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April 23, 2024

Ms. Kara Nierenberg, PE
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**Subject:** **Nuclear Metals, Inc. Superfund Site**
**Concord, Massachusetts**
**May 2022 – April 2023 Annual Groundwater Monitoring Report**
**Revision 1 and Response to Comments**

Dear Ms. Nierenberg:

Enclosed for your review please find the response to comments for the May 2022 – April 2023 Annual Groundwater Monitoring Report Revision 1 dated April 2024. The revised report has been uploaded to the Project Portal as the file size is too large to send via email.

If you have any further questions or concerns, please contact me.

Sincerely,

Bruce Thompson
Project Coordinator

Enclosure

cc: Garry Waldeck, MassDEP

**Response to Comments addressing EPA Comments on the May 2022 – April 2023 Annual Groundwater Monitoring Report, dated October 30, 2023, for the Nuclear Metals, Inc. Superfund Site located in Concord, Massachusetts**

## General Review Comments

1. **Comment: Tables.** Many of the tables (e.g., 1a through 1e, 2b, and 2c) list "Assabet-1A (PZ-1A)" and "Assabet-2A (PZ-2A)" as the Well ID or Location Name. This causes some confusion regarding which of the two locations is actually being gauged or sampled. A specific comment regarding Tables 1b and 2a is included below, but please clarify these entries in all affected tables, either by revising the Well ID or Location Name or by adding a footnote.

   **Response:** Tables will be revised accordingly.

## Specific Comments

2. **Comment: Transmittal Letter.** Garry Waldeck's name is mis-spelled. Please correct the current spelling of

   "Gary" to the correct spelling of "Garry".

   **Response:** Text will be revised accordingly.

3. **Comment: Section 2.3.2, Page 8, Paragraphs 1 and 2.** The first two paragraphs seem slightly inconsistent as written, with the first stating that, except for the upper few feet of core at three of the pre-RI borings, the bedrock is relatively unweathered and unfractured. The second paragraph then states that at MW-BM03 and BEW-5, the upper 15 and 43 feet (respectively) of bedrock were highly fractured. If, as it appears, the intent is to present the information as the results of two different phases of work performed at different times, please revise the text as necessary to clarify that fact; for example, it might suffice to change "indicate" to "indicated" in the last sentence of the first paragraph, and to add "in more recent phases of work" to the beginning of the second paragraph (unless this presumption regarding the text is incorrect)

   **Response:** Text will be revised to clarify the separate observations made during the different phases of work.

4. **Comment: Section 2.5, Page 15, Paragraph 2, bullet 5.** The statement "1,4-dioxane and VOCs in bedrock groundwater" appears to be incomplete as the bullet is missing the action/remedy to be conducted. Please update the text as necessary.

   **Response:** Text will be revised accordingly.

5. **Comment: Section 4.1, Page 22, Paragraph 3 and Table 1b.** Table 1b does not appear to include the added elements described in the text (i.e., sample labels and note). Please update the text and table as necessary.

   **Response:** Text will be revised to reference Table 3.

6. **Comment: Sections 4.2 and 4.3, Page 23.** The text in both sections includes a statement that "the specifics of which are summarized below in Section 4.4" when describing the semi-annual and annual monitoring events, suggesting that Section 4.4 provides further details regarding these monitoring events. However, Section 4.4 discusses monitoring well inspection and maintenance activities. Please update sections 4.2 and 4.3 as necessary.

   **Response:** Text will be updated to reference the appropriate sections.

7. **Comment: Section 5.1.1, Page 26, Paragraph 3.** The text states that the gradients reflect an EW-1 stagnation zone located to the east of well MW-SD37. As shown on Figure 5a, the stagnation zone (estimated downgradient extent of capture for EW-1) is west of MW-SD37, not east. Please revise the text or figure as appropriate.

   **Response:** Text will be updated to state that the stagnation zone is west of MW-SD37 (as shown in Figure 5a).

8. **Comment: Section 5.1.1, Page 27, Paragraph top partial.** The numbers shown in parentheses are differences between the water elevations in the two wells, not gradients. Please calculate and show gradients or change the text to correctly identify the numbers.

   **Response:** Gradients have been re-calculated and the text has been updated with corrected numbers.

9. **Comment: Sections 5.1.1 and 5.1.2, Pages 27 to 28.** These sections include substantial discussion related to vertical hydraulic gradients, but the report does not present any calculated vertical gradients. Please include a table presenting vertical hydraulic gradients for the evaluated well pairs.

   **Response:** Table 6 has been added to present vertical hydraulic gradients for the evaluated well pairs.

10. **Comment: Section 5.2.1.2, Page 31, second bullet under total cobalt.** The text states that there were no CL exceedances of cobalt in bedrock monitoring wells. Figure 6-4b indicates that there was one CL exceedance of cobalt in bedrock at monitoring well MW-BS15. This finding is corroborated by Table 4a-1 which indicates cobalt was detected at a concentration greater than the CL at MWBS15. Please update the text accordingly.

    **Response:** Text will be updated with the correct data regarding CL exceedances of cobalt in bedrock monitoring wells.

11. **Comment: Section 5.2.1.2, Page 31, second bullet under total manganese.** The text states that total manganese concentrations detected at eleven bedrock wells exceeded the CL. Figure 6-6b and Table 4a-1 indicate that total manganese concentrations detected at 9 (not 11) bedrock wells exceeded the CL. The current text incorrectly includes duplicate samples in the well count. Please update the text as necessary.

    **Response:** Text will be updated to indicate that total manganese concentrations detected at 9 (not 11) bedrock wells exceeded the CL.

12. **Comment: Section 5.2.2, Page 32, Paragraph 1, last sentence.** Please revise the reference to Figure 6-10b to Figure 6-9b.

    **Response:** Text will be revised to reference Figure 6-9b instead of Figure 6-10b.

13. **Comment: Section 5.2.2.2, Page 33, Paragraph 2, first sentence.** The text states that the April 2023 concentration of 1,4-dioxane at MW-B1D13 was 31.8 ug/L. Figure 10b shows the concentration of 1,4-dioxane at MW-B1D13 as 32.3 ug/L whereas Table 4b shows it as 31.8 ug/L. Please confirm the result and update the text, table, or figure as appropriate.

    **Response:** Table 4b will be updated to include duplicate sample results. The higher value 32.3 ug/L result was used to infer isoconcentrations in Figure 10b. Initial results are present on Figure 6-9b.

14. **Comment: Section 5.2.3.1, Page 34, bullet related to 1,1-DCA.** The report does not include a figure showing 1,1-DCA exceedance ratios in overburden groundwater compared to the CL (only a figure comparing to the VISL is included). Please include the missing figure.

    **Response:** According to the Record of Decision (ROD) Table L-1, there is no cleanup level for 1,1-DCA in overburden groundwater. Therefore, a figure is not needed. The text has been revised to clarify this point.

15. **Comment: Section 5.2.4.1, Page 35, Paragraph 1, fourth sentence.** Please revise the reference to Figure 6-16b to Figure 6-15a.

    **Response:** Text will be updated with the revised reference to Figure 6-15a.

16. **Comment: Section 5.2.5.1, Page 36, first bullet.** Please revise the second occurrence of "analyzed" in this bullet to "detected".

    **Response:** Text will be revised accordingly.

17. **Comment: Section 5.2.5.2, Page 36, Second Bullet. Typo:** Please remove the empty parentheses symbols "()" from the text.

    **Response:** Text will be revised accordingly.

18. **Comment: Section 5.2.6.2, Page 38, Last Bullet.** The statistics provided for the turbidity are incorrect. Please review and revise the range and mean values provided in the text.

    **Response:** Text will be revised accordingly.

19. **Comment: Section 6, Page 39, second and third bullets.** The statements indicating that uranium and 1,4-dioxane plumes remain stable and that concentrations continue to attenuate appear to be based on a qualitative evaluations of plume extent and concentrations relative to historical conditions. For future reports, performance of statistical trend evaluations should be conducted to assess concentration trends for these COCs. At a minimum, such an evaluation should be conducted every five years to support EPA's Five-Year Review of the Site.

    **Response:** The text will be updated to clarify that these statements of plume stability are based solely on qualitative evaluation of the data. The Remedial Design is still in Pre-Design Investigation phase. The next five-year review is due in November of 2027. In preparation for that five-year review, some level of statistical analysis will be prepared and presented on the groundwater report submitted in 2026 and will be repeated prior to future five-year reviews.

20. **Comment: Section 6, Page 39, fourth bullet.** The statement in this bullet is not a conclusion, it is a recommendation. Please move it to Section 7.

    **Response:** Text will be moved from the conclusion section to the recommendation section of the text.

21. **Comment: Table 1a.** ML-3-3 is not marked as a semi-annual sample location on Table 1a or Figure 4b, but it is included as a semi-annual sampling location on Table 1d. Please review and edit the affected figure/tables as necessary.

    **Response:** Table 1d is indicating what was performed for the 2022-2023 annual sampling event. ML-3-3 was not proposed to be sampled per the Site Wide Monitoring Plan semi – annually however it was included as part of the October 2021 and October 2022 semi – annual sampling event for data collection needs.

22. **Comment: Table 1a.** MW-BS55 and MW-BS56 is included in the annual sampling event list on Table 1a but is not included on Table 1d or on Figure 4c. Please review and edit the affected figure/tables as necessary.

    **Response:** Table 1a will be revised to remove MW-BS55 and MW-BS56. These wells were designated as proposed monitoring well locations for installation during the reporting period.

23. **Comment: Table 1d.** Wells GZW-8-2, MW-S16, and MW-SD-17 are included in the annual sampling event list on Table 1d, but not on Table 1a. In addition, GZW-8-2 is not shown on Figure 4c (annual sampling locations). Please review and edit the affected figure/tables as necessary.

    **Response:** Monitoring wells GZW-8-2, MW-S16, and MW-SD-17 were not proposed to be sampled per the Site Wide Monitoring Plan, therefore they were not included on Table 1a or Figure 4c. Table 1d represents what was included in the 2022-2023 annual groundwater sampling event.

24. **Comment: Figure 4a.** EPA has the following comments on this figure:

    a. Monthly sampling location MW-SD34 is included on Tables 1a and 1c; however, it is not included on this figure. Please revise as appropriate.

       **Response:** Figure will be revised accordingly.

    b. Table 2a indicates that water levels are measured in Assabet-1A and -2A, not in the adjacent piezometers (PZ-1A and PZ-2A), so unless the piezometers are gauged, they should not be shown on this figure. Please revise as appropriate.

       **Response:** Piezometers PZ-1A and PZ-2A are gauged for a water level representative of Assabet 1A and 2A. A note will be added to the tables to explain (see response to related comment 1).

    c. The "Description" box immediately under the title box, receive is misspelled. Please revise as necessary.

       **Response:** Figure will be revised accordingly.

25. **Comment: Figure 4d.** Well AR-02 is missing from this figure. Please revise as necessary.

    **Response:** Figure 4d will be revised to add label to monitoring well AR-02.

26. **Comment: Section 5.1.1, Figure 5a.** This figure presents groundwater elevation contours for the overburden and, where shallow/deep overburden monitoring well pairs are present, lists groundwater elevation values for both the shallow and the deep well. Inclusion of groundwater elevation data for both the shallow and deep wells is confusing, as it is not clear which well is being used to interpolate the contours. Note 3 states that deep overburden is typically used for contouring, but the figure would be clearer if the elevation used for contouring was noted on the figure. Please revise the figure so that it highlights the overburden well location and elevation value used to create the contours.

    **Response:** Contouring heads in the overburden aquifer at the NMI site requires judgement and nuance which include interpretation of heads in shallow and deep overburden, knowledge about the site hydrogeology developed over the years, and an understanding about pumping (especially in the downgradient portions of the site). Where multilevel overburden wells are present at a single location, groundwater elevations from both wells are considered in drafting

the potentiometric contours along with site-specific considerations. For example, deeper overburden well data tend to be weighed more heavily when developing equipotential contours north of Route 62 because the 1,4-dioxane plume and its hydraulic control via pumping at EW-1 (with the recent addition of EW-2 east of the Assabet River) are primarily in deep overburden (as is pumping from Assabet wells). Deeper wells also tend to be a focus when developing on-property contours, although shallow wells are also considered since the 1,4-dioxane and uranium plumes in the overburden span the full aquifer thickness in some areas.

We feel that modifying the figure to highlight only the deep overburden wells at locations where co-located shallow wells are present would indicate that shallow well groundwater elevations were not considered in preparing the contours. Instead, our recommendation is to post all water levels on the figure since it presents the full data set considered when interpreting heads to develop equipotential contours.

27. **Comment: Figures 6-1a through 6-15b.** Please edit the map legends such that the highest concentration color is darkest. For example, red should be used to illustrate >10x and pink could be used for >5x.

    **Response:** Noted. The intended color for the highest concentration was magenta, not pink. At this point we would prefer to retain the current color scheme for consistency with previous reports.

28. **Comment: Figure 7.** Add a 10 ug/L natural uranium contour around location MW-BS22

    **Response:** Figure 7 will be revised to add a 10 ug/L natural uranium contour around location MW-BS22.

29. **Comment: Tables 1b and 2a.** Table 1b has a single row for "Assabet-1A (PZ-1A)" and "Assabet-2A (PZ-2A)". Both sets of wells/piezometers are checked for water levels and for analysis of 1,4-dioxane. The well diameters listed on these rows presumably refer to the supply wells, but it is not clear whether the listed screen depths are for the piezometers or the supply wells. Initially it was thought that this table could best be clarified by providing separate rows for the supply wells and piezometers, with the relevant entries in all columns. However, it was then noticed that Table 2a indicates that water levels are measured in the two supply wells and not in the two nearby piezometers, suggesting that Table 1b would best be clarified by deleting any reference to the piezometers. Please revise Table 1b as necessary to clarify.

    **Response:** Groundwater levels are measured using nearby piezometers. A note will be added to the tables.

**ATTACHMENT 1**

Comments from Members of the 2229 Main Street Oversight Committee Re: 2022-2023 Annual Groundwater Sampling Results These comments are from individual committee members and are not necessarily a consensus of the committee.

The annual groundwater sampling appears to be very comprehensive, and the report well written and inclusive. We thank de maximis for the time and effort put into this round of sampling. There are several brief comments as follows:

1. **Comment:** Would it be possible if sampled wells could be identified relative to the primary groundwater flow direction, i.e. upgradient, cross gradient, or downgradient. This identifier

could be included under the heading of each well in the results tables. This will help to supplement the flow figures where the well location relative to groundwater flow direction is not obvious.

**Response:** Flow directions are shown in Figures 11 and 12.

2. **Comment:** Have any wells been discontinued for sampling during this annual round, and what is the rational for discontinuing each well.

   **Response:** Prior to the 2022-2023 annual groundwater monitoring event proposed modifications were approved by EPA to eliminate nine wells from the program and add one well to the program.

   The table below provides the rational for each proposed modification. Generally, wells proposed for removal from the annual program fall into four categories:

   - Monitoring wells with low to non-detect concentrations of 1,4-dioxane and uranium,
   - Monitoring wells that have been historically low yielding,
   - Monitoring wells co-located with other wells being monitored, or
   - Monitoring wells that have been damaged and are unusable for monitoring

| Monitoring Well | Geologic Unit | Most Recent Detection (Month/Year) | | Rationale |
|---|---|---|---|---|
| | | 1,4-dioxane | Total Uranium | |
| ***Wells Proposed for Elimination from the Annual Sampling Program*** | | | | |
| MW-S63 | Shallow Overburden | <0.144 µg/L (April 2021) | <0.2 µg/L (March 2022) | Damaged during the ISS pilot study; unusable for monitoring. |
| MW-SD63 | Deep Oveburden | 0.0764 µg/L (April 2021) | 0.225 µg/L (March 2022) | Damaged during the ISS pilot study; unusable for monitoring. |
| MW-SD64 | Deep Oveburden | 0.178 µg/L (April 2021) | 0.0766 µg/L (April 2021) | Historically low uranium concentrations in deep overburden. Only sampled for VOCs in current annual monitoring plan. The only VOC detected above a detection limit was chloroform (1.8 µg/L in 2021, 1.3 µg/L in 2022). |
| BEW-1 | Bedrock | 11.5 µg/L (July 2022) | 104 µg/L (July 2022) | Low-yielding extarction well. Will not be used or monitored for during pump and treat system operation. |
| MW-B2D28 | Deep Bedrock | 0.0848 J µg/L (April 2022) | 1.06 µg/L (April 2022) | Shallow bedrock (MW-BS28) and middle bedrock (MW-B1D28) wells will be sampled, which generally have higher 1,4-dioxane detections. |
| BEW-6 | Bedrock | 0.0971 J µg/L (April 2022) | ns | Historically low (J qualified) or non-detect 1,4-dioxane concentrations. |
| MW-SD32 | Deep Oveburden | 0.768 µg/L (April 2022) | 0.152 J µg/L (April 2021) | MW-SD32 generally has lower 1,4-dioxane concentrations compared to shallow oveburden well MW-S32. MW-S32 will continue to be sampled. |
| MW-S40 | Shallow Overburden | 0.261 µg/L (April 2022) | <0.067 µg/L (April 2021) | MW-S40 1,4-dioxane detections are low to non-detect. MW-SD40 is proposed for sampling, which has had higher 1,4-dioxane detections. |
| MW-S38 | Shallow Overburden | 0.475 µg/L (April 2022) | 0.128 J µg/L (April 2021) | MW-S38 and MW-SD38 generally have similar 1,4-dioxane concentrations. MW-SD38 will continue to be sampled. |
| ***Well Proposed for Addition to the Annual Sampling Program*** | | | | |
| *MW-SD40* | Deep Oveburden | 4.32 µg/L (April 2021) | 2.78 J µg/L (April 2021) | MW-S40 is currently included in the sampling plan, where 1,4-dioxane detections are low to non-detect. MW-SD40 is proposed to replace MW-S40 in the annual sampling plan, which has had 1,4-dioxane higher detections. |

3. **Comment:** Could historic concentrations of arsenic from April 2021 and April 2022 be included in the results table along with the April 2023 concentration in the same manner as the concentrations of total uranium are displayed in Table 4a-3.

   **Response:** Noted.

4. **Comment:** What is the significance of vertical gradients mentioned in 5.1.1 and 5.1.2. What conclusions can be drawn where both upward and downward vertical gradients are measured in the same area of the property. If upward vertical gradients are present, do we infer that groundwater is rising in the subsurface carrying its contaminant load upward with it.

**Response:** We do not draw any conclusions, the gradients naturally vary across the site. Please note that gradient is analogous to pressure, so does not equate to flow, or contaminant mass-flux.

## ATTACHMENT 2

**Input from Kevin Trainer (Verdantas) on behalf of CREW, received via email on 12/11/23:**

We had one observation about the arsenic data. Elevated total and dissolved arsenic (over 100 ug/L) were present in groundwater samples from two bedrock monitoring wells (MW-B3D13 and MW-BM03) that are located directly downgradient from the former buildings. The report notes that there is no site-related arsenic source and opines that the elevated concentrations of arsenic may be related to the same geochemical conditions that led to the solubilization of geogenic uranium in bedrock.

This supposition may be correct, but it's interesting that the two wells with the highest arsenic concentrations exhibited relatively low uranium concentrations during the 2023 event. In the 2021 sampling event, one of those wells (MW-BM03) reported higher dissolved uranium concentrations (59.4 ug/L) than in the 2023 sampling event (14.6 ug/L). The report speculates that the decrease in natural uranium concentrations in bedrock may be to the removal of historical mechanisms that mobilized bedrock uranium, coupled with groundwater dilution from upgradient areas. However, if arsenic was related to the same geochemical conditions that solubilized the uranium, then arsenic concentrations would also presumably decrease, but they did not (dissolved arsenic increased from 294 ug/L to 389 ug/L in MW-BM03 between the 2021 and 2023 sampling events).

It's interesting that the arsenic remains elevated in this area, especially since arsenic and uranium in groundwater are presumed to be derived via similar mechanism and uranium concentrations appear to have decreased. Possible fate and transport differences? Or some other mechanism?

**Response:** In order to provide an answer to this question, the arsenic and uranium trends at these and nearby wells need to be evaluated in detail. A brief review of arsenic and uranium detections at MW-BM03, indicate that the two analytes appear to follow a similar trend 1) declining prior to 2021 RD/RA activities, 2) further declines after combined bedrock pumping in late 2021 and 3) rebound in concentrations in April 2023. Even with the 2023 rebound, the arsenic concentrations are lower than historical detections from 2012 to 2019. The change in arsenic vs uranium at MW-B3D13 are not directly comparable as the screen depth at MW-B3D13 is more than 100 feet deeper than the screen at MW-BM03. Arsenic will continue to be monitored during the combined pumping and post-pumping phases.

# NUCLEAR METALS, INC. SUPERFUND SITE

CONCORD, MASSACHUSETTS

May 2022 – April 2023 Annual Groundwater Monitoring Report
Revision 1

*de maximis, inc.*
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October 2023

Revised April 2024

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*4a-7 Sum U-235/238 (Total) – Sitewide Groundwater Sampling Results April 2021, April 2022, and April 2023*
*4b. Semi-volatile Organic Compounds – Sitewide Groundwater Sampling Results – April 2023*
*4c. Volatile Organic Compounds – Sitewide Groundwater Sampling Results – April 2023*
*4d. Nitrate/Nitrite – Sitewide Groundwater Sampling Results – April 2023*
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5 Field Parameters – April 2023

APPENDICES

A – Detailed Chronology
B – Scanned Field Forms
C – Data Validation Memos

## Acronyms and Abbreviations

| | |
|---|---|
| 1,1-DCA | 1,1-dichloroethane |
| ARARs | Applicable or Relevant and Appropriate Requirements |
| AOI | Area of Investigation |
| bgs | below ground surface |
| °C | degrees Celsius |
| CD | Consent Decree |
| CERCLA | Comprehensive Environmental Response, Compensation and Liability Act |
| CL | Cleanup Level as provided in Table L-1 of the Record of Decision |
| COC | Chemicals of Concern |
| CSM | Conceptual Site Model |
| ddms | *de maximis* Data Management Solutions |
| DO | dissolved oxygen |
| DU | Depleted Uranium |
| °F | degrees Fahrenheit |
| FGWTS | Final Groundwater Treatment System |
| FS | Feasibility Study |
| ft | feet/foot |
| GAC | granular activated carbon |
| gpm | gallons per minute |
| GZA | GZA GeoEnvironmental |
| HB | Holding Basin |
| ISS | In-situ Sequestration |
| MassDEP | Massachusetts Department of Environmental Protection |
| MCLs | Maximum Contaminant Levels |
| mg/kg | milligrams per kilogram |
| mg/L | milligrams per liter |
| mL | milliliter |
| msl | mean sea level |
| NMI | Nuclear Metals, Inc. |
| $NO_2^-$ | nitrite |
| $NO_3^-$ | nitrate |
| NTCRA | Non-Time-Critical Removal Action |
| O&M | Operations and Maintenance |

| | |
|---|---|
| OMM | Operation, Maintenance and Monitoring |
| ORP | oxidation-reduction potential |
| PAHs | polycyclic aromatic hydrocarbons |
| PCBs | polychlorinated biphenyls |
| PCE | tetrachloroethylene |
| ppb | parts per billion |
| ppm | parts per million |
| PS | Performance Standards |
| PVC | polyvinyl chloride |
| QAPP | Quality Assurance Project Plan |
| RAOs | Remedial Action Objectives |
| RAWP | Remedial Action Work Plan |
| RDWP | Remedial Design Work Plan |
| RD/RA | Remedial Design/Remedial Action |
| RI | Remedial Investigation |
| ROD | Record of Decision |
| RQD | Rock Quality Designation |
| SDs | Settling Defendants |
| SFAs | Settling Federal Agencies |
| SOP | Standard Operating Procedure |
| SOW | Statement of Work |
| SVOCs | semi-volatile organic compounds |
| SWMP | Site Wide Monitoring Plan |
| TAL | Target Analyte List |
| TCE | trichloroethylene |
| TS | Treatability Study |
| µg/L | micrograms per liter |
| µS/cm | micro Siemens per centimeter |
| U | Uranium |
| USEPA | United States Environmental Protection Agency |
| VC | Vinyl Chloride |
| VI | Vapor Intrusion |
| VISL | Vapor Intrusion Screening Level |
| VOC | volatile organic compound |

# 1.0 Introduction

This annual *Groundwater Monitoring Report* has been prepared by *de maximis, inc.* (*de maximis*) on behalf of the Settling Defendants (SDs), with funding contributions from the Settling Federal Agencies (SFAs), and pursuant to the Consent Decree (CD) and its accompanying Statement of Work (SOW) for the Remedial Design/Remedial Action (RD/RA) at the Nuclear Metals, Inc. (NMI) Superfund Site located in Concord, Massachusetts (hereafter, "the NMI Site" or "the Site") entered by the United States District Court for the District of Massachusetts, Civil Action No. 1-19-cv-12097-RGS, dated December 6, 2019.

As specified in the United States Environmental Protection Agency's (USEPA's) Record of Decision (ROD) (USEPA, 2015), the selected remedy for the NMI Site includes: extraction and ex-situ treatment of volatile organic compounds (VOCs) and 1,4-dioxane in overburden and bedrock aquifers; in-situ treatment of depleted uranium (DU) in the overburden aquifer and natural uranium (U) in the bedrock aquifer; and long-term monitoring to assess the effectiveness of in- and ex-situ treatment. These remedial measures are intended to mitigate uncontrolled migration of, and exposure to, Site-related chemicals of concern (COCs) and allow for the restoration of the Site to beneficial uses.

This report presents a summary of the Groundwater Monitoring Program activities conducted at the Site under RD/RA for the period from May 1, 2022 through April 30, 2023 (Reporting Period) and was prepared in accordance with the *Remedial Design Work Plan – Appendix K: Site Wide Monitoring Plan (SWMP)* (*de maximis*, March 2020), *Remedial Design / Remedial Action – Groundwater Treatment System Operations & Maintenance Plan (Revision 1)* (O&M, Inc., June 2020), and the letter of *Proposed Modifications to the Annual Groundwater Monitoring Plan* (March 13, 2023), as conditionally approved by USEPA on March 28, 2023.

Throughout the Reporting Period, the Knox Trail Groundwater Treatment System located at 16 Knox Trail in Acton, Massachusetts, continued to operate and function as designed, meeting the three Performance Standards (PS) identified in the 100% Removal Design Report Final Treatment System (O&M, inc., 2018) including:

1) hydraulic capture of 1,4-dioxane and VOC plume in overburden and shallow bedrock in the area between the Assabet River and the Assabet 1A supply well;
2) decrease concentration trends in downgradient wells; and
3) treat extracted groundwater and discharge the effluent to the Assabet River at concentrations below discharge limits specified for the Site.

For further details regarding the Final Groundwater Treatment System (FGWTS) and its operations during the Reporting Period, refer to the *Remedial Design / Remedial Action – Knox Trail Annual Treatment System Report* (*de maximis*, 2023) submitted to USEPA under separate cover letter.

The remainder of this document is organized in the following sections:

**Section 2 – Site Background and Current Conceptual Site Model (CSM):** Section 2 summarizes pertinent background information including Site operational history, regulatory status, investigatory, remedial and removal actions, setting, Site conceptual model and nature of Site impacts, and a summary of the objectives, scope, and Performance Standards associated with the selected remedial action.

**Section 3 – Monitoring Network and Schedule:** Section 3 describes the current groundwater monitoring network and associated sampling plan.

**Section 4 – Data Presentation:** Section 4 presents the data collected in the field (water level and water quality field parameters) and the analytical results collected throughout the Reporting Period.

**Section 5 – Evaluation of Data:** Section 5 discusses the results and updated evaluations of the data collected including assessment of how the data fits within the current CSM.

**Section 6 – Conclusions:** Section 6 describes the significance of the monitoring data and any conclusions generated from the evaluation of the data.

**Section 7 – Recommendations / Modifications:** Section 7 provides recommendations for changes to the Groundwater Monitoring Plan, if any, and the rationale for those changes.

**Section 8 – References:** Section 8 lists the various documents cited within the report.

Additionally, tables, figures, appendices, and attachments are included with this report and referenced within the text.

# 2.0 Background Information & Current Conceptual Site Model

The NMI Site consists of the 2229 Main Street, Concord, Massachusetts property (~46 acres) and those areas where groundwater contamination has come to be located (Figure 1 and Figure 2). The NMI Property is bordered by Main Street (Route 62) and several commercial and residential properties to the north, residential properties to the east and south, and residential/woodland and commercial/industrial properties to the west. The areal extent of the COC plumes has migrated off site and now consists of portions of the properties located at:

- 284 High Street, Acton
- 2284 Main Street, Concord
- 16 Knox Trail, Acton
- 2250 Main Street, Concord
- 112 Powder Mill Road, Acton
- 222B Main Street, Concord
- 2320 Main Street, Concord
- 2194 Main Street, Concord
- 35 Forest Ridge Road, Concord
- 2160 Main Street, Concord[1]

## 2.1 Owner & Operational History

Past operations at the Site involved research and development in fundamental research, physical metallurgy, chemical metallurgy, engineering and product development, fuel element development and manufacture, and high temperature materials (NMI, 1961). Most of the operations at the Site were conducted under contracts with the United States Atomic Energy Commission and the United States Department of Defense, along with some contracts for private industry. These operations included the investigation and development of materials for missiles, airframes, and other components.

In September 1972, NMI employees purchased the operation. After the 1972 purchase, NMI developed a large-scale DU manufacturing operation, which included, but was not limited to, the manufacturing of penetrators, or bullets, from DU as a defense contractor for the United States (US) Army. Other work included manufacture of DU shields, and counterweights, manufacture of metal powders, beryllium and beryllium alloy parts production, and manufacture of specialty titanium parts.

[1] At the time of this report, Pre-Design Activities at 2160 Main Street have not included installation of proposed bedrock monitoring wells at this property. Until completion of well installation, this property is assumed to be affected by the 1,4-dioxane plume. For the purposes of this report, 2160 Main Street is not depicted on figures as an affected property.

On October 1, 1997, NMI was renamed Starmet Corporation. Starmet, its subsidiaries, affiliates, and related entities (collectively, the Starmet Parties) continued to perform small scale operations at the Site through October 2011.

## 2.2 Site and Geologic Setting

NMI purchased approximately 30 acres of undeveloped property on August 29, 1957, and constructed and occupied the original facility buildings in March 1958. In 1990, NMI acquired adjacent properties designated as Parcels A and B from the Memorial Drive Trust (MDT), which owned land to the west and south of the NMI Property. At the same time, MDT acquired Lots C and D from NMI. The current NMI Property consists of approximately 46.4 acres.

The existing land use at the NMI Property is a mix of industrial property, fenced undeveloped property, and unfenced undeveloped property. The industrial portion of the NMI Property is represented by the remaining building foundations and associated paved parking lots, paved staging areas, and small landscaped areas (mowed grass).

A security fence with locking gates restricts access to the southern and eastern sides of the portion of the property where the buildings are located. The fence extends from that area to the Sphagnum Bog, encompassing the Cooling Water Recharge Pond, Holding Basin, and Old Landfill areas. This area is essentially 'restricted' open space and is unpaved with varying amounts of vegetation (e.g., brush and grass) and wooded areas. The unfenced portion of the property is located outside of the security fence. This area is open space that is generally wooded. The Northeast Wetland and Sphagnum Bog are within this area.

For purposes of the Remedial Investigation (RI), the Site was divided into "Areas of Investigation" or "AOIs." These AOI designations are shown on Figure 3. Significant features of each AOI relevant to the RD/RA are presented below (note that since RA is underway, the state of the AOIs are evolving as summarized in Section 2.4):

- Holding Basin (AOI-1): The Holding Basin (HB) was constructed in 1958. A pre-existing glacial depression was enlarged by removing soil to flatten the floor and construct an earthen dike on its face. It was actively used from 1958 to September 1985 for disposal of waste sludge until discharges ceased due to a change in waste processing methods. The sludge was produced from neutralization of the waste stream derived from pickling copper-clad depleted uranium rods in hydrogen peroxide, nitric and other acids. The current dimensions of the basin are approximately 180 feet in length and approximately 100 feet in width.

- Drum Burial Area (AOI-2): The Drum Burial Area was located between the Cooling Water Recharge Pond and the Holding Basin. The location of the Drum Burial Area was identified based on previous environmental studies. According to labeled photographs taken at the time of disposal, a trench was excavated, and drums were placed within it in March 1968. In December 2004, a removal action was implemented as part of the RI

field activities to remove and dispose of the waste materials from the Drum Burial Area and the Cooling Water Recharge Pond (MACTEC, 2004).

- Old Landfill (AOI-3): The Old Landfill is located south of the Sphagnum Bog (AOI-6). An area of cleared land and possibly a borrow pit pre-date construction at the Site. Anecdotal reports indicate laboratory equipment and waste that resulted from the initial relocation to the facility were buried in this area along the southern shore of the Sphagnum Bog. Anecdotal reports also indicate that local residents disposed of white goods (such as refrigerators and washing machines) in this area. In 2002, after limited investigation found drum fragments and evidence of radiological and chemical impacts, USEPA completed a limited removal and capping of the landfill. Aerial photographs indicate that additional areas of fill may lie to the south of the landfill cap.

- Cooling Water Recharge Pond (AOI-4): The Cooling Water Recharge Pond (Pond) is a natural topographic depression in the center of the Site, with its southern end approximately 75 feet north of the Holding Basin. The Pond was created by placing a sand dam across the swale. Non-contact cooling water, roof drains, and some storm water run-off was discharged to this pond during facility operations. Wastewater discharged into the HB reportedly overflowed into the Pond on at least two occasions (January 1982 and April 1986) (NMI, 1993). The water level of the Pond significantly decreased following removal of the buildings and termination of discharge from those roof drains to the Pond.

- Sphagnum Bog (AOI-6): The Sphagnum Bog (bog) is a palustrine, broad-leafed evergreen, scrub-shrub, saturated, acidic wetland located in the eastern part of the Site that covers an area of approximately 3.5 acres (Tetra Tech, 2000). The bog is composed primarily of sphagnum peat. The substrate of the bog varies from growing sphagnum at the surface, to decomposed peat below the surface. It is a glacial kettle feature that has no surface water inlets or outlets, so receives the bulk of its moisture from precipitation and run-off. The surface of the bog lies at an elevation of about 162 feet above mean sea level (ft msl). The surface of the bog is perched above the general Site water table, which lies at approximately 145 ft msl as measured in adjacent monitoring wells. The bog is surrounded by higher ground, with the lowest adjoining topographic divide separating the bog from the Cooling Water Recharge Pond (AOI-4) to the west. The western edge of the bog is located approximately 75 feet east of the Cooling Water Recharge Pond and the HB.

- Former Waste Storage Area (AOI-7): AOI-7 consists of a former hazardous waste handling and storage area and surrounding grounds that included loading docks, aboveground chemical tanks, and various types of waste storage. The Former Waste Storage Area was located south of former Building C and much of its footprint lies beneath former Building E. Since the quantities of wastes stored and the location of

those wastes varied over time, AOI-7 includes the former storage area, as well as the area by the former Building C loading docks, the shipping and receiving area surrounding former Buildings B-1 and B-2, and the soils south and southeast of former Building E.

- Sweepings and Fill Area (AOI-8): The Sweepings and Fill Area (Sweepings Area) is located southwest of former Building A, just south of the access road to the facility shipping and receiving area. The area contains piles of sand, coarse gravel, and other fill that are distributed across an area approximately 150 ft by 150 ft. According to an earlier investigation report, floor sweepings from the NMI facility were discarded in this area (GZA, 1998). Most of the fill piles contain cobbles and gravel and do not appear to be floor sweepings; however, the source of the material is unknown. Based on RI characterization data that shows similarity of contaminants to those found in the Cooling Water Recharge Pond, it is likely the piles are the result of the excavation of pond sediment.

- Pavement Drain Outfalls (AOI-9): Three separate networks of pavement stormwater drains are present at the Site and investigated as part of the RI. These collect stormwater from various parking areas or paved surfaces during rain events. Each network discharges locally to surface soil drainage pathways via outfalls.

  A linear series of stormwater drains collect stormwater from pavement to the northeast of Building D. This network is hereafter termed the North Pavement Drain Outfall. This outfall discharges approximately 25 feet to the northeast of the paved parking area above the northeast septic leach field. Photographs found during the Building Non-Time Critical Removal Action (NTCRA) show water being pumped from the Cooling Water Recharge Pond and discharged in this area.

  A second drain network serves a portion of the paved access road located to the south of Buildings A and B-2. This network will hereafter be termed the South Pavement Drain Outfall. Stormwater runoff discharges to a shallow swale that trends northwest alongside the access road. Runoff infiltrates along the length of the swale and it appears that the pathway disappears after approximately 100 feet of transport. This swale terminates in the “Sweepings and Fill Area” (AOI-8).

  A third series of stormwater drains serves the parking lots that are located to the north of Buildings A and D, as well as the access road entering the facility from Main Street. The outfall from this drain network, hereafter termed the Off-site Pavement Drain Outfall, is a large culvert located beneath Main Street. This culvert discharges along the north edge of Main Street to a steep slope that extends northward to a wetland that is part of the Assabet River floodplain.

- Northeast Wetland (AOI-10): The Northeast Wetland is located approximately 200 feet north of the Cooling Water Recharge Pond, and just south of Route 62. This wetland was possibly formed by the construction of Main Street to prevent further runoff to the north. It is a palustrine, forested, broad-leafed, deciduous wetland, subject to seasonal flooding. The low-lying area associated with this wetland covers approximately 0.8 acres.

- Drain Line Area (AOI-11): The Drain Line Area encompasses the area east of former Buildings C and D, north of former Building E and west of the former Tank House and the Cooling Water Recharge Pond. Numerous underground lines, including waste acid drain lines, acid fill lines, septic lines, and storm water discharge lines, run through the area. According to historical photographs, storage trailers and other various materials were staged in this area. Most of the Drain Line Area was paved in 1983, associated with construction of Building E. Prior to that time, the area was gravel and soil. Although the area immediately behind former Buildings C and D is relatively flat, most of the area slopes easterly, towards the Holding Basin.

## 2.3 Geologic Setting

The geology of the Site includes glacially derived stratified drift deposits underlain by crystalline bedrock and is further discussed in the following Sections.

### 2.3.1 Site Overburden Geology

The Site topography consists of an irregular series of steeply sided hills with depressions throughout. Some of these depressions, such as the Sphagnum Bog, Cooling Water Recharge Pond and Holding Basin may have been glacial kettles formed by ice-contact sediments deposited around residual blocks of ice. As the blocks melted, the resulting morphology was hummocky. The surface elevation of the Site varies from approximately 137 ft msl to 213 ft msl, rising generally from north to the south.

The predominantly medium sand overburden is thickest (i.e., about 140 to 150 feet thick) at the hill on the northwest corner of the property from GZW-11 to MW-BS28. Where present, the sandy overburden is thinnest (i.e., about 45 feet thick) near ML-3, located in a depression between Route 62 and the northern parking lot for the facility. Below the building foundations, the sandy overburden decreases from about 100 feet thick east of the buildings to about 60 to 80 feet thick west of the buildings. In the region downgradient of the HB, the sands are fairly homogenous medium sands, with lesser amounts of silt. Sandy overburden below the Holding Basin and Cooling Water Recharge Pond is estimated to be 50 to 60 feet thick.

Till of varying thickness is found below the sandy portion of the overburden at the Site. Up gradient of and beneath the Holding Basin, the till is approximately 5 to 15 feet thick. To the southwest, at MW-BS-10 (adjacent to SW-2A), the till is over 25 feet thick. A till mound north of

the former Building D is 20 to 35 feet thick in the area of ML-1 and ML-2. The till is approximately 30 feet thick at GZW-8 adjacent to the Assabet River.

### 2.3.2 Site Bedrock Geology

The depth to bedrock has been measured at a minimum of 30 locations at or near the Site. The bedrock is highest on the eastern side of the Site beneath the Old Landfill and the Sphagnum Bog (110 to 120 feet above msl) and slopes westward to a low of less than 30 feet at MW-BS14 and MW-BS31. There is a bedrock ridge extending from the area north of former Building D to approximately the SW-1 area, from where the bedrock then slopes downward and northward to the Assabet River to an elevation of less than 15 feet at GZW-8-2. From the Holding Basin to the Assabet River, the top of bedrock elevation drops approximately 90 feet. Evaluation of lithology from the pre-RI bedrock borings (seven of eight had core data) indicated the bedrock consists predominantly of gneiss and schist, and, except for the upper few feet of core at ML-1, GZW-6 and GZW-8, the rock is relatively unweathered and unfractured at the locations cored.

In more recent phases of work, information relative to deeper bedrock structure was collected at three locations: MW-BM03; MW-BM15; and SW-2A. A deep core was collected at MW-BM03 and borehole geophysical logging was completed at MW-BM03 and SW-2A. The Rock Quality Designation (RQD) values ranged from extremely fractured (0% RQD) to generally massive (100% RQD). At MW-BM03, located near the center of the Site, the rock was highly fractured in the upper 15 ft, and became more competent with depth. At MW-BM15, located near the Assabet River, the rock was more highly fractured with depth. However, the borehole at MW-BM15 was not cored as deeply as MW-BM03. The presence of highly fractured bedrock in this area was confirmed at BEW-5, where the top 43 feet of bedrock was observed to be highly fractured with RQDs equaling 0% (i.e., none of the core remained intact). Based on observations in this area during the RI, it was anticipated that the rock may by highly fractured. Therefore, consistent with the work plan for this location, rather than leave this as an open borehole well which was unstable, a 4-inch diameter stainless steel well screen was installed for this extraction well.

The Bedrock Geologic Map of Massachusetts shows the Site to be underlain by the Assabet Quartz Diorite, with the older Shawsheen Gneiss of the Nashoba Formation to the North and the Andover Granite to the South. However, evidence from bedrock wells at the W.R. Grace Site north of the Assabet River (GeoTrans, 2002a), the new bedrock map created for a study of the Rockland Avenue Well Site in Maynard (Walsh, 2001), and rock cores from the Site indicate that the Site is most likely underlain by the Shawsheen Gneiss of the Nashoba Formation. Most cores from the Site are described as gneiss, not quartz diorite, and significant sulfide mineralization was observed in bedrock fractures in GZW-8, which is also indicative of the Nashoba Formation. Some core descriptions noted pegmatite zones including GZW-10 and GZW-6. Quartzite or quartz-rich fracture filling was noted in MW-BM03, MW-BS12, MW-BS17 and GZW-8-2. Based on these observations, the State Bedrock Map appears to incorrectly

depict the contact between the Assabet Quartz Diorite and the Shawsheen Gneiss of the Nashoba north of the Site.

### 2.3.3 Hydrogeology

The Site lies within the Assabet River basin. No natural streams are present on the NMI Property. The only apparent surface water body that pre-dates development of the Site is the Sphagnum Bog located in the eastern-central portion of the Site. The Assabet River flows in an easterly direction and merges with the Sudbury River to form the Concord River approximately 3.5 miles downstream of the Site.

A surface water divide is in the upland to the south of the Site, surface water runoff from areas north of this divide flow north to the Assabet River. Surface water runoff from areas south of this divide flows south to Second Division Brook, which flows in an easterly direction, and then north to join with the Assabet River.

Groundwater is found both in the unconsolidated and bedrock formations and migrates northward, towards the Assabet River.

## 2.4 Conceptual Site Model

The Conceptual Site Model (CSM) for contaminated soil, sediment, and groundwater at the Site is provided in Figure E-1 in Appendix C of the ROD. The CSM is a three-dimensional "picture" of site conditions that illustrates contaminant sources, release mechanisms, exposure pathways, and migration routes.

Potential human and ecological receptors are presented in Section G of the ROD, which documents current and potential future site conditions and shows what is known about human and environmental exposure through contaminant release and migration to potential receptors. The risk assessment and response action for the contaminated soil, sediment, and groundwater at the Site is based on this CSM.

The AOIs found in the risk assessment process to pose unacceptable risk, including their sources and receiving media, are discussed below:

- AOI 1 – Holding Basin Soil: Neutralized nitric acid solution containing dissolved copper and DU was discharged to an unlined Holding Basin between 1958 and 1985. Certain facility process drain lines from the buildings also appear to have discharged to the Holding Basin. The primary receiving media were vadose zone soils and saturated soil below, adjacent, and surrounding the Holding Basin, and groundwater below the Holding Basin. The Holding Basin contains the highest concentration of DU in on-site soil, with an average concentration of 93 mg/kg, and a maximum concentration of approximately 12,000 mg/kg. The volume of DU impacted soil in the Holding Basin is approximately 32,000 cubic yards.

- AOI 2 – Drum Burial Area Soil: In addition to drums in the Old Landfill area (AOI 3), drums containing beryllium and possibly other materials were found (and subsequently removed) in a buried trench located between the Cooling Water Recharge Pond and the Holding Basin. Soil and groundwater would be the primary receiving media from drums that may have leaked or been damaged. Concentrations of DU in this area are generally two-times the cleanup level of 2.7 mg/kg.

- AOI 3 – Old Landfill Soil: The Old Landfill was reportedly used for disposal of solid waste that could include materials from the research and development laboratories, drummed materials containing various metals, including DU and beryllium, and municipal and office waste. Soil would be the primary receiving medium from drums that may have leaked or been damaged.

- AOI 4 – Cooling Water Recharge Pond Surface Water, Sediment, and Bank Soil: Building floor drains and roof drains discharged to the Cooling Water Recharge Pond. Roof drains are a potential source of metals, because if machining dusts were deposited on the roofing material, they would collect in the roof drain system. The Cooling Water Recharge Pond also received direct discharge from the Holding Basin on at least two occasions. Non-contact cooling water pumped from on-site wells contained VOCs, DU, and natural uranium. The primary receiving media include surface water and sediment in the Cooling Water Recharge Pond, and groundwater below the pond. In addition, sediments from the Cooling Water Recharge Pond may have been dredged and placed on the banks surrounding the pond and, in an area known as the “sweepings” area (AOI 8), to increase the capacity of the Cooling Water Recharge Pond. Therefore, soil surrounding the Cooling Water Recharge Pond may also be a primary receiving medium. Surface water did not show unacceptable risk during the risk assessment process.

- AOI 6 – Sphagnum Bog Surface Water and Sediment: Supernatant liquid from the Holding Basin was reportedly discharged to the Sphagnum Bog between 1958 and possibly as late as the 1970s. In addition, sink and floor drains from laboratories located in Building A discharged to the Sphagnum Bog between 1958 and approximately 1975. The primary receiving media were surface water, sediment, and peat in the Sphagnum Bog, although surface water did not show unacceptable risk during the risk assessment process.

- AOI 7 – Former Waste Handling Area Soil: An area located to the south of and beneath the former Building E was formerly used for waste handling and storage, prior to the construction of Building E. During that time, this area was not paved. Soil is the primary medium impacted by material that may have been released to the subsurface.

- AOI 8 – Sweepings and Fill Area Soil: An area southwest of the main parking lot contains piles that reportedly include sweepings from building floors. It was later discovered that this area received dredged sediments from the Cooling Water Recharge Pond. The deposited material has soil-like characteristics (e.g., sand and gravel). Remedial Action at AOI 8 started in fall of 2022 under the 100 Percent Remedial Design – Site-Wide Soil and Sediment AOI 8 and AOI 9, dated September 26, 2022.

- AOI 9 – Northern and Southern Pavement Drain Outfalls: Runoff from pavement and/or water pumped from the Cooling Water Recharge Pond carried contamination to the surface soils at these outfalls. Remedial Action at AOI 9 started in fall of 2022 under the 100 Percent Remedial Design – Site-Wide Soil and Sediment AOI 8 and AOI 9, dated September 26, 2022.

- AOI 11 – Drain Lines Soil: Drain lines carried process wastes, cooling water and stormwater from the facility buildings to the Holding Basin, Sphagnum Bog, and Cooling Water Recharge Pond. If contaminated liquids leaked from underground piping, they would be released to soil beneath the pipes, and potentially to groundwater. Drain lines are generally located beneath the area of land east of Buildings C and D.

- AOI 14 – Down-Wind Surface Soils: Particulate emissions from the air handlers and stacks on the facility buildings may have migrated in the ambient air and been deposited in surficial soils down-wind of the buildings.

- AOI 15 – Transformer Pads Soils: Two outside transformer pads are present. A pad with one transformer is located adjacent to Building B and dates from facility start-up in 1958. A second pad with three transformers is located east of Building D and dates from construction of that building in 1978. Additional electrical units are located on the former switchgear pad located in the paved yard behind Buildings C and D. It is not known if the transformers ever contained petroleum-based dielectric fluid or if the fluid contained PCBs. If dielectric fluid spilled, the fluid would have been released to surface soil around the transformers.

- AOI 16 – Groundwater: Although groundwater was not an original source of contaminants, leaching is known to have occurred in the Holding Basin, where continuous discharge of liquids containing DU, copper, and nitrate, and possibly other chemicals, has resulted in elevated concentrations of these constituents in deep subsurface soils and groundwater beneath the HB. The sources of VOCs and 1,4-dioxane are likely related to historic disposal of chlorinated solvents such as tetrachloroethene and 1,1,1-trichloroethane (which likely contained 1,4-dioxane as a stabilizer) to the Holding Basin, Cooling Water Recharge Pond, and/or Old Landfill. A uranium plume in bedrock groundwater was identified. However, the uranium in bedrock groundwater exhibits a natural isotopic signature, suggesting that it is

not directly related to release of DU at the Site. Evaluation of bedrock groundwater data suggests that the presence of elevated concentrations of natural uranium in bedrock groundwater may be a result of Site-related activities that may have altered bedrock groundwater geochemistry, resulting in release of natural uranium from the bedrock. Surface water did not show unacceptable risk during the risk assessment process.

The major aspects of the CSM for the Site are as follows:

Primary Release Mechanisms (All Media): Constituents were released or disposed of in ways that resulted in contamination that extends across multiple AOIs. Specifically, disposal or release of these contaminants appears to have occurred through:

- Direct disposal, spills, or leaks from drain lines (AOI 1 – Holding Basin, AOI 2 – Drum Burial Area, AOI 7 – Former Waste Storage Area, AOI 11 – Drain Lines, AOI 15 – Transformer Pads);

- Disposal of dredging materials and/or land filling (AOI 3 – Old Landfill, AOI 4 – Cooling Water Recharge Pond, AOI 8 – Sweepings and Fill Area); and

- Aerial deposition (AOI 14 – Perimeter Soils) and subsequent storm water runoff and deposition (AOI 9 – Pavement Drain Outfalls).

Primary Soil Impacts: Among the constituents released by these mechanisms, DU, polychlorinated biphenyls (PCBs), and polycyclic aromatic hydrocarbons (PAHs) show the greatest frequency of contamination in unsaturated soil.

Primary Sediment Impacts: Among the constituents released by these mechanisms, PAHs, PCBs, and metals, including DU and copper, are considered the primary contaminants of potential concern for human and ecological receptors, although VOCs were also detected but at low frequency or low concentrations.

Primary Groundwater Impacts: Groundwater data suggest that DU migrated to the overburden groundwater, natural uranium migrated with bedrock groundwater, and chlorinated VOCs and 1,4-dioxane migrated to the overburden and bedrock groundwater. The groundwater flow is toward the north and northwest, resulting in overburden and bedrock plumes of VOCs and 1,4-dioxane that extend off the facility property toward and beneath the Assabet River. The 1,4-dioxane plume associated with the Site extends to deeper overburden as evidenced by monitoring results from wells located just south and northwest of the Assabet River.

### 2.4.1 Chemicals of Concern

The chemicals of concern (COCs) are summarized in Tables G-1 through G-4 of the ROD for sediment, surface and subsurface soil, and groundwater, respectively, and include but are not limited to the following:

Natural uranium, as found in the Earth's crust, is a mixture of mainly two isotopes: uranium-238 (U-238), accounting for 99.28% and uranium-235 (U-235) about 0.72%. It also contains a trace amount of U-234 (about 0.005%). The RI found that, because of Site activities, natural uranium in the bedrock has been released into the bedrock groundwater at levels that exceed the Maximum Contaminant Level (MCL) for uranium of 30 micrograms/liter (µg/L).

Depleted uranium is uranium that has been stripped of most of the radioactive isotope U-235, such that it is comprised of mostly U-238, the least radioactive of the three isotopes. It also contains a trace amount (less than 0.001%) of U-234. Depleted uranium contains approximately 0.2% U-235 and 99.78% U-238. It is about half as radioactive as natural uranium. The RI found that as the result of disposal activities in the HB, the overburden groundwater is contaminated with DU in excess of the MCL for uranium (listed above). There is also soil and sediment throughout the Site in excess of risk-based cleanup levels for uranium.

Other Metals. Metals of concern other than DU/natural uranium found in Site groundwater include thorium, chromium, arsenic, barium, cobalt, copper, iron, manganese, and molybdenum.

PAHs or Poly Aromatic Hydrocarbons are a group of over one hundred different chemicals that are formed during the incomplete burning of coal, oil and gas, garbage, or other organic substances like tobacco or charbroiled meat. They can also be found in asphalt pavement and roofing products, and a few are used in medicines or to make dyes, plastics, and pesticides. PAHs were detected at low concentrations but above risk-based cleanup levels in surface soil at the Site, particularly in soils that received runoff from parking lots. The PAHs found in the Site soils above ROD cleanup levels are: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and indeno(1,2,3-cd)pyrene.

PCBs or Polychlorinated Biphenyls are man-made chemicals that were used in electrical manufacturing and were banned in 1979. Areas of the Site such as the Cooling Water Recharge Pond and the Sweepings Piles that accepted wastewater dredged materials from the Pond have been contaminated with PCBs above the cleanup level of 1 ppm.

VOCs or Volatile Organic Compounds include a variety of chemicals that are used in glue, paint, solvents, and other products and easily evaporate. VOCs found in Site groundwater include 1,1-Dichloroethane (1,1-DCA), trichloroethylene (TCE), tetrachloroethene (PCE) and Vinyl Chloride (VC); each of these VOCs exist in Site groundwater at concentrations that exceed the MCL or risk-based cleanup level.

SVOCs or Semivolatile Organic Compounds are chemicals that have limited volatility at room temperature. The SVOC 1,4-dioxane is present in groundwater at the Site above the risk-based cleanup level of 0.46 µg/L and is believed to have been included as a stabilizer in solvents historically used at the Site.

### 2.4.2 Principal and Low-Level Threat Wastes

The principal and low-level threat wastes addressed by the ROD are summarized in the following table:

| **Principal Threat Wastes** | **Contaminant(s)** | **Action to Be Taken** |
|---|---|---|
| Holding Basin Soils | Depleted Uranium (DU) | In-Situ Sequestration/ Containment |
| **Low-Level Threat Wastes** | **Contaminant(s)** | **Action to Be Taken** |
| Site-wide Soils and Sediments | DU, PCBs, PAHs, Copper | Excavation/Off-Site Disposal |

### 2.4.3 Exposure Pathways, Areas, and Media Posing Significant Risk

Section G of the ROD discusses risks characterized in the Baseline Human-Health and Ecological Risk Assessments. The risk pathways and areas posing unacceptable risk are summarized in the following table:

| | **Exposure Pathway** | | | | | |
|---|---|---|---|---|---|---|
| **Area of Site** | **Future Resident (adult and young child)** | **Recreational Visitor (young child)** | **Trespasser older child/ adolescent** | **Outdoor Worker** | **Construction Worker** | **Ecological Risks** |
| **AOI 1 Holding Basin** (surface and subsurface soil | **X** | **X** | | | **X** | |
| **AOI 2 & 4 Cooling Pond Soils** (surface and subsurface soil) | **X** | **X** | | | **X** | |
| **AOI 7 & 11 Industrial Area East** (surface and subsurface soil) | **X** | **X** | | **X** | **X** | |
| **AOI 7 & 11 Industrial Area East** (subsurface soil) | **X** | **X** | | | **X** | |
| **AOI 8 Sweepings Area** (surface and subsurface soil) | **X** | **X** | | | **X** | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **AOI 14 North** (surface soil) | X | | | | | |
| **Groundwater**: on-property bedrock and overburden, off-property bedrock and overburden | X | | | | | |
| **Cooling Water Recharge Pond** (sediment) | X | X | X | | | X |
| **Bog** (sediment) | | | | | | X |

## 2.5 Current Regulatory Framework

On October 17, 2019, the USEPA lodged a CD with the United States District Court for the District of Massachusetts Eastern Division in connection with Civil Action No. 19-12097-RGS (USEPA, 2019). The CD was entered by the Court on December 6, 2019. The CD and the SOW, provided as Appendix B to the CD, describe the RD/RA activities to be performed for Site. The RD/RA activities are to be undertaken by the SDs to the CD, with funding contributions from the SFAs.

To efficiently implement the remedy outlined in the ROD, the work will be divided into five RA projects.[2] The five RA projects are:

1) excavation and off-site disposal of contaminated sediments, underground drain lines and debris, and non-HB soils, or "Site-wide Soils and Sediments;"
2) In-situ Sequestration (ISS) of DU in soils and of DU and natural uranium in overburden and bedrock groundwater or "ISS;"
3) containment of HB stabilized soils with a low-permeability vertical wall and horizontal sub-grade cover or "HB Containment;"
4) hydraulic containment and ex-situ treatment of contaminants found in Table L-1 of the ROD, including VOCs and 1,4-dioxane in groundwater (off-property system); and
5) In-situ or ex-situ treatment of contaminants found in Table L-1 of the ROD, including VOCs and 1,4-dioxane in on-property groundwater. Currently a pre-design investigation consisting of one year of ex-situ treatment of 1,4-dioxane and VOCs in bedrock groundwater and two years of monitoring.

Section 3.1 of the SOW requires submittal of a Remedial Design Work Plan (RDWP) to summarize pertinent Site information, identify and describe the scopes and procedures for

[2] RA Projects 1) – 4) are outlined in Section 1.4 of the SOW. The need for RA Project 5) was identified during the Groundwater NTCRA. The Groundwater NTCRA was a 2016 EPA Action to address 1,4-dioxane in overburden groundwater. Since work commenced, the project team has identified bedrock groundwater as a hurdle to be handled separately from the overburden plumes.

various pre-design investigations, describe the anticipated RD process, and discuss the RD-related deliverables and schedule.

As required by Section 3.3(a) of the SOW, Pre-Design Investigation Work Plans (PDI WPs) have been prepared for the three remedial components (Site-wide Soils and Sediments, ISS, and HB Containment). Hydraulic containment and ex-situ treatment of VOCs and 1,4-dioxane in groundwater as required by the Groundwater NTCRA is operating and does not require further PDI work to complete, however, the extent of 1,4-dioxane and VOCs in bedrock groundwater in the area up gradient from the extraction well needs further delineation. Separate PDI WPs were prepared for each remaining remedial component (the 1,4-dioxane remedial component in overburden groundwater was initiated through the Groundwater NTCRA), and were attached to the RDWP as Appendices as follows:

- Site-wide Soils and Sediment PDI WP (Appendix A)
- ISS PDI WP (Appendix B)
- HB Containment PDI WP (Appendix C)
- 1,4-dioxane and VOCs in Bedrock Groundwater (Appendix D)

Section 3.4(a) of the SOW requires performance of Treatability Studies (TS) to support the ISS component of the remedy. Separate studies are needed to evaluate and select treatment materials/reagents, for high concentration DU within the HB, low concentration DU outside the HB, and isotopically natural U in bedrock, respectively. In addition to reagent selection, each media will require evaluation to determine the best means to apply the selected reagent. The Treatability Study Work Plan (TSWP) was attached as Appendix E.

The RDWP also included the following “Supporting Deliverables”:

- To continue the Post-Removal Site Control (PRSC) requirements established pursuant to the Building NTCRA (*de maximis*, 2017), a “” Post Removal Site Control Plan” (PRSC)” was provided as Appendix F.
- Health and Safety Plan (HASP) – Appendix G
- Emergency Response Plan (ERP) – Appendix H
- Sampling and Analysis Plan in two parts as:
    - Field Sampling Plan (FSP) – Appendix I
    - Quality Assurance Project Plan (QAPP) – Appendix J
- Site Wide Monitoring Plan (SWMP) – Appendix K
- Community Relations Support Plan (CRSP) – Appendix L.

The *Remedial Design Work Plan* was approved by USEPA in September 2020. A detailed chronology of events and deliverables pertinent to the Site is included as Appendix A.

### 2.5.1 Remedial Action Objectives

Remedial Action Objectives (RAOs) are medium-specific goals that define the objective of remedial actions to protect human health and the environment. RAOs specify the COCs, potential exposure routes and receptors and provide a general description of what the cleanup

will accomplish. The RAOs are based on available information and standards, such as applicable or relevant and appropriate requirements (ARARs) and site-specific risk-based levels. These RAOs were developed to mitigate, restore and/or prevent existing and future potential threats to human health and the environment.

The RAOs for the selected remedy for the Site are to:

(1) Prevent direct human exposure by a future resident (by dermal contact, ingestion, inhalation, or ionizing radiation) to soils or sediments with contaminants (DU, PCBs, PAHs, and other inorganics) that exceed risk-based standards;

(2) Prevent migration of DU/uranium from soils in the HB that would result in groundwater concentrations exceeding ARARs;

(3) Prevent potential future exposure to contaminated indoor air by a future resident/commercial worker;

(4) Prevent potential human exposure (ingestion, dermal contact, vapor inhalation) by a future resident to groundwater impacted by the Site that may be used as a domestic water supply with VOC, SVOC, DU, or inorganic contaminant concentrations that exceed ARARs or risk-based standards;

(5) Protect ecological receptors from exposure to contaminants (PCBs, copper) in sediments indicative of adverse effects at the Cooling Water Recharge Pond;

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

(7) Restore groundwater within the contaminant plumes to its beneficial use as a potential drinking water supply by meeting ARARs including federal MCLs, or in their absence, by meeting cleanup levels protective of human health; and

(8) Limit migration of VOCs, SVOCs, uranium (depleted and/or naturally occurring), PAHs, and other inorganics in groundwater within the contaminant plumes at concentrations that would exceed ARARs or risk-based standards.

**2.5.2 Performance Standards**

Cleanup levels for groundwater are specified by the USEPA in Table L-1 of the ROD. Cleanup levels
for soil are specified in Table L-2 of the ROD. Cleanup levels for sediment are specified in Table

L-3 and L-4 of the ROD. These cleanup levels are summarized in Tables 1 through 3 of the RDWP.

The remedy will comply with all federal and any more stringent state ARARs that pertain to the Site. A detailed list of ARARs/"to-be-considered" (TBC) requirements was provided in Appendix D of the ROD. ARARs/TBCs for the RD/RA are summarized Tables 4 through 7 of the RDWP.

## 3.0 Monitoring Network and Schedule

The proposed monitoring network associated with the Groundwater Monitoring Program initially consisted of approximately 130 monitoring wells to be used for sampling and water level measurements as determined following the Monitoring Well Integrity Assessment summarized in the SWMP (Appendix K of the RDWP). This initial number of monitoring wells has grown through implementation of PDIs and identification of potential data gaps. As of the end of this Reporting Period (April 2023), a total of 205 monitoring wells, 10 surface water points, 1 extraction well, and 2 municipal supply wells make up the monitoring network used for sampling and/or water level measurements.

The data obtained from this extensive monitoring network was used to identify and monitor the COC plume in terms of:

- Plume extent;
- Temporal and spatial variations in plume chemistry and geometry;
- Capture of all groundwater that exceeds risk-based levels;
- Progress in meeting the long-term remedial goal of groundwater restoration; and
- Effectiveness of institutional controls.

Due to the size and nature of the monitoring network, monitoring wells were grouped into four different sampling groups based on their sampling intent and are further described below. Table 1a summarizes the specific wells included in each well designation group as well as their well construction details.

The various designations are as follows:

"M" – indicates wells subject to monthly sampling.

"S" – indicates wells subject to semi-annual sampling (water-level gauging only).

"A" – indicates wells subject to annual sampling.

"C" – indicates wells subject to comprehensive sampling.

<u>Monthly Sampling</u>

Monthly sampling is applicable to the "M" group designations as indicated on Table 1b and shown on Figure 4a. These wells are appropriate to monitor on a monthly basis for the following reasons:

- Confirm the effectiveness of hydraulic containment by the FGWTS; and
- Evaluate influent 1,4-dioxane concentrations at the Acton Water District Assabet 1A and 2A production wells.

Following submittal of the RDWP in March 2020, 11 monitoring locations are monitored as agreed upon in the Remedial Design / Remedial Action - Monthly Progress Report No. 04 – March 2020 and the June 2020 Remedial Design / Remedial Action – Groundwater Treatment System Operations & Maintenance Plan – Revision 1.

Semi-Annual Gauging

Semi-annual gauging is applicable to the "S" group designations and is focused solely on collection of hydraulic elevations across the NMI Site. This round of monitoring is designed to assist in defining potentiometric surfaces and confirm hydraulic containment of the 1,4-dioxane plume is being maintained. Monitoring wells to be measured during this round are presented in Table 1c and shown on Figure 4b.

Annual Sampling

Annual sampling is applicable to the "A" group designations as indicated on Table 1d and shown on Figure 4c. These wells are appropriate to monitor annually for the following purposes:

- Confirm the effectiveness of plume containment by the FGWTS;
- Confirm that the 1,4-dioxane plume and VOC concentrations remains stable and/or attenuating; and
- Confirm the extent of the DU plume in overburden and U plume in bedrock is stable and/or attenuating.

Note that Tables 1a and 1d reflect results of *de maximis*'s March 13, 2023, request for specified wells to be removed and added from the annual sampling program, as conditionally approved by USEPA on March 28, 2023.

Comprehensive Sampling

Comprehensive sampling is applicable to the "C" group designation as is indicated on Table 1e and shown on Figure 4d. These wells were selected to provide a strong dataset for the following purposes:

- Confirm the effectiveness of plume containment by the FGWTS;
- Confirm that the 1,4-dioxane plume and VOC concentrations remains stable and/or attenuating;

- Confirm the extent of the DU plume in overburden and U plume in bedrock is stable and/or attenuating;
- Evaluate trends and progress towards meeting site-wide PS; and
- Confirm that the groundwater remedy described in the ROD remains protective of human health and the environment, including analysis of data to determine the impact of the post-soil remedy on vapor intrusion risk on the 2229 Main Street property.

An initial comprehensive sampling event (all available wells) was conducted in November 2019 under the Groundwater NTCRA which has been summarized and submitted as part of Appendix B of the RDWP. A second comprehensive event was performed in April of 2021[3] Comprehensive sampling events after that will be performed every five years, during the year prior to a Five-Year Review. The next comprehensive sampling event will be conducted in 2026. These comprehensive events are expected to encompass all available wells to provide information regarding progress in meeting Site-wide groundwater PS.

### 3.1 Monitored Parameters and Sampling Procedures

The annual groundwater elevation round was conducted prior to the start of sampling during each sampling event by measuring the depth to water in each monitoring well from the well casing reference point using an electronic detector (M-scope) (SOP NMI-GW-009). The groundwater elevation was then calculated in feet above mean sea level (ft ASML or ft NGVD) by subtracting the measured water depth from the previously surveyed elevation of the well casing reference point. Note that when a groundwater elevation round was taken as part of the sampling round, depth to water was measured again at every well prior to purging and sampling.

Following meter calibration (SOP NMI-003), standard monitoring wells were purged with a submersible bladder pump (SOP NMI-002) and sampled in accordance with the United States Environmental Protection Agency (USEPA) low-flow sampling protocols as described in SOP NMI-GW-010 or SOP NMI-GW-011 and water chemistry parameters, including temperature, pH, ORP, DO, specific conductance, and turbidity, were measured and recorded during purging to verify stabilization prior to sample collection.

Due to an unconventional well construction, BarCad sampling systems were purged and sampled using procedures outlined in SOP NMI-GW-014 and water samples from the Town of Acton municipal supply well Assabet 1A, located in the Assabet wellfield, was collected from the faucet connected to subsurface lines that carry untreated (raw) water to the Acton Water District treatment plant using procedures outlined in SOP NMI-GW-015. Assabet 2A well was inadvertently not sampled as discussed in Section 4.1, and the sample location thought to be

[3] Due to access issues and continuing PDI work, a number of monitoring wells were not installed at the time of the second comprehensive sampling event. These wells will be included in the next comprehensive event.

Assabet 2A was in fact a combined source location of wells Assabet 2, Assabet 2A, and Assabet 3.

Samples were stored on ice in a cooler and shipped under Chain or Custody procedures (SOP NMI-001) to the environmental laboratory for analysis per the laboratory protocols described in the QAPP. All non-consumable equipment was decontaminated between sampling locations per SOP NMI-007.

As summarized in Tables 1b through 1d, samples were collected and analyzed for all, or a subset of, the following parameters:

- VOCs by USEPA Method 8260D
- 1,4-dioxane by USEPA Method SW846 8270E SIM (Selected Ion Monitoring)
- SVOCs by USEPA Method SW846 8270D
- Total uranium (U), U235, U238, and Th232 by USEPA Method 6020A ICP-MS
- Total and dissolved metals by USEPA Method SW846 6020A
- Metals (boron, magnesium, potassium, and sodium) by USEPA Method SW846 6010D
- Nitrate/nitrite by Standard Method (SM) 4500 NO3-F
- Total and dissolved phosphorous by SM 4500-P-E
- Dissolved inorganic carbon by USEPA Method 9060A
- Total organic Carbon (TOC) by SM 5310C
- Ammonia by SM 4500-NN3-H
- Anions (SO42-, F-, Cl-) by USEPA Method 300.0
- Alkalinity (carbonate/bicarbonate) by SM 2320B
- Total Suspended Solids (TSS) by SM 2540D
- Hardness by USEPA Method SW846 6010D

Samples requiring analysis of radioactive constituents (total uranium (U), U235, U238, and thorium (Th)232) were submitted to GEL Laboratories in Charleston, South Carolina. These analyses were completed by Method 6020A ICP-MS (Inductively Coupled Plasma - Mass Spectrometry) and included analyses for other metals. Additionally, samples analyzed for dissolved inorganic carbon by USEPA Method 9060A were submitted to GEL. Samples collected for non-radioactive analytes were submitted to Alpha Analytical Inc. of Westborough, Massachusetts.

# 4.0 Data Presentation

The Groundwater Monitoring Program activities were conducted monthly, semi-annually (April and October), and annually (April 2023) throughout this Reporting Period. The following Sections summarize the groundwater monitoring program results for the Reporting Period. Scanned copies of field notes, including well purging details for pumped wells and meter calibration forms, are included in Appendix B.

## 4.1 Monthly Sampling

Monthly sampling was conducted by O&M, Inc. under the direction of *de maximis* throughout the Reporting Period. Pursuant to Table 1b, from May 2022 through April 2023, in accordance with the *Remedial Design / Remedial Action - Monthly Progress Report No. 04 – March 2020* and the *June 2020 Remedial Design / Remedial Action – Groundwater Treatment System Operations & Maintenance Plan – Revision* 1, a total of eleven (11) wells were gauged to determine water level and four (4) monitoring wells were sampled for laboratory analysis on a monthly basis.

A Site plan showing the locations of monitoring wells sampled during monthly sampling events is presented on Figure 4a.

Please note, based on communications between Mr. Todd Majer of *de maximis* and Ms. Alexandra Wahlstrom, Environmental Compliance Manager for the Water Supply District of Acton (Acton), it was determined that the sample location for Assabet 2A used to date, was actually the sample point for the blended water from multiple Town of Acton production wells (Assabet 2, Assabet 2A, and Assabet 3). The Town of Acton was not able to give an exact timeline of when these three production wells were combined and piped into the sample port located within a designated building where O&M Inc. has been taking the monthly sample for nearly four years. On August 14, 2023, Ms. Wahlstrom showed the current location of the sample port for Assabet 2A to *de maximis* and O&M, Inc. personnel and O&M, Inc. collected a sample from this location as part of the August 2023 monthly sampling event. As a result, samples previously collected and assumed to be Assabet 2A are instead the blended water from Assabet wells 2, 2A and 3 and are labeled as such on Table 3. Additionally, a note has been added to Table 1b to specify that, as of August 2023, the sample location was revised based on communication from the Acton Water District and represents water quality at Assabet 2A. On August 22, 2023, representatives of USEPA and MassDEP were advised of the clarification received from the Acton Water District and the revised sampling location for Assabet 2A.

### 4.1.1 Depth to Water Measurements

Depth to water measurements were collected prior to sampling activities, where possible. A tabulated summary of groundwater elevations collected as part of monthly sampling events is included as Table 2a and Table 2b.

### 4.1.2 Groundwater Sampling

Laboratory analytical samples were collected pursuant to the methodology described in the FSP and analyzed for 1,4-dioxane as outlined in Table 1b. A calibrated water quality sonde was used to collect geochemical parameters (temperature, specific conductance, DO, ORP, pH and turbidity) prior to sample collection for laboratory analysis from each monitoring well.

Tabulated summaries of analytical results for 1,4-dioxane in groundwater with a comparison of measured values to the applicable groundwater MCLs are included as Table 3.

## 4.2 Semi-Annual Gauging

Semi-annual gauging was conducted during the Reporting Period by O&M, Inc. under direction of *de maximis*, on October 19, 2022, and concurrently with the annual sampling event on April 3, 2023.

On October 19, 2022, pursuant to Table 1c, a total of one-hundred and sixty-four (164) wells were gauged to define the potentiometric surface coinciding with the sampling event. Well GZW-6-1 was not found after several attempts during the October 2022 semi-annual gauging event and April 2023 annual gauging event and was consequently not gauged during the Reporting Period. As mentioned, the April 2023 semi-annual gauging event was conducted concurrently with the annual sampling event, the specifics of which are summarized below in Section 4.3.

A Site plan showing the locations of monitoring wells gauged during semi-annual sampling event is presented on Figure 4b.

### 4.2.1 Depth to Water Measurements

A tabulated summary of groundwater elevations collected as part of the October 2022 and April 2023 semi-annual sampling events is included as Table 2b and 2c.

## 4.3 Annual Sampling Event

Annual sampling, pursuant to Table 1d, was conducted within this Reporting Period by O&M, Inc., Geosyntec Consultants, and Haley & Aldrich, under direction of *de maximis*, from April 3, 2023, through April 11, 2023, the specifics of which are summarized below in Sections 4.3.1 through 4.3.3.

### 4.3.1 Annual Sampling Scope

The annual sampling event was conducted by O&M, Inc., Geosyntec Consultants, and Haley & Aldrich, under direction of *de maximis*, from April 3, 2023, through April 11, 2023. A total of one hundred and sixty-nine (169) monitoring locations were gauged to determine water level and sixty-five (65) monitoring locations were sampled for laboratory analysis. The total wells sampled includes 58 standard monitoring wells, extraction well EW-1, municipal wells Assabet 1A and a combination of Assabet 2, 2A, and 3 (see Section 4.1) operated by the Acton Water

District, 3 surface water samples from the Assabet River, 4 bedrock extraction wells, and 4 BarCad® sampling systems installed in wells GZW-7-1, GZW-10-2, ML-1-1, ML-1-3.

A Site plan showing the locations of monitoring wells sampled during the annual sampling events is presented on Figure 4c.

#### 4.3.2 Depth to Water Measurements

Depth to water measurements were collected by O&M, Inc., under direction of *de maximis*, on April 3, 2023, prior to sampling activities.

A tabulated summary of groundwater elevations collected as part of the annual sampling event is included as Table 2c. Additionally, groundwater elevations were plotted to generate potentiometric contours in overburden and bedrock as shown on Figures 5a and 5b, respectively.

#### 4.3.3 Groundwater Sampling

Laboratory analytical samples were collected pursuant to the methodology described in the FSP and analyzed for the parameters as outlined in Table 1d, including appropriate quality control (QC) sampling as described in the QAPP. A calibrated independent water quality sonde was used to collect geochemical parameters (temperature, specific conductance, DO, ORP, pH and turbidity) prior to sample collection for laboratory analysis from each monitoring well.

Tabular summaries of analytical results for COCs in groundwater with a comparison of measured values to the applicable groundwater MCLs are included as Table 4a-1 through 4e. A tabular summary of field parameters collected during well purging is included as Table 5. Exceedance ratio dot-maps for COCs in both overburden and bedrock groundwater are provided in Figure 6-1a through 6-15b.

### 4.4 Monitoring Well Inspection and Maintenance

The groundwater wells were visually inspected during each sampling event and any maintenance issues, including missing locks or well caps, were noted on field sampling forms and addressed soon after each event was completed.

### 4.5 Data Validation

Based on the potential uses of data in the decision-making process, performance and acceptance criteria have been specified in the NMI RD/RA SOW. The decision on whether data could be used was based on the validation results. Following validation, the data was flagged, as appropriate, and applicable use restrictions were noted.

The Groundwater Monitoring Program was devised so that the loss of any single data point would not hinder description of the distribution of COCs or the development of a risk assessment. A decision rule was adopted that 90 percent of the data points be deemed usable (not rejected) as a condition for use of the data set for decision-making purposes. The usable data was evaluated versus the performance standards. The required reporting limits were also

documented in Worksheets 15-1 through 15-3 of the QAPP so that the lowest achievable detection limit was reported by the laboratory.

The overall quality assurance objective was to develop and implement procedures for field sampling — Chain-of-Custody, laboratory analysis and reporting — that provide results to support the evaluation of site data consistent with requirements identified in the NMI RD/RA SOW. Specific procedures for sampling, chain of custody procedures, laboratory instrument calibration, laboratory analysis, data reporting, internal QC, audits, preventive maintenance of field equipment and corrective action are described in the FSP and the QAPP.

de maximis Data Management Solutions (ddms) performed validation services on data collected during the Reporting Period. A Tier I Plus data evaluation was performed on all aqueous samples, including QC samples, from the Nuclear Metals Superfund site. The data evaluation was performed using the Region 1 - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures dated June 2018, to the extent possible, Massachusetts Compendium of Analytical Methods (CAM) protocols, the site-specific QAPP, and ddms Standard Operating Procedures (SOPs). Professional judgment was applied as necessary and appropriate.

In general, sample processing was deemed to have been conducted in compliance with protocol requirements and all results were determined to be useable as reported, or usable with minor qualification of values as “estimated (J)”, “estimated biased low (J-)”, “estimated biased high (J+)” or “not detected (U)”. These qualifications were applied due to a range of factors including, but not limited to, the following:

- Discrepancies in total vs. dissolved values (i.e., dissolved values higher than total values);
- Discrepancies in lab duplicate values (elevated or lower relative percent difference);
- Method or calibration blank contamination;
- Equipment blank contamination;
- Serial dilution limits;
- Low recoveries in matrix spike and laboratory control samples;
- Elevated recoveries in matrix spike and laboratory control samples; and
- Exceedances in holding times (mainly on trip blank samples).

Data validation memos further explaining any qualification made to the data collected throughout the Reporting Period are included as Appendix C.

# 5.0 Evaluation of Data

Groundwater Monitoring Program data collected during this Reporting Period was compared to applicable groundwater Cleanup Levels (CLs) as provided in Table L-1 of the ROD (USEPA, 2015). Additionally, Groundwater Monitoring Program data was used to evaluate hydraulic gradients, assess spatial and temporal trends on COC concentrations, and make comparisons to historical data collected at the Site. The following Sections describe the Groundwater Monitoring Program data interpretation and analytical results.

## 5.1 Water Level Measurements and Hydraulic Gradients

Tabulated summaries of groundwater elevations collected throughout the Reporting Period are included as Table 2a through Table 2c. Additionally, groundwater elevations from the April 2023 annual monitoring event were plotted to generate potentiometric contours used to infer hydraulic gradients in overburden and bedrock (Figures 5a and 5b). The following sections summarize initial findings from the hydraulic dataset.

### 5.1.1 Overburden

Interpretations of groundwater elevation measurements from the April 2023 sampling event show that hydraulic gradients at the Site are similar to the results in the RI (*de maximis,* 2014, the 2019 and 2021 comprehensive sampling events, and the 2021-2022 annual sampling event. Horizontal gradients for the 2022-2023 annual sampling event are described as follows. From upgradient to downgradient, horizontal gradients near and downgradient of the HB are northwestward, ranging from 0.021 feet per foot (unitless) immediately downgradient of the HB (HB-PZ-2R to MW-8A), to 0.006 north of Building D and near Route 62 (MW-S27 to MW-1), and 0.0004 in the vicinity of the Assabet River (MW-S35 to MW-S36).

In the areas to the west of the HB from approximately MW-S04 to the GZW-10 there is also a northward horizontal gradient, although the gradient is steeper at approximately 0.06 (MW-S04 to GZW-10-1). The high groundwater elevations in overburden and resulting steep hydraulic gradients in this area are attributed to a silt unit with hydraulic conductivities ranging from 0.4 ft/day at MW-S08 and MW-S23 and 1.5 ft/day at MW-S04, which are low relative to the rest of the overburden at the NMI Property. Gradients from GZW-10 northward across Route 62 near the 2284 Main Street property become much flatter at 0.005 (GZW-10-1 to MW-S15), but the direction is still generally northward.

Near the Assabet River, the gradients are oriented more northwestward because they are influenced by the pumping at extraction well EW-1 (installed in 2016 as part of the NTCRA) and Acton municipal wells Assabet 1A and 2A. In the Assabet wellfield west of the river, the gradients reflect an EW-1 stagnation zone located to the west of wells MW-SD37 and MW-SD38. The estimated EW-1 capture zone at 20 gallons per minute (gpm) is presented on Figure 5a.

Vertical gradients in overburden, as estimated by dividing the head difference by the vertical distance between the center of screened intervals, were evaluated in several overburden well pairs across the Site. Downgradient of the Holding Basin, the well pairs show a significant upward gradient from the deeper overburden to the shallow overburden at well pairs MW-S24/SD24 (0.049) and MW-S60/SD60 (0.052). Generally, April 2023 vertical gradients are variable in the overburden in the central portion of the Site with an upward gradient at MW-S17/SD17 (0.005) and downward gradients at MW-S02/MW-SD02 (0.004), MW-S06/SD06 (0.007), MW-S27/SD27 (0.006), MW-S30/SD30 (0.746 – this is thought to be erroneous due to lower than expected groundwater elevation at MW-SD30 that could not be reconciled), MW-S62A/SD62A (0.021), and MW-S64/SD64 (0.001). In the plateau area on the northwest portion of the Site, downward gradients were observed at MW-S01/SD01 (0.005) and MW-SM13/SD13 (0.0109). A summary of well pairs and vertical hydraulic gradient calculations is included in Table 6.

Adjacent to the Assabet River north of the property, an upward gradient has consistently been measured from the deeper overburden to the water table at the GZW-8-1/P-1A (0.075) and MW-S35/SD35 (0.043) well clusters. A slight upward gradient was measured at MW-S32/SD32 (0.002). Downward gradients were observed at MW-S26/SD26 (0.008) and PT-11P/MW-SD34 (0.0003). In the Assabet Wellfield west of the river, the gradients are generally downward from shallow overburden to deep overburden at well pairs MW-S38/SD38 (0.013), MW-S39/SD39 (0.005), and MW-S40/SD40 (0.037), which may be attributable to active pumping at municipal supply wells and EW-1 which are all screened in deep overburden; an upward gradient was observed at MW-S37/SD37 (0.029). Historically, an upward gradient has been observed at MW-S38/SD38, and a downward gradient has been observed at MW-S37/SD37. This change in gradient may be attributable to the alteration of pumping rates from the municipal supply wells Assabet 1A (pumping rate decreased from historical rates) and Assabet 2 and 2A (pumping rate increased from historical rates).

### 5.1.2 Bedrock

Bedrock groundwater flow directions and gradients inferred from the April 2023 data are similar to those observed at the Site historically and indicate a fairly uniform northwest gradient from upgradient of the former buildings, toward the Skating Rink and Assabet River.

The horizontal gradients in the bedrock aquifer were estimated by linear interpolation between contours on Figure 5b. From upgradient to downgradient the hydraulic gradients were 0.02 in the HB area (HA20-CMT-3B(OW) to MW-BS7-2), 0.009 in the northwest downgradient portion of the property (GZW-10 to GZW-11), and flatter across Route 62 to the Assabet River at 0.003 (MW-BS28 to MW-BS34).

Vertical gradients observed during the April 2023 water level round indicated upward vertical gradients from deeper rock to shallow rock on the property (MW-BM03 to MW-BS03 [0.002]; MW-B3D13 to MW-B2D13 [0.0048], and MW-B1D13 to MW-BS13 [0.011]; MW-B2D28 to MW-

B1D28 [0.0022] and from MW-B1D28 to MW-BS28 [0.0106]). Near the Assabet River, an upward gradient from deeper rock to shallower rock was observed (MW-BM15/BS15 [0.013]). The heads in the bedrock versus overburden indicate a downward gradient from overburden to bedrock on the southwestern portion of the NMI Property (MW-S03/BS03 [0.172] and MW-S04/BS04 [0.213]); vertical gradients were variable further downgradient on the northwestern portion of the NMI Property with an upward gradient from bedrock to overburden at MW-SD13/BS13 (0.0471) and a downward gradient from overburden to bedrock at GZW-10-1/10-2 (0.0126). The gradients in the central portion of the NMI Property were variable, with an upward gradient observed at MW-SD02/BS02 (0.007) and a downward gradient observed at MW-SD17/BS17 (0.013). Upward gradients were observed from bedrock to overburden near the Assabet River (MW-BS32 to MW-SD32 [0.009], MW-BS34 to MW-SD34 [0.02], and MW-BS35 to MW-SD35 [0.021]) (see Table 2c and Table 6).

## 5.2 Groundwater Sampling Analytical Results

Tabular summaries of the April 2023 sampling event analytical results for COCs in groundwater with a comparison of measured values to the applicable groundwater CLs are included as Table 4a-1 through 4e. The discussion of results in the following sections is supplemented with figures depicting the current distribution of contaminants. Additional figures, depicting the exceedance ratios (i.e., concentrations relative to a standard) for selected compounds that have historically been detected above the MCL, Site-specific Risk-based Cleanup Levels or Remediation Goals (RGs), or are of particular interest to the stakeholders are presented in Figures 6-1a through 6-15b.

### 5.2.1 Metals

Metals analysis was performed at forty-two (42) monitoring locations sampled during the April 2023 sampling event. The following sections describe the individual analyte results from the metals analysis.

#### 5.2.1.1 Uranium

Uranium is a naturally occurring metal comprised of three radionuclides $U^{234}$, $U^{235}$ and $U^{238}$. If uranium is processed as part of the uranium fuel cycle, the ratios of these isotopes will change and is typically identified as enriched (increased concentrations of $U^{234}$ and $U^{235}$) or depleted (decreased concentrations of $U^{234}$ and $U^{235}$), relative to the total uranium in the sample. If the ratio of $U^{235}$ to $U^{238}$ is greater than 0.6 percent (%), it indicates natural uranium, while ratios of $U^{235}$ to $U^{238}$ closer to 0.2% indicate depleted uranium (DU). Studies of uranium in groundwater presented in the RI (*de maximis*, 2014) indicated that the majority of overburden groundwater samples with detections of uranium at concentrations greater than background exhibited a *DU isotopic signature*, and the majority of bedrock groundwater samples with detections of uranium greater than background exhibited a *natural isotopic* signature. The isotopic ratios in samples collected in April 2021 through April 2023 corroborated the historical isotopic speciation, with the exception of the isotopic ratio detected in the sample from HA20-CMT-1D1 in April 2021. Bedrock monitoring well HA20-CMT-1D1 was resampled in September 2021,

where the result was consistent with bedrock monitoring wells and exhibited a natural isotopic signature.

*5.2.1.1.1 Depleted Uranium in Overburden Groundwater*

The uranium distribution in overburden groundwater contours from data collected through April 2023 are depicted on Figure 8. The primary source of uranium to overburden groundwater at the Site is historical disposal of source material in the HB. In overburden groundwater, uranium has migrated away from the HB in the direction of groundwater flow to the northwest. In the vicinity of the HB, uranium impacts in overburden groundwater extend from the water table into the till, with the highest concentrations in the immediate vicinity of HB-13 (2,600 micrograms per liter [µg/L]) located in the shallow overburden directly beneath the HB (Figure 6-1a). Results from the April 2023 sampling event for depleted uranium ranged from 0.186 J µg/L (MW-S02) to 2,600 µg/L (HB-13) (Table 4a-1). In the downgradient portion of the overburden uranium plume, impacts are generally confined to the shallower groundwater zones in the stratified drift. The extent of the overburden groundwater plume containing uranium at concentrations exceeding the CL of 30 µg/L is limited to an area between the HB and the footprint of the former Building D. The depleted uranium concentrations at shallow overburden monitoring well MW-S02 located immediately downgradient of former Building D have been highly variable historically and ranged from non-detect in June 2010 to 120 µg/L in October 2012, exceeding the CL in four of 16 sampling events between March 2005 and April 2023. The April 2023 depleted uranium concentration at MW-S02 (0.186 J µg/L) represents the lowest detection at this well since it was first sampled in 2005. The April 2023 depleted uranium concentration at shallow overburden monitoring well MW-S24 remained historically low (1,460 µg/L) although slightly greater than the April 2022 concentration. From 2005 through 2021, MW-S24 depleted uranium concentrations have ranged from 2,550 µg/L to 5,480 J µg/L. This well is located downgradient of one of the two ISS pilot test areas, where shallow injections of amendment were completed in the fall of 2021. A detailed discussion of the groundwater monitoring results from this well and other wells near the ISS pilot test areas can be found in the Predesign Investigation Report for In-Situ Sequestration of Uranium in Overburden Groundwater (Geosyntec, 2022). Although some variability has been exhibited in depleted uranium detections at certain monitoring wells (e.g., MW-S02), the plume is generally stable and consistent with the extent described in the RI and recent sampling events. The concentrations of depleted uranium within the plume are consistent with the ranges of concentrations detected historically.

*5.2.1.1.2 Isotopically Natural Uranium in Bedrock Groundwater*

The uranium distribution in bedrock groundwater and the isoconcentration contours inferred from data collected through April 2023 are depicted on Figures 7 and 9. The zone of elevated uranium corresponds to the hydraulic gradient in bedrock and extends northwest from the HB area (HA20-CMT-3B(OW)) to just upgradient of the northwest corner of the property (MW-

BS28/B1D28/B2D28). From upgradient to downgradient along the axis of the elevated uranium in bedrock, concentrations were:

- 48 J µg/L directly downgradient from the HB [HA20-CMT-3B(OW)]
- 43.9 J µg/L and 70.8 J µg/L near the former Building A at MW-BS03 and BEW-2, respectively
- 28.9 µg/L approximately halfway between former Building A and Route 62 at BEW-3

Concentrations above the CL (30 µg/L) are contained within the property limits; the distribution of the uranium plume exceeding the CL is roughly elliptical in shape with an approximate length of 1,050 feet and an approximate width of 500 feet (Figures 6-2a, 7, and 12). The uranium concentrations detected in wells located along the southern cross-gradient portion of the plume are historically below 10 µg/L except for MW-BS10 (28.2 J µg/L). Downgradient of the Site, uranium was detected at concentrations below the CL. The highest concentration of uranium detected downgradient was at BEW-5 (15.9 µg/L). The complete analytical results for uranium in bedrock groundwater are included in Table 4a-1 and 4a-2.

Uranium concentrations in bedrock are generally similar to or lower than that observed during the RI/FS period. As documented in the RI report, it was hypothesized that solubilization of uranium-bearing minerals in bedrock occurred as a result of altered bedrock groundwater geochemistry caused by historic chemical releases into the Holding Basin. Recent decrease in natural uranium concentrations in bedrock may be due to removal of historical mechanisms that mobilized bedrock uranium (i.e., natural uranium in bedrock is no longer being released) coupled with dilution by non-impacted groundwater from upgradient areas.

**5.2.1.2 Other Metals**

In addition to uranium detections described above, select other metals were detected in groundwater above the respective CLs during the April 2023 sampling event including arsenic, cobalt, iron, manganese, molybdenum, and thorium.

Total Arsenic

- Overburden: There were no exceedances of the CL (10 µg/L) for arsenic in overburden monitoring wells (Table 4a-1, Figure 6-3a).
- Bedrock: Total arsenic was detected above the CL (10 µg/L) in eight bedrock monitoring wells at concentrations ranging from 10.7 µg/L at MW-B1D28 to 492 µg/L at MW-BM03 located on the NMI Property southwest of the former Building A (Table 4a-1, Figure 6-3b). Note that there is no known Site-related source of arsenic; elevated concentrations of arsenic may be related to the same geochemical conditions that led to solubilization of geogenic uranium in bedrock.

Total Cobalt

- Overburden: Total cobalt exceeded the CL (6 µg/L) in one overburden monitoring well at MW-S60 (6.23 J µg/L) (Table 4a-1, Figure 6-4a).
- Bedrock: Total cobalt exceeded the CL (6 µg/L) in one bedrock monitoring well at MW-BS15 (8.58 µg/L) (Table 4a-1, Figure 6-4b).

Total Iron

- Overburden: There were no exceedances of total iron in bedrock monitoring wells (Table 4a-1, Figure 6-5a). The previous annual sampling event in April 2022 indicated that total iron exceeded the CL (14,000 µg/L) in two overburden monitoring wells at concentrations of 14,000 µg/L at MW-SD61 and 17,300 µg/L at MW-S62A located immediately southeast of the former Building D.
- Bedrock: There were no exceedances of the total iron CL in bedrock monitoring wells (Table 4a-1, Figure 6-5b).

Total Manganese

- Overburden: Total manganese exceeded the CL (300 µg/L) in five monitoring wells at concentrations ranging from 417 J µg/L at MW-S62A to 1,540 J µg/L at MW-SD61, with a next highest concentration of 1,140 µg/L at HA20-CMT-3T(OW) (Table 4a-1, Figure 6-6a). Detections of manganese in groundwater are spread across the NMI Property as well as the downgradient properties.
- Bedrock: Total manganese concentrations detected at nine bedrock wells exceeded the CL. The exceedances ranged from 316 µg/L at BEW-3 to 1,090 J µg/L at BEW-5 (Table 4a-1, Figure 6-6b).

Total Molybdenum

- Overburden: Total molybdenum was detected above the CL (100 µg/L) in three overburden monitoring wells near the HB area on the NMI Property at concentrations of 297 µg/L at MW-S24 and HB-13, and 1,060 µg/L at HBPZ-2R (Table 4a-1, Figure 6-7a).
- Bedrock: There were no exceedances of total molybdenum in bedrock monitoring wells (Table 4a-1, Figure 6-7b).

Total Thorium

- Overburden: Total thorium was detected above the CL (0.33 µg/L) in two overburden monitoring wells at concentrations of 1.04 J µg/L at HA20-CMT-3T(OW) and 0.853 J at MW-S24 (Table 4a-1, Figure 6-8a). The exceedances are flagged with the J-qualifier as

an estimate because they are below the laboratory reporting limit but above the limit of detection.

- Bedrock: There were no exceedances of total thorium in bedrock monitoring wells (Table 4a-1, Figure 6-8b).

### 5.2.2 Semi-volatile Organic Compounds including 1,4-Dioxane

This section describes the April 2023 analytical results for 1,4-dioxane; samples collected in April 2023 were not analyzed for other SVOCs. Since 2015, 1,4-dioxane has been the primary focus of groundwater investigations and remedial activities completed under the Groundwater NTCRA due to the impact to the Assabet wellfield. The distribution in overburden and bedrock groundwater are discussed in detail below and presented on Figure 6-9a through 6-9b.

Results from wells sampled monthly for 1,4-dioxane are presented in Table 3. The April 2023 analytical data for SVOCs and 1,4-dioxane are presented in Table 4b.

#### *5.2.2.1 1,4-dioxane in Overburden Groundwater*

The area with 1,4-dioxane impacts in overburden groundwater exceeding the CL (0.46 µg/L) generally extends from the HB to the northwest, across the NMI Property, toward and beneath the Assabet River into the Assabet wellfield (Figure 6-9a, Figure 10a and Figure 10c). The highest concentration of 1,4-dioxane in overburden on the NMI Property during the April 2023 sampling event was detected in well HA20-CMT-3T(OW) (54.6 µg/L) to the northwest of the HB. Concentrations of 1,4-dioxane decrease across the NMI Property to slightly above 5 µg/L at monitoring well MW-SD01 (5.56 µg/L) and below 5 µg/L at monitoring well MW-SD17 (0.369 µg/L) located near the northern edge of the Property.

In the downgradient portion of the plume, the highest 1,4-dioxane concentration in overburden detected in the April 2021 through April 2023 monitoring events was at well MW-SD34 (39.9 µg/L, 51.2 µg/L, and 40.9 µg/L, respectively), located in deep overburden north of the Skating Rink (Table 4b). It is hypothesized that a portion of the 1,4-dioxane mass in deep overburden is attributed to inferred discharge from the bedrock plume (described in the next section). Concentrations of 1,4-dioxane in overburden decrease substantially moving laterally from MW-SD34 in all directions, including the Assabet wellfield where the concentrations west of the Assabet River have dissipated following the initiation of the hydraulic containment system at EW-1 in June 2016. In this area, the maximum detection of 1,4-dioxane during the April 2023 sampling event was at monitoring well MW-SD40 (15.1 µg/L). The previous maximum detection of 1,4-dioxane at MW-SD40 was 4.32 µg/L in April 2021. The next highest detections of 1,4-dioxane in this area were at MW-SD42A (1.92 µg/L), MW-SD44 (1.16 µg/L), and extraction well EW-1 (2.46 µg/L), which are relatively consistent with previous maximum detections from the April 2021 and 2022 sampling events.

The 1,4-dioxane concentrations in Assabet 1A have generally decreased since 2016. Assabet 2A will be monitored at the location identified by Acton Water District in August 2023 as the

sampling tap for the discrete well (see Section 4.1 for further discussion of the Assabet 2A sampling location).

The 1,4-dioxane distribution in groundwater based on April 2023 data is generally similar to the prior sampling events. Monitoring wells installed as part of the NTCRA between 2015 and 2017 provide better resolution in the downgradient portion of the plume and the Assabet Wellfield than was available during the RI.

*5.2.2.2 1,4-dioxane in Bedrock Groundwater*

The 1,4-dioxane in bedrock groundwater and the general extent of the plume exceeding the ROD cleanup level (0.46 µg/L) as inferred from data collected in April 2023 is depicted on Figures 10b and 10c. The plume extends from the HB area, below the main facility, to MW-BS32 near the Assabet River.

The highest 1,4-dioxane concentrations for the April 2023 annual sampling event on the NMI Property were detected at bedrock wells MW-BS13 (57.6 µg/L), BEW-3 (32.9 µg/L), and MW-B1D13 (31.8 µg/L) located to the northwest of former Building A. The concentrations decrease to the south and north of this area. In shallow bedrock well MW-BS7-2, located immediately downgradient of the HB, the 1,4-dioxane concentration detected in April 2023 (17.2 J- µg/L) is similar to the historical detections at wells in this area.

In the off-site downgradient portion of the 1,4-dioxane plume, the highest concentration from the April 2023 annual sampling event was detected at BEW-5 (53.6 µg/L) and MW-BS15 (53.8 µg/L), consistent with historical results. From the MW-BS15 area, 1,4-dioxane concentrations in bedrock decrease approaching the Assabet River to the north of the Skating Rink as demonstrated by results from monitoring well MW-BS32 (below the detection limit). It is inferred that groundwater containing 1,4-dioxane discharges from bedrock to deep overburden in this area as demonstrated by persistent elevated detections of 1,4-dioxane in the deep overburden well MW-SD34 and MW-SD40 (Figure 6-9b, 10c, and 11).

The bedrock 1,4-dioxane plume has historically extended beneath the river and into areas immediately west of the Assabet River. Like the overburden, the 1,4-dioxane concentrations in bedrock have generally decreased following the startup of EW-1 in June 2016.

The distribution of 1,4-dioxane in bedrock is similar to that presented during the RI in portions of the plume where historical data existed; however, the concentrations are generally higher compared to those reported in the RI. Higher concentrations may be attributable to improved analytical method (Method 8270D-SIM) which was not available during the RI, and a greater distribution of monitoring wells.

**5.2.3 Volatile Organic Compounds**

During the April 2023 sampling, samples collected from twenty-seven (27) wells were analyzed for VOCs. Several VOCs were detected above the laboratory reporting limit. Only trichloroethene (TCE) was detected above both its CL (5 µg/L) and Vapor Intrusion Screening

Level (VISL) (0.518 µg/L). 1,1-Dichloroethane (1,1-DCA) was detected above its CL (2.7 µg/L) but below its VISL (7.64 µg/L). Additionally, vinyl chloride (VC) was not detected above its CL (2.00 µg/L), but it was detected above its VISL (0.147 µg/L). A summary of the VOC results is presented in Table 4c and Figures 6-10a through 6-13c.

The VOC exceedances in overburden and bedrock groundwater are generally limited to locations within the footprint of the 1,4-dioxane and uranium plumes. The VOCs in these areas are expected to be treated as part of the remedial activities targeting 1,4-dioxane and uranium. VOC detections in VISL will continue to be monitored and addressed as required throughout the RD/RA and redevelopment activities.

*5.2.3.1 Overburden Groundwater*

VOC detections in overburden groundwater were compared to the CLs. Shallow overburden groundwater results were additionally compared to site-specific VISLs. Shallow overburden monitoring wells are identified in the VOC results summary (Table 4c). The distribution of COCs is described below:

- TCE exceeded the CL (5 µg/L) and VISL (0.518 µg/L) at one overburden monitoring well (Figures 6-11a through 6-11c) at concentrations of 8.8 µg/L at HA20-CMT-3T(OW). Three overburden groundwater samples on the NMI Property and downgradient properties had detections of TCE above the VISL (0.518 µg/L), but below the CL. These detections were in the area of the Assabet wellfield, north of the Skating Rink at MW-S32 (1.5 µg/L) and MW-SD-34 and near the HB at MW-S64 (1.6 µg/L).
- 1,1-DCA does not have a CL in overburden groundwater and results were therefore not compared to a CL. However, 1,1-DCA was not detected in overburden groundwater above the corresponding VISL (7.64 µg/L) during the April 2023 sampling (Figure 6-12a).
- VC was not detected in overburden groundwater above the CL (2 µg/L) or the VISLs (0.147 µg/L) during the April 2023 sampling (Figures 6-13a – 6-13b).

*5.2.3.2 Bedrock Groundwater*

VOC detections in bedrock were compared to the CL and the distribution of COCs is described below.

- VC was not detected above the CL (2 µg/L) in bedrock groundwater during the April 2023 sampling round (Figures 6-13c).
- TCE was not detected above the CL (5 µg/L) in bedrock groundwater during the April 2023 sampling round.
- 1,1-DCA was detected above the CL (2.7 µg/L) in two bedrock monitoring wells (Figure 6-12b) at concentrations of 5.3 µg/L (MW-BS01), and 5.4 µg/L (MW-BS50).

### 5.2.4 Nitrate and Nitrite

The nitrate and nitrite results for wells sampled in April 2023 are presented in Table 4d. A brief discussion of the results and comparison to the historical data is presented below.

#### *5.2.4.1 Overburden Groundwater*

Historically, nitrate was widespread in overburden groundwater at concentrations of up to nearly 2,000 milligrams per liter (mg/L) beneath the HB, as high as 890 mg/L at P-1 north of Route 62, and from 10 to 100 mg/L at other locations in the interior of the Site. The April 2023 results indicate that nitrate has dissipated in overburden groundwater to concentrations below the CL (10 mg/L) at the locations sampled (Figure 6-14a). The highest concentration of nitrate was detected downgradient of the HB at MW-S24(3.68 mg/L). Nitrite was detected below the CL (1.0 mg/L) in the samples collected from overburden groundwater monitoring wells during the April 2023 sampling round (Figure 6-15a). Concentrations of nitrite ranged from non-detect to 0.099 (mg/L) at monitoring well MW-SD60 downgradient of the HB.

#### *5.2.4.2 Bedrock Groundwater*

Historically, nitrate has been detected at concentrations over 1,000 mg/L in bedrock near the HB (GZW-7-2 in 1992), in downgradient bedrock at 11 mg/L (GZW-8-2 in 1992), and in the bedrock supply well at 53 mg/L (SW-2A in 1984). Downgradient of the southwestern septic leach field (ST-1) bedrock groundwater contained as much as 238 mg/L nitrate (GZW-6-3 in 1992). The highest nitrate concentration in the recent April 2023 sampling was detected at bedrock monitoring well MW-BS52 (0.079 J mg/L) (Figure 6-14b). There were no detections above the CL for nitrate. Nitrite was detected at bedrock monitoring well MW-BS52 (0.016 J mg/L) (Figure 6-15b) during the April 2023 sampling round (Table 4d). The current detections of nitrate and nitrite in groundwater have decreased significantly in comparison to the historical results.

### 5.2.5 Geochemical Parameters

Several geochemical parameters (chloride, fluoride, sulfate, alkalinity, carbonate, and phosphorus) were analyzed for in groundwater samples from overburden and bedrock groundwater monitoring wells on the NMI Property. A full summary of the geochemical parameter results from the April 2023 sampling round is presented in Table 4e.

#### *5.2.5.1 Overburden Groundwater*

Geochemical parameters analyzed in samples from overburden monitoring wells can be summarized as follows:

- Chloride was analyzed for eleven overburden monitoring wells, where it was detected at concentrations ranging from 32.9 mg/L at HBPZ-2R to 97.1 mg/L at MW-SD34.
- Fluoride was detected at four of the eight overburden monitoring wells where it was analyzed at concentrations ranging from to 0.051 mg/L at MW-S62A to 0.113 mg/L at HBPZ-2R.

- Sulfate (as $SO_4$) was analyzed for at eleven overburden monitoring wells where it was found at concentrations ranging from 2.85 mg/L at MW-SD61 to 498 mg/L at MW-SD34.
- Alkalinity (bicarbonate as $CaCO_3$) was analyzed for at one overburden monitoring well, HA20-CMT-3T (OW), where it was detected at a concentration of 70.7 mg/L.
- Carbonate (as $CO_3$) was analyzed for at one overburden monitoring well, HA20-CMT-3T(OW), where it was not detected above laboratory detection limits.
- Total phosphorus was detected at eleven of the fifteen monitoring wells where it was analyzed at concentrations ranging from 0.007 J mg/L at HB-13 to 0.146 mg/L at HA20-CMT-3T(OW). The J qualifier indicates this is an estimated quantity.
- Dissolved phosphorus was detected at nine of the thirteen wells where it was analyzed at concentrations ranging from 0.004 J at MW-S60 to 0.068 J mg/L at MW-SD61. The J qualifier indicates this is an estimated quantity.

*5.2.5.2 Bedrock Groundwater*

Laboratory results for bedrock wells sampled for geochemical parameters can be summarized as follows:

- Chloride was analyzed for and detected in two bedrock monitoring wells at a concentration of 17.1 mg/L at BEW-5 and 42.8 mg/L at MW-BS52.
- Fluoride was analyzed for and detected in two bedrock monitoring wells at concentrations of 0.037 J mg/L at BEW-5 and 0.120 mg/L at MW-BS52.
- Sulfate (as $SO_4$) was analyzed for and detected in two bedrock monitoring wells at concentrations of 26.2 mg/L at MW-BS52 and 471 mg/L at BEW-5.
- Alkalinity (bicarbonate as $CaCO_3$) was detected in fifteen bedrock monitoring wells at concentrations ranging from 49.4 mg/L at BEW-4 to 224 mg/L at MW-B1D13.
- Carbonate (as $CO_3$) was not detected above the laboratory detection limit (2 mg/L) in bedrock monitoring wells.
- Total phosphorus was detected in eight of the nine bedrock monitoring wells where it was analyzed at concentrations ranging from 0.004 J mg/L at BEW-4 to 0.068 mg/L at MW-BS01 J. The J qualifier indicates this is an estimated value.

**5.2.6 Field Parameters**

Field parameters (dissolved oxygen [DO], oxidation-reduction potential [ORP], pH, specific conductance, temperature, and turbidity) were measured as part of low-flow sampling procedures per SOP NMI-GW-010 – *Groundwater Sampling Using the Low-Flow Protocol*. The field parameters recorded at monitoring wells immediately prior to sampling are presented in Table 5. The results for overburden and bedrock wells sampled in April 2023, excluding results

from municipal wells Assabet 1A/2A and extraction wells EW-1, BEW-2, BEW-3, and BEW-4, which are not sampled using continuous purging per the low-flow protocols, are summarized below.

*5.2.6.1 Overburden Groundwater*

The ranges of field parameters reported for the thirty monitoring wells screened within the overburden sampled using the low-flow method are summarized below.

- DO readings in April 2023 ranged from 0.05 to 9.86 mg/L with an arithmetic mean of 4.73 mg/L in overburden groundwater. These results are similar to the range (0.00 to 11.50 mg/L) reported in April 2022. The percentage of overburden wells with anoxic conditions (DO less than 0.5 mg/L) was slightly lower at 10% in April 2023, as compared to 14% reported in April 2022. Oxic conditions (DO greater than 2 mg/L) were reported for 63% of the wells in April 2023, as opposed to 60% of the wells in April 2022.
- ORP readings in April 2023 in overburden wells ranged from -127.3 to 188.8 millivolts (mV) with an arithmetic mean of 86.2 mV. About 80% of ORP measurements in overburden groundwater in April 2023 were positive, indicating oxidizing conditions, which is higher than the 69% reported in April 2022.
- pH readings ranged from 5.45 to 7.48 standard units (SU) with an arithmetic mean of 6.21 SU in overburden groundwater, which is similar to the range of pH measurements reported during April 2022 (5.41 to 7.48 SU). Additionally, 60% of the overburden locations had a circumneutral pH (between 6 and 8 SU) in April 2023, which is consistent with the 54% of locations that was observed during the April 2022 event.
- Specific conductance ranged from 0.100 to 2,187 micro-Siemens per centimeter (µS/cm) with an arithmetic mean of 425.4 µS/cm in overburden groundwater which is similar to readings from April 2022 (68.5 to 2,214 µS/cm).
- Temperature ranged from 9.00 to 13.30 degrees Celsius (°C) with an arithmetic mean of 11.09 °C in overburden groundwater.
- Turbidity in samples collected from overburden wells ranged from 0.02 to 69.00 Nephelometric Turbidity Units (NTU) with an arithmetic mean of approximately 8.68 NTU.

*5.2.6.2 Bedrock Groundwater*

The ranges of field parameters reported for the twenty-nine (29) bedrock monitoring wells sampled using the low-flow method are summarized below.

- DO readings ranged from 0.00 to 3.39 mg/L with an arithmetic mean of 0.62 mg/L. These results have a similar range compared to the range of 0.18 to 3.39 mg/L reported in April 2022. The percentage of bedrock wells with anoxic conditions (DO less than 0.5 mg/L) was higher at 50% in April 2023 compared to 20% in April 2022. Oxic conditions

(DO greater than 2 mg/L) were reported for 3% of the wells in April 2023, as opposed to 13% of the wells in April 2022.

- ORP readings ranged from -168.40 to 115.30 mV with an arithmetic mean of -50.10 mV. Negative ORP was measured at 70% of bedrock locations sampled in April 2023, as compared to 67% of bedrock locations in April 2022.
- pH readings ranged from 6.55 to 12.01 SU with an arithmetic mean of 7.82 SU. The pH range for bedrock groundwater in April 2023 is similar to April 2022 (6.49 to 11.79 SU). Additionally, 79% of the bedrock locations had a circumneutral pH (between 6 and 8 standard units) in the April 2023 event as compared to 73% of locations during April 2022.
- Specific conductance ranged from 91.21 to 3,417.5 µS/cm; the measurement at MW-BS51 (3,417.5 µS/cm) was the only measurement greater than 1,068. The arithmetic mean including the MW-BS51 measurement was 600.14 µS/cm and 499.52 µS/cm without the MW-BS51 measurement. The range of specific conductance readings from April 2021 (122.26 to 2,726 µS/cm) is similar to April 2022 (127 µS/cm to 1,291 µS/cm) and April 2023 ranges, not including the MW-BS51 reading.
- Temperature ranged from 9.40 to 20.40 °C with an arithmetic mean of 11.71 °C.
- Turbidity ranged from 0.60 to 58.9 NTU with an arithmetic mean of 10.36 NTU (excluding the over-range turbidity measurement at ML-1-3 of 984.00 NTU) in samples collected from bedrock wells.

# 6.0 Conclusions

The following overall conclusions are made based on the data and analysis results provided in this report.

- The Knox Trail Groundwater Treatment system, installed under the Groundwater NTCRA (*de maximis,* 2018a and 2018b), continues to effectively contain the 1,4-dioxane plume in the vicinity of EW-1;
- Based on qualitative evaluations, 1,4-dioxane and VOC analytical results seem to indicate that concentrations within the plume remain stable and/or continue to attenuate;
- The uranium analytical results indicate that concentration of both DU in overburden and natural uranium in bedrock within their applicable plumes remain stable and continue to attenuate; and

# 7.0 Recommendations / Modifications

The data collected under this Groundwater Monitoring Program will continue to ensure the objectives of the RD/RA SOW are met. Tabular summaries of analytical results will continue to be updated to incorporate the conditions and status of the Site. Trends in COCs will continue to be evaluated as RD/RA progresses to ensure progress is being made towards meeting site wide PS. A monitoring well abandonment evaluation will be submitted prior to the beginning of the April 2024 Annual event to allow time for USEPA approval.

The Remedial Design is still in Pre-Design Investigation phase. The next 5-year review is due in November of 2027. In preparation for the 5-year review some level of statistical analysis will be prepared and presented on the groundwater report submitted in 2026.

# 8.0 References

*de maximis* et. al., 2014 Remedial Investigation/Feasibility Study Report, Nuclear Metals, Inc. Superfund Site, Concord, MA, October 2014.

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# FIGURES

# FIGURE 1
# SITE LOCATION MAP

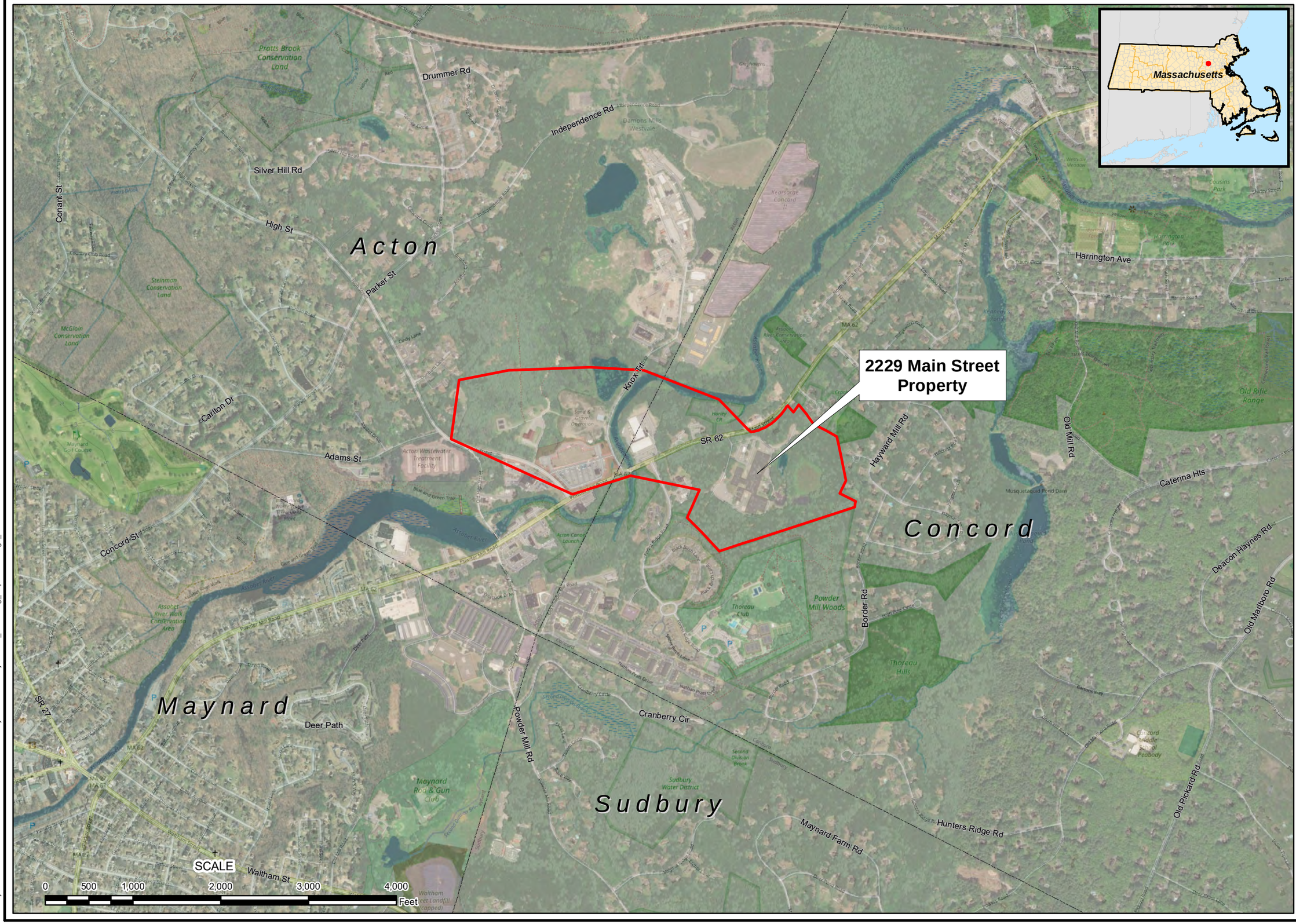



Figure 1

**Site Location Map**

Nuclear Metals, Inc. Site
Remedial Design Work Plan

Concord, Massachusetts

Description:

2229 Main Street Property

Map Legend:

Site Boundary

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

File: Fig1_SiteLoc.mxd
Project No.: 3252
Plot Date: 7/12/2022
Arc Operator: LS
Reviewed by: HG

ddms
www.ddmsinc.com

*de maximis, inc.*

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# FIGURE 2
# AFFECTED PROPERTIES

Figure 2

**AFFECTED PROPERTIES**

Nuclear Metals Inc. Site
RD/RA
Concord, Massachusetts

Description:

Affected property parcels in Concord and Acton, MA.

Map Legend:

- Affected Parcels
- Access Needed

284 High Street
16 Knox Trail-28
112 Powder Mill Road
2320 Main Street
2284 Main Street
2250 Main Street
2194 Main Street
222B Main Street
35 Forest Ridge Road
2229 Main Street

SCALE
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Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
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Plot Info:

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Plot Date: 1 February, 2018
Arc Operator: AM
Reviewed by: HG

ddms

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# FIGURE 3
# AREAS OF INVESTIGATION (AOI) DESIGNATIONS

AOI 18A
ASSABET RIVER

AOI 18B

AOI 9

Route 62 / Main Street

AOI 10

AOI 9

AOI 5

AOI 13

WELL HOUSE #2

WELL HOUSE #1

AOI 13

BLDG D
AOI 13

SHED

SHED

AOI 15

Cooling Water Recharge Pond

AOI 4

Sphagnum Bog

AOI 6

AOI 12

BLDG A
AOI 13

BLDG B
AOI 13

BLDG C
AOI 13

AOI 15

AOI 11

AOI 2

B-4
AOI 13

B-3

AOI 13

TANK HOUSE

Holding Basin

AOI 1

B-1
AOI 13

SHED

B-2
AOI 13

AOI 5

AOI 9

AOI 8

BLDG E
AOI 13

SHED

AOI 3

AOI 14
SURFACE SOILS

AOI 7

| AOI # | AOI Name |
|---|---|
| 1 | Holding Basin |
| 2 | Drum Burial Area |
| 3 | Old Landfill |
| 4 | Cooling Water Recharge Pond |
| 5 | Septic Fields |
| 6 | Sphagnum Bog |
| 7 | Former Waste Storage Area |
| 8 | Sweepings and Fill Area |
| 9 | Pavement Drain Outfalls |
| 10 | Northeast Wetland |
| 11 | Drain Line Area |
| 12 | UST Area |
| 13 | Site Structures |
| 14 | Surface Soils |
| 15 | Transformer Pads |
| 16 | Groundwater (Site-wide) |
| 17 | Background Areas (Off-site) |
| 18A | Assabet River Main Channel |
| 18B | Assabet River Embayment |

**Legend**

Pavement Outline

N

0 40 80 Feet

Prepared by BJR | Checked by AMR

Figure 3
Areas of Investigation

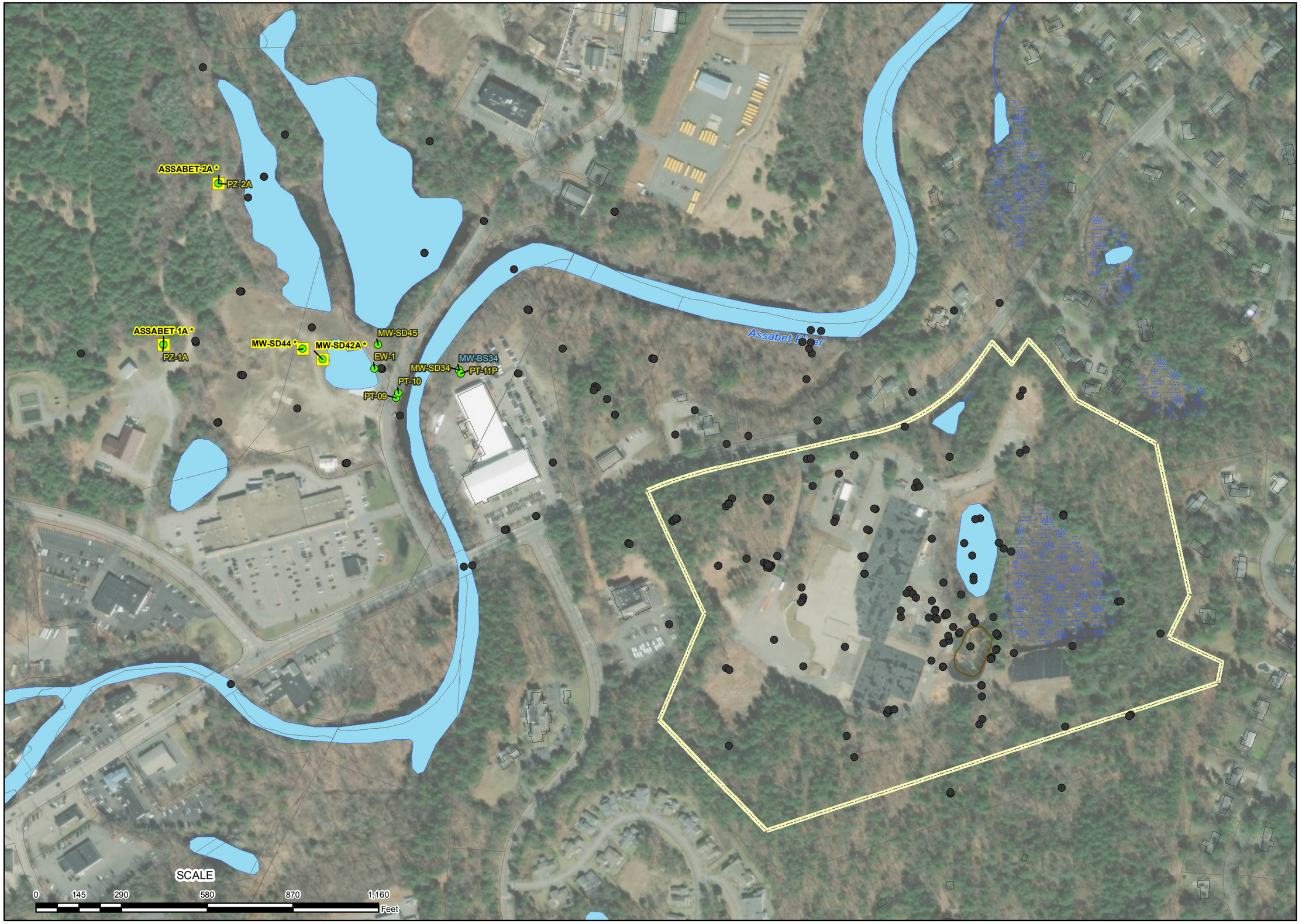
*de maximis, inc.*

Nuclear Metals, Inc.
Concord, Massachusetts

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# FIGURE 4
# MONITORING WELL NETWORK

4a. Site Plan – Monthly Sampling Well Network
4b. Site Plan – Semi-Annual Sampling Well Network
4b (detail). Site Plan – Semi-Annual Sampling Well Network
4c. Site Plan – Annual Sampling Well Network
4c (detail). Site Plan – Annual Sampling Well Network
4d. Site Plan – Comprehensive Sampling Well Network
4d (detail). Site Plan – Comprehensive Sampling Well Network




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# Figure 4a

**Site Plan**

Monthly Sampling
Well Network
(RDRA List)

Nuclear Metals Inc.
Concord, Massachusetts

Description:

Selected wells to be sampled and/or gauged from the monitoring well network are labeled (color distinguishes the screen formation). Well symbols that have a halo indicate that they will also receive an analytical sample analysis.

- Well Location
- Monthly Gauged Locations (13 Total)
- Overburden Well Analytical Sample (4 Total)

Overburden Monitoring Well
- MW-01 - sampled
- MW-01 - gauged only

Bedrock Monitoring Well
- MW-01 - sampled
- MW-01 - gauged only

Other Monitoring Well/Surface Water
- MW-01 - sampled
- MW-01 - gauged only

Sampling Plan list was agreed upon in the July 2019 Non-Time-Critical Removal Action for Groundwater – Groundwater Treatment System Operation & Maintenance Plan.

* indicates that the monitoring well location is included in the condensed monitoring well list as agreed upon in the Remedial Design / Remedial Action - Monthly Progress Report No . 04 – March 2020 and the June 2020 Remedial Design / Remedial Action – Groundwater Treatment System Operations & Maintenance Plan – Revision 1.

Spatial Projection:

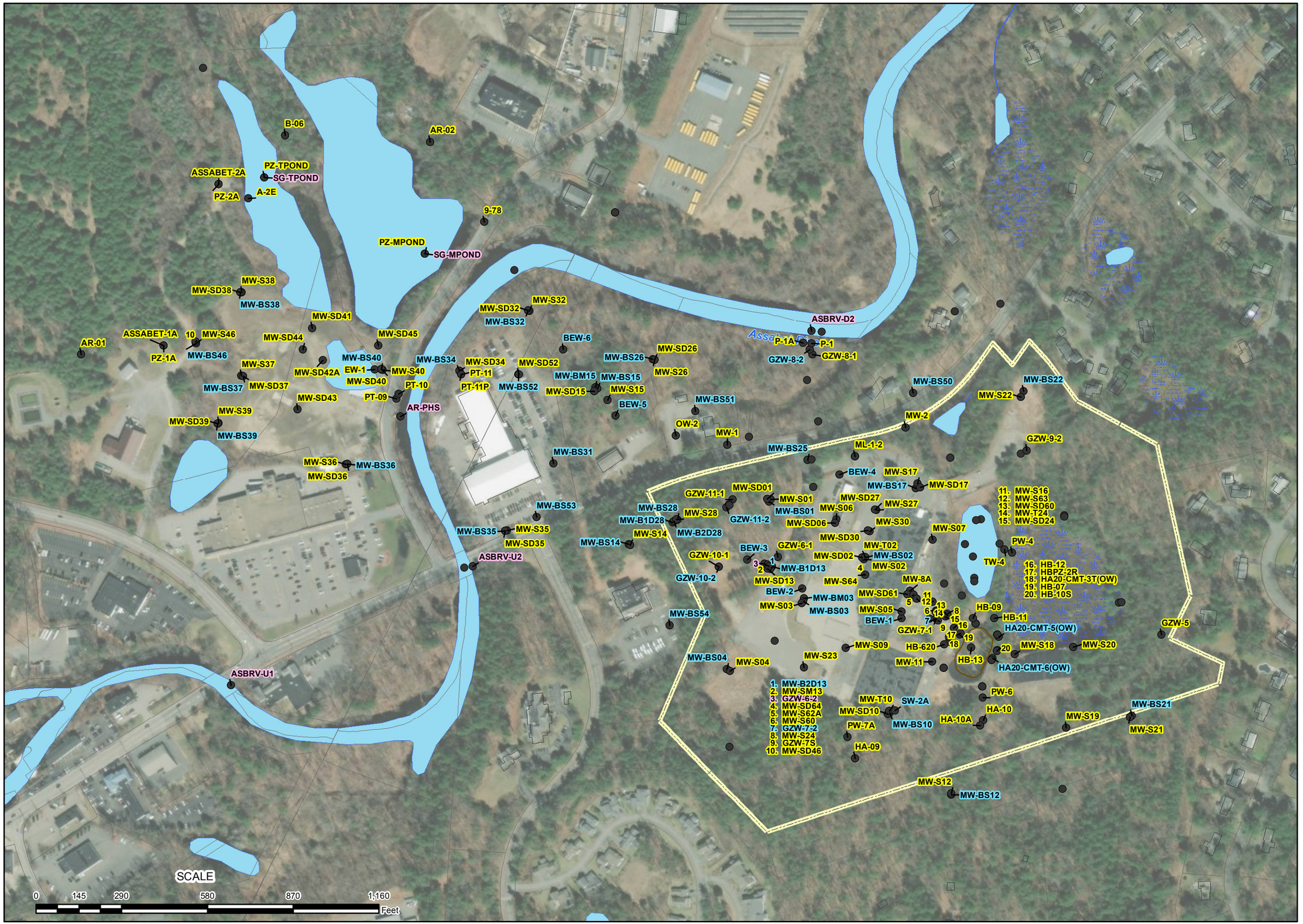
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Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

Project No.: 3243
Plot Date: 27 December, 2023
Arc Operator: JNR
Reviewed by: AH

ddms




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Figure 4b

**Site Plan**

Semi-Annual Sampling Well Network

Nuclear Metals Inc.
Concord, Massachusetts

Description:

Selected wells to be gauged from the monitoring well network are labeled (color distinguishes the screen formation).

- Well Location

MW-01 Overburden Monitoring Well

MW-01 Bedrock Monitoring Well

MW-01 Other Monitoring Well or Surface Water

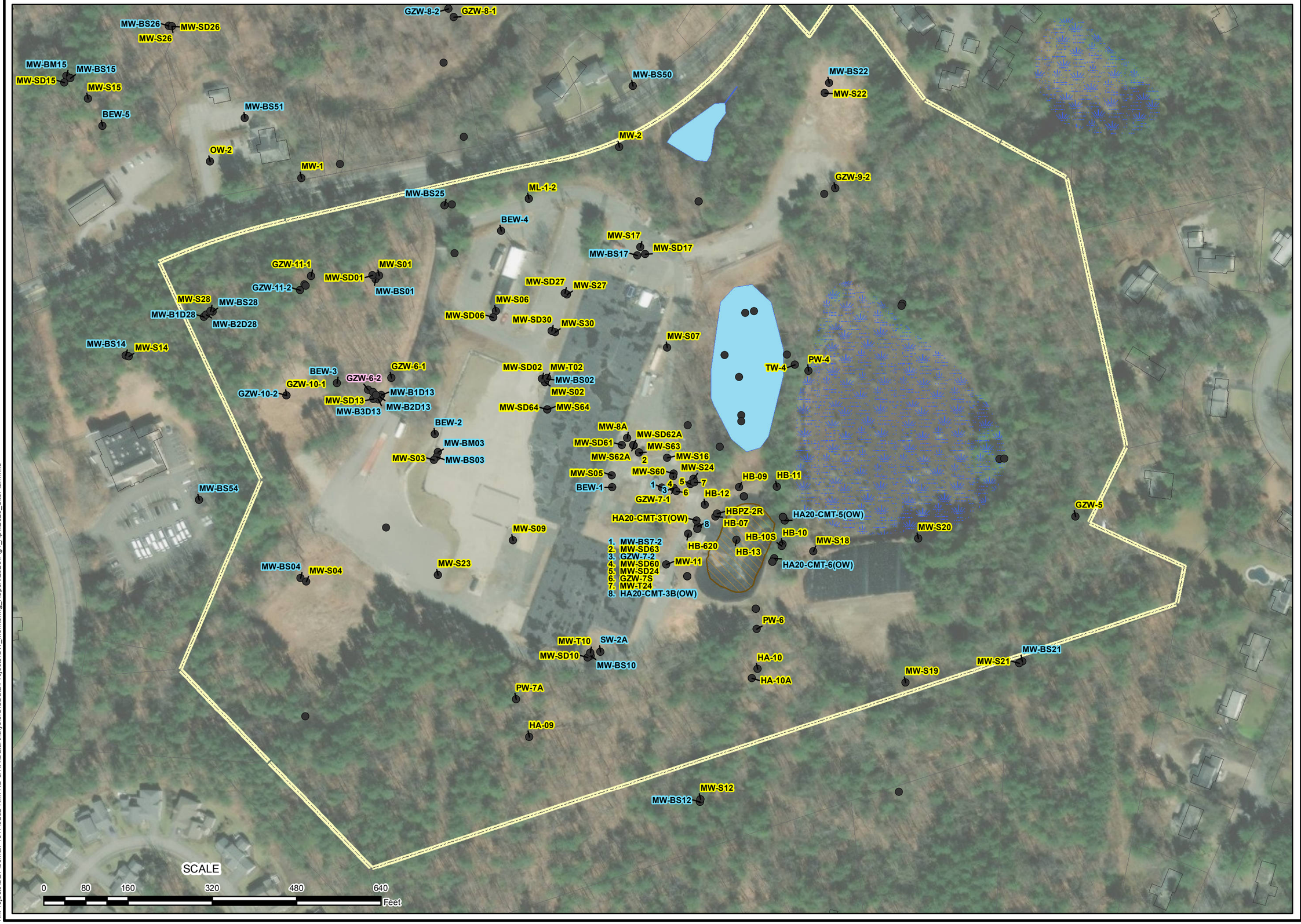
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Plot Info:

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Arc Operator: JNR
Reviewed by: AH

ddms




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# Figure 4b (detail)

**Site Plan**
Semi-Annual Sampling
Well Network

Nuclear Metals Inc.
Concord, Massachusetts

Description:

Selected wells to be gauged from the monitoring well network are labeled (color distinguishes the screen formation).

- Well Location

- MW-01 Overburden Monitoring Well
- MW-01 Bedrock Monitoring Well
- MW-01 Other Monitoring Well or Surface Water

Spatial Projection:

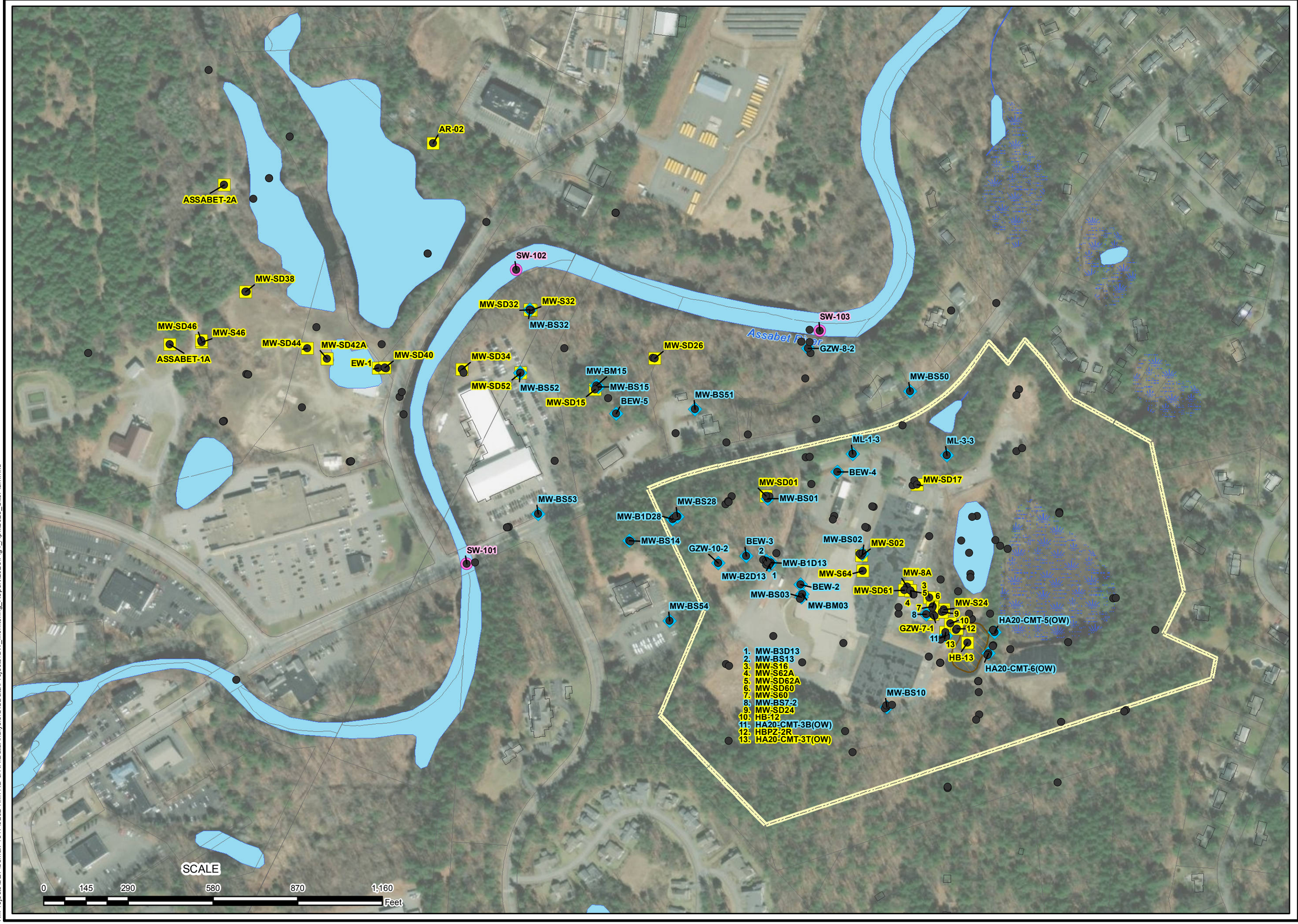
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Coordinate System:
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FIPS Zone: 2001
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Plot Info:

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Arc Operator: JNR
Reviewed by: AH

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# Figure 4c

**Site Plan**

Annual Sampling Well Network

Nuclear Metals Inc.
Concord, Massachusetts

Description:

Selected wells to be sampled and/or gauged from the monitoring well network are labeled (color distinguishes the screen formation). Well symbols that have a halo indicate that they will also receive an analytical sample analysis.

- Well Location
- Overburden Well Analytical Sample (34 Total)
- Bedrock Well Analytical Sample (32 Total)
- Other Analytical Sample (3 Total)

MW-01 Overburden Monitoring Well

MW-01 Bedrock Monitoring Well

MW-01 Other Monitoring Well or Surface Water

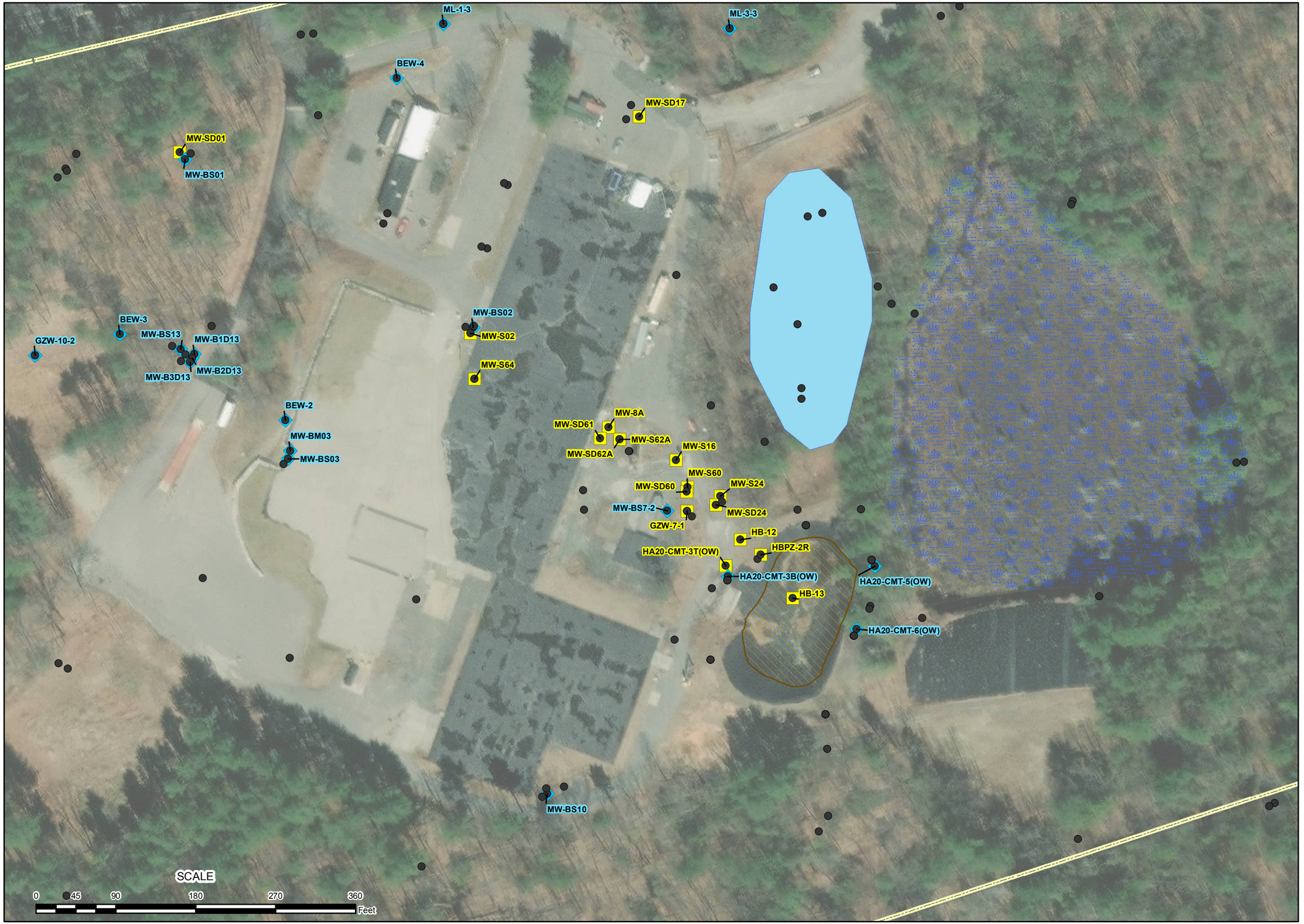
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Reviewed by: AH

ddms




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# Figure 4c(detail)

**Site Plan**
Annual Sampling
Well Network

Nuclear Metals Inc.
Concord, Massachusetts

Description:

Selected wells to be sampled and/or gauged from the monitoring well network are labeled (color distinguishes the screen formation). Well symbols that have a halo indicate that they will also receive an analytical sample analysis.

- Well Location
- Overburden Well Analytical Sample (18 Total)
- Bedrock Well Analytical Sample (19 Total)

MW-01 Overburden Monitoring Well

MW-01 Bedrock Monitoring Well

MW-01 Other Monitoring Well or Surface Water

Spatial Projection:

N

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

Project No.: 3243
Plot Date: 27 December, 2023
Arc Operator: JNR
Reviewed by: AH

ddms

# Figure 4d

**Site Plan**

Comprehensive Sampling Well Network

Nuclear Metals Inc.
Concord, Massachusetts

Description:

Selected wells to be sampled and/or gauged from the monitoring well network are labeled (color distinguishes the screen formation). Well symbols that have a halo indicate that they will also receive an analytical sample analysis.

- Well Location
- Overburden Well Analytical Sample (148 Total)
- Bedrock Well Analytical Sample (78 Total)
- Other Analytical Sample (6 Total)

MW-01 Overburden Monitoring Well

MW-01 Bedrock Monitoring Well

MW-01 Other Monitoring Well or Surface Water

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

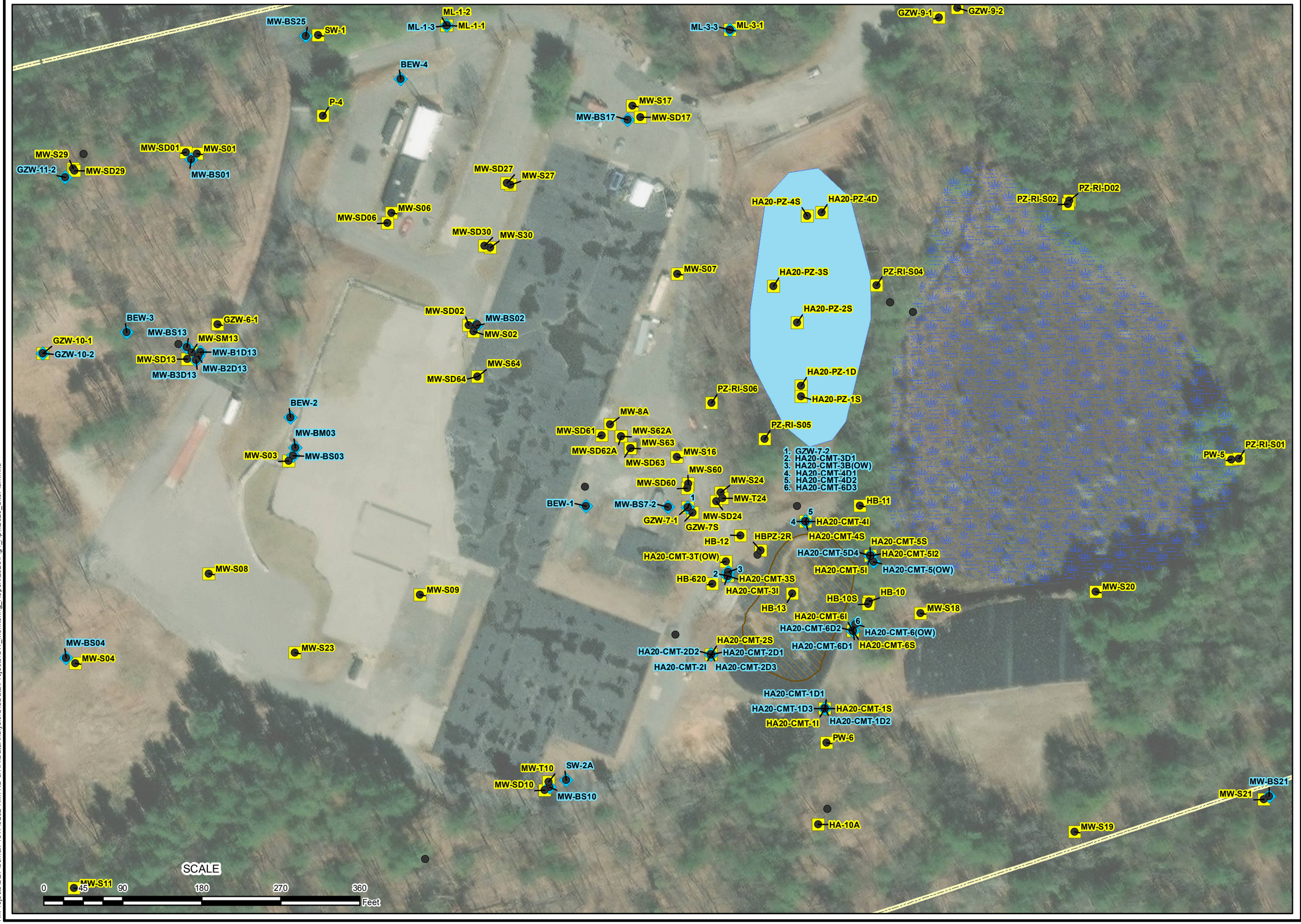
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Feet

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# Figure 4d (detail)

**Site Plan**
Comprehensive Sampling Well Network

Nuclear Metals Inc.
Concord, Massachusetts

Description:

Selected wells to be sampled and/or gauged from the monitoring well network are labeled (color distinguishes the screen formation). Well symbols that have a halo indicate that they will also receive an analytical sample analysis.

- Well Location
- Overburden Well Analytical Sample (89 Total)
- Bedrock Well Analytical Sample (49 Total)

MW-01 Overburden Monitoring Well

MW-01 Bedrock Monitoring Well

MW-01 Other Monitoring Well or Surface Water

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

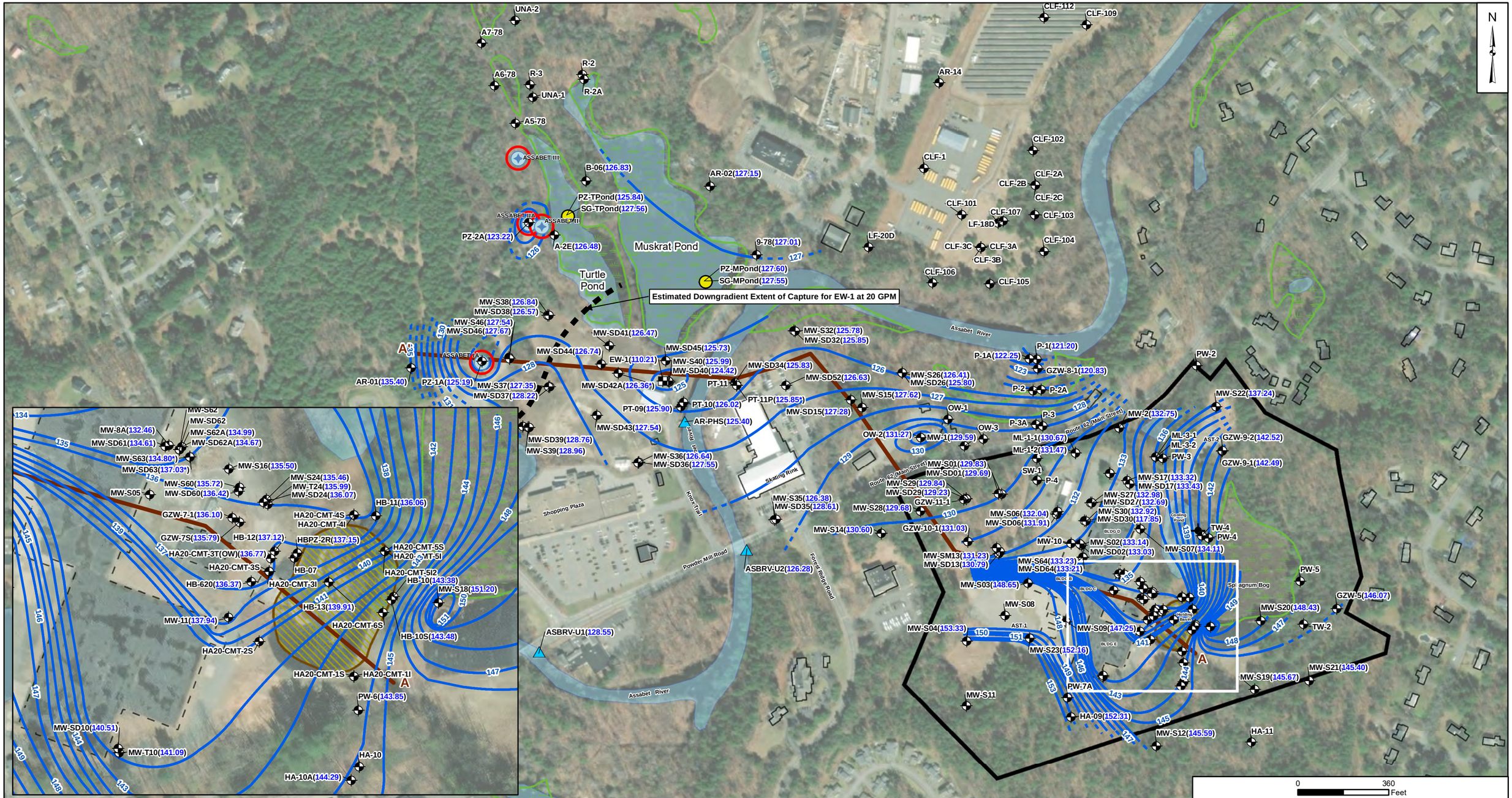
Project No.: 3243
Plot Date: 27 December, 2023
Arc Operator: JNR
Reviewed by: AH

ddms

# FIGURE 5
# GROUNDWATER ELEVATION DATA

5a. Groundwater Elevations in Overburden – April 2023

5b. Groundwater Elevations in Bedrock – April 2023




0 360 Feet

**Legend**

- Assabet River Stage Elevation
- Extraction Well
- Monitoring Well
- Piezometer
- Staff Gauge and Drive Point Piezometer Locations
- Active Public Water Supply Well
- Wetlands
- Surface Water
- Site Boundary
- Former Building Concrete Foundation
- Building Outline
- Cross Section A-A'
- Groundwater Elevation Contour (ft)
- Estimated Groundwater Elevation Contour (ft)
- 87.2 April 2023 Groundwater Elevation

**DRAFT**

Notes:
1. Water levels were measured on 3 April 2023.
2. The average pumping rate at municipal well Assabet 1A, for the 24-hour period prior to the waterwater level round was 78 gpm, Assabet II was 104 gpm, Assabet IIA was 206 gpm, and Assabet III was 87 gpm. The assumed pumping rate at EW-1 was 20 gpm.
3. Where multi-level overburden wells exist at a single location, data from the most appropriate well was prioritized in drafting contours. In general, contours represent deeper overburden.
4. Groundwater elevation contours are interpreted and may not represent actual flow directions or gradients.
5. Locations annotated with an asterisk * were not used in developing groundwater potentiometric contours (GZW-8-1, PT-11P, MW-S63 and MW-SD63).
6. Based on historical data, it is suspected that depth to water measurements for MW-BS03 and MW-S03 were inadvertently switched. The recorded value for MW-BS03 is listed here for MW-S03 and vice versa.

Definitions:
ft: feet
gpm: gallons per minute

# Groundwater Elevations in Overburden April 2023

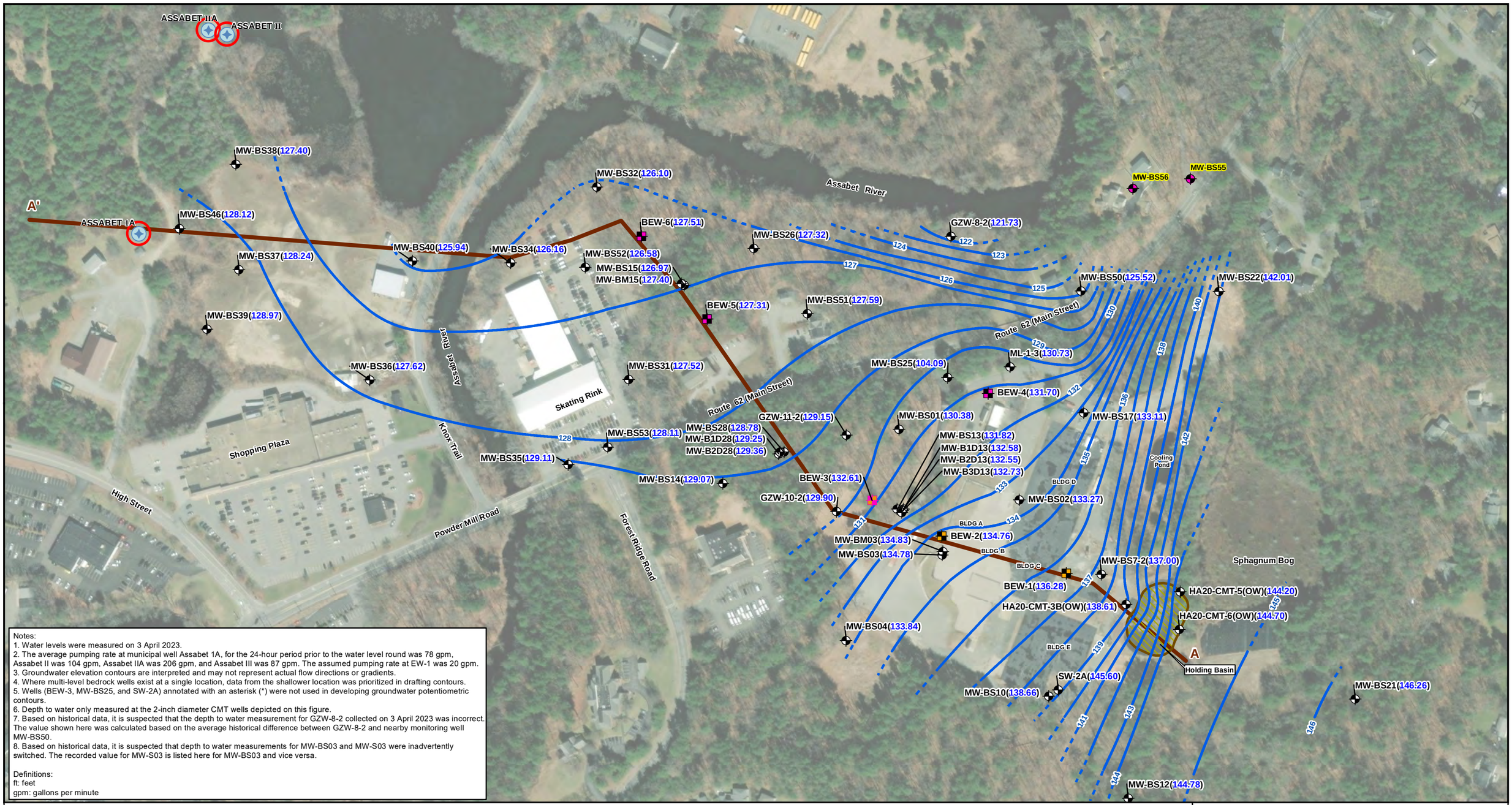
Nuclear Metals, Inc. Superfund Site
Concord, Massachusetts

Geosyntec consultants | de maximis, inc.

Acton, Massachusetts | August 2023

**Figure 5a**

Q:\GISProjects\BR0090-NMISite\Projects\Updates_2023\Figure X - GWE OB April 2023.mxd 8/1/2023 10:42:05 AM




Notes:
1. Water levels were measured on 3 April 2023.
2. The average pumping rate at municipal well Assabet 1A, for the 24-hour period prior to the water level round was 78 gpm, Assabet II was 104 gpm, Assabet IIA was 206 gpm, and Assabet III was 87 gpm. The assumed pumping rate at EW-1 was 20 gpm.
3. Groundwater elevation contours are interpreted and may not represent actual flow directions or gradients.
4. Where multi-level bedrock wells exist at a single location, data from the shallower location was prioritized in drafting contours.
5. Wells (BEW-3, MW-BS25, and SW-2A) annotated with an asterisk (*) were not used in developing groundwater potentiometric contours.
6. Depth to water only measured at the 2-inch diameter CMT wells depicted on this figure.
7. Based on historical data, it is suspected that the depth to water measurement for GZW-8-2 collected on 3 April 2023 was incorrect. The value shown here was calculated based on the average historical difference between GZW-8-2 and nearby monitoring well MW-BS50.
8. Based on historical data, it is suspected that depth to water measurements for MW-BS03 and MW-S03 were inadvertently switched. The recorded value for MW-S03 is listed here for MW-BS03 and vice versa.

Definitions:
ft: feet
gpm: gallons per minute

## Legend

- Bedrock Extraction Well for Uranium Plume
- Bedrock Extraction Well for Uranium and 1,4-Dioxane Plumes
- Bedrock Extraction Well for 1,4-Dioxane Plume
- Proposed Bedrock Monitoring Well
- Bedrock Monitoring Well
- Extraction Well
- Holding Basin Source Control
- Cross Section A-
- Groundwater Elevation Contour (ft)
- Estimated Groundwater Elevation Contour (ft)
- 87.2 April 2023 Groundwater Elevation

N

DRAFT

0 250 Feet

# Groundwater Elevation in Bedrock - April 2023

Nuclear Metals, Inc. Superfund Site
Concord, Massachusetts

Geosyntec consultants | de maximis, inc.

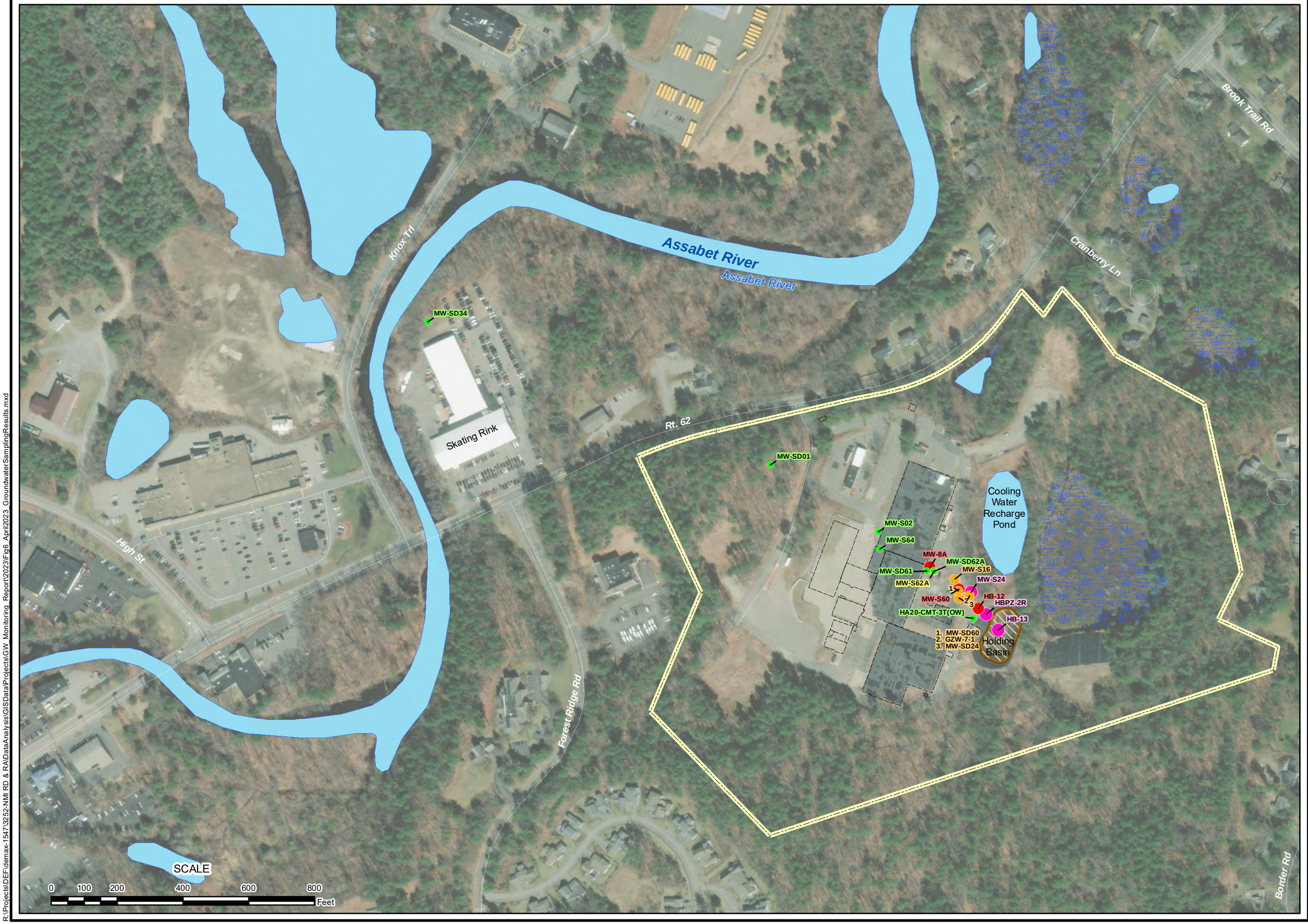
Acton, Massachusetts | July 2023

**Figure 5b**

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# FIGURE 6
# COC EXCEEDANCE RATIOS - APRIL 2023

6-1a. Total Uranium (Depleted) Exceedance Ratios in Overburden Groundwater – April 2023
6-2a. Total Uranium (Natural) Exceedance Ratios in Bedrock Groundwater – April 2023
6-3a. Arsenic Exceedance Ratios in Overburden Groundwater – April 2023
6-3b. Arsenic Exceedance Ratios in Bedrock Groundwater – April 2023
6-4a. Cobalt Exceedance Ratios in Overburden Groundwater – April 2023
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6-12a. 1,1-Dichloroethane – VISL Exceedance Ratios in Overburden Groundwater – April 2023
6-12b. 1,1-Dichloroethane Exceedance Ratios in Bedrock Groundwater – April 2023
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6-13b. Vinyl Chloride – VISL Exceedance Ratios in Overburden Groundwater – April 2023
6-13c. Vinyl Chloride Exceedance Ratios in Bedrock Groundwater – April 2023
6-14a. Nitrate as N Exceedance Ratios in Overburden Groundwater – April 2023
6-14b. Nitrate as N Exceedance Ratios in Bedrock Groundwater – April 2023
6-15a. Nitrite as N Exceedance Ratios in Overburden Groundwater – April 2023
6-15b. Nitrite as N Exceedance Ratios in Bedrock Groundwater – April 2023




# Figure 6-1a

**Total Uranium (Depleted) Exceedance Ratios in Overburden Groundwater**

April 2023

Nuclear Metals Inc.
(Remedial Design/Remedial Action)
Concord, Massachusetts

Description:

Exceedances based on ROD Level (30 ug/l)

Map Legend:

**Exceedance Ratios: Total Uranium (Depleted) in Overburden ROD Level (30 ug/l)**

- > 10x (Count :3)
- > 5x (Count :3)
- > 2x (Count :4)
- > 1x (Count :1)
- < Cleanup Level (Count :7)
- ND (Count :0)
- Site Boundary
- Former Building Concrete Foundations

***Notes:***

1. ROD - Record of Decision.
2. ND - Not detected above laboratory method detection limit.
3. MCL - Maximum Contaminant Level.

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

Project No.: 3243
Plot Date: 09 August, 2023
Arc Operator: JR
Reviewed by: HG

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# Figure 6-2a

**Total Uranium (Natural) Exceedance Ratios in Bedrock Groundwater**

April 2023

Nuclear Metals Inc.
(Remedial Design/Remedial Action)
Concord, Massachusetts

Description:

Exceedances based on ROD Level (30 ug/l)

Map Legend:

**Exceedance Ratios:**
**Total Uranium (Natural) in Bedrock**
**ROD Level (30 ug/l)**

- > 10x (Count :0)
- > 5x (Count :0)
- > 2x (Count :3)
- > 1x (Count :5)
- < Cleanup Level (Count :16)
- ND (Count :0)
- Site Boundary
- Former Building Concrete Foundations

***Notes:***

1. ROD - Record of Decision.
2. ND - Not detected above laboratory method detection limit.
3. MCL - Maximum Contaminant Level.

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

Project No.: 3243
Plot Date: 09 August, 2023
Arc Operator: JR
Reviewed by: HG

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# Figure 6-3a

**Arsenic Exceedance Ratios in Overburden Groundwater**

April 2023

Nuclear Metals Inc.
(Remedial Design/Remedial Action)
Concord, Massachusetts

Description:

Exceedances based on ROD Level (10 ug/l)

Map Legend:

**Exceedance Ratios:**
**Arsenic in Overburden**
**ROD Level (10 ug/l)**

- > 10x (Count :0)
- > 5x (Count :0)
- > 2x (Count :0)
- > 1x (Count :0)
- < Cleanup Level (Count :5)
- ND (Count :13)
- Site Boundary
- Former Building Concrete Foundations

***Notes:***

1. ROD - Record of Decision.
2. ND - Not detected above laboratory method detection limit.
3. MCL - Maximum Contaminant Level.

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

Project No.: 3243
Plot Date: 09 August, 2023
Arc Operator: JR
Reviewed by: HG

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Assabet River
Knox Trl
Brook Trail Rd
Cranberry Ln
Rt. 62
High St
Forest Ridge Rd
Border Rd
Skating Rink
Cooling Water Recharge Pond
Holding Basin
MW-SD34
MW-SD01
MW-S02
MW-S64
MW-SD61
MW-8A
MW-S62A
MW-S16
MW-S60
MW-SD62A
MW-S24
GZW-7-1
MW-SD24
MW-SD60
HB-12
HA20-CMT-3T(OW)
HBPZ-2R
HB-13

SCALE
0 100 200 400 600 800 Feet

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# Figure 6-3b

**Arsenic Exceedance Ratios in Bedrock Groundwater**

April 2023

Nuclear Metals Inc.
(Remedial Design/Remedial Action)
Concord, Massachusetts

Description:

Exceedances based on ROD Level (10 ug/l)

Map Legend:

**Exceedance Ratios: Arsenic in Bedrock ROD Level (10 ug/l)**

- > 10x (Count :2)
- > 5x (Count :1)
- > 2x (Count :2)
- > 1x (Count :2)
- < Cleanup Level (Count :12)
- ND (Count :5)
- Site Boundary
- Former Building Concrete Foundations

***Notes:***

1. ROD - Record of Decision.
2. ND - Not detected above laboratory method detection limit.
3. MCL - Maximum Contaminant Level.

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

Project No.: 3243
Plot Date: 09 August, 2023
Arc Operator: JR
Reviewed by: HG

ddms

Assabet River
Knox Trl
Brook Trail Rd
Cranberry Ln
Rt. 62
Skating Rink
High St
Forest Ridge Rd
Border Rd
Cooling Water Recharge Pond
Holding Basin

MW-BS52
MW-BS15
BEW-5
BEW-4
MW-BS01
MW-B1D28
MW-BS28
MW-BS14
BEW-3
GZW-10-2
MW-BS13
MW-B1D13
MW-B3D13
BEW-2
MW-BM03
MW-BS03
MW-BS02
MW-BS54
MW-BS7-2
HA20-CMT-5(OW)
HA20-CMT-3B(OW)
HA20-CMT-6(OW)
MW-BS10

SCALE
0 100 200 400 600 800
Feet

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# Figure 6-4a

**Cobalt Exceedance Ratios in Overburden Groundwater**

April 2023

Nuclear Metals Inc.
(Remedial Design/Remedial Action)
Concord, Massachusetts

Description:

Exceedances based on ROD Level (6 ug/l)

Map Legend:

**Exceedance Ratios: Cobalt in Overburden ROD Level (6 ug/l)**

- > 10x (Count :0)
- > 5x (Count :0)
- > 2x (Count :0)
- > 1x (Count :1)
- < Cleanup Level (Count :16)
- ND (Count :1)
- Site Boundary
- Former Building Concrete Foundations

***Notes:***

1. ROD - Record of Decision.

2. ND - Not detected above laboratory method detection limit.

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

Project No.: 3243
Plot Date: 09 August, 2023
Arc Operator: JR
Reviewed by: HG

ddms

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# Figure 6-4b

**Cobalt Exceedance Ratios in Bedrock Groundwater**

April 2023

Nuclear Metals Inc.
(Remedial Design/Remedial Action)
Concord, Massachusetts

Description:

Exceedances based on ROD Level (6 ug/l)

Map Legend:

**Exceedance Ratios: Cobalt in Bedrock ROD Level (6 ug/l)**

- > 10x (Count :0)
- > 5x (Count :0)
- > 2x (Count :0)
- > 1x (Count :1)
- < Cleanup Level (Count :12)
- ND (Count :11)
- Site Boundary
- Former Building Concrete Foundations

***Notes:***

1. ROD - Record of Decision.

2. ND - Not detected above laboratory method detection limit.

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

Project No.: 3243
Plot Date: 09 August, 2023
Arc Operator: JR
Reviewed by: HG

ddms




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# Figure 6-5a

**Iron Exceedance Ratios in Overburden Groundwater**

April 2023

Nuclear Metals Inc.
(Remedial Design/Remedial Action)
Concord, Massachusetts

Description:

Exceedances based on ROD Level (14000 ug/l)

Map Legend:

**Exceedance Ratios:**
**Iron in Overburden**
**ROD Level (14000 ug/l)**

- > 10x (Count :0)
- > 5x (Count :0)
- > 2x (Count :0)
- > 1x (Count :0)
- < Cleanup Level (Count :14)
- ND (Count :4)
- Site Boundary
- Former Building Concrete Foundations

***Notes:***

1. ROD - Record of Decision.

2. ND - Not detected above laboratory method detection limit.

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

Project No.: 3243
Plot Date: 09 August, 2023
Arc Operator: JR
Reviewed by: HG

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# Figure 6-5b

**Iron Exceedance Ratios in Bedrock Groundwater**

April 2023

Nuclear Metals Inc.
(Remedial Design/Remedial Action)
Concord, Massachusetts

Description:

Exceedances based on ROD Level (14000 ug/l)

Map Legend:

**Exceedance Ratios:**
**Iron in Bedrock**
**ROD Level (14000 ug/l)**

- > 10x (Count :0)
- > 5x (Count :0)
- > 2x (Count :0)
- > 1x (Count :0)
- < Cleanup Level (Count :24)
- ND (Count :0)
- Site Boundary
- Former Building Concrete Foundations

***Notes:***

1. ROD - Record of Decision.

2. ND - Not detected above laboratory method detection limit.

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

Project No.: 3243
Plot Date: 09 August, 2023
Arc Operator: JR
Reviewed by: HG

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# Figure 6-6a

**Manganese Exceedance Ratios in Overburden Groundwater**

April 2023

Nuclear Metals Inc.
(Remedial Design/Remedial Action)
Concord, Massachusetts

Description:

Exceedances based on ROD Level (300 ug/l)

Map Legend:

**Exceedance Ratios: Manganese in Overburden ROD Level (300 ug/l)**

- > 10x (Count :0)
- > 5x (Count :1)
- > 2x (Count :2)
- > 1x (Count :2)
- < Cleanup Level (Count :12)
- ND (Count :1)
- Site Boundary
- Former Building Concrete Foundations

***Notes:***

1. ROD - Record of Decision.

2. ND - Not detected above laboratory method detection limit.

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

Project No.: 3243
Plot Date: 09 August, 2023
Arc Operator: JR
Reviewed by: HG

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SCALE
0 100 200 400 600 800 Feet

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# Figure 6-6b

**Manganese Exceedance Ratios in Bedrock Groundwater**

April 2023

Nuclear Metals Inc.
(Remedial Design/Remedial Action)
Concord, Massachusetts

Description:

Exceedances based on ROD Level (300 ug/l)

Map Legend:

**Exceedance Ratios: Manganese in Bedrock ROD Level (300 ug/l)**

- > 10x (Count :0)
- > 5x (Count :0)
- > 2x (Count :3)
- > 1x (Count :6)
- < Cleanup Level (Count :15)
- ND (Count :0)
- Site Boundary
- Former Building Concrete Foundations

***Notes:***

1. ROD - Record of Decision.

2. ND - Not detected above laboratory method detection limit.

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

Project No.: 3243
Plot Date: 09 August, 2023
Arc Operator: JR
Reviewed by: HG

ddms

Assabet River
Assabet River
Knox Trl
Brook Trail Rd
Cranberry Ln
Rt. 62
Skating Rink
High St
Forest Ridge Rd
Border Rd
Cooling Water Recharge Pond
Holding Basin

MW-BS52
MW-BS15
BEW-5
BEW-4
MW-BS01
MW-B1D28
MW-BS28
MW-BS14
GZW-10-2
BEW-3
MW-B1D13
MW-BS13
MW-B3D13
MW-B2D13
BEW-2
MW-BM03
MW-BS03
MW-BS54
MW-BS02
MW-BS7-2
HA20-CMT-5(OW)
HA20-CMT-3B(OW)
HA20-CMT-6(OW)
MW-BS10

SCALE
0 100 200 400 600 800
Feet

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# Figure 6-7a

**Molybdenum Exceedance Ratios in Overburden Groundwater**

April 2023

Nuclear Metals Inc.
(Remedial Design/Remedial Action)
Concord, Massachusetts

Description:

Exceedances based on ROD Level (100 ug/l)

Map Legend:

**Exceedance Ratios: Molybdenum in Overburden ROD Level (100 ug/l)**

- > 10x (Count :1)
- > 5x (Count :0)
- > 2x (Count :2)
- > 1x (Count :0)
- < Cleanup Level (Count :14)
- ND (Count :1)
- Site Boundary
- Former Building Concrete Foundations

***Notes:***

1. ROD - Record of Decision.

2. ND - Not detected above laboratory method detection limit.

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

Project No.: 3243
Plot Date: 09 August, 2023
Arc Operator: JR
Reviewed by: HG

ddms

# Figure 6-7b

**Molybdenum Exceedance Ratios in Bedrock Groundwater**

April 2023

Nuclear Metals Inc.
(Remedial Design/Remedial Action)
Concord, Massachusetts

Description:

Exceedances based on ROD Level (100 ug/l)

Map Legend:

**Exceedance Ratios: Molybdenum in Bedrock ROD Level (100 ug/l)**

- > 10x (Count :0)
- > 5x (Count :0)
- > 2x (Count :0)
- > 1x (Count :0)
- < Cleanup Level (Count :24)
- ND (Count :0)
- Site Boundary
- Former Building Concrete Foundations

***Notes:***

1. ROD - Record of Decision.

2. ND - Not detected above laboratory method detection limit.

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

Project No.: 3243
Plot Date: 09 August, 2023
Arc Operator: JR
Reviewed by: HG

ddms

Assabet River
Assabet River
Knox Trl
Brook Trail Rd
Cranberry Ln
Rt. 62
Skating Rink
High St
Forest Ridge Rd
Border Rd
Cooling Water Recharge Pond
Holding Basin

MW-BS52
MW-BS15
BEW-5
BEW-4
MW-BS01
MW-B1D28
MW-BS28
MW-BS14
GZW-10-2
BEW-3
MW-B1D13
MW-BS13
MW-B3D13
MW-B2D13
BEW-2
MW-BM03
MW-BS03
MW-BS02
MW-BS54
MW-BS7-2
HA20-CMT-3B(OW)
HA20-CMT-5(OW)
HA20-CMT-6(OW)
MW-BS10

SCALE
0 100 200 400 600 800
Feet

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# Figure 6-8a

**Thorium Exceedance Ratios in Overburden Groundwater**

April 2023

Nuclear Metals Inc.
(Remedial Design/Remedial Action)
Concord, Massachusetts

Description:

Exceedances based on ROD Level (0.33 ug/l)

Map Legend:

**Exceedance Ratios: Thorium in Overburden ROD Level (0.33 ug/l)**

- > 10x (Count :0)
- > 5x (Count :0)
- > 2x (Count :2)
- > 1x (Count :0)
- < Cleanup Level (Count :0)
- ND (Count :16)
- Site Boundary
- Former Building Concrete Foundations

***Notes:***

1. ROD - Record of Decision.

2. ND - Not detected above laboratory method detection limit.

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

Project No.: 3243
Plot Date: 09 August, 2023
Arc Operator: JR
Reviewed by: HG

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# Figure 6-8b

**Thorium Exceedance Ratios in Bedrock Groundwater**

April 2023

Nuclear Metals Inc.
(Remedial Design/Remedial Action)
Concord, Massachusetts

Description:

Exceedances based on ROD Level (0.33 ug/l)

Map Legend:

**Exceedance Ratios: Thorium in Bedrock ROD Level (0.33 ug/l)**

- > 10x (Count :0)
- > 5x (Count :0)
- > 2x (Count :0)
- > 1x (Count :0)
- < Cleanup Level (Count :0)
- ND (Count :24)
- Site Boundary
- Former Building Concrete Foundations

***Notes:***

1. ROD - Record of Decision.

2. ND - Not detected above laboratory method detection limit.

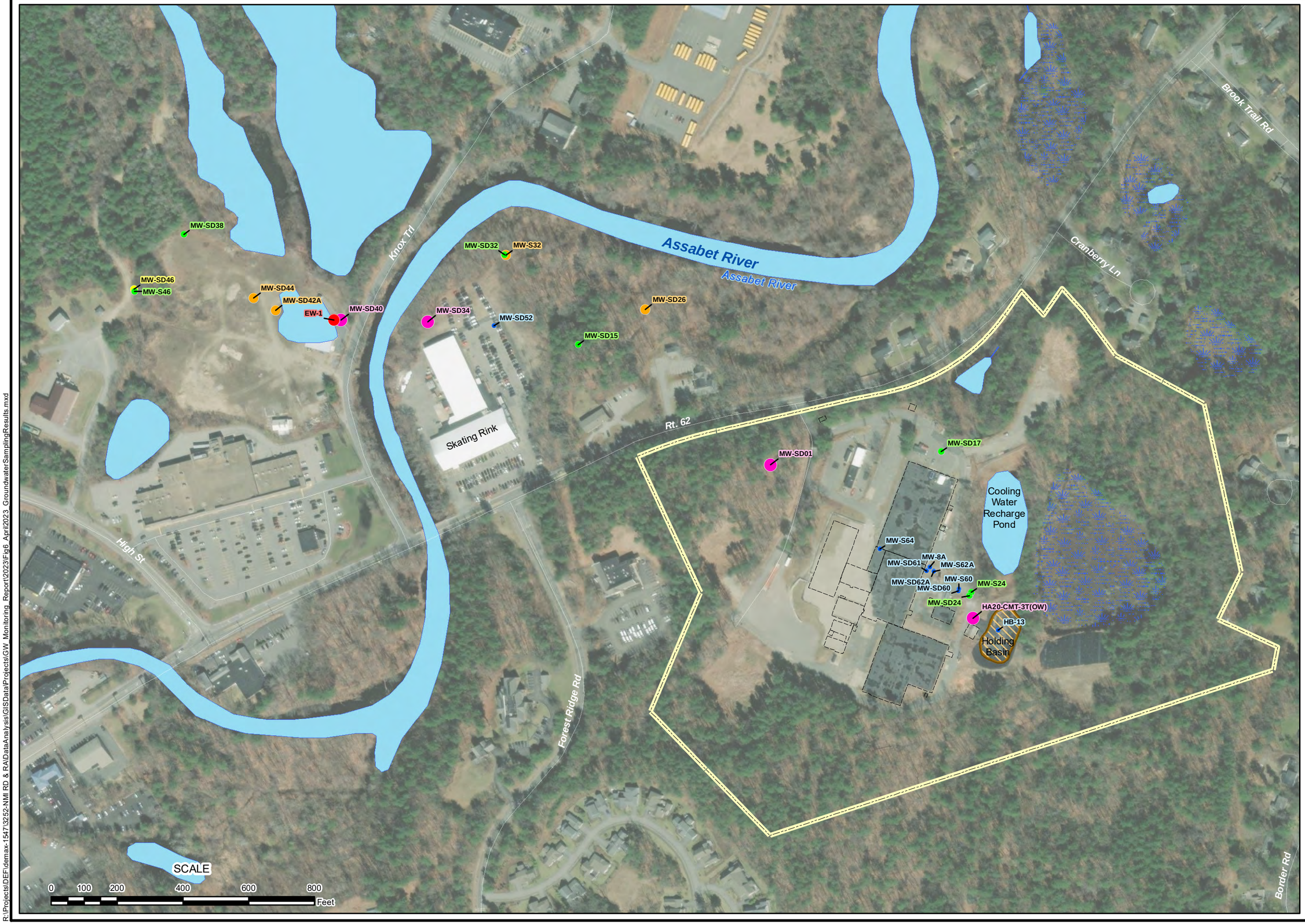
Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

Project No.: 3243
Plot Date: 09 August, 2023
Arc Operator: JR
Reviewed by: HG

ddms




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# Figure 6-9a

**1,4-Dioxane Exceedance Ratios in Overburden Groundwater**

April 2023

Nuclear Metals Inc.
(Remedial Design/Remedial Action)
Concord, Massachusetts

Description:

Exceedances based on ROD Level (0.46 ug/l)

Map Legend:

**Exceedance Ratios:**
**1,4-Dioxane in Overburden**
**ROD Level (0.46 ug/l)**

- > 10x (Count :4)
- > 5x (Count :1)
- > 2x (Count :4)
- > 1x (Count :1)
- < Cleanup Level (Count :7)
- ND (Count :9)
- Site Boundary
- Former Building Concrete Foundations

***Notes:***

1. ROD - Record of Decision.

2. ND - Not detected above laboratory method detection limit.

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

Project No.: 3243
Plot Date: 09 August, 2023
Arc Operator: JR
Reviewed by: HG

ddms

# Figure 6-9b

**1,4-Dioxane Exceedance Ratios in Bedrock Groundwater**

April 2023

Nuclear Metals Inc.
(Remedial Design/Remedial Action)
Concord, Massachusetts

Description:

Exceedances based on ROD Level (0.46 ug/l)

Map Legend:

**Exceedance Ratios: 1,4-Dioxane in Bedrock ROD Level (0.46 ug/l)**

- > 10x (Count :17)
- > 5x (Count :3)
- > 2x (Count :5)
- > 1x (Count :0)
- < Cleanup Level (Count :5)
- ND (Count :2)
- Site Boundary
- Former Building Concrete Foundations

***Notes:***

1. ROD - Record of Decision.
2. ND - Not detected above laboratory method detection limit.

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

Project No.: 3243
Plot Date: 09 August, 2023
Arc Operator: JR
Reviewed by: HG

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Figure 6-10a

**Tetrachloroethylene Exceedance Ratios in Overburden Groundwater**

April 2023

Nuclear Metals Inc.
(Remedial Design/Remedial Action)
Concord, Massachusetts

Description:

Exceedances based on ROD Level (5 ug/l)

Map Legend:

**Exceedance Ratios: Tetrachloroethylene in Overburden ROD Level (5 ug/l)**

- > 10x (Count :0)
- > 5x (Count :0)
- > 2x (Count :0)
- > 1x (Count :0)
- < Cleanup Level (Count :4)
- ND (Count :8)
- Site Boundary
- Former Building Concrete Foundations

***Notes:***

1. ROD - Record of Decision.
2. ND - Not detected above laboratory method detection limit.
3. MCL - Maximum Contaminant Level.

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

Project No.: 3243
Plot Date: 09 August, 2023
Arc Operator: JR
Reviewed by: HG

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Figure 6-10b

**Tetrachloroethylene - VISL Exceedance Ratios in Overburden Groundwater**

April 2023

Nuclear Metals Inc.
(Remedial Design/Remedial Action)
Concord, Massachusetts

Description:

Exceedances based on VISL Level (5.76 ug/l)

Map Legend:

**Exceedance Ratios: Tetrachloroethylene - VISL in Overburden**
**VISL Level (5.76 ug/l)**

- > 10x (Count :0)
- > 5x (Count :0)
- > 2x (Count :0)
- > 1x (Count :0)
- < Cleanup Level (Count :4)
- ND (Count :8)
- Site Boundary
- Former Building Concrete Foundations

***Notes:***

1. VISL - Vapor Intrusion Screening Level.

2. ND - Not detected above laboratory method detection limit.

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

Project No.: 3243
Plot Date: 09 August, 2023
Arc Operator: JR
Reviewed by: HG

ddms




# Figure 6-10c

**Tetrachloroethylene Exceedance Ratios in Bedrock Groundwater**

April 2023

Nuclear Metals Inc.
(Remedial Design/Remedial Action)
Concord, Massachusetts

Description:

Exceedances based on ROD Level (5 ug/l)

Map Legend:

**Exceedance Ratios: Tetrachloroethylene in Bedrock ROD Level (5 ug/l)**

- > 10x (Count :0)
- > 5x (Count :0)
- > 2x (Count :0)
- > 1x (Count :0)
- < Cleanup Level (Count :6)
- ND (Count :9)
- Site Boundary
- Former Building Concrete Foundations

***Notes:***

1. ROD - Record of Decision.
2. ND - Not detected above laboratory method detection limit.
3. MCL - Maximum Contaminant Level.

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

Project No.: 3243
Plot Date: 30 October, 2023
Arc Operator: JR
Reviewed by: HG

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# Figure 6-11a

**Trichloroethene Exceedance Ratios in Overburden Groundwater**

April 2023

Nuclear Metals Inc.
(Remedial Design/Remedial Action)
Concord, Massachusetts

Description:

Exceedances based on ROD Level (5 ug/l)

Map Legend:

**Exceedance Ratios: Trichloroethene in Overburden ROD Level (5 ug/l)**

- > 10x (Count :0)
- > 5x (Count :0)
- > 2x (Count :0)
- > 1x (Count :1)
- < Cleanup Level (Count :5)
- ND (Count :6)
- Site Boundary
- Former Building Concrete Foundations

***Notes:***

1. ROD - Record of Decision.
2. ND - Not detected above laboratory method detection limit.
3. MCL - Maximum Contaminant Level.

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

Project No.: 3243
Plot Date: 09 August, 2023
Arc Operator: JR
Reviewed by: HG

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# Figure 6-11b

**Trichloroethene - VISL Exceedance Ratios in Overburden Groundwater**

April 2023

Nuclear Metals Inc.
(Remedial Design/Remedial Action)
Concord, Massachusetts

Description:

Exceedances based on VISL Level (0.518 ug/l)

Map Legend:

**Exceedance Ratios:**
**Trichloroethene - VISL in Overburden**
**VISL Level (0.518 ug/l)**

- > 10x (Count :1)
- > 5x (Count :1)
- > 2x (Count :2)
- > 1x (Count :0)
- < Cleanup Level (Count :2)
- ND (Count :6)
- Site Boundary
- Former Building Concrete Foundations

***Notes:***

1. VISL - Vapor Intrusion Screening Level.

2. ND - Not detected above laboratory method detection limit.

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

Project No.: 3243
Plot Date: 09 August, 2023
Arc Operator: JR
Reviewed by: HG

ddms




# Figure 6-11c

**Trichloroethene Exceedance Ratios in Bedrock Groundwater**

April 2023

Nuclear Metals Inc.
(Remedial Design/Remedial Action)
Concord, Massachusetts

Description:

Exceedances based on ROD Level (5 ug/l)

Map Legend:

**Exceedance Ratios: Trichloroethene in Bedrock ROD Level (5 ug/l)**

- > 10x (Count :0)
- > 5x (Count :0)
- > 2x (Count :0)
- > 1x (Count :0)
- < Cleanup Level (Count :11)
- ND (Count :4)
- Site Boundary
- Former Building Concrete Foundations

***Notes:***

1. ROD - Record of Decision.
2. ND - Not detected above laboratory method detection limit.
3. MCL - Maximum Contaminant Level.

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

Project No.: 3243
Plot Date: 30 October, 2023
Arc Operator: JR
Reviewed by: HG

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# Figure 6-12a

**1,1-Dichloroethane - VISL Exceedance Ratios in Overburden Groundwater**

April 2023

Nuclear Metals Inc.
(Remedial Design/Remedial Action)
Concord, Massachusetts

Description:

Exceedances based on VISL Level (7.64 ug/l)

Map Legend:

**Exceedance Ratios:**
**1,1-Dichloroethane - VISL in Overburden**
**VISL Level (7.64 ug/l)**

- > 10x (Count :0)
- > 5x (Count :0)
- > 2x (Count :0)
- > 1x (Count :0)
- < Cleanup Level (Count :3)
- ND (Count :9)
- Site Boundary
- Former Building Concrete Foundations

***Notes:***

1. VISL - Vapor Intrusion Screening Level.

2. ND - Not detected above laboratory method detection limit.

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

Project No.: 3243
Plot Date: 09 August, 2023
Arc Operator: JR
Reviewed by: HG

ddms




# Figure 6-12b

**1,1-Dichloroethane Exceedance Ratios in Bedrock Groundwater**

April 2023

Nuclear Metals Inc.
(Remedial Design/Remedial Action)
Concord, Massachusetts

Description:

Exceedances based on ROD Level (2.7 ug/l)

Map Legend:

**Exceedance Ratios: 1,1-Dichloroethane in Bedrock ROD Level (2.7 ug/l)**

- > 10x (Count :0)
- > 5x (Count :0)
- > 2x (Count :1)
- > 1x (Count :1)
- < Cleanup Level (Count :8)
- ND (Count :5)
- Site Boundary
- Former Building Concrete Foundations

***Notes:***

1. ROD - Record of Decision.

2. ND - Not detected above laboratory method detection limit.

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

Project No.: 3243
Plot Date: 30 October, 2023
Arc Operator: JR
Reviewed by: HG

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Figure 6-13a

**Vinyl Chloride Exceedance Ratios in Overburden Groundwater**

April 2023

Nuclear Metals Inc.
(Remedial Design/Remedial Action)
Concord, Massachusetts

Description:

Exceedances based on ROD Level (2 ug/l)

Map Legend:

**Exceedance Ratios:**
**Vinyl Chloride in Overburden**
**ROD Level (2 ug/l)**

- > 10x (Count :0)
- > 5x (Count :0)
- > 2x (Count :0)
- > 1x (Count :0)
- < Cleanup Level (Count :1)
- ND (Count :11)
- Site Boundary
- Former Building Concrete Foundations

***Notes:***

1. ROD - Record of Decision.

2. ND - Not detected above laboratory method detection limit.

3. MCL - Maximum Contaminant Level.

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

Project No.: 3243
Plot Date: 09 August, 2023
Arc Operator: JR
Reviewed by: HG

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# Figure 6-13b

**Vinyl Chloride - VISL Exceedance Ratios in Overburden Groundwater**

April 2023

Nuclear Metals Inc.
(Remedial Design/Remedial Action)
Concord, Massachusetts

Description:

Exceedances based on VISL Level (0.147 ug/l)

Map Legend:

**Exceedance Ratios:**
**Vinyl Chloride - VISL in Overburden**
**VISL Level (0.147 ug/l)**

- > 10x (Count :0)
- > 5x (Count :0)
- > 2x (Count :0)
- > 1x (Count :0)
- < Cleanup Level (Count :1)
- ND (Count :11)
- Site Boundary
- Former Building Concrete Foundations

***Notes:***

1. VISL - Vapor Intrusion Screening Level.

2. ND - Not detected above laboratory method detection limit.

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

Project No.: 3243
Plot Date: 09 August, 2023
Arc Operator: JR
Reviewed by: HG

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# Figure 6-13c

**Vinyl Chloride Exceedance Ratios in Bedrock Groundwater**

April 2023

Nuclear Metals Inc.
(Remedial Design/Remedial Action)
Concord, Massachusetts

Description:

Exceedances based on ROD Level (2 ug/l)

Map Legend:

**Exceedance Ratios:**
**Vinyl Chloride in Bedrock**
**ROD Level (2 ug/l)**

- > 10x (Count :0)
- > 5x (Count :0)
- > 2x (Count :0)
- > 1x (Count :0)
- < Cleanup Level (Count :1)
- ND (Count :14)
- Site Boundary
- Former Building Concrete Foundations

***Notes:***

1. ROD - Record of Decision.
2. ND - Not detected above laboratory method detection limit.
3. MCL - Maximum Contaminant Level.

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

Project No.: 3243
Plot Date: 30 October, 2023
Arc Operator: JR
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Assabet River
Assabet River
Knox Trl
Brook Trail Rd
Cranberry Ln
Rt. 62
Skating Rink
High St
Forest Ridge Rd
Border Rd
Cooling Water Recharge Pond
Holding Basin
MW-BS52
MW-BS15
BEW-5
MW-BS51
MW-BS50
BEW-4
MW-BS01
MW-BS53
GZW-10-2
BEW-3
BEW-2
MW-BS54
HA20-CMT-3B(OW)
HA20-CMT-5(OW)
HA20-CMT-6(OW)
SCALE
0 100 200 400 600 800
Feet

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# Figure 6-14a

**Nitrate as N Exceedance Ratios in Overburden Groundwater**

April 2023

Nuclear Metals Inc.
(Remedial Design/Remedial Action)
Concord, Massachusetts

Description:

Exceedances based on ROD Level (10000 ug/l)

Map Legend:

**Exceedance Ratios:**
**Nitrate as N in Overburden**
**ROD Level (10000 ug/l)**

- > 10x (Count :0)
- > 5x (Count :0)
- > 2x (Count :0)
- > 1x (Count :0)
- < Cleanup Level (Count :14)
- ND (Count :0)
- Site Boundary
- Former Building Concrete Foundations

***Notes:***

1. ROD - Record of Decision.
2. ND - Not detected above laboratory method detection limit.
3. MCL - Maximum Contaminant Level.

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

Project No.: 3243
Plot Date: 09 August, 2023
Arc Operator: JR
Reviewed by: HG

ddms

Assabet River
Knox Trl
Brook Trail Rd
Cranberry Ln
MW-SD34
Skating Rink
Rt. 62
High St
Forest Ridge Rd
Border Rd
Cooling Water Recharge Pond
Holding Basin
MW-S02
MW-S64
MW-SD61
MW-8A
MW-S62A
MW-S16
MW-SD62A
MW-S24
MW-S60
MW-SD60
MW-SD24
HBPZ-2R
HB-13
SCALE
0 100 200 400 600 800 Feet

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Figure 6-14b

**Nitrate as N Exceedance Ratios in Bedrock Groundwater**

April 2023

Nuclear Metals Inc.
(Remedial Design/Remedial Action)
Concord, Massachusetts

Description:

Exceedances based on ROD Level (10000 ug/l)

Map Legend:

**Exceedance Ratios:**
**Nitrate as N in Bedrock**
**ROD Level (10000 ug/l)**

- > 10x (Count :0)
- > 5x (Count :0)
- > 2x (Count :0)
- > 1x (Count :0)
- < Cleanup Level (Count :1)
- ND (Count :1)
- Site Boundary
- Former Building Concrete Foundations

***Notes:***

1. ROD - Record of Decision.
2. ND - Not detected above laboratory method detection limit.
3. MCL - Maximum Contaminant Level.

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

Project No.: 3243
Plot Date: 09 August, 2023
Arc Operator: JR
Reviewed by: HG

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# Figure 6-15a

**Nitrite as N Exceedance Ratios in Overburden Groundwater**

April 2023

Nuclear Metals Inc.
(Remedial Design/Remedial Action)
Concord, Massachusetts

Description:

Exceedances based on ROD Level (1000 ug/l)

Map Legend:

**Exceedance Ratios:**
**Nitrite as N in Overburden**
**ROD Level (1000 ug/l)**

- > 10x (Count :0)
- > 5x (Count :0)
- > 2x (Count :0)
- > 1x (Count :0)
- < Cleanup Level (Count :13)
- ND (Count :1)
- Site Boundary
- Former Building Concrete Foundations

***Notes:***

1. ROD - Record of Decision.
2. ND - Not detected above laboratory method detection limit.
3. MCL - Maximum Contaminant Level.

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

Plot Info:

Project No.: 3243
Plot Date: 09 August, 2023
Arc Operator: JR
Reviewed by: HG

ddms




Figure 6-15b

**Nitrite as N Exceedance Ratios in Bedrock Groundwater**

April 2023

Nuclear Metals Inc.
(Remedial Design/Remedial Action)
Concord, Massachusetts

Description:

Exceedances based on ROD Level (1000 ug/l)

Map Legend:

**Exceedance Ratios:**
**Nitrite as N in Bedrock**
**ROD Level (1000 ug/l)**

- > 10x (Count :0)
- > 5x (Count :0)
- > 2x (Count :0)
- > 1x (Count :0)
- < Cleanup Level (Count :1)
- ND (Count :1)
- Site Boundary
- Former Building Concrete Foundations

***Notes:***

1. ROD - Record of Decision.
2. ND - Not detected above laboratory method detection limit.
3. MCL - Maximum Contaminant Level.

Spatial Projection:

Coordinate System:
MA State Plane Mainland
FIPS Zone: 2001
Units: US Survey Feet
Datum: NAD83

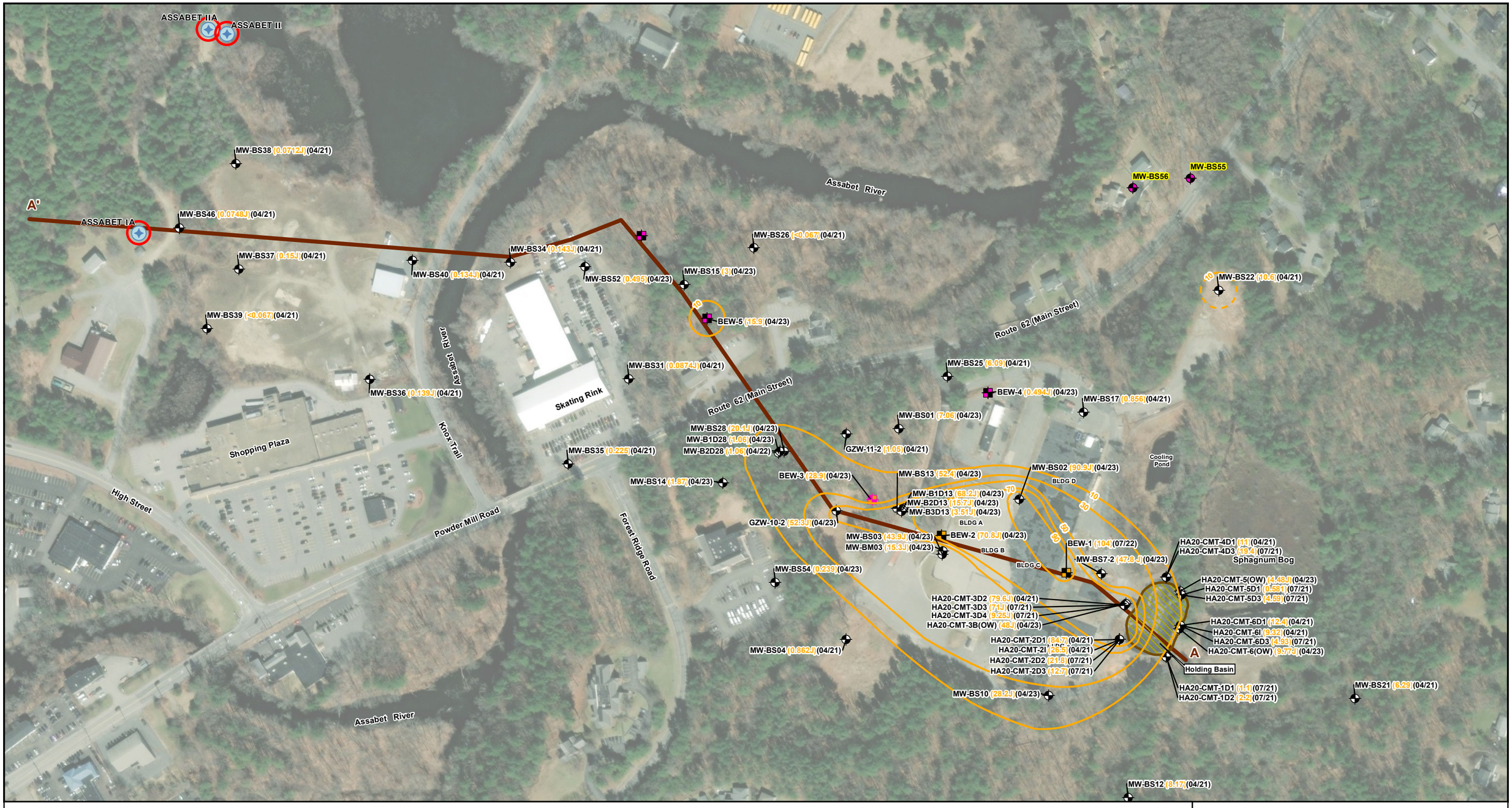
Plot Info:

Project No.: 3243
Plot Date: 09 August, 2023
Arc Operator: JR
Reviewed by: HG

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# FIGURE 7
# ISOTOPICALLY NATURAL URANIUM IN BEDROCK GROUNDWATER - DATA THROUGH April 2023




## Legend

- Extraction Well
- Monitoring Well
- Bedrock Extraction Well for Uranium Plume
- Bedrock Extraction Well for Uranium and 1,4-Dioxane Plumes
- Bedrock Extraction Well for 1,4-Dioxane Plume
- Proposed Bedrock Monitoring Well
- Holding Basin Source Control
- Cross Section A-A'
- Uranium Contour in Bedrock Groundwater (µg/L)
- Estimated Uranium Contour in Bedrock Groundwater (µg/L)

(125.35) **(04/21)** Most Recent Uranium Concentration (µg/L) (Month/Year Collected)

N

DRAFT

0 250 Feet

**Uranium Distribution in Bedrock Groundwater**
**Most Recent Data Through April 2023**

Nuclear Metals, Inc. Superfund Site
Concord, Massachusetts

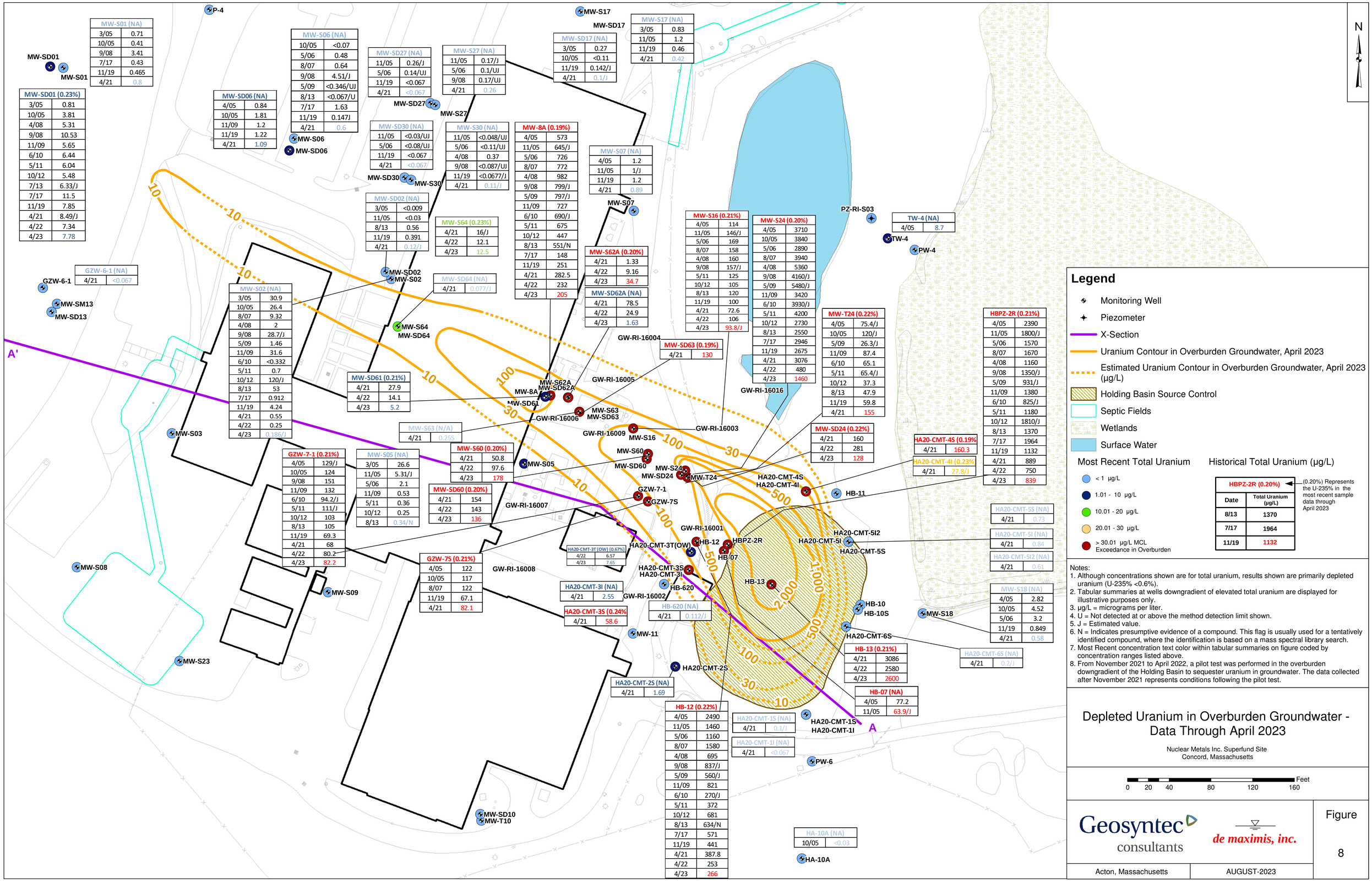
Geosyntec consultants | de maximis, inc.

Acton, Massachusetts | January 2024

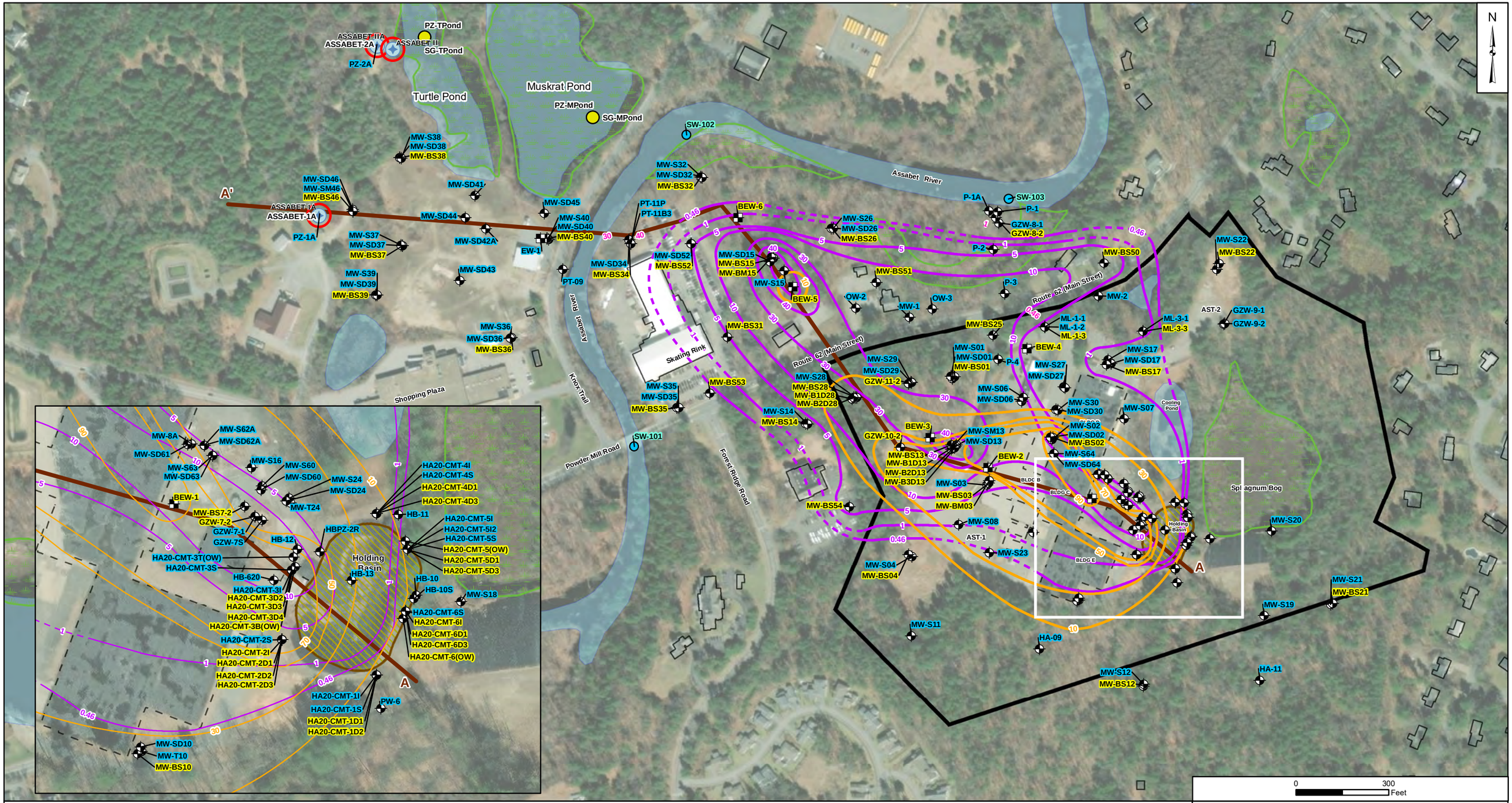
**Figure 7**

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# FIGURE 8
# DEPLETED URANIUM IN OVERBURDEN GROUNDWATER
# - DATA THROUGH APRIL 2023


N
P-4
MW-S17
MW-SD17
MW-SD01
MW-S01
MW-S01 (NA)
3/05 0.71
10/05 0.41
9/08 3.41
7/17 0.43
11/19 0.465
4/21 0.8
MW-SD01 (0.23%)
3/05 0.81
10/05 3.81
4/08 5.31
9/08 10.53
11/09 5.65
6/10 6.44
5/11 6.04
10/12 5.48
7/13 6.33/J
7/17 11.5
11/19 7.85
4/21 8.49/J
4/22 7.34
4/23 7.78
MW-S17 (NA)
3/05 0.83
11/05 1.2
11/19 0.46
4/21 0.42
MW-SD17 (NA)
3/05 0.27
10/05 <0.11
11/19 0.142/J
4/21 0.1/J
MW-S06 (NA)
10/05 <0.07
5/06 0.48
8/07 0.64
9/08 4.51/J
5/09 <0.346/UJ
8/13 <0.067/U
7/17 1.63
11/19 0.147J
4/21 0.6
MW-SD27 (NA)
11/05 0.26/J
5/06 0.14/UJ
11/19 <0.067
4/21 <0.067
MW-S27 (NA)
11/05 0.17/J
5/06 0.1/UJ
9/08 0.17/UJ
4/21 0.26
MW-SD06 (NA)
4/05 0.84
10/05 1.81
11/09 1.2
11/19 1.22
4/21 1.09
MW-SD27
MW-S27
MW-S06
MW-SD06
MW-SD30 (NA)
11/05 <0.03/UJ
5/06 <0.08/UJ
11/19 <0.067
4/21 <0.067
MW-S30 (NA)
11/05 <0.048/UJ
5/06 <0.11/UJ
4/08 0.37
9/08 <0.087/UJ
11/19 <0.0677/J
4/21 0.11/J
MW-8A (0.19%)
4/05 573
11/05 645/J
5/06 726
8/07 772
4/08 982
9/08 799/J
5/09 797/J
11/09 727
6/10 690/J
5/11 675
10/12 447
8/13 551/N
7/17 148
11/19 251
4/21 282.5
4/22 232
4/23 205
MW-S07 (NA)
4/05 1.2
11/05 1/J
11/19 1.2
4/21 0.89
MW-SD30
MW-S30
MW-S07
MW-SD02 (NA)
3/05 <0.009
11/05 <0.03
8/13 0.56
11/19 0.391
4/21 0.12/J
MW-S64 (0.23%)
4/21 16/J
4/22 12.1
4/23 12.5
MW-SD02
MW-S02
MW-SD64 (NA)
4/21 0.077/J
MW-S62A (0.20%)
4/21 1.33
4/22 9.16
4/23 34.7
MW-SD62A (NA)
4/21 78.5
4/22 24.9
4/23 1.63
MW-S16 (0.21%)
4/05 114
11/05 146/J
5/06 169
8/07 158
4/08 160
9/08 157/J
5/11 125
10/12 105
8/13 120
11/19 100
4/21 72.6
4/22 106
4/23 93.8/J
MW-S24 (0.20%)
4/05 3710
10/05 3840
5/06 2890
8/07 3940
4/08 5360
9/08 4160/J
5/09 5480/J
11/09 3420
6/10 3930/J
5/11 4200
10/12 2730
8/13 2550
7/17 2946
11/19 2675
4/21 3076
4/22 480
4/23 1460
PZ-RI-S03
TW-4 (NA)
4/05 8.7
TW-4
PW-4
GZW-6-1 (NA)
4/21 <0.067
GZW-6-1
MW-SM13
MW-SD13
MW-S02 (NA)
3/05 30.9
10/05 26.4
8/07 9.32
4/08 2
9/08 28.7/J
5/09 1.46
11/09 31.6
6/10 <0.332
5/11 0.7
10/12 120/J
8/13 53
7/17 0.912
11/19 4.24
4/21 0.55
4/22 0.25
4/23 0.186/J
MW-SD61 (0.21%)
4/21 27.9
4/22 14.1
4/23 5.2
MW-S64
MW-SD64
GW-RI-16004
MW-SD63 (0.19%)
4/21 130
MW-T24 (0.22%)
4/05 75.4/J
10/05 120/J
5/09 26.3/J
11/09 87.4
6/10 65.1
5/11 65.4/J
10/12 37.3
8/13 47.9
11/19 59.8
4/21 155
HBPZ-2R (0.21%)
4/05 2390
11/05 1800/J
5/06 1570
8/07 1670
4/08 1160
9/08 1350/J
5/09 931/J
11/09 1380
6/10 825/J
5/11 1180
10/12 1810/J
8/13 1370
7/17 1964
11/19 1132
4/21 889
4/22 750
4/23 839
MW-S62A
MW-8A
MW-SD62A
MW-SD61
GW-RI-16005
GW-RI-16016
GW-RI-16006
MW-S63
MW-SD63
MW-S63 (N/A)
4/21 0.255
GW-RI-16009
MW-S16
GW-RI-16003
MW-SD24 (0.22%)
4/21 160
4/22 281
4/23 128
HA20-CMT-4S (0.19%)
4/21 160.3
HA20-CMT-4I (0.23%)
4/21 27.8/J
MW-S60
MW-SD60
MW-S24
MW-SD24
MW-T24
HA20-CMT-4S
HA20-CMT-4I
HB-11
MW-S05
MW-S05 (NA)
3/05 26.6
11/05 5.31/J
5/06 2.1
11/09 0.53
5/11 0.36
10/12 0.25
8/13 0.34/N
MW-S60 (0.20%)
4/21 50.8
4/22 97.6
4/23 178
MW-SD60 (0.20%)
4/21 154
4/22 143
4/23 136
GZW-7-1 (0.21%)
4/05 129/J
10/05 124
9/08 151
11/09 132
6/10 94.2/J
5/11 111/J
10/12 103
8/13 105
11/19 69.3
4/21 68
4/22 80.2
4/23 82.2
GZW-7-1
GZW-7S
GW-RI-16007
GW-RI-16001
HA20-CMT-5I2
HA20-CMT-5I
HA20-CMT-5S
HA20-CMT-5S (NA)
4/21 0.73
HA20-CMT-5I (NA)
4/21 0.84
HA20-CMT-5I2 (NA)
4/21 0.61
HB-12
HBPZ-2R
HB-07
HA20-CMT-3T(OW)
HA20-CMT-3T (OW) (0.67%)
4/22 6.57
4/23 7.65
GZW-7S (0.21%)
4/05 122
10/05 117
8/07 122
11/19 67.1
4/21 82.1
GW-RI-16008
HA20-CMT-3S
HA20-CMT-3I
HB-620
HB-13
HB-10
HB-10S
MW-S18 (NA)
4/05 2.82
10/05 4.52
5/06 3.2
11/19 0.849
4/21 0.58
MW-S18
HA20-CMT-3I (NA)
4/21 2.55
GW-RI-16002
HB-620 (NA)
4/21 0.112/J
HA20-CMT-3S (0.24%)
4/21 58.6
HA20-CMT-6S
HA20-CMT-6S (NA)
4/21 0.2/J
HB-13 (0.21%)
4/21 3086
4/22 2580
4/23 2600
MW-11
HA20-CMT-2S
HA20-CMT-2S (NA)
4/21 1.69
HB-07 (NA)
4/05 77.2
11/05 63.9/J
HB-12 (0.22%)
4/05 2490
11/05 1460
5/06 1160
8/07 1580
4/08 695
9/08 837/J
5/09 560/J
11/09 821
6/10 270/J
5/11 372
10/12 681
8/13 634/N
7/17 571
11/19 441
4/21 387.8
4/22 253
4/23 266
HA20-CMT-1S (NA)
4/21 0.1/J
HA20-CMT-1I (NA)
4/21 <0.067
HA20-CMT-1S
HA20-CMT-1I
PW-6
HA-10A (NA)
10/05 <0.03
HA-10A
MW-S03
MW-S08
MW-S09
MW-S23
MW-SD10
MW-T10
A'
A
10
30
100
500
1,000
2,000
Legend
Monitoring Well
Piezometer
X-Section
Uranium Contour in Overburden Groundwater, April 2023
Estimated Uranium Contour in Overburden Groundwater, April 2023 (µg/L)
Holding Basin Source Control
Septic Fields
Wetlands
Surface Water
Most Recent Total Uranium
< 1 µg/L
1.01 - 10 µg/L
10.01 - 20 µg/L
20.01 - 30 µg/L
> 30.01 µg/L MCL Exceedance in Overburden
Historical Total Uranium (µg/L)
HBPZ-2R (0.20%)
Date | Total Uranium (µg/L)
8/13 1370
7/17 1964
11/19 1132
(0.20%) Represents the U-235% in the most recent sample data through April 2023
Notes:
1. Although concentrations shown are for total uranium, results shown are primarily depleted uranium (U-235% <0.6%).
2. Tabular summaries at wells downgradient of elevated total uranium are displayed for illustrative purposes only.
3. µg/L = micrograms per liter.
4. U = Not detected at or above the method detection limit shown.
5. J = Estimated value.
6. N = Indicates presumptive evidence of a compound. This flag is usually used for a tentatively identified compound, where the identification is based on a mass spectral library search.
7. Most Recent concentration text color within tabular summaries on figure coded by concentration ranges listed above.
8. From November 2021 to April 2022, a pilot test was performed in the overburden downgradient of the Holding Basin to sequester uranium in groundwater. The data collected after November 2021 represents conditions following the pilot test.
Depleted Uranium in Overburden Groundwater - Data Through April 2023
Nuclear Metals Inc. Superfund Site
Concord, Massachusetts
0 20 40 80 120 160 Feet
Geosyntec consultants
de maximis, inc.
Figure 8
Acton, Massachusetts
AUGUST-2023

# FIGURE 9
# ISOTOPICALLY NATURAL URANIUM AND 1,4-DIOXANE DISTRIBUTION IN BEDROCK GROUNDWATER THROUGH April 2023




**Legend**

- Extraction Well
- Monitoring Well
- Surface Water
- Staff Gauge and Drive Point Piezometer Locations
- Active Public Water Supply Well
- Wetlands
- Surface Water
- Site Boundary
- Former Building Concrete Foundation
- Building Outline
- Cross Section A-A'
- Uranium Contour in Bedrock Groundwater (µg/L)
- 1,4-Dioxane Isoconcentration Contour in Bedrock Through April 2023 (µg/L)
- Estimated 1,4-Dioxane Isoconcentration Contour in Bedrock Through April 2023 (µg/L)

**DRAFT**

Notes:
1. The most recent monitoring data from 2013 to 2023 are presented on this figure.
2. < = less than laboratory method detection limit.
3. J = estimated detection below method quantification limit.
4. J+ = estimated detection below method quantification limit (biased high)
5. µg/L = micrograms per liter

0 300 Feet

**Isotopically Natural Uranium and 1,4-Dioxane Distribution in Bedrock Groundwater Through April 2023**

Nuclear Metals, Inc. Superfund Site
Concord, Massachusetts

Geosyntec consultants | de maximis, inc.

Acton, Massachusetts | August 2023

**Figure 9**

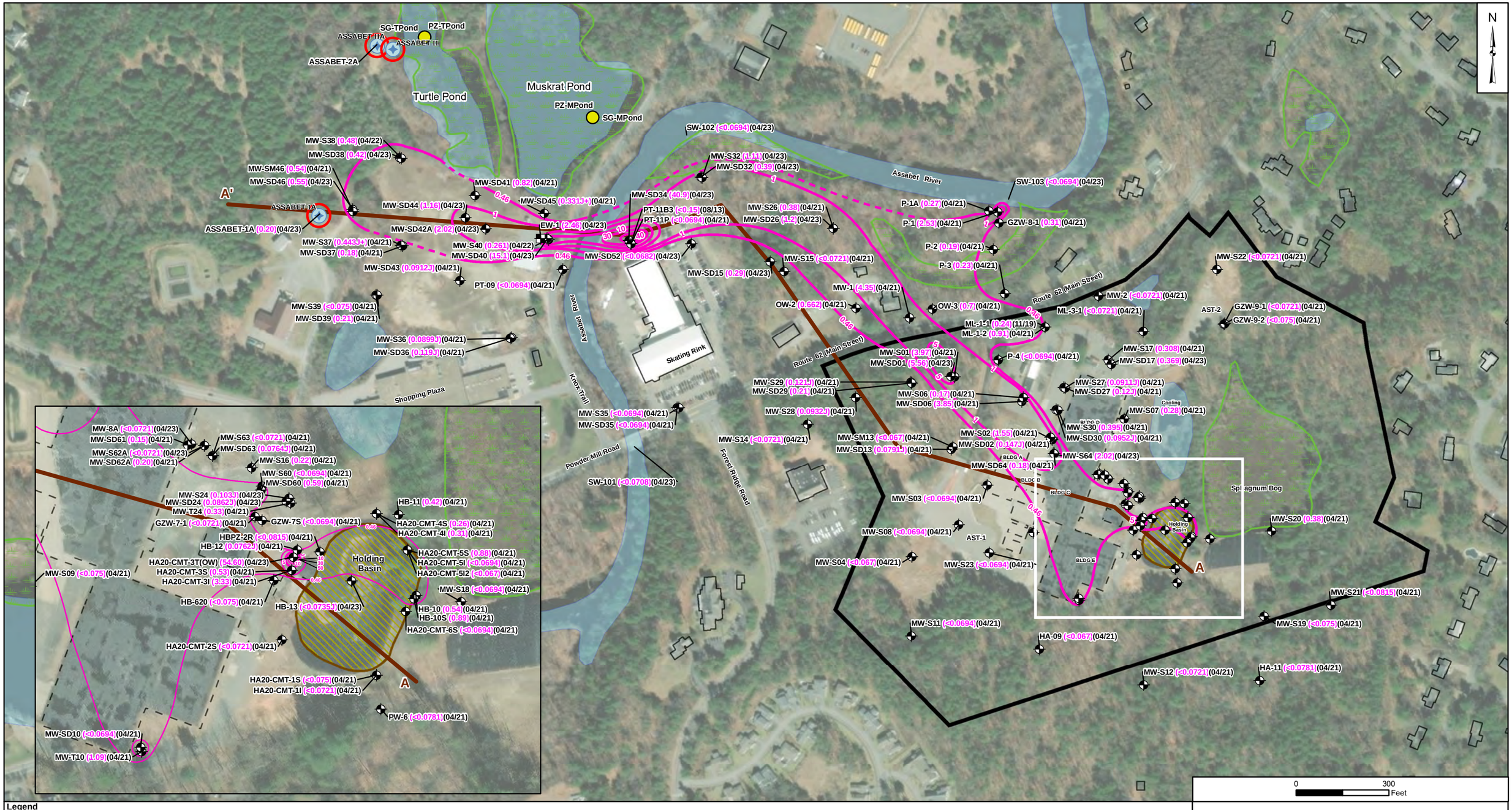
Q:\GISProjects\BR0090-NMISite\Projects\Updates_2023\Figure X - Uranium BR 14D MR 2023.mxd 8/7/2023 1:35:33 AM

# FIGURE 10
# 1,4-DIOXANE DISTRIBUTION IN OVERBURDEN AND BEDROCK GROUNDWATER

10a. 1,4-Dioxane Distribution in Overburden Groundwater - Most Recent Data Through April 2023

10b. 1,4-Dioxane Distribution in Bedrock Groundwater - Most Recent Data Through April 2023

10c. 1,4-Dioxane Distribution in Overburden and Bedrock Groundwater - Most Recent Data Through April 2023




**Legend**

- Extraction Well
- Monitoring Well
- Staff Gauge and Drive Point Piezometer Locations
- Active Public Water Supply Well
- Wetlands
- Surface Water
- Site Boundary
- Former Building Concrete Foundation
- Building Outline
- Cross Section A-A'
- 1,4-Dioxane Isoconcentration Contour in Overburden Through April 2023 (µg/L)
- Estimated 1,4-Dioxane Isoconcentration Contour in Overburden Through April 2023 (µg/L)
- **(125.35) (04/21)** Most Recent 1,4-Dioxane Concentration (µg/L) (Month/Year Collected)

**DRAFT**

Notes:
1. The most recent monitoring data from 2013 to 2023 are presented on this figure.
2. < = less than laboratory method detection limit.
3. J = estimated detection below method quantification limit.
4. J+ = estimated detection below method quantification limit (biased high)
5. µg/L = micrograms per liter

# 1,4-Dioxane Distribution in Overburden Groundwater Most Recent Data Through April 2023

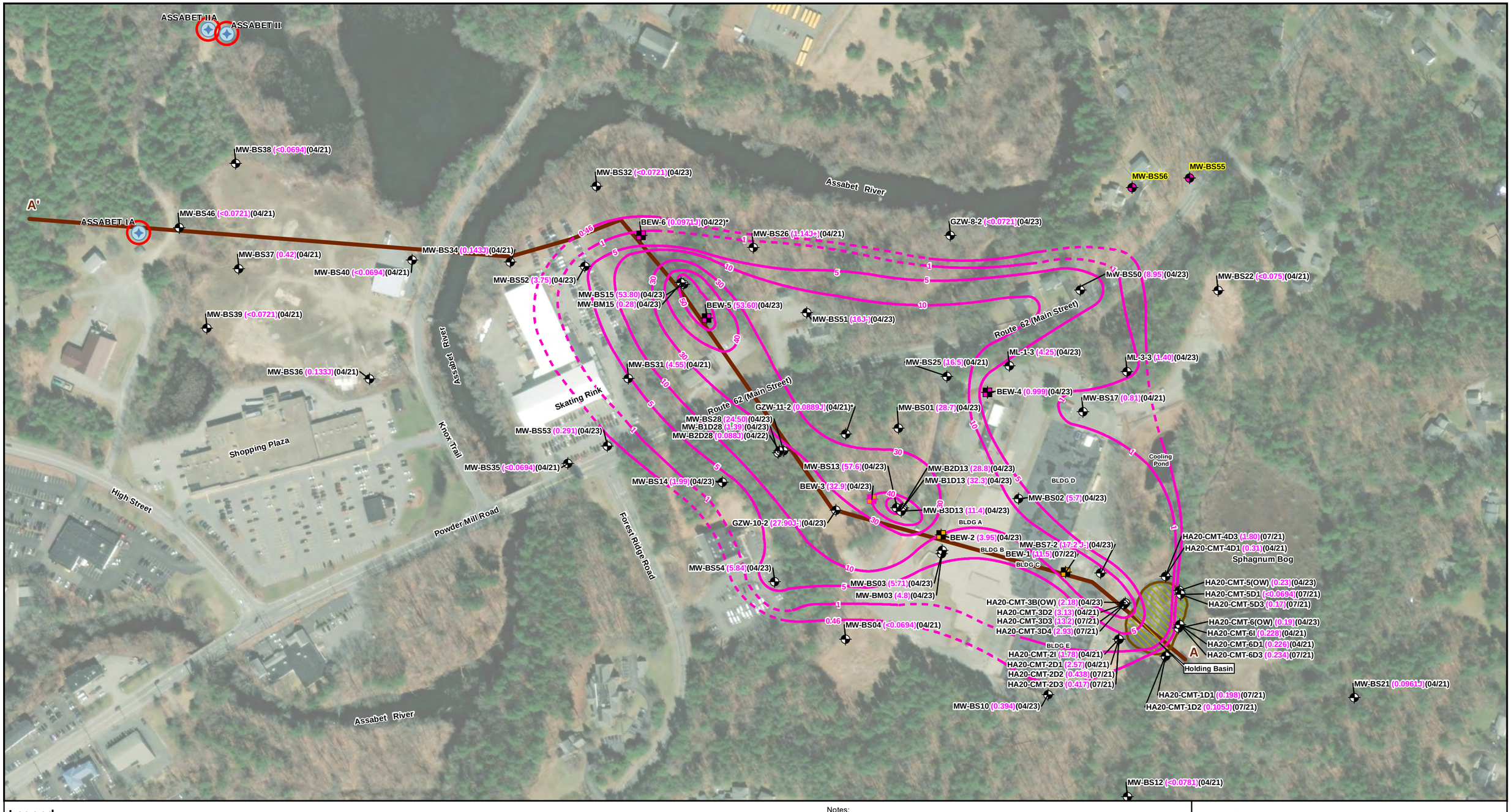
Nuclear Metals, Inc. Superfund Site
Concord, Massachusetts

Geosyntec consultants | de maximis, inc.

Acton, Massachusetts | August 2023

**Figure 10a**

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## Legend

- Extraction Well
- Monitoring Well
- Bedrock Extraction Well for Uranium Plume
- Bedrock Extraction Well for Uranium and 1,4-Dioxane Plumes
- Bedrock Extraction Well for 1,4-Dioxane Plume
- Proposed Bedrock Monitoring Well
- Holding Basin Source Control Area
- Cross Section A-A'
- 1,4-Dioxane Isoconcentration Contour in Bedrock Through April 2023 (µg/L)
- Estimated 1,4-Dioxane Isoconcentration Contour in Bedrock Through April 2023 (µg/L)

**(125.35) (04/21)** Most Recent 1,4-Dioxane Concentration (µg/L) (Month/Year Collected)

***DRAFT***

Notes:
1. The most recent monitoring data from 2013 to 2023 are presented on this figure.
2. Wells (GZW-11-2, BEW-2, BEW,4 and BEW-6) annotated with an asterisk (*) were not used in developing isoconcentration contours.
3. < = less than laboratory method detection limit.
4. J = estimated detection below method quantification limit (biased low).
5. J- = estimated detection below method quantification limit (biased low)
6. J+ = estimated detection below method quantification limit (biased high)
7. µg/L = micrograms per liter

N

0 250 Feet

**1,4-Dioxane Distribution in Bedrock Groundwater**
**Most Recent Data Through April 2023**

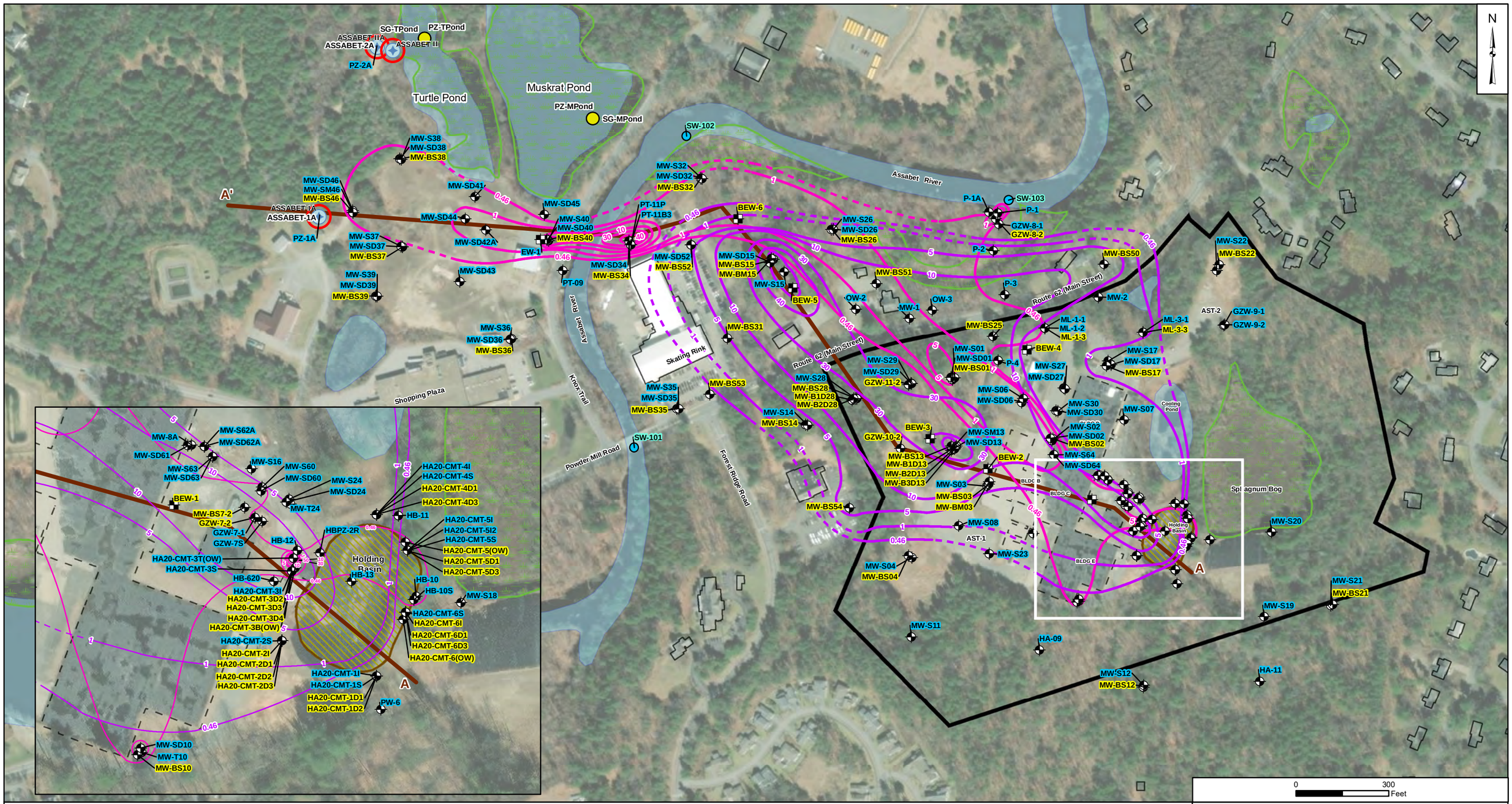
Nuclear Metals, Inc. Superfund Site
Concord, Massachusetts

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Acton, Massachusetts | July 2023

**Figure 10b**

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**Legend**

- Extraction Well
- Monitoring Well
- Surface Water
- Staff Gauge and Drive Point Piezometer Locations
- Active Public Water Supply Well
- Wetlands
- Surface Water
- Site Boundary
- Former Building Concrete Foundation
- Building Outline
- Cross Section A-A'
- 1,4-Dioxane Isoconcentration Contour in Overburden Through April 2023 (µg/L)
- Estimated 1,4-Dioxane Isoconcentration Contour in Overburden Through April 2023 (µg/L)
- 1,4-Dioxane Isoconcentration Contour in Bedrock Through April 2023 (µg/L)
- Estimated 1,4-Dioxane Isoconcentration Contour in Bedrock Through April 2023 (µg/L)

**DRAFT**

Notes:
1. The most recent monitoring data from 2013 to 2023 are presented on this figure.
2. See Figures 10a and 10b for posted concentrations at wells.
3. Contours are in units of µg/L = micrograms per liter

# 1,4-Dioxane Distribution in Overburden and Bedrock Groundwater
## Most Recent Data Through April 2023

Nuclear Metals, Inc. Superfund Site
Concord, Massachusetts

Geosyntec consultants | de maximis, inc.

Acton, Massachusetts | August 2023

**Figure 10c**

Q:\GISProjects\BR0090-NMISite\Projects\Updates_2023\Figure X - 14D OB and BR MR 2023.mxd 8/4/2023 5:25:47 PM

# FIGURE 11
# DISTRIBUTION OF 1,4-DIOXANE IN GROUNDWATER THROUGH June 2023 - CROSS SECTION A-A'

DRAFT

SOUTHEAST A — NORTHWEST A

ELEVATION (FEET)

DISTANCE (FEET)

T:\PROJECTS_CADD\N\NMI (NUCLEAR METALS SUPERFUND SITE)\FIGURES\2023 SECTIONS\BR0090B-F100 ( SEC A B – 2023 DATA URAMIUM – DIOX)

## LEGEND

- Existing ground surface (note 1)
- Top of till
- Top of bedrock
- Water table April 2023
- Inferred groundwater flow direction April 2013
- -1,4-dioxane µg/l isoconcentration contour through April 2023 (dashed where inferred) - 0.46 µg/L 2015 ROD clean up level

monitoring well
screened interval
12.8 1,4-dioxane (µg/L) historic
2.4 1,4-dioxane (µg/L) 2023 see note 3

Push-ahead sample collection depths

Fracture interpreted in bedrock cores or geophysical logs

OVERBURDEN: SILT; SILT - SAND (F, M, C); SAND (F, M, C); GRAVEL; CLAY

BEDROCK: GLACIAL TILL; ANDOVER GRANITE WEATHERED BEDROCK; SHAWSHEEN GNEISS WEATHERED BEDROCK; ASSABET QUARTZ DIORITE BEDROCK; SHAWSHEEN GNEISS BEDROCK; ANDOVER GRANITE BEDROCK

Notes:
1. The cross-section alignment, 1,4-dioxane distribution, and dates of most recent sample results are shown in plan view on Figure 10.
2. Ground surface from topographic map titled "existing conditions plan 2229 Main Street, Concord Mass" prepared by Feldman Land Surveyors, dated 2020-6-19 and from an aerial map flown in November 2001 prepared by Sanborn inc. and is approximate.
3. The most recent 1,4-dioxane results from 2013 to 2023 are shown on this figure. Results shown in magenta were collected in April 2023. Results shown in black were collected between 2013 to 2022. The month/year of sample collection is provided in the plan view figure (Figure 10).
4. Depths to top of bedrock and well screens are approximate.
5. Well name designations from left to right indicate the shallowest to the deepest at that location. Bedrock extraction wells (BEW) shaded green are open bedrock boreholes, except BEW-5 which has a 4-inch diameter, 20-foot long stainless steel screen.
6. Magenta isoconcentration contour lines depict distribution of 1,4-dioxane in groundwater. For open bedrock (BEW) wells, the monitoring data posted at the pump intake elevations were considered in contouring.
7. Because not all the wells are exactly along the hydraulic gradient direction (illustrated on figure 5b) the contours have not honored all of the data presented, but illustrate a conservative interpretation (i.e, using the higher levels for contouring).

BEW: bedrock extraction well
J: estimated value, compound is detected, but below the sample quantitation limit
NS: not sampled
ROD: Record of Decision, September 2015
µg/L: micrograms per Liter
GPM: gallons per minute
J+: estimated value, compound is detected, but below the sample quantification limit (biased high)

0 120 HORIZ. SCALE IN FEET

0 30 VERT. SCALE IN FEET

DRAFT

**Distribution of 1, 4-dioxane in Groundwater through June 2023 -Cross Section A-A'**

Nuclear Metals, Inc. Superfund Site Concord, Massachusetts

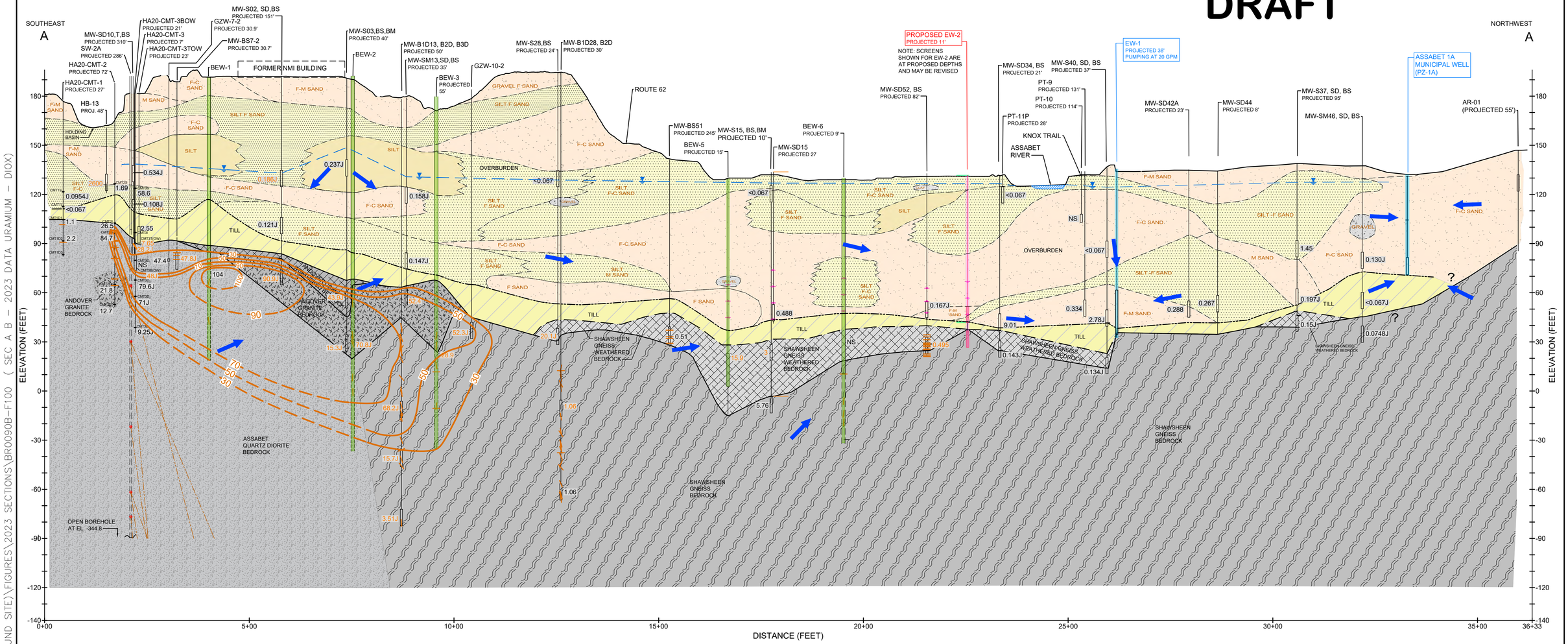
Geosyntec consultants

Acton, MA | August 2023

Figure 11

# FIGURE 12
# ISOTOPICALLY NATURAL URANIUM CONCENTRATIONS IN GROUNDWATER THROUGH April 2023 - CROSS SECTION A-A'

# DRAFT




T:\PROJECTS_CADD\N\NMI (NUCLEAR METALS SUPERFUND SITE)\FIGURES\2023 SECTIONS\BR0090B-F100 ( SEC A B – 2023 DATA URAMIUM – DIOX)

## LEGEND

- Existing ground surface (note 1)
- Top of till
- Top of bedrock
- Water table April 2023
- Inferred groundwater flow direction April 2023
- Uranium µg/l isoconcentration contour through April 2023 (dashed where inferred) - 30 µg/L 2015 rod cleanup level (thick contours)
- monitoring well
  - screened interval
  - 58.6 Isotopically natural uranium (µg/l) historic
  - 90.9 Isotopically natural uranium (µg/l) 2023 see note 3
- Fracture interpreted in bedrock cores or geophysical logs

OVERBURDEN
- SILT
- SILT - SAND (F, M, C)
- SAND (F, M, C)
- GRAVEL
- CLAY

BEDROCK
- OVERBURDEN
- GLACIAL TILL
- ANDOVER GRANITE WEATHERED BEDROCK
- SHAWSHEEN GNEISS WEATHERED BEDROCK
- ASSABET QUARTZ DIORITE BEDROCK
- SHAWSHEEN GNEISS BEDROCK
- ANDOVER GRANITE BEDROCK

Notes:
1. The cross-section alignment, uranium distribution, and dates of most recent sample results are shown in plan view on Figure 9.
2. Ground surface from topographic map titled "existing conditions plan 2229 Main Street, Concord Mass" prepared by Feldman Land Surveyors, dated 2020-6-19 and from an aerial map flown in November 2001 prepared by Sanborn inc. and is approximate.
3. The most recent uranium results are shown on this figure. Results shown in orange were collected in April 2023. Results shown in black were collected between 2005 to 2022. The months/years of sample collection are provided in the plan view figure (Figure 9).
4. Depths to top of bedrock and well screens are approximate.
5. Well name designations from left to right indicate the shallowest to the deepest at that location. Bedrock extraction wells (BEW) shaded green are open bedrock boreholes, except BEW-5 which has a 4-inch diameter, 20-foot long stainless steel screen.
6. Orange isoconcentration contour lines depict distribution of isotopically natural uranium in groundwater. For open bedrock (BEW) wells, the monitoring data posted at the pump intake elevations were considered in contouring.
7. Analytical concentration contours do not honor all of the data presented, but illustrate a conservative interpretation (i.e., using the higher value when necessary).
8. The speciation of Uranium detections at CMT-3s indicated that these detections represent depleted uranium and these data were not used in the contouring of isotopically natural uranium.

BEW: bedrock extraction well
J: estimated value, compound is detected, but below the sample quantitation limit.
NS: not sampled
ROD: Record of Decision, September 2015
µg/L: micrograms per Liter
GPM: gallons per minute

DRAFT

0 120 HORIZ. SCALE IN FEET

0 30 VERT. SCALE IN FEET

**Isotopically Natural Uranium Concentrations in Groundwater through April 2023 - Cross Section A-A'**

Nuclear Metals, Inc. Superfund Site Concord, Massachusetts

Geosyntec consultants

Acton, MA | August 2023

Figure 12

# TABLES

# TABLE 1
# MONITORING WELL NETWORK

1a. Overall Monitoring Well Network
1b. Monthly Sampling Event
1c. Semi-Annual Sampling Event
1d. Annual Sampling Event
1e. Comprehensive Sampling Event

Table 1a.
Overall Monitoring Well Network
Site Wide Monitoring Plan (SWMP)
NMI RD/RA

| Well ID | Easting (X) | Northing (Y) | Ground Surface Elevation (feet NGVD) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Elevation Top of Screen (feet) | Elevation Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Monthly Sampling | Semi-Annual Sampling | Annual Sampling | Comprehensive Sampling |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | "M" | "S" | "A" | "C" |
| 9-78 | 676096.827 | 2987274.821 | | 138.96 | N/A | 58 | 62 | 58 | 58 | OB | N/A | A | X | | X |
| A-2E | 675299.016 | 2987354.769 | N/A | 132.70 | N/A | 74 | N/A | 74 | 74 | OB | N/A | A | X | | X |
| A5-78 | 675145.405 | 2987795.458 | N/A | 132.32 | N/A | 88 | 93 | 88 | 88 | OB | N/A | | | | X |
| AR-01 | 674733.403 | 2986826.979 | N/A | 139.91 | N/A | 122 | 132 | 122 | 122 | OB | N/A | A | X | | X |
| AR-02 | 675913.415 | 2987545.893 | N/A | 137.38 | N/A | 120 | 130 | 120 | 120 | OB | N/A | A | X | | X |
| AR-PHS | 675813.999 | 2986615.917 | N/A | 128.62 | -- | -- | -- | -- | -- | SW | -- | A | X | | X |
| ASBRV-D2 | 677203.791 | 2986906.699 | N/A | N/A | -- | -- | -- | -- | -- | SW | -- | | X | | X |
| ASBRV-U1 | 675239.488 | 2985706.537 | N/A | 140.85 | -- | -- | -- | -- | -- | SW | -- | | X | | X |
| ASBRV-U2 | 676058.199 | 2986109.991 | N/A | 138.48 | -- | -- | -- | -- | -- | SW | -- | A | X | | X |
| ASSABET-1A (PZ-1A)[1] | 675012.679 | 2986855.744 | N/A | 139.08 | 50.8 | 61 | 88 | 68 | 61 | OB | 18 | A & B | X | X | X |
| ASSABET-2A (PZ-2A)[1] | 675197.550 | 2987402.686 | N/A | 137.67 | 26 | 34 | 106 | 86 | 34 | OB | 12 | A & B | X | X | X |
| AST-2 | | | | | | | | | | | | | | | |
| B-06 | 675423.942 | 2987568.250 | N/A | 139.13 | N/A | N/A | 113 | 110 | N/A | OB | N/A | A | X | | X |
| BEW-1* | 677509.410 | 2985933.649 | 191.85 | 193.88 | 114 | 175.4 | 77.85 | 16.45 | 178 | BR | 6 | | X | | X |
| BEW-2* | 677172.855 | 2986034.777 | 190.31 | 192.31 | 134.5 | 227 | 55.81 | -36.69 | 229 | BR | 6 | | X | X | X |
| BEW-3* | 676986.190 | 2986131.727 | 177.47 | 179.69 | 119 | 212.5 | 58.47 | -35.03 | 215 | BR | 6 | | X | X | X |
| BEW-4* | 677298.570 | 2986420.305 | 169.91 | 172.07 | 74.5 | 142 | 95.41 | 27.91 | 144 | BR | 6 | | X | X | X |
| BEW-5* | 676541.404 | 2986620.006 | 129.88 | 132.48 | 107 | 127 | 22.88 | -15.12 | 145 | BR | 6 | | X | X | X |
| BEW-6* | 676364.690 | 2986842.848 | 129.87 | 132.91 | 119 | 162 | 10.87 | -32.13 | 162 | BR | 6 | | X | | X |
| EW-1 | 675727.042 | 2986776.130 | 135.50 | 135.62 | 74 | 98 | 61.5 | 37.5 | 98 | OB | 6 | A & B | X | X | X |
| GZW-10-1 | 676891.080 | 2986108.060 | 184.00 | 186.30 | 55 | 60 | 129 | 124 | 164 | OB | 0.5 | | X | | X |
| GZW-10-2 | 676891.084 | 2986108.069 | 184.00 | 186.30 | 142 | 152 | 42 | 32 | 164 | BR | 1.5 | | X | X | X |
| GZW-11-1 | | | | | | | | | | | | | | | |
| GZW-11-2 | 676916.293 | 2986308.467 | 193.20 | 195.45 | 155 | 175 | 38.2 | 18.2 | 176 | BR | 1.5 | | X | | X |
| GZW-5 | 678388.326 | 2985878.371 | 194.10 | 196.02 | 40 | 55 | 154.1 | 139.1 | 55 | OB | 1.5 | | X | | X |
| GZW-6-1 | 677089.774 | 2986141.090 | 178.40 | 178.61 | 32 | 42 | 146.4 | 136.4 | 45 | OB | 1.5 | | X | | X |
| GZW-6-2 | | | | | | | | | | | | | | | |
| GZW-7-1 | 677625.824 | 2985932.510 | 192.23 | 195.62 | 68 | 78 | 124.23 | 114.23 | 122 | OB | 1.5 | | X | X | X |
| GZW-7-2 | | | | | | | | | | | | | | | |
| GZW-7S | 677631.281 | 2985926.516 | 193.92 | 193.67 | 61 | 71 | 132.92 | 122.92 | 71 | OB | 2 | | X | | X |
| GZW-8-1 | 677208.084 | 2986826.318 | 125.13 | 127.57 | 2 | 12 | 123.1325 | 113.1325 | 12 | OB | 2 | | X | | X |
| GZW-8-2 | 677198.012 | 2986842.544 | 128.45 | 127.10 | 114.5 | 116 | 13.95 | 12.45 | 133.5 | BR | 1.5 | | X | | X |
| GZW-9-1 | 677911.818 | 2986490.304 | 180.68 | 183.07 | 32 | 42 | 148.68 | 138.68 | 42 | OB | 1.5 | | | | X |
| GZW-9-2 | 677932.608 | 2986501.571 | 180.63 | 183.15 | 45 | 50 | 135.63 | 130.63 | 64 | OB | 1.5 | | X | | X |
| HA-09 | 677351.560 | 2985459.930 | 205.00 | 205.80 | 49 | 69 | 156 | 136 | 70 | OB | 2 | | X | | X |
| HA-10 | | | | | | | | | | | | | | | |
| HA-10A | 677774.000 | 2985571.206 | 181.30 | 180.94 | 27.6 | 47.6 | 153.7 | 133.7 | 47.6 | OB | 2 | | X | | X |
| HA-11 | 678053.940 | 2985355.590 | 157.40 | 158.43 | 14 | 24 | 143.4 | 133.4 | 24 | OB | 2 | | | | X |
| HA20-CMT-1$D_1$* | 677781.860 | 2985703.250 | 177.54 | 180.13 | 72.9 | 73.4 | 104.64 | 104.14 | 3 and 6 | BR | 0.375 | | | | X |
| HA20-CMT-1$D_2$* | 677781.860 | 2985703.250 | 177.54 | 180.13 | 85.9 | 86.4 | 91.64 | 91.14 | 5 | BR | 0.375 | | | | X |
| HA20-CMT-1$D_3$* | 677781.860 | 2985703.250 | 177.54 | 180.13 | 94.3 | 94.8 | 83.24 | 82.74 | 7 | BR | 0.375 | | | | X |
| HA20-CMT-1I* | 677781.860 | 2985703.250 | 177.54 | 180.13 | 64.9 | 65.4 | 112.64 | 112.14 | 2 | OB | 0.375 | | | | X |
| HA20-CMT-1S* | 677781.860 | 2985703.250 | 177.54 | 180.13 | 55.9 | 56.4 | 121.64 | 121.14 | 1 and 4 | OB | 0.375 | | | | X |
| HA20-CMT-2$D_1$* | 677652.030 | 2985764.910 | 187.90 | 190.85 | 91.4 | 91.9 | 96.5 | 96 | 3 | BR | 0.375 | | | | X |
| HA20-CMT-2$D_2$* | 677652.030 | 2985764.910 | 187.90 | 190.85 | 122.9 | 123.4 | 65 | 64.5 | 6 | BR | 0.375 | | | | X |
| HA20-CMT-2$D_3$ | 677652.030 | 2985764.910 | 187.90 | 190.85 | 135.1 | 135.6 | 52.8 | 52.3 | 7 | BR | 0.375 | | | | X |
| HA20-CMT-2I* | 677652.030 | 2985764.910 | 187.90 | 190.85 | 85.4 | 85.9 | 102.5 | 102 | 5 and 2 | BR | 0.375 | | | | X |
| HA20-CMT-2S* | 677652.030 | 2985764.910 | 187.90 | 190.85 | 61.4 | 61.9 | 126.5 | 126 | 4 and 1 | OB | 0.375 | | | | X |
| HA20-CMT-3B(OW)* | 677671.468 | 2985858.746 | 181.53 | 184.30 | 98 | 108 | 83.53 | 73.53 | 108 | BR | 2 | | X | X | X |
| HA20-CMT-3$D_1$* | 677671.180 | 2985854.340 | 181.64 | 184.65 | 101.9 | 102.4 | 79.74 | 79.24 | 3 and 6 | BR | 0.375 | | | | X |
| HA20-CMT-3$D_2$* | 677671.180 | 2985854.340 | 181.64 | 184.65 | 113.9 | 114.4 | 67.74 | 67.24 | 4 | BR | 0.375 | | | | X |
| HA20-CMT-3$D_3$* | 677671.180 | 2985854.340 | 181.64 | 184.65 | 123.9 | 124.4 | 57.74 | 57.24 | 5 | BR | 0.375 | | | | X |
| HA20-CMT-3$D_4$* | 677671.180 | 2985854.340 | 181.64 | 184.65 | 142.9 | 143.4 | 38.74 | 38.24 | 7 | BR | 0.375 | | | | X |
| HA20-CMT-3I* | 677671.180 | 2985854.340 | 181.64 | 184.65 | 84.9 | 85.4 | 96.74 | 96.24 | 2 | OB | 0.375 | | | | X |
| HA20-CMT-3S* | 677671.180 | 2985854.340 | 181.64 | 184.65 | 57.9 | 58.4 | 123.74 | 123.24 | 1 | OB | 0.375 | | | | X |
| HA20-CMT-3T(OW)* | 677669.070 | 2985870.862 | 182.41 | 184.79 | 82 | 92 | 100.41 | 90.41 | 92 | OB | 2 | | X | X | X |
| HA20-CMT-4$D_1$* | 677759.450 | 2985916.250 | 173.94 | 176.86 | 90.9 | 91.4 | 83.04 | 82.54 | 3 and 6 | BR | 0.375 | | | | X |
| HA20-CMT-4$D_2$* | 677759.450 | 2985916.250 | 173.94 | 176.86 | 102.9 | 103.4 | 71.04 | 70.54 | 4 | BR | 0.375 | | | | X |

Table 1a.
Overall Monitoring Well Network
Site Wide Monitoring Plan (SWMP)
NMI RD/RA

| Well ID | Easting (X) | Northing (Y) | Ground Surface Elevation (feet NGVD) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Elevation Top of Screen (feet) | Elevation Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Monthly Sampling | Semi-Annual Sampling | Annual Sampling | Comprehensive Sampling |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | "M" | "S" | "A" | "C" |
| HA20-CMT-4D$_3$* | 677759.450 | 2985916.250 | 173.94 | 176.86 | 110.9 | 111.4 | 63.04 | 62.54 | 5 and 7 | BR | 0.375 | | | | X |
| HA20-CMT-4I* | 677759.450 | 2985916.250 | 173.94 | 176.86 | 78.9 | 79.4 | 95.04 | 94.54 | 2 | OB | 0.375 | | | | X |
| HA20-CMT-4S* | 677759.450 | 2985916.250 | 173.94 | 176.86 | 61.9 | 62.4 | 112.04 | 111.54 | 1 | OB | 0.375 | | | | X |
| HA20-CMT-5(OW)* | 677836.950 | 2985870.380 | 172.79 | 175.64 | 90 | 100 | 82.79 | 72.79 | 100 | BR | 2 | | X | X | X |
| HA20-CMT-5D$_1$* | 677833.690 | 2985877.490 | 173.45 | 176.64 | 81.9 | 82.4 | 91.55 | 91.05 | 4 | BR | 0.375 | | | | X |
| HA20-CMT-5D$_2$* | 677833.690 | 2985877.490 | 173.45 | 176.64 | 91.9 | 92.4 | 81.55 | 81.05 | 5 | BR | 0.375 | | | | X |
| HA20-CMT-5D$_3$* | 677833.690 | 2985877.490 | 173.45 | 176.64 | 116.9 | 117.4 | 56.55 | 56.05 | 6 | BR | 0.375 | | | | X |
| HA20-CMT-5D$_4$* | 677833.690 | 2985877.490 | 173.45 | 176.64 | 129.1 | 129.6 | 44.35 | 43.85 | 7 | BR | 0.375 | | | | X |
| HA20-CMT-5I* | 677833.690 | 2985877.490 | 173.45 | 176.64 | 64.9 | 65.4 | 108.55 | 108.05 | 2 | OB | 0.375 | | | | X |
| HA20-CMT-5I$_2$* | 677833.690 | 2985877.490 | 173.45 | 176.64 | 72.9 | 73.4 | 100.55 | 100.05 | 3 | OB | 0.375 | | | | X |
| HA20-CMT-5S* | 677833.690 | 2985877.490 | 173.45 | 176.64 | 44.9 | 45.4 | 128.55 | 128.05 | 1 | OB | 0.375 | | | | X |
| HA20-CMT-6(OW)* | 677816.820 | 2985799.050 | 177.54 | 180.29 | 79 | 84 | 98.54 | 93.54 | 84 | BR | 2 | | X | X | X |
| HA20-CMT-6D$_1$* | 677813.870 | 2985791.960 | 177.34 | 180.45 | 83 | 83.5 | 94.34 | 93.84 | 3 | BR | 0.375 | | | | X |
| HA20-CMT-6D$_2$* | 677813.870 | 2985791.960 | 177.34 | 180.45 | 99.5 | 100 | 77.84 | 77.34 | 5 | BR | 0.375 | | | | X |
| HA20-CMT-6D$_3$* | 677813.870 | 2985791.960 | 177.34 | 180.45 | 118 | 118.5 | 59.34 | 58.84 | 6 | BR | 0.375 | | | | X |
| HA20-CMT-6D$_4$* | 677813.870 | 2985791.960 | 177.34 | 180.45 | 126 | 126.5 | 51.34 | 50.84 | 7 | BR | 0.375 | | | | X |
| HA20-CMT-6I* | 677813.870 | 2985791.960 | 177.34 | 180.45 | 77 | 77.5 | 100.34 | 99.84 | 4 and 1 | OB | 0.375 | | | | X |
| HA20-CMT-6S* | 677813.870 | 2985791.960 | 177.34 | 180.45 | 65 | 65.5 | 112.34 | 111.84 | 2 | OB | 0.375 | | | | X |
| HA20-PZ-1D* | 677754.508 | 2986070.878 | N/A | N/A | 3 | 4.2 | N/A | N/A | 4.2 | OB | 0.75 | | | | X |
| HA20-PZ-1S* | 677754.508 | 2986058.878 | N/A | N/A | 0.8 | 2 | N/A | N/A | 2 | OB | 0.75 | | | | X |
| HA20-PZ-2S* | 677750.193 | 2986142.749 | N/A | 143.28 | 0.5 | 1.7 | N/A | N/A | 1.7 | OB | 0.75 | | | | X |
| HA20-PZ-3S* | 677723.021 | 2986184.614 | N/A | 148.18 | 0.5 | 1.7 | N/A | N/A | 1.7 | OB | 0.75 | | | | X |
| HA20-PZ-4D* | 677778.236 | 2986268.273 | N/A | 146.57 | 3 | 4.2 | N/A | N/A | 4.2 | OB | 0.75 | | | | X |
| HA20-PZ-4S* | 677761.585 | 2986264.603 | N/A | 148.11 | 1.5 | 2.7 | N/A | N/A | 2.7 | OB | 0.75 | | | | X |
| HB-10 | 677832.308 | 2985825.495 | 178.10 | 180.37 | 49 | 64 | 129.1 | 114.1 | 65 | OB | 1.5 | | X | | X |
| HB-10S | 677831.039 | 2985822.409 | 177.90 | 179.81 | 32 | 42 | 145.9 | 135.9 | 42 | OB | 2 | | X | | X |
| HB-11 | 677821.837 | 2985934.359 | 173.70 | 175.01 | 30 | 40 | 143.7 | 133.7 | 42 | OB | 2 | | X | | X |
| HB-12 | 677685.443 | 2985900.362 | 183.18 | 182.85 | 45 | 55 | 138.18 | 128.18 | 57 | OB | 2 | | X | X | X |
| HB-13* | 677744.743 | 2985834.135 | 160.40 | 162.11 | 28 | 38 | 132.4 | 122.4 | 38 | OB | 2 | | X | X | X |
| HB-620 | 677653.637 | 2985845.275 | 182.20 | 181.87 | 40 | 55 | 142.2 | 127.2 | 55 | OB | 2 | | X | | X |
| HB-7 | | | | | | | | | | | | | | | |
| HB-9 | | | | | | | | | | | | | | | |
| HBPZ-2R | 677708.467 | 2985883.407 | 174.82 | 176.05 | 36 | 51 | 138.82 | 123.82 | 52.5 | OB | 2 | | X | X | X |
| LF-20D | 676539.028 | 2987306.809 | N/A | 150.16 | 105 | 115 | 44 | 34 | N/A | OB | N/A | A | | | X |
| LF-20DBR | 676539.028 | 2987306.809 | N/A | 150.46 | N/A | N/A | -53 | -43 | N/A | BR | N/A | A | | | X |
| LF-20SBR | 676539.028 | 2987306.809 | N/A | 150.16 | N/A | N/A | 9 | -1 | N/A | BR | N/A | A | | | X |
| ML-1-1 | 677351.080 | 2986481.288 | 172.60 | 175.49 | 40 | 45 | 132.6 | 127.6 | 82.5 | OB | 1.5 | | | | X |
| ML-1-2 | 677351.080 | 2986481.280 | 172.60 | 175.35 | 65.5 | 67 | 107.1 | 105.6 | 82.5 | OB | 1.5 | | X | | X |
| ML-1-3 | 677351.080 | 2986481.288 | 172.60 | 175.40 | 80.1 | 81.5 | 92.5 | 91.1 | 82.5 | BR | 1.5 | | | X | X |
| ML-3-1 | 677673.754 | 2986476.313 | 146.90 | 146.77 | 25 | 30 | 121.9 | 116.9 | 55.5 | OB | 1.5 | | | | X |
| ML-3-3 | 677673.754 | 2986476.313 | 146.90 | 148.80 | 52 | 53.5 | 94.9 | 93.4 | 55.5 | BR | 1.5 | | | X | X |
| MW-1 | 676918.700 | 2986521.010 | 155.00 | 155.60 | 23 | 38 | 132 | 117 | 39 | OB | 2 | A | X | | X |
| MW-11 | 677611.840 | 2985787.100 | 188.42 | 189.70 | 55 | 65 | 133.42 | 123.42 | 65 | OB | 2 | | X | | X |
| MW-2 | 677522.349 | 2986579.572 | 147.40 | 149.02 | 13.6 | 23.6 | 133.8 | 123.8 | 24 | OB | 2 | | X | | X |
| MW-8A | 677537.207 | 2986026.898 | 191.88 | 191.72 | 60 | 70 | 131.88 | 121.88 | 70 | OB | 2 | | X | X | X |
| MW-B1D13* | 677070.533 | 2986109.304 | 177.54 | 180.53 | 184 | 194 | -6.5 | -16.5 | 194 | BR | 2 | | X | X | X |
| MW-B1D28* | 676734.155 | 2986257.635 | 194.41 | 197.25 | 200 | 210 | -5.6 | -15.6 | 210 | BR | 2 | | X | X | X |
| MW-B2D13* | 677067.893 | 2986105.092 | 177.81 | 180.63 | 214 | 224 | -36.2 | -46.2 | 224 | BR | 2 | | X | X | X |
| MW-B2D28* | 676738.463 | 2986261.708 | 194.36 | 197.25 | 251 | 261 | -56.6 | -66.6 | 261 | BR | 2 | | X | | X |
| MW-B3D13* | 677065.299 | 2986100.428 | 178.07 | 181.05 | 250 | 260 | -71.9 | -81.9 | 260 | BR | 2 | | X | X | X |
| MW-BM03 | 677178.500 | 2986000.500 | 191.40 | 191.06 | 157 | 167 | 34.4 | 24.4 | 200 | BR | 2 | | X | X | X |
| MW-BM15 | 676472.900 | 2986715.000 | 133.60 | 135.61 | 137 | 147 | -3.4 | -13.4 | 157 | BR | 2 | A | X | X | X |
| MW-BS01 | 677059.740 | 2986329.040 | 191.40 | 194.03 | 124 | 134 | 67.4 | 57.4 | 134.5 | BR | 2 | | X | X | X |
| MW-BS02 | 677384.300 | 2986139.420 | 191.89 | 191.74 | 117 | 127 | 74.89 | 64.89 | 127.5 | BR | 2 | | X | X | X |
| MW-BS03 | 677176.090 | 2985991.350 | 191.45 | 190.14 | 130.8 | 140.8 | 60.65 | 50.65 | 142.5 | BR | 2 | | X | X | X |
| MW-BS04 | 676917.330 | 2985761.010 | 175.87 | 178.07 | 111 | 126.3 | 64.87 | 49.57 | 126.3 | BR | 2 | | X | | X |
| MW-BS10 | 677468.040 | 2985613.500 | 191.82 | 194.00 | 98.5 | 108.5 | 93.32 | 83.32 | 109 | BR | 2 | | X | X | X |
| MW-BS12 | 677676.260 | 2985336.240 | 184.90 | 184.33 | 73 | 83 | 111.9 | 101.9 | 83.5 | BR | 2 | | X | | X |
| MW-BS13 | 677055.070 | 2986114.950 | 178.99 | 181.52 | 116.5 | 126.5 | 62.49 | 52.49 | 127.2 | BR | 2 | | X | X | X |

Table 1a.
Overall Monitoring Well Network
Site Wide Monitoring Plan (SWMP)
NMI RD/RA

| Well ID | Easting (X) | Northing (Y) | Ground Surface Elevation (feet NGVD) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Elevation Top of Screen (feet) | Elevation Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Monthly Sampling | Semi-Annual Sampling | Annual Sampling | Comprehensive Sampling |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | "M" | "S" | "A" | "C" |
| MW-BS14 | 676585.660 | 2986183.740 | 192.30 | 193.84 | 170 | 180 | 22.3 | 12.3 | 180 | BR | 2 | A | X | X | X |
| MW-BS15 | 676480.200 | 2986710.900 | 133.50 | 135.28 | 105 | 115 | 28.5 | 18.5 | 115 | BR | 2 | A | X | X | X |
| MW-BS17 | 677556.850 | 2986373.910 | 189.63 | 189.30 | 99.8 | 109.8 | 89.83 | 79.83 | 113 | BR | 2 | | X | | X |
| MW-BS21 | 678287.850 | 2985603.230 | 188.40 | 188.11 | 70 | 80 | 118.4 | 108.4 | 80.5 | BR | 2 | | X | | X |
| MW-BS22 | 677921.110 | 2986701.510 | 172.70 | 174.59 | 48 | 58 | 124.7 | 114.7 | 58.5 | BR | 2 | | X | | X |
| MW-BS25 | 677190.620 | 2986469.390 | 153.10 | 152.95 | 68 | 78 | 85.1 | 75.1 | 78.5 | BR | 2 | | X | | X |
| MW-BS26 | 676667.230 | 2986809.980 | 129.00 | 131.84 | 114 | 124 | 15 | 5 | 124.5 | BR | 2 | A | X | | X |
| MW-BS28 | 676750.550 | 2986267.520 | 194.70 | 197.35 | 156.4 | 166.4 | 38.3 | 28.3 | 168 | BR | 2 | | X | X | X |
| MW-BS31 | 676330.800 | 2986457.800 | 139.50 | 139.40 | 119 | 129 | 20.5 | 10.5 | 129 | BR | 2 | A | X | | X |
| MW-BS32 | 676245.126 | 2986975.518 | 129.40 | 131.36 | 92 | 102 | 37.4 | 27.4 | 102 | BR | 2 | A | X | X | X |
| MW-BS34 | 676012.541 | 2986771.180 | 131.70 | 133.60 | 101 | 111 | 30.7 | 20.7 | 111 | BR | 2 | A & B | X | | X |
| MW-BS35 | 676167.742 | 2986228.569 | 139.50 | 138.80 | 105.5 | 115.5 | 34 | 24 | 115.5 | BR | 2 | A | X | | X |
| MW-BS36 | 675633.119 | 2986455.835 | 133.10 | 134.76 | 113 | 123 | 20.1 | 10.1 | 123 | BR | 2 | A | X | | X |
| MW-BS37 | 675280.991 | 2986753.462 | 138.50 | 140.69 | 92 | 102 | 46.5 | 36.5 | 102 | BR | 2 | A | X | | X |
| MW-BS38 | 675272.149 | 2987036.888 | 134.20 | 136.39 | 85 | 95 | 49.2 | 39.2 | 95 | BR | 2 | A | X | | X |
| MW-BS39 | 675194.853 | 2986592.584 | 135.10 | 136.52 | 91 | 101 | 44.1 | 34.1 | 101 | BR | 2 | A | X | | X |
| MW-BS40 | 675748.309 | 2986775.842 | 136.64 | 138.76 | 116 | 126 | 20.64 | 10.64 | 126 | BR | 2 | A | X | | X |
| MW-BS46 | 675121.081 | 2986864.268 | 137.82 | 140.13 | 98 | 108 | 39.82 | 29.82 | 109 | BR | 2 | A | X | | X |
| MW-BS50* | 677548.152 | 2986695.846 | 150.69 | 150.32 | 63 | 73 | 87.7 | 77.7 | 73.5 | BR | 2 | | X | X | X |
| MW-BS51* | 676811.835 | 2986634.506 | 141.14 | 140.90 | 102 | 112 | 39.1 | 29.1 | 112 | BR | 2 | | X | X | X |
| MW-BS52* | 676213.222 | 2986759.159 | 132.79 | 132.58 | 100 | 110 | 32.8 | 22.8 | 110 | BR | 2 | | X | X | X |
| MW-BS53* | 676274.354 | 2986275.880 | 140.64 | 140.36 | 126 | 136 | 14.6 | 4.6 | 139 | BR | 2 | | X | X | X |
| MW-BS54* | 676724.768 | 2985909.439 | 169.81 | 169.39 | 176 | 186 | -6.2 | -16.2 | 186 | BR | 2 | | X | X | X |
| MW-BS7-2* | 677603.080 | 2985932.637 | 188.79 | 188.53 | 104.5 | 114.5 | 84.29 | 74.29 | 114.5 | BR | 2 | | X | X | X |
| MW-S01 | 677066.570 | 2986335.650 | 191.20 | 193.37 | 60.5 | 70.5 | 130.7 | 120.7 | 72 | OB | 2 | | X | | X |
| MW-S02 | 677381.430 | 2986132.980 | 191.79 | 191.40 | 57 | 67 | 134.79 | 124.79 | 103 | OB | 2 | | X | X | X |
| MW-S03 | 677171.050 | 2985985.210 | 191.19 | 191.20 | 50 | 60 | 141.19 | 131.19 | 60.5 | OB | 2 | | X | | X |
| MW-S04 | 676928.030 | 2985754.980 | 175.67 | 177.34 | 22 | 32 | 153.67 | 143.67 | 32 | OB | 2 | | X | | X |
| MW-S05 | | | | | | | | | | | | | | | |
| MW-S06 | 677287.970 | 2986267.830 | 178.20 | 177.92 | 45 | 55 | 133.2 | 123.2 | 56 | OB | 2 | | X | | X |
| MW-S07 | 677613.800 | 2986198.590 | 190.75 | 190.33 | 59 | 69 | 131.75 | 121.75 | 105 | OB | 2 | | X | | X |
| MW-S08 | 677080.050 | 2985856.870 | 182.63 | 185.63 | 37 | 47 | 145.63 | 135.63 | 104 | OB | 2 | | | | X |
| MW-S09 | 677320.560 | 2985832.740 | 191.65 | 191.08 | 51 | 61 | 140.65 | 130.65 | 106 | OB | 2 | | X | | X |
| MW-S11 | 676926.290 | 2985498.530 | 188.02 | 190.54 | 28.8 | 38.8 | 159.22 | 149.22 | 40.6 | OB | 2 | | | | X |
| MW-S12 | 677676.990 | 2985340.840 | 184.70 | 184.43 | 40 | 50 | 144.7 | 134.7 | 53 | OB | 2 | | X | | X |
| MW-S14 | 676591.250 | 2986181.970 | 192.50 | 194.90 | 61 | 71 | 131.5 | 121.5 | 71 | OB | 2 | A | X | | X |
| MW-S15 | 676513.520 | 2986671.240 | 130.40 | 134.14 | 5 | 15 | 125.4 | 115.4 | 24 | OB | 2 | A | X | | X |
| MW-S16 | 677613.300 | 2985989.710 | 187.77 | 187.40 | 68.8 | 78.8 | 118.97 | 108.97 | 81.5 | OB | 2 | | X | | X |
| MW-S17 | 677562.620 | 2986389.930 | 189.09 | 188.17 | 56 | 66 | 133.09 | 123.09 | 69 | OB | 2 | | X | | X |
| MW-S18 | 677890.840 | 2985811.990 | 155.55 | 158.23 | 9.5 | 19.5 | 146.05 | 136.05 | 30 | OB | 2 | | X | | X |
| MW-S19 | 678066.170 | 2985562.920 | 185.25 | 187.50 | 39 | 49 | 146.25 | 136.25 | 66 | OB | 2 | | X | | X |
| MW-S20 | 678090.290 | 2985836.480 | 154.38 | 156.59 | 19 | 29 | 135.38 | 125.38 | 50 | OB | 2 | | X | | X |
| MW-S21 | 678281.600 | 2985599.500 | 188.00 | 187.56 | 43 | 53 | 145 | 135 | 55 | OB | 2 | | X | | X |
| MW-S22 | 677912.910 | 2986682.140 | 173.10 | 175.62 | 33.6 | 43.6 | 139.5 | 129.5 | 44 | OB | 2 | | X | | X |
| MW-S23 | 677178.150 | 2985766.840 | 181.93 | 184.25 | 40 | 50 | 141.93 | 131.93 | 89 | OB | 2 | | X | | X |
| MW-S24 | 677663.300 | 2985949.330 | 185.70 | 185.53 | 53.8 | 63.8 | 131.9 | 121.9 | 65 | OB | 2 | | X | X | X |
| MW-S26 | 676672.841 | 2986809.146 | 128.60 | 130.65 | 5 | 15 | 123.6 | 113.6 | 90 | OB | 2 | A | X | | X |
| MW-S27 | 677423.740 | 2986300.100 | 186.50 | 186.14 | 124 | 134 | 62.5 | 52.5 | 134.5 | OB | 2 | | X | | X |
| MW-S28 | 676746.300 | 2986268.430 | 194.70 | 196.94 | 60 | 70 | 134.7 | 124.7 | 92 | OB | 2 | | X | | X |
| MW-S29 | 676925.180 | 2986318.600 | 192.80 | 194.74 | 62 | 72 | 130.8 | 120.8 | 73 | OB | 2 | | | | X |
| MW-S30 | 677400.480 | 2986228.300 | 187.50 | 187.23 | 52 | 62 | 135.5 | 125.5 | 62 | OB | 2 | | X | | X |
| MW-S32 | 676249.333 | 2986973.333 | 129.50 | 131.23 | 35 | 45 | 94.5 | 84.5 | 45 | OB | 2 | A | X | X | X |
| MW-S35 | 676173.470 | 2986230.135 | 139.60 | 138.95 | 30 | 40 | 109.6 | 99.6 | 40 | OB | 2 | A | X | | X |
| MW-S36 | 675629.002 | 2986454.906 | 133.20 | 135.09 | 38 | 48 | 95.2 | 85.2 | 48 | OB | 2 | A | X | | X |
| MW-S37 | 675275.464 | 2986754.678 | 139.00 | 140.96 | 47 | 57 | 92 | 82 | 57 | OB | 2 | A | X | | X |
| MW-S38 | 675276.911 | 2987036.356 | 134.40 | 136.56 | 40 | 50 | 94.4 | 84.4 | 50 | OB | 2 | A | X | | X |
| MW-S39 | 675198.697 | 2986594.507 | 135.00 | 136.79 | 38 | 48 | 97 | 87 | 48 | OB | 2 | A | X | | X |
| MW-S40 | 675752.877 | 2986773.872 | 136.73 | 138.71 | 45 | 55 | 91.73 | 81.73 | 55 | OB | 2 | A | X | | X |
| MW-S46 | 675121.081 | 2986864.268 | 137.82 | 140.22 | 53 | 63 | 84.82 | 74.82 | 109 | OB | 2 | A | X | X | X |
| MW-S60* | 677626.130 | 2985959.287 | 186.84 | 186.55 | 53 | 63 | 133.84 | 123.84 | 63 | OB | 2 | | X | X | X |

Table 1a.
Overall Monitoring Well Network
Site Wide Monitoring Plan (SWMP)
NMI RD/RA

| Well ID | Easting (X) | Northing (Y) | Ground Surface Elevation (feet NGVD) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Elevation Top of Screen (feet) | Elevation Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Monthly Sampling | Semi-Annual Sampling | Annual Sampling | Comprehensive Sampling |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | "M" | "S" | "A" | "C" |
| MW-S62A* | 677549.730 | 2986013.388 | 191.62 | 193.55 | 58 | 68 | 133.62 | 123.62 | 68 | OB | 2 | | X | X | X |
| MW-S63* | 677560.385 | 2985999.730 | 190.99 | 192.70 | 58 | 68 | 132.99 | 122.99 | 68 | OB | 2 | | X | | X |
| MW-S64* | 677386.193 | 2986081.430 | 192.10 | 194.91 | 60 | 75 | 132.1 | 117.1 | 75 | OB | 2 | | X | X | X |
| MW-SD01 | 677054.010 | 2986336.790 | 191.50 | 193.54 | 90 | 100 | 101.5 | 91.5 | 119 | OB | 2 | | X | X | X |
| MW-SD02 | 677376.030 | 2986139.930 | 190.93 | 190.73 | 85 | 95 | 105.93 | 95.93 | 95 | OB | 2 | | X | | X |
| MW-SD06 | 677283.710 | 2986256.420 | 178.30 | 178.23 | 64 | 74 | 114.3 | 104.3 | 81 | OB | 2 | | X | | X |
| MW-SD10 | 677462.750 | 2985610.210 | 192.05 | 194.29 | 54.3 | 64.3 | 137.75 | 127.75 | 65 | OB | 2 | | X | | X |
| MW-SD13 | 677055.420 | 2986101.420 | 179.20 | 180.68 | 94.8 | 104.8 | 84.4 | 74.4 | 105.5 | OB | 2 | | X | | X |
| MW-SD15* | 676469.274 | 2986702.030 | 133.78 | 136.44 | 81 | 91 | 52.78 | 42.78 | 91 | OB | 2 | | X | X | X |
| MW-SD17 | 677571.780 | 2986376.840 | 189.48 | 189.28 | 76 | 86 | 113.48 | 103.48 | 89 | OB | 2 | | X | | X |
| MW-SD24* | 677657.895 | 2985939.351 | 185.46 | 185.06 | 66 | 76 | 119.46 | 109.46 | 76 | OB | 2 | | X | X | X |
| MW-SD26 | 676672.841 | 2986809.146 | 128.60 | 130.56 | 80 | 90 | 48.6 | 38.6 | 90 | OB | 2 | A | X | X | X |
| MW-SD27 | 677419.350 | 2986301.890 | 186.40 | 185.90 | 72 | 82 | 114.4 | 104.4 | 82 | OB | 2 | | X | | X |
| MW-SD29 | 676927.100 | 2986316.100 | 192.90 | 195.56 | 100 | 110 | 92.9 | 82.9 | 111 | OB | 2 | | | | X |
| MW-SD30 | 677394.250 | 2986230.440 | 187.30 | 187.06 | 72 | 82 | 115.3 | 105.3 | 82 | OB | 2 | | X | | X |
| MW-SD32 | 676245.126 | 2986975.518 | 129.40 | 131.37 | 65 | 75 | 64.4 | 54.4 | 75 | OB | 2 | A | X | X | X |
| MW-SD34 | 676012.541 | 2986771.180 | 131.70 | 133.56 | 84.5 | 94.5 | 47.2 | 37.2 | 94.5 | OB | 2 | A & B | X | X | X |
| MW-SD35 | 676167.742 | 2986228.569 | 139.50 | 138.79 | 82 | 92 | 57.5 | 47.5 | 92 | OB | 2 | A | X | | X |
| MW-SD36 | 675633.119 | 2986455.835 | 133.10 | 134.78 | 92 | 102 | 41.1 | 31.1 | 102 | OB | 2 | A | X | | X |
| MW-SD37 | 675280.991 | 2986753.462 | 138.50 | 141.11 | 76 | 86 | 62.5 | 52.5 | 86 | OB | 2 | A | X | | X |
| MW-SD38 | 675272.149 | 2987036.888 | 134.20 | 135.95 | 60 | 70 | 74.2 | 64.2 | 70 | OB | 2 | A | X | X | X |
| MW-SD39 | 675194.853 | 2986592.584 | 135.10 | 136.77 | 75 | 85 | 60.1 | 50.1 | 85 | OB | 2 | A | X | | X |
| MW-SD40 | 675748.209 | 2986776.318 | 136.64 | 138.67 | 87 | 97 | 49.64 | 39.64 | 97 | OB | 2 | A | X | X | X |
| MW-SD41 | 675514.802 | 2986915.587 | 134.43 | 136.60 | 72 | 82 | 62.43 | 52.43 | 82 | OB | 2 | A | X | | X |
| MW-SD42A | 675550.344 | 2986806.565 | 135.15 | 137.70 | 80 | 90 | 55.15 | 45.15 | 90 | OB | 2 | A & B | X | X | X |
| MW-SD43 | 675465.857 | 2986640.193 | 135.72 | 137.78 | 80 | 90 | 55.72 | 45.72 | 90 | OB | 2 | A | X | | X |
| MW-SD44 | 675483.952 | 2986843.633 | 134.43 | 137.01 | 76 | 86 | 58.43 | 48.43 | 86 | OB | 2 | A & B | X | X | X |
| MW-SD45 | 675738.684 | 2986856.800 | 137.67 | 140.15 | 75 | 85 | 62.67 | 52.67 | 85 | OB | 2 | A & B | X | | X |
| MW-SD46 | 675119.845 | 2986869.830 | 137.78 | 140.37 | 77.5 | 87.5 | 60.28 | 50.28 | 87.5 | OB | 2 | A | X | X | X |
| MW-SD52* | 676213.515 | 2986759.174 | 132.79 | 132.57 | 78 | 88 | 54.7915 | 44.7915 | 88 | OB | 2 | | X | X | X |
| MW-SD60* | 677624.916 | 2985954.461 | 186.79 | 186.58 | 64 | 79 | 122.8 | 107.8 | 79 | OB | 2 | | X | X | X |
| MW-SD61* | 677527.771 | 2986014.149 | 191.83 | 194.61 | 72 | 82 | 119.83 | 109.83 | 82 | OB | 2 | | X | X | X |
| MW-SD62A* | 677549.497 | 2986013.456 | 191.62 | 193.48 | 73 | 83 | 118.62 | 108.62 | 83 | OB | 2 | | X | X | X |
| MW-SD63* | 677560.281 | 2985999.609 | 190.99 | 192.77 | 73 | 83 | 117.99 | 107.99 | 83 | OB | 2 | | X | | X |
| MW-SD64* | 677385.944 | 2986081.152 | 192.10 | 194.91 | 85 | 95 | 107.1 | 97.1 | 95 | OB | 2 | | X | | X |
| MW-SM13 | 677060.660 | 2986109.140 | 179.10 | 181.10 | 54.5 | 64.5 | 124.6 | 114.6 | 65 | OB | 2 | | X | | X |
| MW-T02 | | | | | | | | | | | | | | | |
| MW-T10 | 677467.190 | 2985619.510 | 191.84 | 194.86 | 75 | 80 | 116.84 | 111.84 | 81 | OB | 2 | | X | | X |
| MW-T24 | 677665.210 | 2985942.930 | 185.47 | 185.11 | 85.5 | 89.5 | 99.97 | 95.97 | 91 | OB | 2 | | X | | X |
| OW-2 | 676745.475 | 2986552.420 | 152.00 | 151.90 | 17.8 | 27.8 | 134.2 | 124.2 | 27.8 | OB | 2 | A | X | | X |
| OW-3 | 676992.414 | 2986547.550 | 147.00 | 147.30 | 13.7 | 23.7 | 133.3 | 123.3 | 26 | OB | 2 | | | | X |
| P-1 | 677203.865 | 2986863.384 | 129.00 | 127.80 | 48 | 53 | 81 | 76 | 53 | OB | 1.5 | | X | | X |
| P-1A | 677175.538 | 2986865.383 | 126.72 | 128.80 | 25 | 30 | 101.72 | 96.72 | 30 | OB | 1.5 | | X | | X |
| P-2 | 677189.515 | 2986739.848 | 127.50 | 129.62 | 20 | 25 | 107.5 | 102.5 | 25 | OB | 1.5 | | | | X |
| P-3 | 677227.083 | 2986599.369 | 136.00 | 130.34 | 20 | 25 | 116 | 111 | 27 | OB | 1.5 | | | | X |
| P-4 | 677210.140 | 2986378.351 | 159.10 | 159.14 | 35.5 | 40.5 | 123.6 | 118.6 | 40.5 | OB | 1.5 | | | | X |
| PT-09 | 675799.306 | 2986676.424 | N/A | 134.60 | 79 | 89 | 53 | 43 | 89 | OB | 1.5 | A & B | X | | X |
| PT-10 | 675808.123 | 2986692.785 | N/A | 135.23 | 25 | 30 | 108 | 103 | 30 | OB | 1.5 | A & B | X | | X |
| PT-11 | | | | | | | | | | | | | | | |
| PT-11P | 676018.462 | 2986759.402 | N/A | 133.30 | 7 | 17 | 124 | 114 | 17 | OB | 1.5 | A & B | X | | X |
| PW-4 | | | | | | | | | | | | | | | |
| PW-5 | 678244.780 | 2985986.950 | 154.81 | 155.10 | N/A | N/A | N/A | N/A | 43 | OB | 2.5 | | | | X |
| PW-6 | 677783.613 | 2985664.423 | 182.00 | 182.65 | N/A | N/A | 182 | 182 | 55 | OB | 2.5 | | X | | X |
| PW-7A | | | | | | | | | | | | | | | |
| PZ-Mpond | 675896.365 | 2987167.500 | N/A | 129.01 | 7.67 | 8.67 | N/A | N/A | 8.67 | OB | 1 | A | X | | X |
| PZ-RI-D02 | 678060.144 | 2986282.028 | 156.60 | 159.35 | 24.25 | 34.25 | 132.35 | 122.35 | 34.25 | OB | 1 | | | | X |
| PZ-RI-S01 | 678253.543 | 2985987.928 | 154.53 | 155.99 | 11.25 | 21.25 | 143.28 | 133.28 | 21.25 | OB | 1 | | | | X |
| PZ-RI-S02 | 678058.944 | 2986277.728 | 156.00 | 158.24 | 11.4 | 21.4 | 144.6 | 134.6 | 21.4 | OB | 1 | | | | X |

Table 1a.
Overall Monitoring Well Network
Site Wide Monitoring Plan (SWMP)
NMI RD/RA

| Well ID | Easting (X) | Northing (Y) | Ground Surface Elevation (feet NGVD) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Elevation Top of Screen (feet) | Elevation Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Monthly Sampling | Semi-Annual Sampling | Annual Sampling | Comprehensive Sampling |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | "M" | "S" | "A" | "C" |
| PZ-RI-S04 | 677840.688 | 2986185.313 | 162.00 | 165.05 | 20 | 30 | 142 | 132 | 30 | OB | 1 | | | | X |
| PZ-RI-S05 | 677713.144 | 2986010.528 | 159.59 | 161.54 | 21.3 | 31.3 | 138.29 | 128.29 | 31.5 | OB | 1 | | | | X |
| PZ-RI-S06 | 677652.545 | 2986051.328 | 188.76 | 191.22 | 54 | 64 | 134.76 | 124.76 | 64 | OB | 1 | | | | X |
| PZ-Tpond | 675352.989 | 2987425.881 | N/A | 128.64 | 3.5 | 4.5 | N/A | N/A | 4.5 | OB | 1 | A | X | | X |
| SG-Mpond | 675896.365 | 2987167.500 | N/A | 128.85 | -- | -- | -- | -- | -- | SW | -- | A | X | | X |
| SG-Tpond | 675352.989 | 2987425.881 | N/A | 128.00 | -- | -- | -- | -- | -- | SW | -- | A | X | | X |
| Surface Water (Cooling Water Pond) | N/A | N/A | N/A | N/A | -- | -- | -- | -- | -- | SW | -- | | | | X |
| SW-1 | 677204.617 | 2986470.404 | 153.00 | 151.87 | 45 | 60 | 108 | 93 | 60 | OB | N/A | | | | X |
| SW-101 | 676029.660 | 2986104.077 | N/A | N/A | -- | -- | -- | -- | -- | SW | -- | | | X | X |
| SW-102 | 676198.818 | 2987111.338 | N/A | N/A | -- | -- | -- | -- | -- | SW | -- | | | X | X |
| SW-103 | 677239.399 | 2986903.734 | N/A | N/A | -- | -- | -- | -- | -- | SW | -- | | | X | X |
| SW-2A | 677487.020 | 2985621.610 | 192.20 | 193.26 | 103 | 537 | 89.2 | -344.8 | 537 | BR | 8 | | X | | X |
| TW-4 | | | | | | | | | | | | | | | |



**Notes:**
OB = Overburden
BR = Bedrock
SW = Surface Water
N/A = Not Available
TBD = To Be Determined (well installation to be determined based on negotiations for access with property owner)
-- = Not Applicible
A = indicative of the well list provided in the July 2019 Non-Time-Critical Removal Action for Groundwater – Groundwater Treatment System Operation & Maintenance Plan
B = indicative of the well list agreed upon in the Remedial Design / Remedial Action - Monthly Progress Report No. 04 – March 2020 and the June 2020 Remedial Design / Remedial Action – Groundwater Treatment System Operations & Maintenance Plan – Revision 1
* = indicates wells that were installed as part of RD/RA PDI activities and were included as part of the sampling event if installed at the time of sampling.
Shaded cells indicate monitoring well locations that have been identified as not useable for monitoring and are recommended for abandonment or were unable to be located and should no longer be considered part of the monitoring well network.
Note that this table reflects the March 13, 2023, request for specified wells to be added and removed from the annual sampling program, as conditionally approved by USEPA on March 28, 2023.
1 = Assabet-1A and Assabet-2A are gauged monthly via PZ-1A and PZ-2A respectively. These piezometers were installed offset to Assabet 1A and Assabet 2A.
It was determined that the sample location for Assabet 2A, sampled through August 2023, was actually the sample point for the blended water from multiple Town of Acton production wells (Assabet 2, Assabet 2A, and Assabet 3). As of August 2023, the sample location was revised based on communication from the Acton Water District and represents water quality at Assabet 2A. On August 22, 2023, representatives of USEPA and MassDEP were advised of the clarification received from the Acton Water District and the revised sampling location for Assabet 2A.

Table 1b.
Monthly Sampling Event - Well Designation "M"
Site Wide Monitoring Plan (SWMP)
NMI RD/RA

| Well ID | Top of Screen (feet) | Bottom of Screen (feet) | Total Depth (feet) | Formation | Well Diameter (inches) | Water Levels | Field Parameters | Analysis 1,4-dioxane Method 8270D SIM |
|---|---|---|---|---|---|---|---|---|
| ASSABET-1A (PZ-1A) | 50.8 | 61 | 61 | OB | 18 | X | | X |
| ASSABET-2A* (PZ-2A) | 26 | 34 | 34 | OB | 12 | X | | X |
| EW-1 | 74 | 98 | 98 | OB | 6 | X | | |
| MW-BS34 | 101 | 111 | 111 | BR | 2 | X | | |
| MW-SD34 | 84.5 | 94.5 | 94.5 | OB | 2 | X | | |
| MW-SD42A | 80 | 90 | 90 | OB | 2 | X | X | X |
| MW-SD44 | 76 | 86 | 86 | OB | 2 | X | X | X |
| MW-SD45 | 75 | 85 | 85 | OB | 2 | X | | |
| PT-09 | 79 | 89 | 89 | OB | 1.5 | X | | |
| PT-10 | 25 | 30 | 30 | OB | 1.5 | X | | |
| PT-11P | 7 | 17 | 17 | OB | 1.5 | X | | |

Notes:
OB = Overburden
BR = Bedrock

Note: Assabet-1A and Assabet-2A are gauged monthly via PZ-1A and PZ-2A respectively. These piezometers were installed offset to Assabet 1A and Assabet 2A.

* Note that it was determined that the sample location for Assabet 2A, sampled through August 2023, was actually the sample point for the blended water from multiple Town of Acton production wells (Assabet 2, Assabet 2A, and Assabet 3). As of August 2023, the sample location was revised based on communication from the Acton Water District and represents water quality at Assabet 2A. On August 22, 2023, representatives of USEPA and MassDEP were advised of the clarification received from the Acton Water District and the revised sampling location for Assabet 2A.

Quality Control Samples, hold times, preservatives, and bottleware consistent with the NMI RD/RA QAPP Monthly Sampling will be coupled with Semi-Annual, Annual and Comprehensive events, when applicable.

Table 1c.
Semi-Annual Sampling Event - Well Designation "S"
Site Wide Monitoring Plan (SWMP)
NMI RD/RA

| Well ID | Top of Screen (feet) | Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Water Levels |
|---|---|---|---|---|---|---|
| 9-78 | N/A | 58 | 58 | OB | N/A | X |
| A-2E | N/A | 74 | 74 | OB | N/A | X |
| AR-01 | N/A | 122 | 122 | OB | N/A | X |
| AR-02 | N/A | 120 | 120 | OB | N/A | X |
| AR-PHS | -- | -- | -- | SW | -- | X |
| ASBRV-D2 | -- | -- | -- | SW | -- | X |
| ASBRV-U1 | -- | -- | -- | SW | -- | X |
| ASBRV-U2 | -- | -- | -- | SW | -- | X |
| ASSABET-1A (PZ-1A) | 50.8 | 61 | 61 | OB | 18 | X |
| ASSABET-2A (PZ-2A) | 26 | 34 | 34 | OB | 12 | X |
| B-06 | N/A | N/A | N/A | OB | N/A | X |
| BEW-1* | 114 | 175.4 | 178 | BR | 6 | X |
| BEW-2* | 134.5 | 227 | 229 | BR | 6 | X |
| BEW-3* | 119 | 212.5 | 215 | BR | 6 | X |
| BEW-4* | 74.5 | 142 | 144 | BR | 6 | X |
| BEW-5* | 107 | 127 | 145 | BR | 6 | X |
| BEW-6* | 119 | 162 | 162 | BR | 6 | X |
| EW-1 | 74 | 98 | 98 | OB | 6 | X |
| GZW-5 | 40 | 55 | 55 | OB | 1.5 | X |
| GZW-6-1 | 32 | 42 | 45 | OB | 1.5 | X |
| GZW-7S | 61 | 71 | 71 | OB | 2 | X |
| GZW-7-1 | 68 | 78 | 122 | OB | 1.5 | X |
| GZW-8-1 | 2 | 12 | 12 | OB | 2 | X |
| GZW-8-2 | 114.5 | 116 | 133.5 | BR | 1.5 | X |
| GZW-9-2 | 45 | 50 | 64 | OB | 1.5 | X |
| GZW-10-1 | 55 | 60 | 164 | OB | 0.5 | X |
| GZW-10-2 | 142 | 152 | 164 | BR | 1.5 | X |
| GZW-11-2 | 155 | 175 | 176 | BR | 1.5 | X |
| HA-09 | 49 | 69 | 70 | OB | 2 | X |
| HA-10A | 27.6 | 47.6 | 47.6 | OB | 2 | X |
| HA20-CMT-3B(OW)* | 98 | 108 | 108 | BR | 2 | X |
| HA20-CMT-3T(OW)* | 82 | 92 | 92 | OB | 2 | X |
| HA20-CMT-5(OW)* | 90 | 100 | 100 | BR | 2 | X |
| HA20-CMT-6(OW)* | 79 | 84 | 84 | BR | 2 | X |
| HB-10 | 49 | 64 | 65 | OB | 1.5 | X |
| HB-10S | 32 | 42 | 42 | OB | 2 | X |
| HB-11 | 30 | 40 | 42 | OB | 2 | X |
| HB-12 | 45 | 55 | 57 | OB | 2 | X |
| HB-13* | 28 | 38 | 38 | OB | 2 | X |
| HB-620 | 40 | 55 | 55 | OB | 2 | X |
| HBPZ-2R | 36 | 51 | 52.5 | OB | 2 | X |
| ML-1-2 | 65.5 | 67 | 82.5 | OB | 1.5 | X |
| ML-3-3 | 52 | 53.5 | 55.5 | BR | 1.5 | X |
| MW-1 | 23 | 38 | 39 | OB | 2 | X |
| MW-2 | 13.6 | 23.6 | 24 | OB | 2 | X |
| MW-8A | 60 | 70 | 70 | OB | 2 | X |
| MW-11 | 55 | 65 | 65 | OB | 2 | X |
| MW-B1D13* | 184 | 194 | 194 | BR | 2 | X |
| MW-B1D28* | 200 | 210 | 210 | BR | 2 | X |

Table 1c.
Semi-Annual Sampling Event - Well Designation "S"
Site Wide Monitoring Plan (SWMP)
NMI RD/RA

| Well ID | Top of Screen (feet) | Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Water Levels |
|---|---|---|---|---|---|---|
| MW-B2D13* | 214 | 224 | 224 | BR | 2 | X |
| MW-B2D28* | 251 | 261 | 261 | BR | 2 | X |
| MW-B3D13* | 250 | 260 | 260 | BR | 2 | X |
| MW-BM03 | 157 | 167 | 200 | BR | 2 | X |
| MW-BM15 | 137 | 147 | 157 | BR | 2 | X |
| MW-BS01 | 124 | 134 | 134.5 | BR | 2 | X |
| MW-BS02 | 117 | 127 | 127.5 | BR | 2 | X |
| MW-BS03 | 130.8 | 140.8 | 142.5 | BR | 2 | X |
| MW-BS04 | 111 | 126.3 | 126.3 | BR | 2 | X |
| MW-BS10 | 98.5 | 108.5 | 109 | BR | 2 | X |
| MW-BS12 | 73 | 83 | 83.5 | BR | 2 | X |
| MW-BS13 | 116.5 | 126.5 | 127.2 | BR | 2 | X |
| MW-BS14 | 170 | 180 | 180 | BR | 2 | X |
| MW-BS15 | 105 | 115 | 115 | BR | 2 | X |
| MW-BS17 | 99.8 | 109.8 | 113 | BR | 2 | X |
| MW-BS21 | 70 | 80 | 80.5 | BR | 2 | X |
| MW-BS22 | 48 | 58 | 58.5 | BR | 2 | X |
| MW-BS25 | 68 | 78 | 78.5 | BR | 2 | X |
| MW-BS26 | 114 | 124 | 124.5 | BR | 2 | X |
| MW-BS28 | 156.4 | 166.4 | 168 | BR | 2 | X |
| MW-BS31 | 119 | 129 | 129 | BR | 2 | X |
| MW-BS32 | 92 | 102 | 102 | BR | 2 | X |
| MW-BS34 | 101 | 111 | 111 | BR | 2 | X |
| MW-BS35 | 105.5 | 115.5 | 115.5 | BR | 2 | X |
| MW-BS36 | 113 | 123 | 123 | BR | 2 | X |
| MW-BS37 | 92 | 102 | 102 | BR | 2 | X |
| MW-BS38 | 85 | 95 | 95 | BR | 2 | X |
| MW-BS39 | 91 | 101 | 101 | BR | 2 | X |
| MW-BS40 | 116 | 126 | 126 | BR | 2 | X |
| MW-BS46 | 98 | 108 | 109 | BR | 2 | X |
| MW-BS50* | 63 | 73 | 73.5 | BR | 2 | X |
| MW-BS51* | 102 | 112 | 112 | BR | 2 | X |
| MW-BS52* | 100 | 110 | 110 | BR | 2 | X |
| MW-BS53* | 126 | 136 | 139 | BR | 2 | X |
| MW-BS54* | 176 | 186 | 186 | BR | 2 | X |
| MW-BS55* | TBD | TBD | TBD | BR | 2 | X |
| MW-BS56* | TBD | TBD | TBD | BR | 2 | X |
| MW-BS7-2* | 104.5 | 114.5 | 114.5 | BR | 2 | X |
| MW-S01 | 60.5 | 70.5 | 72 | OB | 2 | X |
| MW-S02 | 57 | 67 | 103 | OB | 2 | X |
| MW-S03 | 50 | 60 | 60.5 | OB | 2 | X |
| MW-S04 | 22 | 32 | 32 | OB | 2 | X |
| MW-S06 | 45 | 55 | 56 | OB | 2 | X |
| MW-S07 | 59 | 69 | 105 | OB | 2 | X |
| MW-S09 | 51 | 61 | 106 | OB | 2 | X |
| MW-S12 | 40 | 50 | 53 | OB | 2 | X |
| MW-S14 | 61 | 71 | 71 | OB | 2 | X |
| MW-S15 | 5 | 15 | 24 | OB | 2 | X |
| MW-S16 | 68.8 | 78.8 | 81.5 | OB | 2 | X |

Table 1c.
Semi-Annual Sampling Event - Well Designation "S"
Site Wide Monitoring Plan (SWMP)
NMI RD/RA

| Well ID | Top of Screen (feet) | Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Water Levels |
|---|---|---|---|---|---|---|
| MW-S17 | 56 | 66 | 69 | OB | 2 | X |
| MW-S18 | 9.5 | 19.5 | 30 | OB | 2 | X |
| MW-S19 | 39 | 49 | 66 | OB | 2 | X |
| MW-S20 | 19 | 29 | 50 | OB | 2 | X |
| MW-S21 | 43 | 53 | 55 | OB | 2 | X |
| MW-S22 | 33.6 | 43.6 | 44 | OB | 2 | X |
| MW-S23 | 40 | 50 | 89 | OB | 2 | X |
| MW-S24 | 53.8 | 63.8 | 65 | OB | 2 | X |
| MW-S26 | 5 | 15 | 90 | OB | 2 | X |
| MW-S27 | 124 | 134 | 134.5 | OB | 2 | X |
| MW-S28 | 60 | 70 | 92 | OB | 2 | X |
| MW-S30 | 52 | 62 | 62 | OB | 2 | X |
| MW-S32 | 35 | 45 | 45 | OB | 2 | X |
| MW-S35 | 30 | 40 | 40 | OB | 2 | X |
| MW-S36 | 38 | 48 | 48 | OB | 2 | X |
| MW-S37 | 47 | 57 | 57 | OB | 2 | X |
| MW-S38 | 40 | 50 | 50 | OB | 2 | X |
| MW-S39 | 38 | 48 | 48 | OB | 2 | X |
| MW-S40 | 45 | 55 | 55 | OB | 2 | X |
| MW-S46 | 53 | 63 | 109 | OB | 2 | X |
| MW-S60* | 53 | 63 | 63 | OB | 2 | X |
| MW-S62A* | 58 | 68 | 68 | OB | 2 | X |
| MW-S63* | 58 | 68 | 68 | OB | 2 | X |
| MW-S64* | 60 | 75 | 75 | OB | 2 | X |
| MW-SD01 | 90 | 100 | 119 | OB | 2 | X |
| MW-SD02 | 85 | 95 | 95 | OB | 2 | X |
| MW-SD06 | 64 | 74 | 81 | OB | 2 | X |
| MW-SD10 | 54.3 | 64.3 | 65 | OB | 2 | X |
| MW-SD13 | 94.8 | 104.8 | 105.5 | OB | 2 | X |
| MW-SD15* | 81 | 91 | 91 | OB | 2 | X |
| MW-SD17 | 76 | 86 | 89 | OB | 2 | X |
| MW-SD24* | 66 | 76 | 76 | OB | 2 | X |
| MW-SD26 | 80 | 90 | 90 | OB | 2 | X |
| MW-SD27 | 72 | 82 | 82 | OB | 2 | X |
| MW-SD30 | 72 | 82 | 82 | OB | 2 | X |
| MW-SD32 | 65 | 75 | 75 | OB | 2 | X |
| MW-SD34 | 84.5 | 94.5 | 94.5 | OB | 2 | X |
| MW-SD35 | 82 | 92 | 92 | OB | 2 | X |
| MW-SD36 | 92 | 102 | 102 | OB | 2 | X |
| MW-SD37 | 76 | 86 | 86 | OB | 2 | X |
| MW-SD38 | 60 | 70 | 70 | OB | 2 | X |
| MW-SD39 | 75 | 85 | 85 | OB | 2 | X |
| MW-SD40 | 87 | 97 | 97 | OB | 2 | X |
| MW-SD41 | 72 | 82 | 82 | OB | 2 | X |
| MW-SD42A | 80 | 90 | 90 | OB | 2 | X |
| MW-SD43 | 80 | 90 | 90 | OB | 2 | X |
| MW-SD44 | 76 | 86 | 86 | OB | 2 | X |
| MW-SD45 | 75 | 85 | 85 | OB | 2 | X |
| MW-SD46 | 77.5 | 87.5 | 87.5 | OB | 2 | X |

Table 1c.
Semi-Annual Sampling Event - Well Designation "S"
Site Wide Monitoring Plan (SWMP)
NMI RD/RA

| Well ID | Top of Screen (feet) | Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Water Levels |
|---|---|---|---|---|---|---|
| MW-SD52* | 78 | 88 | 88 | OB | 2 | X |
| MW-SD60* | 64 | 79 | 79 | OB | 2 | X |
| MW-SD61* | 72 | 82 | 82 | OB | 2 | X |
| MW-SD62A* | 73 | 83 | 83 | OB | 2 | X |
| MW-SD63* | 73 | 83 | 83 | OB | 2 | X |
| MW-SD64* | 85 | 95 | 95 | OB | 2 | X |
| MW-SM13 | 54.5 | 64.5 | 65 | OB | 2 | X |
| MW-T10 | 75 | 80 | 81 | OB | 2 | X |
| MW-T24 | 85.5 | 89.5 | 91 | OB | 2 | X |
| OW-2 | 17.8 | 27.8 | 27.8 | OB | 2 | X |
| P-1 | 48 | 53 | 53 | OB | 1.5 | X |
| P-1A | 25 | 30 | 30 | OB | 1.5 | X |
| PT-09 | 79 | 89 | 89 | OB | 1.5 | X |
| PT-10 | 25 | 30 | 30 | OB | 1.5 | X |
| PT-11P | 7 | 17 | 17 | OB | 1.5 | X |
| PW-6 | N/A | N/A | 55 | OB | 2.5 | X |
| PZ-Mpond | 7.67 | 8.67 | 8.67 | OB | 1 | X |
| PZ-Tpond | 3.5 | 4.5 | 4.5 | OB | 1 | X |
| SG-Mpond | -- | -- | -- | SW | -- | X |
| SG-Tpond | -- | -- | -- | SW | -- | X |
| SW-2A | 103 | 537 | 537 | BR | 8 | X |

Notes:
OB = Overburden
BR = Bedrock
SW = Surface Water
N/A = Not Available
-- = Not Applicable
* = indicates wells that were installed as part of RD/RA PDI activities and were included as part of the sampling event if installed at the tim
Semi-annual sampling will be coupled with Annual and Comprehensive events, when applicable.
TBD = Well installation to be determined based on negotiations for access with property owner.
Assabet-1A and Assabet-2A are gauged monthly via PZ-1A and PZ-2A respectively. These piezometers were installed offset to Assabet 1A and Assabet 2A.

Table 1d
Annual Sampling Event- Well Designation "A"
Sitewide Monitoring Plan (SWMP)
NMI RD/RA

| Well ID | Top of Screen (feet) | Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Water Levels | Field Parameters | Analysis | | | | | | | | | | | | | One time Analysis for April 2023 Event | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | VOCs | 1,4-dioxane | U-Total $^{235}U$ / $^{238}U$ and Total Th | Total and Dissolved Metals | Total Phosphorous | Dissolved Phosphorus | Dissolved Inorganic Carbon | Nitrate/Nitrite | Alkalinity | Total Suspended Solids (TSS) | Total Organic Carbon (TOC) | Anions ($SO_4^{2-}$; $F^-$; $Cl^-$) | Hardness | Cations (Na, Mg, K) | Anions (Cl, SO4) | Boron | Molybdenum | Ammonia | Dissolved Organic Carbon |
| | | | | | | | | Method 8260C | Method 8270D SIM | *Method 6020A ICP-MS* | *Method 6020A ICP-MS* | Method SM 4500P-E | | *Method 9060A* | Method 353.2 | Method SM2320B | SM2540D | SM5310C | Method 300 | Method 6020B | | Method 300 | Method 6020A ICP | | Method SM4500 NH3-BH | |
| ASSABET-1A (PZ-1A) | 50.8 | 61 | 61 | OB | 18 | X | X | | X | | | | | | | | | | | | | | | | | |
| ASSABET-2A (PZ-2A) | 26 | 34 | 34 | OB | 12 | X | X | | X | | | | | | | | | | | | | | | | | |
| BEW-2* | 134.5 | 227 | 229 | BR | 6 | X | X | X | X | X | X | | | | | X | | | | | | | | | | |
| BEW-3* | 119 | 212.5 | 215 | BR | 6 | X | X | X | X | X | X | | | | | X | | | | | | | | | | |
| BEW-4* | 74.5 | 142 | 144 | BR | 6 | X | X | X | X | X | X | X | | | | X | | | | | | | | | | |
| BEW-5* | 107 | 127 | 145 | BR | 6 | X | X | X | X | X | X | | | | X | | X | X | X | X | | | | | | |
| EW-1 | 74 | 98 | 98 | OB | 6 | X | X | | X | | | | | | | | | | | | | | | | | |
| GZW-10-2 | 142 | 152 | 164 | BR | 1.5 | X | X | X | X | X | X | | | | | | | | | | | | | | | |
| GZW-7-1 | 68 | 78 | 122 | OB | 1.5 | X | X | | | X | X | | | | | | | | | | | | | | | |
| GZW-8-2 | 114.5 | 116 | 133.5 | BR | 1.5 | X | X | | X | | | | | | | | | | | | | | | | | |
| HA20-CMT-3B(OW)* | 98 | 108 | 108 | BR | 2 | X | X | X | X | X | X | X | | | | X | | | | | | | | | | |
| HA20-CMT-3T(OW)* | 82 | 92 | 92 | OB | 2 | X | X | X | X | X | X | X | | | | X | | | | | | | | | | |
| HA20-CMT-5(OW)* | 90 | 100 | 100 | BR | 2 | X | X | X | X | X | X | X | | | | X | | | | | | | | | | |
| HA20-CMT-6(OW)* | 79 | 84 | 84 | BR | 2 | X | X | X | X | X | X | X | | | | X | | | | | | | | | | |
| HB-12 | 45 | 55 | 57 | OB | 2 | X | X | | | X | X | | | | | | | | | | | | | | | |
| HB-13* | 28 | 38 | 38 | OB | 2 | X | X | X | X | X | X | X | X | X | X | | | | | | | | | | | X |
| HBPZ-2R | 36 | 51 | 52.5 | OB | 2 | X | X | | | X | | X | X | X | X | | | | | | X | X | X | X | X | X |
| ML-1-3 | 80.1 | 81.5 | 82.5 | BR | 1.5 | X | X | | X | | X | | | | | | | | | | | | | | | |
| ML-3-3 | 52 | 53.5 | 55.5 | BR | 1.5 | X | X | | X | | | | | | | | | | | | | | | | | |
| MW-8A | 60 | 70 | 70 | OB | 2 | X | X | | X | X | X | X | X | X | X | | | | | | X | X | X | X | X | X |
| MW-B1D13* | 184 | 194 | 194 | BR | 2 | X | X | | X | X | X | X | | | | X | | | | | | | | | | |
| MW-B1D28* | 200 | 210 | 210 | BR | 2 | X | X | | X | X | X | X | | | | | | | | | | | | | | |
| MW-B2D13* | 214 | 224 | 224 | BR | 2 | X | X | | X | X | X | X | | | | X | | | | | | | | | | |
| MW-B3D13* | 250 | 260 | 260 | BR | 2 | X | X | | X | X | X | X | | | | X | | | | | | | | | | |
| MW-BM03 | 157 | 167 | 200 | BR | 2 | X | X | | X | X | X | | | | | | | | | | | | | | | |
| MW-BM15 | 137 | 147 | 157 | BR | 2 | X | X | | X | | | | | | | | | | | | | | | | | |
| MW-BS01 | 124 | 134 | 134.5 | BR | 2 | X | X | X | X | X | X | X | | | | | | | | | | | | | | |
| MW-BS02 | 117 | 127 | 127.5 | BR | 2 | X | X | | X | X | X | | | | | X | | | | | | | | | | |
| MW-BS03 | 130.8 | 140.8 | 142.5 | BR | 2 | X | X | | X | X | X | | | | | X | | | | | | | | | | |
| MW-BS10 | 98.5 | 108.5 | 109 | BR | 2 | X | X | | X | X | X | | | | | X | | | | | | | | | | |
| MW-BS13 | 116.5 | 126.5 | 127.2 | BR | 2 | X | X | | X | X | X | | | | | X | | | | | | | | | | |
| MW-BS14 | 170 | 180 | 180 | BR | 2 | X | X | | X | X | X | | | | | | | | | | | | | | | |
| MW-BS15 | 105 | 115 | 115 | BR | 2 | X | X | X | X | X | X | | | | | | | | | | | | | | | |
| MW-BS28 | 156.4 | 166.4 | 168 | BR | 2 | X | X | | X | X | X | | | | | | | | | | | | | | | |
| MW-BS32 | 92 | 102 | 102 | BR | 2 | X | X | | X | | | | | | | | | | | | | | | | | |
| MW-BS50* | 63 | 73 | 73.5 | BR | 2 | X | X | X | X | | | | | | | | | | | | | | | | | |
| MW-BS51* | 102 | 112 | 112 | BR | 2 | X | X | X | X | | | | | | | | | | | | | | | | | |
| MW-BS52* | 100 | 110 | 110 | BR | 2 | X | X | X | X | X | X | | | | X | | X | X | X | X | | | | | | |

Table 1d
Annual Sampling Event- Well Designation "A"
Sitewide Monitoring Plan (SWMP)
NMI RD/RA

| Well ID | Top of Screen (feet) | Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Water Levels | Field Parameters | Analysis | | | | | | | | | | | | | One time Analysis for April 2023 Event | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | VOCs | 1,4-dioxane | U-Total $^{235}U$ / $^{238}U$ and Total Th | Total and Dissolved Metals | Total Phosphorous | Dissolved Phosphorus | Dissolved Inorganic Carbon | Nitrate/Nitrite | Alkalinity | Total Suspended Solids (TSS) | Total Organic Carbon (TOC) | Anions ($SO_4$,2-; F-; Cl-) | Hardness | Cations (Na, Mg, K) | Anions (Cl, SO4) | Boron | Molybdenum | Ammonia | Dissolved Organic Carbon |
| | | | | | | | | Method 8260C | Method 8270D SIM | *Method 6020A ICP-MS* | *Method 6020A ICP-MS* | Method SM 4500P-E | | *Method 9060A* | Method 353.2 | Method SM2320B | SM2540D | SM5310C | Method 300 | Method 6020B | | Method 300 | Method 6020A ICP | | Method SM4500 NH3-BH | |
| MW-BS53* | 126 | 136 | 139 | BR | 2 | X | X | X | X | | | | | | | | | | | | | | | | | |
| MW-BS54* | 176 | 186 | 186 | BR | 2 | X | X | X | X | *X* | *X* | | | | | | | | | | | | | | | |
| MW-BS7-2* | 104.5 | 114.5 | 114.5 | BR | 2 | X | X | | X | *X* | *X* | | | | | X | | | | | | | | | | |
| MW-S02 | 57 | 67 | 103 | OB | 2 | X | X | | | *X* | *X* | X | X | *X* | X | | | | | | | | | | | X |
| MW-S16 | 68.8 | 78.8 | 81.5 | OB | 2 | X | X | | | *X* | *X* | X | X | *X* | X | | | | | | | | | | | X |
| MW-S24 | 53.8 | 63.8 | 65 | OB | 2 | X | X | | X | *X* | *X* | X | X | *X* | X | | | | | | X | X | X | X | X | X |
| MW-S32 | 35 | 45 | 45 | OB | 2 | X | X | X | X | | | | | | | | | | | | | | | | | |
| MW-S46 | 53 | 63 | 109 | OB | 2 | X | X | | X | | | | | | | | | | | | | | | | | |
| MW-S60* | 53 | 63 | 63 | OB | 2 | X | X | X | | *X* | *X* | X | X | *X* | X | | | | | | X | X | X | X | X | X |
| MW-S62A* | 58 | 68 | 68 | OB | 2 | X | X | X | X | *X* | *X* | X | X | *X* | X | | | | | | X | X | X | X | X | X |
| MW-S64* | 60 | 75 | 75 | OB | 2 | X | X | X | | *X* | *X* | X | X | *X* | X | | | | | | | | | | | X |
| MW-SD01 | 90 | 100 | 119 | OB | 2 | X | X | | X | *X* | *X* | X | | | | | | | | | | | | | | |
| MW-SD15* | 81 | 91 | 91 | OB | 2 | X | X | | X | | | | | | | | | | | | | | | | | |
| MW-SD17 | 76 | 86 | 89 | OB | 2 | X | X | | X | | | | | | | | | | | | | | | | | |
| MW-SD24* | 66 | 76 | 76 | OB | 2 | X | X | | X | *X* | *X* | X | X | *X* | X | | | | | | X | X | X | X | X | X |
| MW-SD26 | 80 | 90 | 90 | OB | 2 | X | X | | X | | | | | | | | | | | | | | | | | |
| MW-SD32 | 65 | 75 | 75 | OB | ~~2~~ | X | X | | X | | | | | | | | | | | | | | | | | |
| MW-SD34 | 84.5 | 94.5 | 94.5 | OB | 2 | X | X | X | X | *X* | *X* | | | | X | | X | X | X | X | | | | | | |
| MW-SD38 | 60 | 70 | 70 | OB | 2 | X | X | X | X | | | | | | | | | | | | | | | | | |
| MW-SD40 | 87 | 97 | 97 | OB | 2 | X | X | | X | | | | | | | | | | | | | | | | | |
| MW-SD42A | 80 | 90 | 90 | OB | 2 | X | X | | X | | | | | | | | | | | | | | | | | |
| MW-SD44 | 76 | 86 | 86 | OB | 2 | X | X | | X | | | | | | | | | | | | | | | | | |
| MW-SD46 | 77.5 | 87.5 | 87.5 | OB | 2 | X | X | | X | | | | | | | | | | | | | | | | | |
| MW-SD52* | 78 | 88 | 88 | OB | 2 | X | X | X | X | | | | | | | | | | | | | | | | | |
| MW-SD60* | 64 | 79 | 79 | OB | 2 | X | X | X | | *X* | *X* | X | X | *X* | X | | | | | | X | X | X | X | X | X |
| MW-SD61* | 72 | 82 | 82 | OB | 2 | X | X | X | | *X* | *X* | X | X | *X* | X | | | | | | X | X | X | X | X | X |
| MW-SD62A* | 73 | 83 | 83 | OB | 2 | X | X | X | | *X* | *X* | X | X | *X* | X | | | | | | X | X | X | X | X | X |
| SW-101 | -- | -- | -- | SW | -- | X | X | | X | | | | | | | | | | | | | | | | | |
| SW-102 | -- | -- | -- | SW | -- | X | X | | X | | | | | | | | | | | | | | | | | |
| SW-103 | -- | -- | -- | SW | -- | X | X | | X | | | | | | | | | | | | | | | | | |
| Totals | | | | | | | 65 | 27 | 58 | 42 | 42 | 24 | 13 | 13 | 16 | 16 | 3 | 3 | 3 | 3 | 9 | 9 | 9 | 9 | 9 | 13 |

Notes:
Quality Control Samples, hold times, preservatives, and bottleware will be consistent with the NMI RD/RA QAPP.
* = indicates wells that were installed as part of RD/RA PDI activities and were included as part of the sampling event if installed at the time of sampling.
BR = Bedrock
SW = Surface Water
OB = Overburden

Assabet-1A and Assabet-2A are gauged monthly via PZ-1A and PZ-2A respectively. These piezometers were installed offset to Assabet 1A and Assabet 2A.

Table 1e.
Comprehensive Sampling Event - Well Designation "C"
Site Wide Monitoring Plan (SWMP)
NMI RD/RA

| Well ID | Top of Screen (feet) | Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Water Levels | Field Parameters | Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | VOCs | 1,4-dioxane | SVOCs | U-Total $^{235}U$ / $^{238}U$ and Th $^{232}Th$ | Total and Dissolved Metals | Nitrate / Nitrite | PFAS | Geochemistry Parameters | | | | | |
| | | | | | | | | | | | | | | | Total Phosphorous | Ortho-phosphate | DOC | T & D Cations | Anions ($SO_4^{2-}$; $F^-$; $Cl^-$) | Alkalinity |
| | | | | | | | | Method 8260C | Method 8270D SIM w/ I.D. | Method 8270D | Method 6020A ICP-MS | Method 6020A ICP-MS | Method 353.2 | Method 537.1 I.D. | Method SM 4500P-E | Method SM 4500P-E | Method 9060 | Method 6020A ICP-MS | Method 300 | Method SM 2320 |
| 9-78 | N/A | 58 | 58 | OB | N/A | X | | | | | | | | | | | | | | |
| A-2E | N/A | 74 | 74 | OB | N/A | X | | | | | | | | | | | | | | |
| A5-78 | N/A | 88 | 88 | OB | N/A | X | | | | | | | | | | | | | | |
| AR-01 | N/A | 122 | 122 | OB | N/A | X | | | | | | | | | | | | | | |
| AR-02 | N/A | 120 | 120 | OB | N/A | X | | | | | | | | | | | | | | |
| AR-PHS | -- | -- | -- | SW | -- | X | | | | | | | | | | | | | | |
| ASBRV-D2 | -- | -- | -- | SW | -- | X | | | | | | | | | | | | | | |
| ASBRV-U1 | -- | -- | -- | SW | -- | X | | | | | | | | | | | | | | |
| ASBRV-U2 | -- | -- | -- | SW | -- | X | | | | | | | | | | | | | | |
| ASSABET-1A (PZ-1A) | 50.8 | 61 | 61 | OB | 18 | X | X | X | X | X | X | X | X | X | | | | | | |
| ASSABET-2A (PZ-2A) | 26 | 34 | 34 | OB | 12 | X | X | X | X | X | X | X | X | X | | | | | | |
| B-06 | N/A | N/A | N/A | OB | N/A | X | | | | | | | | | | | | | | |
| BEW-1* | 114 | 175.4 | 178 | BR | 6 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| BEW-2* | 134.5 | 227 | 229 | BR | 6 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| BEW-3* | 119 | 212.5 | 215 | BR | 6 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| BEW-4* | 74.5 | 142 | 144 | BR | 6 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| BEW-5* | 107 | 127 | 145 | BR | 6 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| BEW-6* | 119 | 162 | 162 | BR | 6 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| EW-1 | 74 | 98 | 98 | OB | 6 | X | X | X | X | X | X | X | X | X | | | | | | |
| GZW-10-1 | 55 | 60 | 164 | OB | 0.5 | X | X | X | X | X | X | X | X | | | | | | | |
| GZW-10-2 | 142 | 152 | 164 | BR | 1.5 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| GZW-11-2 | 155 | 175 | 176 | BR | 1.5 | X | X | X | X | X | X | X | X | | | | | | | |
| GZW-5 | 40 | 55 | 55 | OB | 1.5 | X | X | X | X | X | X | X | X | | | | | | | |
| GZW-6-1 | 32 | 42 | 45 | OB | 1.5 | X | X | X | X | X | X | X | X | | | | | | | |
| GZW-7-1 | 68 | 78 | 122 | OB | 1.5 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| GZW-7S | 61 | 71 | 71 | OB | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| GZW-8-1 | 2 | 12 | 12 | OB | 2 | X | X | X | X | X | X | | X | | | | | | X | |
| GZW-8-2 | 114.5 | 116 | 133.5 | BR | 1.5 | X | X | X | X | X | X | X | X | | | | | | | |
| GZW-9-1 | 32 | 42 | 42 | OB | 1.5 | X | X | X | X | X | X | X | X | | | | | | | |
| GZW-9-2 | 45 | 50 | 64 | OB | 1.5 | X | X | X | X | X | X | X | X | | | | | | | |
| HA-09 | 49 | 69 | 70 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| HA-10A | 27.6 | 47.6 | 47.6 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| HA-11 | 14 | 24 | 24 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| HA20-CMT-1D$_1$* | 72.9 | 73.4 | 3 and 6 | BR | 0.375 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| HA20-CMT-1D$_2$* | 85.9 | 86.4 | 5 | BR | 0.375 | X | X | | | | X | X | X | | | | | | | |
| HA20-CMT-1D$_3$* | 94.3 | 94.8 | 7 | BR | 0.375 | X | X | | | | X | X | X | | | | | | | |
| HA20-CMT-1I* | 64.9 | 65.4 | 2 | OB | 0.375 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| HA20-CMT-1S* | 55.9 | 56.4 | 1 and 4 | OB | 0.375 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| HA20-CMT-2D$_1$* | 91.4 | 91.9 | 3 | BR | 0.375 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| HA20-CMT-2D$_2$* | 122.9 | 123.4 | 6 | BR | 0.375 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| HA20-CMT-2D$_3$ | 135.1 | 135.6 | 7 | BR | 0.375 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| HA20-CMT-2I* | 85.4 | 85.9 | 5 and 2 | BR | 0.375 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| HA20-CMT-2S* | 61.4 | 61.9 | 4 and 1 | OB | 0.375 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| HA20-CMT-3B(OW)* | 98 | 108 | 108 | BR | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| HA20-CMT-3D$_1$* | 101.9 | 102.4 | 3 and 6 | BR | 0.375 | X | X | | | | X | X | X | | | | | | | |
| HA20-CMT-3D$_2$* | 113.9 | 114.4 | 4 | BR | 0.375 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| HA20-CMT-3D$_3$* | 123.9 | 124.4 | 5 | BR | 0.375 | X | X | | | | X | X | X | | | | | | | |
| HA20-CMT-3D$_4$* | 142.9 | 143.4 | 7 | BR | 0.375 | X | X | | | | X | X | X | | | | | | | |
| HA20-CMT-3I* | 84.9 | 85.4 | 2 | OB | 0.375 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| HA20-CMT-3S* | 57.9 | 58.4 | 1 | OB | 0.375 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| HA20-CMT-3T(OW)* | 82 | 92 | 92 | OB | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| HA20-CMT-4D$_1$* | 90.9 | 91.4 | 3 and 6 | BR | 0.375 | X | X | X | X | X | X | X | X | | | | | | | |
| HA20-CMT-4D$_2$* | 102.9 | 103.4 | 4 | BR | 0.375 | X | X | X | X | X | X | X | X | | | | | | | |
| HA20-CMT-4D$_3$* | 110.9 | 111.4 | 5 and 7 | BR | 0.375 | X | X | | | | X | X | X | | | | | | | |
| HA20-CMT-4I* | 78.9 | 79.4 | 2 | OB | 0.375 | X | X | X | X | X | X | X | X | | | | | | | |
| HA20-CMT-4S* | 61.9 | 62.4 | 1 | OB | 0.375 | X | X | X | X | X | X | X | X | | | | | | | |
| HA20-CMT-5(OW)* | 90 | 100 | 100 | BR | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| HA20-CMT-5D$_1$* | 81.9 | 82.4 | 4 | BR | 0.375 | X | X | X | X | X | X | X | X | | | | | | | |
| HA20-CMT-5D$_2$* | 91.9 | 92.4 | 5 | BR | 0.375 | X | X | | | | X | X | X | | | | | | | |
| HA20-CMT-5D$_3$* | 116.9 | 117.4 | 6 | BR | 0.375 | X | X | | | | X | X | X | | | | | | | |
| HA20-CMT-5D$_4$* | 129.1 | 129.6 | 7 | BR | 0.375 | X | X | | | | X | X | X | | | | | | | |
| HA20-CMT-5I* | 64.9 | 65.4 | 2 | OB | 0.375 | X | X | X | X | X | X | X | X | | | | | | | |
| HA20-CMT-5I$_2$* | 72.9 | 73.4 | 3 | OB | 0.375 | X | X | X | X | X | X | X | X | | | | | | | |
| HA20-CMT-5S* | 44.9 | 45.4 | 1 | OB | 0.375 | X | X | X | X | X | X | X | X | | | | | | | |
| HA20-CMT-6(OW)* | 79 | 84 | 84 | BR | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |

Table 1e.
Comprehensive Sampling Event - Well Designation "C"
Site Wide Monitoring Plan (SWMP)
NMI RD/RA

| Well ID | Top of Screen (feet) | Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Water Levels | Field Parameters | Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | VOCs | 1,4-dioxane | SVOCs | U-Total $^{235}U$ / $^{238}U$ and Th $^{232}Th$ | Total and Dissolved Metals | Nitrate / Nitrite | PFAS | Geochemistry Parameters | | | | | |
| | | | | | | | | | | | | | | | Total Phosphorous | Ortho-phosphate | DOC | T & D Cations | Anions (SO4,2-; F-; Cl-) | Alkalinity |
| | | | | | | | | Method 8260C | Method 8270D SIM w/ I.D. | Method 8270D | Method 6020A ICP-MS | Method 6020A ICP-MS | Method 353.2 | Method 537.1 I.D. | Method SM 4500P-E | Method SM 4500P-E | Method 9060 | Method 6020A ICP-MS | Method 300 | Method SM 2320 |
| HA20-CMT-6D$_1$* | 83 | 83.5 | 3 | BR | 0.375 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| HA20-CMT-6D$_2$* | 99.5 | 100 | 5 | BR | 0.375 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| HA20-CMT-6D$_3$* | 118 | 118.5 | 6 | BR | 0.375 | X | X | | | | X | X | X | | | | | | | |
| HA20-CMT-6D$_4$* | 126 | 126.5 | 7 | BR | 0.375 | X | X | | | | X | X | X | | | | | | | |
| HA20-CMT-6I* | 77 | 77.5 | 4 and 1 | OB | 0.375 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| HA20-CMT-6S* | 65 | 65.5 | 2 | OB | 0.375 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| HA20-PZ-1D* | 3 | 4.2 | 4.2 | OB | 0.75 | X | X | X | X | X | X | X | X | | | | | | | |
| HA20-PZ-1S* | 0.8 | 2 | 2 | OB | 0.75 | X | X | X | X | X | X | X | X | | | | | | | |
| HA20-PZ-2S* | 0.5 | 1.7 | 1.7 | OB | 0.75 | X | X | X | X | X | X | X | X | | | | | | | |
| HA20-PZ-3S* | 0.5 | 1.7 | 1.7 | OB | 0.75 | X | X | X | X | X | X | X | X | | | | | | | |
| HA20-PZ-4D* | 3 | 4.2 | 4.2 | OB | 0.75 | X | X | X | X | X | X | X | X | | | | | | | |
| HA20-PZ-4S* | 1.5 | 2.7 | 2.7 | OB | 0.75 | X | X | X | X | X | X | X | X | | | | | | | |
| HB-10 | 49 | 64 | 65 | OB | 1.5 | X | X | X | X | X | X | X | X | X | | | | | | |
| HB-10S | 32 | 42 | 42 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| HB-11 | 30 | 40 | 42 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| HB-12 | 45 | 55 | 57 | OB | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| HB-13* | 28 | 38 | 38 | OB | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| HB-620 | 40 | 55 | 55 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| HBPZ-2R | 36 | 51 | 52.5 | OB | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| LF-20D | 105 | 115 | N/A | OB | N/A | X | | | | | | | | | | | | | | |
| LF-20DBR | N/A | N/A | N/A | BR | N/A | X | | | | | | | | | | | | | | |
| LF-20SBR | N/A | N/A | N/A | BR | N/A | X | | | | | | | | | | | | | | |
| ML-1-1 | 40 | 45 | 82.5 | OB | 1.5 | X | X | X | X | X | X | X | X | | | | | | | |
| ML-1-2 | 65.5 | 67 | 82.5 | OB | 1.5 | X | X | X | X | X | X | X | X | | | | | | | |
| ML-1-3 | 80.1 | 81.5 | 82.5 | BR | 1.5 | X | X | X | X | X | X | X | X | | | | | | | |
| ML-3-1 | 25 | 30 | 55.5 | OB | 1.5 | X | X | X | X | X | X | X | X | | | | | | X | |
| ML-3-3 | 52 | 53.5 | 55.5 | BR | 1.5 | X | X | X | X | X | X | X | X | | | | | | X | |
| MW-1 | 23 | 38 | 39 | OB | 2 | X | X | X | X | X | X | X | X | X | | | | | | |
| MW-11 | 55 | 65 | 65 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-2 | 13.6 | 23.6 | 24 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | X | |
| MW-8A | 60 | 70 | 70 | OB | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| MW-B1D13* | 184 | 194 | 194 | BR | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| MW-B1D28* | 200 | 210 | 210 | BR | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| MW-B2D13* | 214 | 224 | 224 | BR | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| MW-B2D28* | 251 | 261 | 261 | BR | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| MW-B3D13* | 250 | 260 | 260 | BR | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| MW-BM03 | 157 | 167 | 200 | BR | 2 | X | X | X | X | X | X | X | X | X | | | | | | |
| MW-BM15 | 137 | 147 | 157 | BR | 2 | X | X | X | X | X | X | X | X | X | | | | | | |
| MW-BS01 | 124 | 134 | 134.5 | BR | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-BS02 | 117 | 127 | 127.5 | BR | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| MW-BS03 | 130.8 | 140.8 | 142.5 | BR | 2 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| MW-BS04 | 111 | 126.3 | 126.3 | BR | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-BS10 | 98.5 | 108.5 | 109 | BR | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| MW-BS12 | 73 | 83 | 83.5 | BR | 2 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| MW-BS13 | 116.5 | 126.5 | 127.2 | BR | 2 | X | X | X | X | X | X | X | X | | | | | | X | |
| MW-BS14 | 170 | 180 | 180 | BR | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-BS15 | 105 | 115 | 115 | BR | 2 | X | X | X | X | X | X | X | X | X | | | | | | |
| MW-BS17 | 99.8 | 109.8 | 113 | BR | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-BS21 | 70 | 80 | 80.5 | BR | 2 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| MW-BS22 | 48 | 58 | 58.5 | BR | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-BS25 | 68 | 78 | 78.5 | BR | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-BS26 | 114 | 124 | 124.5 | BR | 2 | X | X | X | X | X | X | X | X | | | | | | X | |
| MW-BS28 | 156.4 | 166.4 | 168 | BR | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| MW-BS31 | 119 | 129 | 129 | BR | 2 | X | X | X | X | X | X | X | X | | | | | | X | |
| MW-BS32 | 92 | 102 | 102 | BR | 2 | X | X | X | X | X | X | X | X | | | | | | X | |
| MW-BS34 | 101 | 111 | 111 | BR | 2 | X | X | X | X | X | X | X | X | X | | | | | | |
| MW-BS35 | 105.5 | 115.5 | 115.5 | BR | 2 | X | X | X | X | X | X | X | X | | | | | | X | |
| MW-BS36 | 113 | 123 | 123 | BR | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-BS37 | 92 | 102 | 102 | BR | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-BS38 | 85 | 95 | 95 | BR | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-BS39 | 91 | 101 | 101 | BR | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-BS40 | 116 | 126 | 126 | BR | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-BS46 | 98 | 108 | 109 | BR | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-BS50* | 63 | 73 | 73.5 | BR | 2 | X | X | X | X | X | X | X | X | | | | | | X | |
| MW-BS51* | 102 | 112 | 112 | BR | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-BS52* | 100 | 110 | 110 | BR | 2 | X | X | X | X | X | X | X | X | | | | | | | |

Table 1e.
Comprehensive Sampling Event - Well Designation "C"
Site Wide Monitoring Plan (SWMP)
NMI RD/RA

| Well ID | Top of Screen (feet) | Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Water Levels | Field Parameters | Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | Geochemistry Parameters | | | | | |
| | | | | | | | | VOCs | 1,4-dioxane | SVOCs | U-Total $^{235}U$ / $^{238}U$ and Th $^{232}Th$ | Total and Dissolved Metals | Nitrate / Nitrite | PFAS | Total Phosphorous | Ortho-phosphate | DOC | T & D Cations | Anions ($SO_4$,2-; F-; Cl-) | Alkalinity |
| | | | | | | | | Method 8260C | Method 8270D SIM w/ I.D. | Method 8270D | Method 6020A ICP-MS | Method 6020A ICP-MS | Method 353.2 | Method 537.1 I.D. | Method SM 4500P-E | Method SM 4500P-E | Method 9060 | Method 6020A ICP-MS | Method 300 | Method SM 2320 |
| MW-BS53* | 126 | 136 | 139 | BR | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-BS54* | 176 | 186 | 186 | BR | 2 | X | X | X | X | X | X | X | X | | | | | | X | |
| MW-BS55* | TBD | TBD | TBD | BR | 2 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| MW-BS56* | TBD | TBD | TBD | BR | 2 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| MW-BS7-2* | 104.5 | 114.5 | 114.5 | BR | 2 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| MW-S01 | 60.5 | 70.5 | 72 | OB | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| MW-S02 | 57 | 67 | 103 | OB | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| MW-S03 | 50 | 60 | 60.5 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-S04 | 22 | 32 | 32 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-S06 | 45 | 55 | 56 | OB | 2 | X | X | X | X | X | X | X | X | X | | | | | | |
| MW-S07 | 59 | 69 | 105 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-S08 | 37 | 47 | 104 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-S09 | 51 | 61 | 106 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-S11 | 28.8 | 38.8 | 40.6 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-S12 | 40 | 50 | 53 | OB | 2 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| MW-S14 | 61 | 71 | 71 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-S15 | 5 | 15 | 24 | OB | 2 | X | X | X | X | X | X | X | X | X | | | | | | |
| MW-S16 | 68.8 | 78.8 | 81.5 | OB | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| MW-S17 | 56 | 66 | 69 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-S18 | 9.5 | 19.5 | 30 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-S19 | 39 | 49 | 66 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-S20 | 19 | 29 | 50 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-S21 | 43 | 53 | 55 | OB | 2 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| MW-S22 | 33.6 | 43.6 | 44 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-S23 | 40 | 50 | 89 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-S24 | 53.8 | 63.8 | 65 | OB | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| MW-S26 | 5 | 15 | 90 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-S27 | 124 | 134 | 134.5 | OB | 2 | X | X | X | X | X | X | X | X | X | | | | | | |
| MW-S28 | 60 | 70 | 92 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-S29 | 62 | 72 | 73 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-S30 | 52 | 62 | 62 | OB | 2 | X | X | X | X | X | X | X | X | X | | | | | | |
| MW-S32 | 35 | 45 | 45 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-S35 | 30 | 40 | 40 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-S36 | 38 | 48 | 48 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-S37 | 47 | 57 | 57 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-S38 | 40 | 50 | 50 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | X | |
| MW-S39 | 38 | 48 | 48 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-S40 | 45 | 55 | 55 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-S46 | 53 | 63 | 109 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-S60* | 53 | 63 | 63 | OB | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| MW-S62A* | 58 | 68 | 68 | OB | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| MW-S63* | 58 | 68 | 68 | OB | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| MW-S64* | 60 | 75 | 75 | OB | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| MW-SD01 | 90 | 100 | 119 | OB | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| MW-SD02 | 85 | 95 | 95 | OB | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| MW-SD06 | 64 | 74 | 81 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-SD10 | 54.3 | 64.3 | 65 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-SD13 | 94.8 | 104.8 | 105.5 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | X | |
| MW-SD15* | 81 | 91 | 91 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-SD17 | 76 | 86 | 89 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-SD24* | 66 | 76 | 76 | OB | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| MW-SD26 | 80 | 90 | 90 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-SD27 | 72 | 82 | 82 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-SD29 | 100 | 110 | 111 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-SD30 | 72 | 82 | 82 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-SD32 | 65 | 75 | 75 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | X | |
| MW-SD34 | 84.5 | 94.5 | 94.5 | OB | 2 | X | X | X | X | X | X | X | X | X | | | | | | |
| MW-SD35 | 82 | 92 | 92 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | X | |
| MW-SD36 | 92 | 102 | 102 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-SD37 | 76 | 86 | 86 | OB | 2 | X | X | X | X | X | X | X | X | X | | | | | | |
| MW-SD38 | 60 | 70 | 70 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | X | |
| MW-SD39 | 75 | 85 | 85 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-SD40 | 87 | 97 | 97 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-SD41 | 72 | 82 | 82 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |

Table 1e.
Comprehensive Sampling Event - Well Designation "C"
Site Wide Monitoring Plan (SWMP)
NMI RD/RA

| Well ID | Top of Screen (feet) | Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Water Levels | Field Parameters | Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | VOCs | 1,4-dioxane | SVOCs | U-Total $^{235}U$ / $^{238}U$ and Th $^{232}Th$ | Total and Dissolved Metals | Nitrate / Nitrite | PFAS | Geochemistry Parameters | | | | | |
| | | | | | | | | | | | | | | | Total Phosphorous | Ortho-phosphate | DOC | T & D Cations | Anions ($SO_4$,2-; F-; Cl-) | Alkalinity |
| | | | | | | | | Method 8260C | Method 8270D SIM w/ I.D. | Method 8270D | Method 6020A ICP-MS | Method 6020A ICP-MS | Method 353.2 | Method 537.1 I.D. | Method SM 4500P-E | Method SM 4500P-E | Method 9060 | Method 6020A ICP-MS | Method 300 | Method SM 2320 |
| MW-SD42A | 80 | 90 | 90 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-SD43 | 80 | 90 | 90 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-SD44 | 76 | 86 | 86 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-SD45 | 75 | 85 | 85 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-SD46 | 77.5 | 87.5 | 87.5 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-SD52* | 78 | 88 | 88 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-SD60* | 64 | 79 | 79 | OB | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| MW-SD61* | 72 | 82 | 82 | OB | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| MW-SD62A* | 73 | 83 | 83 | OB | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| MW-SD63* | 73 | 83 | 83 | OB | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| MW-SD64* | 85 | 95 | 95 | OB | 2 | X | X | X | X | X | X | X | X | | X | X | X | X | X | X |
| MW-SM13 | 54.5 | 64.5 | 65 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | X | |
| MW-T10 | 75 | 80 | 81 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| MW-T24 | 85.5 | 89.5 | 91 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| OW-2 | 17.8 | 27.8 | 27.8 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| OW-3 | 13.7 | 23.7 | 26 | OB | 2 | X | X | X | X | X | X | X | X | | | | | | | |
| P-1 | 48 | 53 | 53 | OB | 1.5 | X | X | X | X | X | X | X | X | | | | | | | |
| P-1A | 25 | 30 | 30 | OB | 1.5 | X | X | X | X | X | X | X | X | | | | | | | |
| P-2 | 20 | 25 | 25 | OB | 1.5 | X | X | X | X | X | X | X | X | | | | | | | |
| P-3 | 20 | 25 | 27 | OB | 1.5 | X | X | X | X | X | X | X | X | | | | | | | |
| P-4 | 35.5 | 40.5 | 40.5 | OB | 1.5 | X | X | X | X | X | X | X | X | | | | | | | |
| PT-09 | 79 | 89 | 89 | OB | 1.5 | X | X | X | X | X | X | X | X | | | | | | | |
| PT-10 | 25 | 30 | 30 | OB | 1.5 | X | X | X | X | X | X | X | X | | | | | | | |
| PT-11P | 7 | 17 | 17 | OB | 1.5 | X | X | X | X | X | X | X | X | | | | | | | |
| PW-5 | N/A | N/A | 43 | OB | 2.5 | X | | | | | | | | | | | | | | |
| PW-6 | N/A | N/A | 55 | OB | 2.5 | X | X | X | X | X | X | X | X | | | | | | | |
| PZ-Mpond | 7.67 | 8.67 | 8.67 | OB | 1 | X | | | | | | | | | | | | | | |
| PZ-RI-D02 | 24.25 | 34.25 | 34.25 | OB | 1 | X | | | | | | | | | | | | | | |
| PZ-RI-S01 | 11.25 | 21.25 | 21.25 | OB | 1 | X | | | | | | | | | | | | | | |
| PZ-RI-S02 | 11.4 | 21.4 | 21.4 | OB | 1 | X | | | | | | | | | | | | | | |
| PZ-RI-S04 | 20 | 30 | 30 | OB | 1 | X | | | | | | | | | | | | | | |
| PZ-RI-S05 | 21.3 | 31.3 | 31.5 | OB | 1 | X | | | | | | | | | | | | | | |
| PZ-RI-S06 | 54 | 64 | 64 | OB | 1 | X | | | | | | | | | | | | | | |
| PZ-Tpond | 3.5 | 4.5 | 4.5 | OB | 1 | X | | | | | | | | | | | | | | |
| SG-Mpond | -- | -- | -- | SW | -- | X | | | | | | | | | | | | | | |
| SG-Tpond | -- | -- | -- | SW | -- | X | | | | | | | | | | | | | | |
| Surface Water (Cooling Water Pond) | -- | -- | -- | SW | -- | X | X | X | X | X | X | X | X | | | | | | | |
| SW-1 | 45 | 60 | 60 | OB | N/A | X | X | X | X | X | X | X | X | | | | | | | |
| SW-101 | -- | -- | -- | SW | -- | X | X | X | X | X | X | X | X | | | | | | | |
| SW-102 | -- | -- | -- | SW | -- | X | X | X | X | X | X | X | X | | | | | | | |
| SW-103 | -- | -- | -- | SW | -- | X | X | X | X | X | X | X | X | | | | | | | |
| SW-2A | 103 | 537 | 537 | BR | 8 | X | X | X | X | X | X | X | X | | | | | | | |

Notes:
OB = Overburden
BR = Bedrock
SW = Surface Water
N/A = Not Available
-- = Not Applicable
A = indicative of the well list provided in the July 2019 Non-Time-Critical Removal Action for Groundwater – Groundwater Treatment System Operation & Maintenance Plan
B = indicative of the well list agreed upon in the Remedial Design / Remedial Action - Monthly Progress Report No. 04 – March 2020 and the June 2020 Remedial Design / Remedial Action – Groundwater Treatment System Operations & Maintenance Plan – Revision 1
* = indicates wells that were installed as part of RD/RA PDI activities and were included as part of the sampling event if installed at the time of sampling.
Shaded cells indicate monitoring well locations that have been identified as not useable for monitoring and are recommended for abandonment or were unable to be located and should no longer be considered part of the monitoring well network.
Assabet-1A and Assabet-2A are gauged monthly via PZ-1A and PZ-2A respectively. These piezometers were installed offset to Assabet 1A and Assabet 2A.

# TABLE 2
# DEPTH TO WATER AND GROUNDWATER ELEVATION DATA

2a. Monthly Groundwater Elevation Data – RDRA
2b. Semi-Annual Groundwater Elevation Data – October 2022
2c. Annual Groundwater Elevation Data – April 2023

Table 2a
Depth to Water and Groundwater Elevation Data
Monthly Groundwater Elevation Data
NMI RD/RA

| Date | Assabet 1A | | | Assabet 2A | | | EW-1 | | | MW-SD34 | | | MW-BS34 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Measuring Point Elevation (TOR; ft NGVD ) | Depth to Water (ft) | Groundwater Elevation (ft) | Measuring Point Elevation (TOR; ft NGVD ) | Depth to Water (ft) | Groundwater Elevation (ft) | Measuring Point Elevation (TOR; ft NGVD ) | Depth to Water (ft) | Groundwater Elevation (ft) | Measuring Point Elevation (TOR; ft NGVD ) | Depth to Water (ft) | Groundwater Elevation (ft) | Measuring Point Elevation (TOR; ft NGVD ) | Depth to Water (ft) | Groundwater Elevation (ft) |
| 05/18/22 | 139.08 | 12.04 | 127.04 | 137.67 | 14.14 | 123.53 | 135.62 | 23.83 | 111.79 | 133.56 | 8.54 | 125.02 | 133.60 | 8.12 | 125.48 |
| 06/15/22 | 139.08 | 13.41 | 125.67 | 137.67 | 14.62 | 123.05 | 135.62 | 25.21 | 110.41 | 133.56 | 8.84 | 124.72 | 133.60 | 8.51 | 125.09 |
| 07/14/22 | 139.08 | 16.26 | 122.82 | 137.67 | 16.10 | 121.57 | 135.62 | 25.62 | 110.00 | 133.56 | 9.46 | 124.10 | 133.60 | 9.18 | 124.42 |
| 08/16/22 | 139.08 | 18.19 | 120.89 | 137.67 | 17.38 | 120.29 | 135.62 | 23.91 | 111.71 | 133.56 | 9.77 | 123.79 | 133.60 | 9.63 | 123.97 |
| 09/14/22 | 139.08 | 18.06 | 121.02 | 137.67 | 17.42 | 120.25 | 135.62 | 27.25 | 108.37 | 133.56 | 9.70 | 123.86 | 133.60 | 9.56 | 124.04 |
| 10/19/22 | 139.08 | 17.62 | 121.46 | 137.67 | 17.48 | 120.19 | 135.62 | 24.72 | 110.90 | 133.56 | 8.63 | 124.93 | 133.60 | 8.73 | 124.87 |
| 11/16/22 | 139.08 | 17.42 | 121.66 | 137.67 | 17.65 | 120.02 | 135.62 | 25.78 | 109.84 | 133.56 | 8.92 | 124.64 | 133.60 | 8.89 | 124.71 |
| 12/21/22 | 139.08 | 17.31 | 121.77 | 137.67 | 16.79 | 120.88 | 135.62 | 25.56 | 110.06 | 133.56 | 8.31 | 125.25 | 133.60 | 7.89 | 125.71 |
| 01/18/23 | 139.08 | 16.59 | 122.49 | 137.67 | 16.14 | 121.53 | 135.62 | 25.72 | 109.90 | 133.56 | 8.24 | 125.32 | 133.60 | 7.91 | 125.69 |
| 02/15/23 | 139.08 | 15.62 | 123.46 | 137.67 | 14.88 | 122.79 | 135.62 | 26.41 | 109.21 | 133.56 | 8.34 | 125.22 | 133.60 | 8.14 | 125.46 |
| 03/08/23 | 139.08 | 16.21 | 122.87 | 137.67 | NM | - | 135.62 | 25.92 | 109.70 | 133.56 | 7.84 | 125.72 | 133.60 | 7.67 | 125.93 |
| 04/03/23 | 139.08 | 13.89 | 125.19 | 137.67 | 14.45 | 123.22 | 135.62 | 25.41 | 110.21 | 133.56 | 7.73 | 125.83 | 133.60 | 7.44 | 126.16 |

**Notes:**

1. NGVD = National Geodetic Vertical Datum of 1929.
2. TOR = top of riser
3. ft = feet
4. NM = not measured due to accessibility issues and/or equipment malfunctions.
5. Assabet-1A and Assabet-2A are gauged monthly via PZ-1A and PZ-2A respectively. These piezometers were installed offset to Assabet 1A and Assabet 2A.

Table 2a
Depth to Water and Groundwater Elevation Data
Monthly Groundwater Elevation Data
NMI RD/RA

| Date | MW-SD42A | | | MW-SD44 | | | MW-SD45 | | | PT-09 | | | PT-10 | | | PT-11P | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Measuring Point Elevation (TOR; ft NGVD ) | Depth to Water (ft) | Groundwater Elevation (ft) | Measuring Point Elevation (TOR; ft NGVD ) | Depth to Water (ft) | Groundwater Elevation (ft) | Measuring Point Elevation (TOR; ft NGVD ) | Depth to Water (ft) | Groundwater Elevation (ft) | Measuring Point Elevation (TOR; ft NGVD ) | Depth to Water (ft) | Groundwater Elevation (ft) | Measuring Point Elevation (TOR; ft NGVD ) | Depth to Water (ft) | Groundwater Elevation (ft) | Measuring Point Elevation (TOR; ft NGVD ) | Depth to Water (ft) | Groundwater Elevation (ft) |
| 05/18/22 | 137.70 | 12.22 | 125.48 | 137.01 | 10.85 | 126.16 | 140.15 | 14.92 | 125.23 | 134.60 | 9.46 | 125.14 | 135.23 | 9.93 | 125.30 | 133.30 | 8.28 | 125.02 |
| 06/15/22 | 137.70 | 13.07 | 124.63 | 137.01 | 12.28 | 124.73 | 140.15 | 15.61 | 124.54 | 134.60 | 9.98 | 124.62 | 135.23 | 10.33 | 124.90 | 133.30 | 8.52 | 124.78 |
| 07/14/22 | 137.70 | 14.08 | 123.62 | 137.01 | 13.41 | 123.60 | 140.15 | 16.42 | 123.73 | 134.60 | 10.67 | 123.93 | 135.23 | 10.98 | 124.25 | 133.30 | 9.02 | 124.28 |
| 08/16/22 | 137.70 | 14.84 | 122.86 | 137.01 | 14.32 | 122.69 | 140.15 | 17.02 | 123.13 | 134.60 | 11.15 | 123.45 | 135.23 | 11.46 | 123.77 | 133.30 | 9.36 | 123.94 |
| 09/14/22 | 137.70 | 14.61 | 123.09 | 137.01 | 13.94 | 123.07 | 140.15 | 16.84 | 123.31 | 134.60 | 10.97 | 123.63 | 135.23 | 10.31 | 124.92 | 133.30 | 9.17 | 124.13 |
| 10/19/22 | 137.70 | 13.96 | 123.74 | 137.01 | 13.36 | 123.65 | 140.15 | 15.98 | 124.17 | 134.60 | 10.05 | 124.55 | 135.23 | 10.36 | 124.87 | 133.30 | 8.14 | 125.16 |
| 11/16/22 | 137.70 | 15.04 | 122.66 | 137.01 | 13.21 | 123.80 | 140.15 | 16.32 | 123.83 | 134.60 | 10.40 | 124.20 | 135.23 | 10.57 | 124.66 | 133.30 | 8.26 | 125.04 |
| 12/21/22 | 137.70 | 14.64 | 123.06 | 137.01 | 12.71 | 124.30 | 140.15 | 15.27 | 124.88 | 134.60 | 9.34 | 125.26 | 135.23 | 9.82 | 125.41 | 133.30 | 7.26 | 126.04 |
| 01/18/23 | 137.70 | 13.57 | 124.13 | 137.01 | 14.21 | 122.80 | 140.15 | 15.25 | 124.90 | 134.60 | 9.41 | 125.19 | 135.23 | 9.76 | 125.47 | 133.30 | 7.68 | 125.62 |
| 02/15/23 | 137.70 | 12.88 | 124.82 | 137.01 | 13.21 | 123.80 | 140.15 | 15.34 | 124.81 | 134.60 | 9.56 | 125.04 | 135.23 | 9.95 | 125.28 | 133.30 | 8.07 | 125.23 |
| 03/08/23 | 137.70 | 11.91 | 125.79 | 137.01 | 11.34 | 125.67 | 140.15 | 14.79 | 125.36 | 134.60 | 9.08 | 125.52 | 135.23 | 9.51 | 125.72 | 133.30 | 7.56 | 125.74 |
| 04/03/23 | 137.70 | 11.34 | 126.36 | 137.01 | 10.27 | 126.74 | 140.15 | 14.42 | 125.73 | 134.60 | 8.70 | 125.90 | 135.23 | 9.21 | 126.02 | 133.30 | 7.45 | 125.85 |

**Notes:**

1. NGVD = National Geodetic Vertical Datum of 1929.
2. TOR = top of riser
3. ft = feet
4. NM = not measured due to accessibility issues and/or equipment malfunctions.
5. Assabet-1A and Assabet-2A are gauged monthly via PZ-1A and PZ-2A respectively. These piezometers were installed offset to Assabet 1A and Assabet 2A.

Table 2b.
Depth to Water and Groundwater Elevation Data
Semi-Annual Groundwater Elevation Data
NMI RD/RA

| Location Name | Measuring Point Elevation (TOR; ft NGVD) | Geologic Unit | 10/19/2022 | |
|---|---|---|---|---|
| | | | Depth to Water (ft) | Groundwater Elevation (ft NGVD) |
| 9-78 | 138.96 | Overburden | 14.00 | 124.96 |
| A-2E | 132.70 | Overburden | 11.79 | 120.91 |
| AR-01 | 139.91 | Overburden | 14.19 | 125.72 |
| AR-02 | 137.38 | Overburden | 11.72 | 125.66 |
| AR-PHS | 128.62 | Surface Water | 3.52 | 125.10 |
| ASBRV-D2 | 127.80 | Surface Water | 2.60 | 125.20 |
| ASBRV-U1 | 140.85 | Surface Water | 12.69 | 128.16 |
| ASBRV-U2 | 138.48 | Surface Water | 12.64 | 125.84 |
| ASSABET-1A (PZ-1A) | 139.08 | Overburden | 17.62 | 121.46 |
| ASSABET-2A (PZ-2A) | 137.67 | Overburden | 17.48 | 120.19 |
| B-06 | 139.13 | Overburden | 15.19 | 123.94 |
| BEW-1 | 193.88 | Bedrock | 58.82 | 135.06 |
| BEW-2 | 192.31 | Bedrock | 56.40 | 135.91 |
| BEW-3 | 179.69 | Bedrock | 45.11 | 134.58 |
| BEW-4 | 172.07 | Bedrock | 39.57 | 132.50 |
| BEW-5 | 132.48 | Bedrock | 6.56 | 125.92 |
| BEW-6 | 132.91 | Bedrock | 7.23 | 125.68 |
| EW-1 | 135.62 | Overburden | 24.72 | 110.90 |
| GZW-5 | 196.02 | Overburden | 50.69 | 145.33 |
| GZW-6-1 | 178.61 | Overburden | Compromised | |
| GZW-7-1 | 195.00 | Overburden | 60.42 | 134.58 |
| GZW-7S | 193.58 | Overburden | 58.81 | 134.77 |
| GZW-8-1 | 127.57 | Overburden | 7.20 | 120.37 |
| GZW-8-2 | 127.10 | Overburden | 16.70 | 110.40 |
| GZW-9-2 | 183.05 | Overburden | 42.56 | 140.49 |
| GZW-10-1 | 186.21 | Overburden | 56.71 | 129.50 |
| GZW-10-2 | 186.23 | Bedrock | 57.45 | 128.78 |
| GZW-11-2 | 195.43 | Bedrock | 67.43 | 128.00 |
| GZW-9-1 | 182.98 | Overburden | NM | NM |
| HA-09 | 208.10 | Overburden | 55.19 | 152.91 |
| HA-10A | 180.94 | Overburden | 37.83 | 143.11 |
| HA20-CMT-3B(OW) | 184.30 | Bedrock | 46.68 | 137.62 |
| HA20-CMT-3T(OW) | 184.79 | Overburden | 49.29 | 135.50 |
| HA20-CMT-5(OW) | 175.64 | Bedrock | 32.71 | 142.93 |
| HA20-CMT-6(OW) | 180.29 | Bedrock | 36.78 | 143.51 |
| HB-10 | 180.30 | Overburden | 38.42 | 141.88 |
| HB-10S | 179.73 | Overburden | 37.74 | 141.99 |
| HB-11 | 174.91 | Overburden | 35.47 | 139.44 |
| HB-12 | 182.78 | Overburden | 47.15 | 135.63 |
| HB-13 | 162.11 | Overburden | 23.52 | 138.59 |
| HB-620 | 181.97 | Overburden | 45.40 | 136.57 |
| HBPZ-2R | 176.05 | Overburden | 40.34 | 135.71 |
| ML-1-1 | 175.42 | Overburden | NM | NM |
| ML-1-2 | 175.48 | Overburden | 45.80 | 129.68 |
| ML-1-3 | 175.53 | Bedrock | NM | NM |
| ML-3-3 | 148.80 | Bedrock | 21.60 | 127.20 |
| MW-1 | 155.60 | Overburden | 27.10 | 128.50 |
| MW-2 | 148.98 | Overburden | 17.97 | 131.01 |
| MW-8A | 191.46 | Overburden | 58.71 | 132.75 |
| MW-11 | 189.70 | Overburden | 52.48 | 137.22 |

Table 2b.
Depth to Water and Groundwater Elevation Data
Semi-Annual Groundwater Elevation Data
NMI RD/RA

| Location Name | Measuring Point Elevation (TOR; ft NGVD) | Geologic Unit | 10/19/2022 | |
|---|---|---|---|---|
| | | | Depth to Water (ft) | Groundwater Elevation (ft NGVD) |
| MW-B1D13 | 180.53 | Bedrock | 49.00 | 131.53 |
| MW-B1D28 | 197.25 | Bedrock | 69.19 | 128.06 |
| MW-B2D13 | 180.63 | Bedrock | 69.37 | 111.26 |
| MW-B2D28 | 197.25 | Bedrock | 49.38 | 147.87 |
| MW-B3D13 | 181.05 | Bedrock | 49.11 | 131.94 |
| MW-BM03 | 191.03 | Bedrock | 57.26 | 133.77 |
| MW-BM15 | 135.60 | Bedrock | 9.90 | 125.70 |
| MW-BS01 | 193.98 | Bedrock | 64.93 | 129.05 |
| MW-BS02 | 191.62 | Bedrock | 59.99 | 131.63 |
| MW-BS03 | 190.98 | Bedrock | 57.53 | 133.45 |
| MW-BS04 | 178.06 | Bedrock | 45.65 | 132.41 |
| MW-BS10 | 193.82 | Bedrock | 53.83 | 139.99 |
| MW-BS12 | 184.28 | Bedrock | 40.06 | 144.22 |
| MW-BS13 | 181.53 | Bedrock | 51.35 | 130.18 |
| MW-BS14 | 193.79 | Bedrock | 65.85 | 127.94 |
| MW-BS15 | 135.29 | Bedrock | 9.30 | 125.99 |
| MW-BS17 | 189.16 | Bedrock | 56.92 | 132.24 |
| MW-BS21 | 188.03 | Bedrock | 43.14 | 144.89 |
| MW-BS22 | 174.51 | Bedrock | 33.80 | 140.71 |
| MW-BS25 | 152.90 | Bedrock | 24.26 | 128.64 |
| MW-BS26 | 131.87 | Bedrock | 6.16 | 125.71 |
| MW-BS28 | 197.29 | Bedrock | 69.65 | 127.64 |
| MW-BS31 | 139.37 | Bedrock | 13.10 | 126.27 |
| MW-BS32 | 131.36 | Bedrock | 6.22 | 125.14 |
| MW-BS34 | 133.60 | Bedrock | 8.73 | 124.87 |
| MW-BS35 | 138.80 | Bedrock | 11.39 | 127.41 |
| MW-BS36 | 134.76 | Bedrock | 9.74 | 125.02 |
| MW-BS37 | 140.69 | Bedrock | 17.25 | 123.44 |
| MW-BS38 | 136.39 | Bedrock | 6.90 | 129.49 |
| MW-BS39 | 136.52 | Bedrock | 12.00 | 124.52 |
| MW-BS40 | 138.76 | Bedrock | 14.68 | 124.08 |
| MW-BS46 | 140.13 | Bedrock | 16.80 | 123.33 |
| MW-BS50 | 150.32 | Bedrock | 25.97 | 124.35 |
| MW-BS51 | 140.90 | Bedrock | 14.68 | 126.22 |
| MW-BS52 | 132.58 | Bedrock | 7.05 | 125.53 |
| MW-BS53 | 140.36 | Bedrock | 14.24 | 126.12 |
| MW-BS54 | 169.39 | Bedrock | 39.37 | 130.02 |
| MW-BS7-2 | 188.53 | Bedrock | 52.90 | 135.63 |
| MW-S01 | 193.31 | Overburden | 64.83 | 128.48 |
| MW-S02 | 191.54 | Overburden | 60.08 | 131.46 |
| MW-S03 | 191.11 | Overburden | 43.70 | 147.41 |
| MW-S04 | 177.32 | Overburden | 26.62 | 150.70 |
| MW-S06 | 177.92 | Overburden | 47.43 | 130.49 |
| MW-S07 | 190.36 | Overburden | 57.93 | 132.43 |
| MW-S09 | 191.22 | Overburden | 45.25 | 145.97 |
| MW-S12 | 184.37 | Overburden | 41.00 | 143.37 |
| MW-S14 | 194.86 | Overburden | 66.02 | 128.84 |
| MW-S15 | 134.17 | Overburden | 7.45 | 126.72 |
| MW-S16 | 187.26 | Overburden | 53.38 | 133.88 |
| MW-S17 | 188.62 | Overburden | 57.64 | 130.98 |

Table 2b.
Depth to Water and Groundwater Elevation Data
Semi-Annual Groundwater Elevation Data
NMI RD/RA

| Location Name | Measuring Point Elevation (TOR; ft NGVD) | Geologic Unit | 10/19/2022 | |
|---|---|---|---|---|
| | | | Depth to Water (ft) | Groundwater Elevation (ft NGVD) |
| MW-S18 | 158.20 | Overburden | 11.85 | 146.35 |
| MW-S19 | 187.46 | Overburden | 42.92 | 144.54 |
| MW-S20 | 156.43 | Overburden | 11.80 | 144.63 |
| MW-S21 | 187.51 | Overburden | 42.83 | 144.68 |
| MW-S22 | 175.53 | Overburden | 39.70 | 135.83 |
| MW-S23 | 183.66 | Overburden | 33.16 | 150.50 |
| MW-S24 | 185.27 | Overburden | 50.49 | 134.78 |
| MW-S26 | 130.65 | Overburden | 4.89 | 125.76 |
| MW-S27 | 186.03 | Overburden | 54.65 | 131.38 |
| MW-S28 | 196.87 | Overburden | 67.83 | 129.04 |
| MW-S29 | 194.66 | Overburden | NM | NM |
| MW-S30 | 187.12 | Overburden | 55.84 | 131.28 |
| MW-S32 | 131.23 | Overburden | 6.11 | 125.12 |
| MW-S35 | 138.95 | Overburden | 13.25 | 125.70 |
| MW-S36 | 135.09 | Overburden | 10.50 | 124.59 |
| MW-S37 | 140.96 | Overburden | 17.50 | 123.46 |
| MW-S38 | 136.56 | Overburden | 13.79 | 122.77 |
| MW-S39 | 136.79 | Overburden | 13.02 | 123.77 |
| MW-S40 | 138.71 | Overburden | 13.98 | 124.73 |
| MW-S46 | 140.22 | Overburden | 17.62 | 122.60 |
| MW-S60 | 186.55 | Overburden | 52.39 | 134.16 |
| MW-S62A | 193.55 | Overburden | 60.56 | 132.99 |
| MW-S63 | 192.70 | Overburden | 59.19 | 133.51 |
| MW-S64 | 194.91 | Overburden | 63.34 | 131.57 |
| MW-SD01 | 193.47 | Overburden | 65.07 | 128.40 |
| MW-SD02 | 190.42 | Overburden | 59.04 | 131.38 |
| MW-SD06 | 178.13 | Overburden | 47.79 | 130.34 |
| MW-SD10 | 194.13 | Overburden | 55.13 | 139.00 |
| MW-SD13 | 180.73 | Overburden | 51.24 | 129.49 |

Table 2b.
Depth to Water and Groundwater Elevation Data
Semi-Annual Groundwater Elevation Data
NMI RD/RA

| Location Name | Measuring Point Elevation (TOR; ft NGVD) | Geologic Unit | 10/19/2022 | |
|---|---|---|---|---|
| | | | Depth to Water (ft) | Groundwater Elevation (ft NGVD) |
| MW-SD15 | 136.44 | Overburden | 10.03 | 126.41 |
| MW-SD17 | 189.10 | Overburden | 57.80 | 131.30 |
| MW-SD24 | 185.06 | Overburden | 50.35 | 134.71 |
| MW-SD26 | 130.56 | Overburden | 5.55 | 125.01 |
| MW-SD27 | 185.78 | Overburden | 54.66 | 131.12 |
| MW-SD29 | 195.49 | Overburden | NM | NM |
| MW-SD30 | 186.95 | Overburden | 55.75 | 131.20 |
| MW-SD32 | 131.37 | Overburden | 6.25 | 125.12 |
| MW-SD34 | 133.56 | Overburden | 8.63 | 124.93 |
| MW-SD35 | 138.79 | Overburden | 11.55 | 127.24 |
| MW-SD36 | 134.78 | Overburden | 9.68 | 125.10 |
| MW-SD37 | 141.11 | Overburden | 17.68 | 123.43 |
| MW-SD38 | 135.95 | Overburden | 13.59 | 122.36 |
| MW-SD39 | 136.77 | Overburden | 13.22 | 123.55 |
| MW-SD40 | 138.67 | Overburden | 15.63 | 123.04 |
| MW-SD41 | 136.60 | Overburden | 12.90 | 123.70 |
| MW-SD42A | 137.70 | Overburden | 13.96 | 123.74 |
| MW-SD43 | 137.78 | Overburden | 13.65 | 124.13 |
| MW-SD44 | 137.01 | Overburden | 13.36 | 123.65 |
| MW-SD45 | 140.15 | Overburden | 15.98 | 124.17 |
| MW-SD46 | 140.37 | Overburden | 17.68 | 122.69 |
| MW-SD52 | 132.57 | Overburden | 6.86 | 125.71 |
| MW-SD60 | 186.58 | Overburden | 52.17 | 134.41 |
| MW-SD61 | 194.61 | Overburden | 61.70 | 132.91 |
| MW-SD62A | 193.48 | Overburden | 60.53 | 132.95 |
| MW-SD63 | 192.77 | Overburden | 55.78 | 136.99 |
| MW-SD64 | 194.91 | Overburden | 63.37 | 131.54 |
| MW-SM13 | 181.15 | Overburden | 51.48 | 129.67 |
| MW-T10 | 194.71 | Overburden | 56.53 | 138.18 |
| MW-T24 | 184.99 | Overburden | 50.46 | 134.53 |
| OW-2 | 151.90 | Overburden | 22.06 | 129.84 |
| P-1 | 127.80 | Overburden | 7.25 | 120.55 |
| P-1A | 128.80 | Overburden | 7.00 | 121.80 |
| PT-09 | 134.60 | Overburden | 10.05 | 124.55 |
| PT-10 | 135.23 | Overburden | 10.36 | 124.87 |
| PT-11P | 133.30 | Overburden | 8.14 | 125.16 |
| PW-6 | 182.65 | Overburden | 43.40 | 139.25 |
| PZ-Mpond | 129.01 | Overburden | 3.13 | 125.88 |
| PZ-Tpond | 128.64 | Overburden | 5.44 | 123.20 |
| SG-Mpond | 128.85 | Surface Water | 2.92 | 125.93 |
| SG-Tpond | 128.00 | Surface Water | NM | NM |
| SW-2A | 193.26 | Bedrock | 48.81 | 144.45 |

Notes
1. NGVD = National Geodetic Vertical Datum of 1929.
2. TOR = top of riser
3. ft = feet
4. NM= not measured due to accessibility issues and/or ability to locate.
5. Shaded cells indicate well not installed at the time of sampling event.
6. Assabet-1A and Assabet-2A are gauged monthly via PZ-1A and PZ-2A respectively. These piezometers were installed offset to Assabet1A and Assabet 2A.

Table 2c.
Depth to Water and Groundwater Elevation Data
Annual Groundwater Elevation Data
NMI RD/RA

| Location Name | Measuring Point Elevation (TOR; ft NGVD) | Geologic Unit | 4/3/2023 | |
|---|---|---|---|---|
| | | | Depth to Water (ft) | Groundwater Elevation (ft NGVD) |
| 9-78 | 138.96 | Overburden | 11.95 | 127.01 |
| A-2E | 132.70 | Overburden | 6.22 | 126.48 |
| AR-01 | 139.91 | Overburden | 4.51 | 135.40 |
| AR-02 | 137.38 | Overburden | 10.23 | 127.15 |
| AR-PHS | 128.62 | Surface Water | 3.22 | 125.40 |
| ASBRV-D2 | 127.80 | Surface Water | NM | NM |
| ASBRV-U1 | 140.85 | Surface Water | 12.30 | 128.55 |
| ASBRV-U2 | 138.48 | Surface Water | 12.20 | 126.28 |
| ASSABET-1A (PZ-1A) | 139.08 | Overburden | 13.89 | 125.19 |
| ASSABET-2A (PZ-2A) | 137.67 | Overburden | 14.45 | 123.22 |
| B-06 | 139.13 | Overburden | 12.30 | 126.83 |
| BEW-1 | 193.88 | Bedrock | 57.60 | 136.28 |
| BEW-2 | 192.31 | Bedrock | 55.14 | 137.17 |
| BEW-3 | 179.69 | Bedrock | 43.89 | 135.80 |
| BEW-4 | 172.07 | Bedrock | 37.90 | 134.17 |
| BEW-5 | 132.48 | Bedrock | 5.17 | 127.31 |
| BEW-6 | 132.91 | Bedrock | 5.40 | 127.51 |
| EW-1 | 135.62 | Overburden | 25.41 | 110.21 |
| GZW-5 | 196.02 | Overburden | 49.95 | 146.07 |
| GZW-6-1 | 178.61 | Overburden | Not Located | |
| GZW-7-1 | 195.00 | Overburden | 58.90 | 136.10 |
| GZW-7S | 193.58 | Overburden | 57.79 | 135.79 |
| GZW-8-1 | 127.57 | Overburden | 6.74 | 120.83 |
| GZW-8-2 | 127.10 | Overburden | 14.76 | 112.34 |
| GZW-9-2 | 183.05 | Overburden | 40.53 | 142.52 |
| GZW-10-1 | 186.21 | Overburden | 55.18 | 131.03 |
| GZW-10-2 | 186.23 | Bedrock | 56.33 | 129.90 |
| GZW-11-1 | 195.43 | Overburden | 65.54 | 129.89 |
| GZW-11-2 | 195.43 | Bedrock | 66.28 | 129.15 |
| GZW-9-1 | 182.98 | Overburden | 40.49 | 142.49 |
| HA-09 | 208.10 | Overburden | 55.79 | 152.31 |
| HA-10A | 180.94 | Overburden | 36.65 | 144.29 |
| HA20-CMT-3B(OW) | 184.30 | Bedrock | 45.69 | 138.61 |
| HA20-CMT-3T(OW) | 184.79 | Overburden | 48.02 | 136.77 |
| HA20-CMT-5(OW) | 175.64 | Bedrock | 31.44 | 144.20 |
| HA20-CMT-6(OW) | 180.29 | Bedrock | 35.61 | 144.68 |
| HB-10 | 180.30 | Overburden | 36.92 | 143.38 |
| HB-10S | 179.73 | Overburden | 36.25 | 143.48 |
| HB-11 | 174.91 | Overburden | 38.85 | 136.06 |
| HB-12 | 182.78 | Overburden | 45.66 | 137.12 |
| HB-13 | 162.11 | Overburden | 22.20 | 139.91 |
| HB-620 | 181.97 | Overburden | 45.60 | 136.37 |
| HBPZ-2R | 176.05 | Overburden | 38.90 | 137.15 |
| ML-1-1 | 175.42 | Overburden | 44.75 | 130.67 |
| ML-1-2 | 175.48 | Overburden | 44.01 | 131.47 |
| ML-1-3 | 175.53 | Bedrock | 44.80 | 130.73 |
| ML-3-3 | 148.80 | Bedrock | NM | NM |
| MW-1 | 155.60 | Overburden | 26.01 | 129.59 |
| MW-2 | 148.98 | Overburden | 16.23 | 132.75 |
| MW-8A | 191.46 | Overburden | 59.00 | 132.46 |

Table 2c.
Depth to Water and Groundwater Elevation Data
Annual Groundwater Elevation Data
NMI RD/RA

| Location Name | Measuring Point Elevation (TOR; ft NGVD) | Geologic Unit | 4/3/2023 | |
|---|---|---|---|---|
| | | | Depth to Water (ft) | Groundwater Elevation (ft NGVD) |
| MW-11 | 189.70 | Overburden | 51.76 | 137.94 |
| MW-B1D13 | 180.53 | Bedrock | 47.95 | 132.58 |
| MW-B1D28 | 197.25 | Bedrock | 68.00 | 129.25 |
| MW-B2D13 | 180.63 | Bedrock | 48.08 | 132.55 |
| MW-B2D28 | 197.25 | Bedrock | 67.89 | 129.36 |
| MW-B3D13 | 181.05 | Bedrock | 48.32 | 132.73 |
| MW-BM03 | 191.03 | Bedrock | 56.20 | 134.83 |
| MW-BM15 | 135.60 | Bedrock | 8.20 | 127.40 |
| MW-BS01 | 193.98 | Bedrock | 63.60 | 130.38 |
| MW-BS02 | 191.62 | Bedrock | 58.35 | 133.27 |
| MW-BS03 | 190.98 | Bedrock | 42.33 | 148.65 |
| MW-BS04 | 178.06 | Bedrock | 44.22 | 133.84 |
| MW-BS10 | 193.82 | Bedrock | 55.16 | 138.66 |
| MW-BS12 | 184.28 | Bedrock | 39.50 | 144.78 |
| MW-BS13 | 181.53 | Bedrock | 49.71 | 131.82 |
| MW-BS14 | 193.79 | Bedrock | 64.72 | 129.07 |
| MW-BS15 | 135.29 | Bedrock | 8.32 | 126.97 |
| MW-BS17 | 189.16 | Bedrock | 56.05 | 133.11 |
| MW-BS21 | 188.03 | Bedrock | 41.77 | 146.26 |
| MW-BS22 | 174.51 | Bedrock | 32.50 | 142.01 |
| MW-BS25 | 152.90 | Bedrock | 48.81 | 104.09 |
| MW-BS26 | 131.87 | Bedrock | 4.55 | 127.32 |
| MW-BS28 | 197.29 | Bedrock | 68.51 | 128.78 |
| MW-BS31 | 139.37 | Bedrock | 11.85 | 127.52 |
| MW-BS32 | 131.36 | Bedrock | 5.26 | 126.10 |
| MW-BS34 | 133.60 | Bedrock | 7.44 | 126.16 |
| MW-BS35 | 138.80 | Bedrock | 9.69 | 129.11 |
| MW-BS36 | 134.76 | Bedrock | 7.14 | 127.62 |
| MW-BS37 | 140.69 | Bedrock | 12.45 | 128.24 |
| MW-BS38 | 136.39 | Bedrock | 8.99 | 127.40 |
| MW-BS39 | 136.52 | Bedrock | 7.55 | 128.97 |
| MW-BS40 | 138.76 | Bedrock | 12.82 | 125.94 |
| MW-BS46 | 140.13 | Bedrock | 12.01 | 128.12 |
| MW-BS50 | 150.32 | Bedrock | 24.80 | 125.52 |
| MW-BS51 | 140.90 | Bedrock | 13.31 | 127.59 |
| MW-BS52 | 132.58 | Bedrock | 6.00 | 126.58 |
| MW-BS53 | 140.36 | Bedrock | 12.25 | 128.11 |
| MW-BS54 | 169.39 | Bedrock | NM | NM |
| MW-BS7-2 | 188.53 | Bedrock | 51.53 | 137.00 |
| MW-S01 | 193.31 | Overburden | 63.48 | 129.83 |
| MW-S02 | 191.54 | Overburden | 58.40 | 133.14 |
| MW-S03 | 191.11 | Overburden | 56.33 | 134.78 |
| MW-S04 | 177.32 | Overburden | 23.99 | 153.33 |
| MW-S06 | 177.92 | Overburden | 45.88 | 132.04 |
| MW-S07 | 190.36 | Overburden | 56.25 | 134.11 |
| MW-S09 | 191.22 | Overburden | 43.97 | 147.25 |
| MW-S12 | 184.37 | Overburden | 38.78 | 145.59 |
| MW-S14 | 194.86 | Overburden | 64.26 | 130.60 |
| MW-S15 | 134.17 | Overburden | 6.55 | 127.62 |
| MW-S16 | 187.26 | Overburden | 51.76 | 135.50 |

Table 2c.
Depth to Water and Groundwater Elevation Data
Annual Groundwater Elevation Data
NMI RD/RA

| Location Name | Measuring Point Elevation (TOR; ft NGVD) | Geologic Unit | 4/3/2023 | |
|---|---|---|---|---|
| | | | Depth to Water (ft) | Groundwater Elevation (ft NGVD) |
| MW-S17 | 188.62 | Overburden | 55.30 | 133.32 |
| MW-S18 | 158.20 | Overburden | 7.00 | 151.20 |
| MW-S19 | 187.46 | Overburden | 41.79 | 145.67 |
| MW-S20 | 156.43 | Overburden | 8.00 | 148.43 |
| MW-S21 | 187.51 | Overburden | 42.11 | 145.40 |
| MW-S22 | 175.53 | Overburden | 38.29 | 137.24 |
| MW-S23 | 183.66 | Overburden | 31.50 | 152.16 |
| MW-S24 | 185.27 | Overburden | 49.81 | 135.46 |
| MW-S26 | 130.65 | Overburden | 4.24 | 126.41 |
| MW-S27 | 186.03 | Overburden | 53.05 | 132.98 |
| MW-S28 | 196.87 | Overburden | 67.19 | 129.68 |
| MW-S29 | 194.66 | Overburden | 64.82 | 129.84 |
| MW-S30 | 187.12 | Overburden | 54.20 | 132.92 |
| MW-S32 | 131.23 | Overburden | 5.45 | 125.78 |
| MW-S35 | 138.95 | Overburden | 12.57 | 126.38 |
| MW-S36 | 135.09 | Overburden | 8.45 | 126.64 |
| MW-S37 | 140.96 | Overburden | 13.61 | 127.35 |
| MW-S38 | 136.56 | Overburden | 9.72 | 126.84 |
| MW-S39 | 136.79 | Overburden | 7.83 | 128.96 |
| MW-S40 | 138.71 | Overburden | 12.72 | 125.99 |
| MW-S46 | 140.22 | Overburden | 12.68 | 127.54 |
| MW-S60 | 186.55 | Overburden | 50.83 | 135.72 |
| MW-S62A | 193.55 | Overburden | 58.56 | 134.99 |
| MW-S63 | 192.70 | Overburden | 57.90 | 134.80 |
| MW-S64 | 194.91 | Overburden | 61.68 | 133.23 |
| MW-SD01 | 193.47 | Overburden | 63.78 | 129.69 |
| MW-SD02 | 190.42 | Overburden | 57.39 | 133.03 |
| MW-SD06 | 178.13 | Overburden | 46.22 | 131.91 |
| MW-SD10 | 194.13 | Overburden | 53.62 | 140.51 |

Table 2c.
Depth to Water and Groundwater Elevation Data
Annual Groundwater Elevation Data
NMI RD/RA

| Location Name | Measuring Point Elevation (TOR; ft NGVD) | Geologic Unit | 4/3/2023 | |
|---|---|---|---|---|
| | | | Depth to Water (ft) | Groundwater Elevation (ft NGVD) |
| MW-SD13 | 180.73 | Overburden | 49.94 | 130.79 |
| MW-SD15 | 136.44 | Overburden | 9.16 | 127.28 |
| MW-SD17 | 189.10 | Overburden | 55.67 | 133.43 |
| MW-SD24 | 185.06 | Overburden | 48.99 | 136.07 |
| MW-SD26 | 130.56 | Overburden | 4.76 | 125.80 |
| MW-SD27 | 185.78 | Overburden | 53.09 | 132.69 |
| MW-SD29 | 195.49 | Overburden | 66.26 | 129.23 |
| MW-SD30 | 186.95 | Overburden | 69.10 | 117.85 |
| MW-SD32 | 131.37 | Overburden | 5.52 | 125.85 |
| MW-SD34 | 133.56 | Overburden | 7.73 | 125.83 |
| MW-SD35 | 138.79 | Overburden | 10.18 | 128.61 |
| MW-SD36 | 134.78 | Overburden | 7.23 | 127.55 |
| MW-SD37 | 141.11 | Overburden | 12.89 | 128.22 |
| MW-SD38 | 135.95 | Overburden | 9.38 | 126.57 |
| MW-SD39 | 136.77 | Overburden | 8.01 | 128.76 |
| MW-SD40 | 138.67 | Overburden | 14.25 | 124.42 |
| MW-SD41 | 136.60 | Overburden | 10.13 | 126.47 |
| MW-SD42A | 137.70 | Overburden | 11.34 | 126.36 |
| MW-SD43 | 137.78 | Overburden | 10.24 | 127.54 |
| MW-SD44 | 137.01 | Overburden | 10.27 | 126.74 |
| MW-SD45 | 140.15 | Overburden | 14.42 | 125.73 |
| MW-SD46 | 140.37 | Overburden | 12.70 | 127.67 |
| MW-SD52 | 132.57 | Overburden | 5.94 | 126.63 |
| MW-SD60 | 186.58 | Overburden | 50.16 | 136.42 |
| MW-SD61 | 194.61 | Overburden | 60.00 | 134.61 |
| MW-SD62A | 193.48 | Overburden | 58.81 | 134.67 |
| MW-SD63 | 192.77 | Overburden | 55.74 | 137.03 |
| MW-SD64 | 194.91 | Overburden | 61.70 | 133.21 |
| MW-SM13 | 181.15 | Overburden | 49.92 | 131.23 |
| MW-T10 | 194.71 | Overburden | 53.62 | 141.09 |
| MW-T24 | 184.99 | Overburden | 49.00 | 135.99 |
| OW-2 | 151.90 | Overburden | 20.63 | 131.27 |
| P-1 | 127.80 | Overburden | 6.60 | 121.20 |
| P-1A | 128.80 | Overburden | 6.55 | 122.25 |
| PT-09 | 134.60 | Overburden | 8.70 | 125.90 |
| PT-10 | 135.23 | Overburden | 9.21 | 126.02 |
| PT-11P | 133.30 | Overburden | 7.45 | 125.85 |
| PW-6 | 182.65 | Overburden | 38.80 | 143.85 |
| PZ-Mpond | 129.01 | Overburden | 1.41 | 127.60 |
| PZ-Tpond | 128.64 | Overburden | 2.80 | 125.84 |
| SG-Mpond | 128.85 | Surface Water | 1.30 | 127.55 |
| SG-Tpond | 128.00 | Surface Water | 0.44 | 127.56 |
| SW-2A | 193.26 | Bedrock | 47.66 | 145.60 |

Notes
1. NGVD = National Geodetic Vertical Datum of 1929.
2. TOR = top of riser
3. ft = feet
4. NM= not measured due to accessibility issues and/or ability to locate.
5. Shaded cells indicate well not installed at the time of sampling event.
6. Assabet-1A and Assabet-2A are gauged monthly via PZ-1A and PZ-2A respectively. These piezometers were installed offset to Assabet 1A and Assabet 2A.

# TABLE 3
# SUMMARY OF MONTHLY SAMPLING
# 1,4-DIOXANE ANALYTICAL RESULTS

Table 3.
Summary of Monthly Sampling - 1,4 Dioxane Analytical Results
NMI RD/RA

| Date | ASSABET-1A | | Combined ASSABET-2, 2A & 3 | | MW-SD42A | | MW-SD44 | |
|---|---|---|---|---|---|---|---|---|
| May 2022 | **0.285** | J+ | **0.297** | J+ | **4.50** | J+ | **1.75** | J+ |
| June 2022 | **0.134** | J | **0.205** | | **2.54** | | **1.36** | |
| July 2022 | **0.152** | | **0.221** | | **2.94** | | **1.50** | |
| August 2022 | **0.175** | | **0.249** | | **1.48** | | **2.56** | |
| September 2022 | **0.152** | | **0.236** | | **1.82** | | **3.20** | |
| October 2022 | **0.162** | | **0.302** | | **1.30** | | **2.41** | |
| November 2022 | **0.160** | | **0.362** | | **1.15** | | **2.67** | |
| December 2022 | **0.186** | | **0.417** | | **1.24** | | **3.69** | |
| January 2023 | **0.207** | | **0.400** | | **0.588** | | **3.22** | |
| February 2023 | **0.185** | | **0.448** | | **1.24** | | **1.71** | |
| March 2023 | **0.169** | | **0.452** | | **0.908** | | **1.56** | |
| April 2023 | **0.203** | | **0.419** | | **1.92** | | **1.16** | |

**Notes**
J = Estimated quantity. The associated numerical value is the approximate concentration
J+ = The result is an estimated quantity, but the result may be biased high.
All samples represented in ug/l
Shaded cells indicate value exceed Incremental Lifetime Cancer Risk (ILCR) Cleanup Level for 1,4 Dioxane of 0.46 ug/l in Overburden and Bedrock
Bolded cells indicate analyte detected above the laboratory reporting limit (detect)

Note that it was determined that the sample location for Assabet 2A, sampled through August 2023, was actually the sample point for the blended water from multiple Town of Acton production wells (Assabet 2, Assabet 2A, and Assabet 3). As of August 2023, the sample location was revised based on communication from the Acton Water District and represents water quality at Assabet 2A. On August 22, 2023, representatives of USEPA and MassDEP were advised of the clarification received from the Acton Water District and the revised sampling location for Assabet 2A.

# TABLE 4
# SUMMARY of ANNUAL ANALYTICAL RESULTS

4a. Metals – Sitewide Groundwater Sampling Results – April 2023
- 4a – 1 Metals (Total) – Sitewide Groundwater Sampling Results – April 2023
- 4a – 2 Metals (Dissolved) – Sitewide Groundwater Sampling Results – April 2023
- 4a – 3 Uranium (Total) – Sitewide Groundwater Sampling Results April 2021-2023
- 4a – 4 Dissolved Uranium (Total) – Sitewide Groundwater Sampling Results April 2021-2023
- 4a – 5 Uranium-238 (Total) – Sitewide Groundwater Sampling Results April 2021-2023
- 4a – 6 Calc U-235/U-238 (Total) – Sitewide Groundwater Sampling Results April 2021-2023
- 4a – 7 Sum U-235/U-238 (Total) – Sitewide Groundwater Sampling Results April 2021-2023

4b. Semivolatiles – Sitewide Groundwater Sampling Results - April 2021 to April 2023

4c. Volatile Organic Compounds – Sitewide Groundwater Sampling Results – April 2023

4d. Nitrate/Nitrite – Sitewide Groundwater Sampling Results – April 2023

4e. Geochemical Parameters – Sitewide Groundwater Sampling Results – April 2023

Table 4a-1
Summary of Annual Sampling Analytical Results
Metals (Total) - Sitewide Groundwater Sampling Results - April 2023
NMI RD/RA

| | | | | | Sample Location | BEW-2 | BEW-3 | BEW-4 | BEW-5 | GZW-10-2 | HA20-CMT-3B(OW) | HA20-CMT-5(OW) | HA20-CMT-6(OW) | MW-B1D13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Sample Date | 4/5/2023 | 4/5/2023 | 4/5/2023 | 4/10/2023 | 4/11/2023 | 4/5/2023 | 4/3/2023 | 4/4/2023 | 4/7/2023 |
| | | | | | Formation | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock |
| Fraction | Analyte | Cas No. | ROD CL | Unit | | | | | | | | | | |
| T | Aluminum | 7429-90-5 | | ug/l | | **30.6 J** | < 19.3 U | **132** | **63.4 J** | **22.8 J** | **156** | **1670** | **21.8 J** | < 19.3 U |
| T | Antimony | 7440-36-0 | | ug/l | | **13.4** | < 1.00 U | < 1.00 U | < 1.00 U | **4.2** | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U |
| T | Arsenic | 7440-38-2 | 10 | ug/l | | 11.1 | **2.12 J** | < 2.00 U | **6.38** | **2.02 J** | **32.4** | < 2.00 U | < 2.00 U | **3.02 J** |
| T | Barium | 7440-39-3 | 2000 | ug/l | | **31.1** | **31.1** | **16.6** | **33.5** | **24.3** | **18.9** | **43.4** | **19.2** | **35.8** |
| T | Beryllium | 7440-41-7 | | ug/l | | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U |
| T | Cadmium | 7440-43-9 | | ug/l | | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U |
| T | Calcium | 7440-70-2 | | ug/l | | **43500** | **72000** | **28700** | **172000** | **80200 J** | **35100** | **45400** | **52200** | **83200** |
| T | Chromium | 7440-47-3 | 100 | ug/l | | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | **3.48 J** | < 3.00 U | < 3.00 U |
| T | Cobalt | 7440-48-4 | 6 | ug/l | | **2.08 J+** | < 0.300 U | < 0.300 U | < 0.300 U | **0.901 J+** | **0.345 J+** | **1.42 J+** | **0.371 J+** | < 0.300 U |
| T | Copper | 7440-50-8 | 1300 | ug/l | | **1.26 J+** | < 0.300 U | **1.58 J+** | < 0.300 U | **1.1 J+** | **1.08 J+** | **2.37** | **0.321 J+** | < 0.300 U |
| T | Iron | 7439-89-6 | 14000 | ug/l | | **1780** | **6430** | **761** | **3170** | **43.3 J** | **256** | **1840** | **49.3 J** | **213** |
| T | Lead | 7439-92-1 | | ug/l | | **2.6** | < 0.500 U | **1.82 J** | < 0.500 U | < 0.500 U | < 0.500 U | **1.26 J** | < 0.500 U | < 0.500 U |
| T | Magnesium | 7439-95-4 | | ug/l | | **15500** | **32600** | **8260** | **50500 J** | **26900** | **9420** | **9470** | **10300** | **30300** |
| T | Manganese | 7439-96-5 | 300 | ug/l | | **269** | **316** | **58.2** | **1090 J** | **273** | **371** | **558** | **288** | **84.8** |
| T | Molybdenum | 7439-98-7 | 100 | ug/l | | **23.2** | **11.9** | **3.25** | **1.16** | < 0.200 UJ | **39.3** | **2.98** | **3.36** | **10.1** |
| T | Nickel | 7440-02-0 | | ug/l | | **5.4** | **1.37 J** | **1.74 J** | **0.86 J+** | **3.86 J+** | **1.11 J** | **2.37 J+** | < 0.600 U | **0.808 J+** |
| T | Potassium | 7440-09-7 | | ug/l | | **3740 J+** | **7190 J+** | **3690 J+** | **16800 N** | **8370** | **4830 J+** | **7310 J** | **9290 J** | **6300** |
| T | Selenium | 7782-49-2 | | ug/l | | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U |
| T | Silver | 7440-22-4 | | ug/l | | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U |
| T | Sodium | 7440-23-5 | | ug/l | | **29400** | **41300** | **24100** | **46000** | **34400** | **49500** | **11800** | **13600** | **37700 J** |
| T | Thallium | 7440-28-0 | | ug/l | | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U |
| T | Thorium | 7440-29-1 | 0.33 | ug/l | | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U |
| T | Uranium | 7440-61-1 | 30 | ug/l | | **70.8 J** | **28.9** | **0.494 J** | **15.9** | **52.3 J** | **48 J** | **4.48 J** | **9.77 J** | **68.2 J** |
| T | Uranium-235 | 15117-96-1 | 30 | ug/l | | **0.51 J** | **0.213** | < 0.0100 UJ | **0.114 J** | **0.375 J** | **0.35 J** | **0.0339 J** | **0.0689 J** | **0.5 J** |
| T | Uranium-238 | 7440-61-2 | 30 | ug/l | | **70.3 J** | **28.7** | **0.494 J** | **15.8 J** | **51.9 J** | **47.6 J** | **4.45 J** | **9.7 J** | **67.7 J** |
| T | **Calc U-235/U-238** | | | ug/l | | **0.00725** | **0.00742** | | **0.00722** | **0.00723** | **0.00735** | **0.00762** | **0.00710** | **0.00739** |
| T | **Sum U-235/U-238** | | 30 | ug/l | | **70.8** | **28.9** | **0.494** | **15.9** | **52.3** | **48.0** | **4.48** | **9.77** | **68.2** |
| T | Vanadium | 7440-62-2 | | ug/l | | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | **4.08 J** | **6.88 J** | **7.52 J** | **4.01 J** |
| T | Zinc | 7440-66-6 | | ug/l | | **133** | **8.05 J** | **8.01 J** | **5.53 J** | **12.1 J** | < 3.30 U | **7.62 J** | < 3.30 U | < 3.30 U |

Table 4a-1
Summary of Annual Sampling Analytical Results
Metals (Total) - Sitewide Groundwater Sampling Results - April 2023
NMI RD/RA

| | | | | | Sample Location | MW-B1D13 DUP | MW-B1D28 | MW-B2D13 | MW-B3D13 | MW-BM03 | MW-BS01 | MW-BS02 | MW-BS03 | MW-BS03 DUP | MW-BS10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Sample Date | 4/7/2023 | 4/4/2023 | 4/6/2023 | 4/6/2023 | 4/5/2023 | 4/10/2023 | 4/5/2023 | 4/6/2023 | 4/6/2023 | 4/6/2023 |
| | | | | | Formation | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock |
| Fraction | Analyte | Cas No. | ROD CL | Unit | | | | | | | | | | | |
| T | Aluminum | 7429-90-5 | | ug/l | | < 19.3 U | **126** | **25.5 J** | **113** | **105** | **213 J** | **35.9 J** | **69.6** | **47.8 J** | < 19.3 U |
| T | Antimony | 7440-36-0 | | ug/l | | < 1.00 U | < 1.00 U | < 1.00 U | **3.41** | **4.11** | < 1.00 U | **2.19 J** | **1.02 J** | < 1.00 U | < 1.00 U |
| T | Arsenic | 7440-38-2 | 10 | ug/l | | **3.11 J** | **10.7** | **5.6** | **128** | **492** | **9.57** | **34.1** | **97.8** | **97.9** | **3.31 J** |
| T | Barium | 7440-39-3 | 2000 | ug/l | | **34.6** | **20.9** | **51.9** | **94.8** | **62.4** | **21** | **5.69** | **48.9** | **46.6** | **7.44** |
| T | Beryllium | 7440-41-7 | | ug/l | | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U |
| T | Cadmium | 7440-43-9 | | ug/l | | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | **0.334 J+** | < 0.300 U | < 0.300 U | < 0.300 U |
| T | Calcium | 7440-70-2 | | ug/l | | **82900** | **24800** | **75400** | **60900** | **50000** | **28100** | **53100** | **42500** | **42500** | **17300** |
| T | Chromium | 7440-47-3 | 100 | ug/l | | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U |
| T | Cobalt | 7440-48-4 | 6 | ug/l | | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | **1.19 J+** | < 0.300 U | **0.523 J+** | **1.82 J+** | **1.63 J** | < 0.300 U |
| T | Copper | 7440-50-8 | 1300 | ug/l | | < 0.300 U | < 0.300 UJ | < 0.300 U | **0.547 J+** | **0.728 J+** | **1.36 J+** | **0.508 J** | **0.678 J+** | **0.628 J+** | < 0.300 U |
| T | Iron | 7439-89-6 | 14000 | ug/l | | **216** | **81 J** | **559** | **600** | **800** | **202** | **81.5 J** | **1860** | **1820** | **223** |
| T | Lead | 7439-92-1 | | ug/l | | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U |
| T | Magnesium | 7439-95-4 | | ug/l | | **30600** | **10800** | **27000** | **21200** | **16800** | **9170 J** | **16300** | **15600** | **15500** | **6200** |
| T | Manganese | 7439-96-5 | 300 | ug/l | | **84.9** | **2.93 J** | **113** | **68.6** | **180** | **10.4 J** | **119** | **385** | **378** | **296** |
| T | Molybdenum | 7439-98-7 | 100 | ug/l | | **9.76** | **14.7** | **21 J** | **52.5 J** | **12.4 J** | **7.74** | **10.8** | **7.17 J** | **6.8 J** | **17.2 J** |
| T | Nickel | 7440-02-0 | | ug/l | | **0.827 J+** | < 0.600 U | < 0.600 U | **0.896 J+** | **3.34** | **2.14 J+** | **3.3** | **3.76 J** | **3.3 J** | < 0.600 U |
| T | Potassium | 7440-09-7 | | ug/l | | **6220** | **7990 J** | **8020** | **4300** | **5590 J+** | **6680 N** | **4420 J+** | **6410** | **6050 J** | **2700** |
| T | Selenium | 7782-49-2 | | ug/l | | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U |
| T | Silver | 7440-22-4 | | ug/l | | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U |
| T | Sodium | 7440-23-5 | | ug/l | | **37300 J** | **23700** | **49700 J** | **37900 J** | **34300** | **31700** | **38300** | **33300 J** | **32700 J** | **13500 J** |
| T | Thallium | 7440-28-0 | | ug/l | | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U |
| T | Thorium | 7440-29-1 | 0.33 | ug/l | | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U |
| T | Uranium | 7440-61-1 | 30 | ug/l | | **66.4 J** | **1.06** | **15.7 J** | **3.51 J** | **15.3 J** | **7.06** | **90.9 J** | **43.9 J** | **41.9 J** | **28.2 J** |
| T | Uranium-235 | 15117-96-1 | 30 | ug/l | | **0.48 J** | < 0.0100 U | **0.117** | **0.0252 J** | **0.111 J** | **0.0507 J** | **0.66 J** | **0.319** | **0.308** | **0.205** |
| T | Uranium-238 | 7440-61-2 | 30 | ug/l | | **65.9 J** | **1.06** | **15.5 J** | **3.48 J** | **15.2 J** | **7.01 J** | **90.2 J** | **43.5 J** | **41.6 J** | **28 J** |
| T | **Calc U-235/U-238** | | | ug/l | | **0.00728** | | **0.00755** | **0.00724** | **0.00730** | **0.00723** | **0.00732** | **0.00733** | **0.00740** | **0.00732** |
| T | **Sum U-235/U-238** | | 30 | ug/l | | **66.4** | **1.06** | **15.6** | **3.51** | **15.3** | **7.06** | **90.9** | **43.8** | **41.9** | **28.2** |
| T | Vanadium | 7440-62-2 | | ug/l | | **4.25 J** | **4.74 J** | **3.52 J** | < 3.30 U | < 3.30 U | **3.43 J** | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U |
| T | Zinc | 7440-66-6 | | ug/l | | < 3.30 U | **14 J** | < 3.30 U | **10.5 J** | < 3.30 U | **6.64 J** | **11.1 J** | **4.47 J** | **3.75 J** | < 3.30 U |

Table 4a-1
Summary of Annual Sampling Analytical Results
Metals (Total) - Sitewide Groundwater Sampling Results - April 2023
NMI RD/RA

| | | | | | Sample Location | MW-BS13 | MW-BS14 | MW-BS15 | MW-BS28 | MW-BS52 | MW-BS52 DUP | MW-BS54 | MW-BS7-2 | GZW-7-1 | HA20-CMT-3T(OW) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Sample Date | 4/7/2023 | 4/10/2023 | 4/10/2023 | 4/4/2023 | 4/5/2023 | 4/5/2023 | 4/7/2023 | 4/11/2023 | 4/11/2023 | 4/4/2023 |
| | | | | | Formation | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Overburden | Overburden |
| Fraction | Analyte | Cas No. | ROD CL | Unit | | | | | | | | | | | |
| T | Aluminum | 7429-90-5 | | ug/l | | < 19.3 U | < 19.3 UJ | **58.7 J** | **147** | **209** | **225** | **169** | **34 J** | < 19.3 U | **3680** |
| T | Antimony | 7440-36-0 | | ug/l | | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U | **3.2** | < 1.00 U | < 1.00 U | **7.27 J** |
| T | Arsenic | 7440-38-2 | 10 | ug/l | | **3.44 J** | < 2.00 U | **2.09 J** | **2.7 J** | < 2.00 UJ | < 2.00 UJ | **2.95 J** | **2.17 J** | < 2.00 U | **3.87 J** |
| T | Barium | 7440-39-3 | 2000 | ug/l | | **36.3** | **51.1** | **16.5** | **25.6** | **21.5** | **20.9** | **45.7** | **31.3** | **6.88** | **201** |
| T | Beryllium | 7440-41-7 | | ug/l | | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | **0.204 J** |
| T | Cadmium | 7440-43-9 | | ug/l | | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U |
| T | Calcium | 7440-70-2 | | ug/l | | **102000** | **53500** | **96300** | **115000** | **33200** | **31700** | **46700** | **65200 J** | **26600** | **231000** |
| T | Chromium | 7440-47-3 | 100 | ug/l | | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | **4.99 J** |
| T | Cobalt | 7440-48-4 | 6 | ug/l | | < 0.300 U | **2.93** | **8.58** | **1.44 J+** | < 0.300 U | < 0.300 U | **0.944 J+** | **1.02 J+** | < 0.300 U | **1.55 J+** |
| T | Copper | 7440-50-8 | 1300 | ug/l | | < 0.300 U | **0.457 J+** | **1.05 J** | **0.512 J+** | **0.361 J+** | **0.436 J+** | **3.78 J+** | **2.39** | **20.7** | **2.95** |
| T | Iron | 7439-89-6 | 14000 | ug/l | | **166** | **885** | **325** | **601** | **2090** | **2180** | **935** | **49.4 J** | **98.6 J** | **3480** |
| T | Lead | 7439-92-1 | | ug/l | | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | **0.735 J** | < 0.500 U | < 0.500 U | **1.27 J** |
| T | Magnesium | 7439-95-4 | | ug/l | | **35800** | **19800 J** | **29700 J** | **38200** | **10400** | **9840** | **16500** | **17000** | **6580** | **65200** |
| T | Manganese | 7439-96-5 | 300 | ug/l | | **198** | **1020 J** | **258 J** | **1010** | **395** | **395** | **104** | **400** | **1.42 J+** | **1140** |
| T | Molybdenum | 7439-98-7 | 100 | ug/l | | **0.918 J** | **2.26** | **6.31** | **2.24** | **1.66 J** | **1.58 J** | **6.82** | **52.1** | **1.01** | **19.7** |
| T | Nickel | 7440-02-0 | | ug/l | | **1.28 J+** | **4.6** | **2.95 J+** | **4.35** | **0.922 J** | **0.912 J** | **1.62 J+** | **1.14 J+** | **0.87 J+** | **3.45** |
| T | Potassium | 7440-09-7 | | ug/l | | **12300** | **8230 N** | **12200 N** | **13900 J** | **12200** | **11600** | **7250** | **6730** | **4270** | **17700 J** |
| T | Selenium | 7782-49-2 | | ug/l | | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U |
| T | Silver | 7440-22-4 | | ug/l | | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U |
| T | Sodium | 7440-23-5 | | ug/l | | **40400 J** | **28900** | **65200** | **44100** | **25000** | **23700** | **29000 J** | **74600 J** | **39500** | **116000** |
| T | Thallium | 7440-28-0 | | ug/l | | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U |
| T | Thorium | 7440-29-1 | 0.33 | ug/l | | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | **1.04 J** |
| T | Uranium | 7440-61-1 | 30 | ug/l | | **52.4** | **1.87** | **3** | **20.1 J** | **0.481** | **0.495** | **0.239** | **47.8 J** | **82.2** | **7.65** |
| T | Uranium-235 | 15117-96-1 | 30 | ug/l | | **0.382** | **0.014 J** | **0.0218 J** | **0.141 J** | < 0.0100 U | < 0.0100 U | < 0.0100 U | **0.341** | **0.173** | **0.0513 J** |
| T | Uranium-238 | 7440-61-2 | 30 | ug/l | | **52** | **1.86 J** | **2.98 J** | **19.9 J** | **0.481** | **0.495** | **0.239** | **47.5 J** | **82.1** | **7.6** |
| T | **Calc U-235/U-238** | | | ug/l | | **0.00735** | **0.00753** | **0.00732** | **0.00709** | | | | **0.00718** | **0.00211** | **0.00675** |
| T | **Sum U-235/U-238** | | 30 | ug/l | | **52.4** | **1.87** | **3.00** | **20.0** | **0.481** | **0.495** | **0.239** | **47.8** | **82.3** | **7.65** |
| T | Vanadium | 7440-62-2 | | ug/l | | **4.28 J** | < 3.30 U | **3.69 J** | **5.1 J** | < 3.30 U | < 3.30 U | **3.31 J** | < 3.30 U | < 3.30 U | **9.34 J** |
| T | Zinc | 7440-66-6 | | ug/l | | < 3.30 U | **4.18 J** | **4.79 J** | **3.3 J** | **4.53 J** | **4.37 J** | **8.48 J** | < 3.30 U | < 3.30 UJ | **12 J** |

Table 4a-1
Summary of Annual Sampling Analytical Results
Metals (Total) - Sitewide Groundwater Sampling Results - April 2023
NMI RD/RA

| | | | | | Sample Location | HB-12 | HB-13 | HB-13 DUP | HBPZ-2R | MW-8A | MW-S02 | MW-S16 | MW-S24 | MW-S60 | MW-S62A | MW-S64 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Sample Date | 4/11/2023 | 4/11/2023 | 4/11/2023 | 4/11/2023 | 4/7/2023 | 4/5/2023 | 4/5/2023 | 4/10/2023 | 4/7/2023 | 4/10/2023 | 4/5/2023 |
| | | | | | Formation | Overburden | Overburden | Overburden | Overburden | Overburden | Overburden | Overburden | Overburden | Overburden | Overburden | Overburden |
| Fraction | Analyte | Cas No. | ROD CL | Unit | | | | | | | | | | | | |
| T | Aluminum | 7429-90-5 | | ug/l | | **54.5** | < 19.3 U | < 19.3 U | **29.3 J** | **79.8** | **23.6 J** | **57** | < 19.3 UJ | < 19.3 U | **24.4 J** | **55** |
| T | Antimony | 7440-36-0 | | ug/l | | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U |
| T | Arsenic | 7440-38-2 | 10 | ug/l | | < 2.00 U | < 2.00 U | < 2.00 U | < 2.00 U | **2.72 J** | < 2.00 U | < 2.00 U | < 2.00 U | < 2.00 U | **2.55 J** | < 2.00 U |
| T | Barium | 7440-39-3 | 2000 | ug/l | | **3.34 J** | **8.45** | **8.05** | **3.16 J** | **10.3** | **5.79** | **6.83** | **7.08** | **7.79** | **12.7** | **4.9** |
| T | Beryllium | 7440-41-7 | | ug/l | | < 0.200 UJ | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U |
| T | Cadmium | 7440-43-9 | | ug/l | | < 0.300 U | < 0.300 U | < 0.300 U | **0.947 J+** | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U |
| T | Calcium | 7440-70-2 | | ug/l | | **17600** | **19400** | **19700** | **17000** | **22000** | **8410** | **25600** | **28300** | **23600** | **23300** | **6740** |
| T | Chromium | 7440-47-3 | 100 | ug/l | | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U |
| T | Cobalt | 7440-48-4 | 6 | ug/l | | **0.472 J+** | **1.13 J+** | **1.22 J+** | **0.759 J+** | **3.02** | **0.389 J+** | **0.325 J+** | **1.75** | **6.23 J** | **0.71 J** | **0.583 J+** |
| T | Copper | 7440-50-8 | 1300 | ug/l | | **8.35** | **10.8** | **11.1** | **16.2** | **7.14** | **1.2 J+** | **23.1** | **9.93** | **23.3** | **2.02** | **62** |
| T | Iron | 7439-89-6 | 14000 | ug/l | | < 33.0 U | < 33.0 U | < 33.0 U | < 33.0 U | **211** | < 33.0 U | **285** | **274 J** | **1840** | **849** | **55 J** |
| T | Lead | 7439-92-1 | | ug/l | | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | **1.56 J** | **1.49 J** | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U |
| T | Magnesium | 7439-95-4 | | ug/l | | **6140** | **4970** | **4950** | **7370** | **4960** | **925** | **5850** | **7280 J** | **5630** | **5720 J** | **1530** |
| T | Manganese | 7439-96-5 | 300 | ug/l | | **4.87 J+** | **23.4** | **24.9** | **13.8 J+** | **585 J** | < 1.00 U | **10** | **39.7 J** | **71.7 J** | **417 J** | **8.64** |
| T | Molybdenum | 7439-98-7 | 100 | ug/l | | **76.5** | **297** | **284** | **1060** | **60** | < 0.200 U | **2.58** | **297** | **19.4** | **43.7** | **0.24 J** |
| T | Nickel | 7440-02-0 | | ug/l | | **1.53 J+** | **1.58 J+** | **1.63 J+** | **2.5 J+** | **1.25 J+** | < 0.600 U | **1.26 J** | **1.99 J+** | **10.3 J** | **0.747 J+** | **2.41** |
| T | Potassium | 7440-09-7 | | ug/l | | **2920** | **2760** | **2810** | **2920** | **3260** | **1860 J+** | **3840 J+** | **3980 N** | **3430** | **3680 N** | **1400 J+** |
| T | Selenium | 7782-49-2 | | ug/l | | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U |
| T | Silver | 7440-22-4 | | ug/l | | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U |
| T | Sodium | 7440-23-5 | | ug/l | | **24700** | **17600** | **17900** | **23600** | **26800 J** | **21200** | **35600** | **20000** | **28600 J** | **36500** | **8490** |
| T | Thallium | 7440-28-0 | | ug/l | | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U |
| T | Thorium | 7440-29-1 | 0.33 | ug/l | | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | **0.853 J** | < 0.700 U | < 0.700 U | < 0.700 U |
| T | Uranium | 7440-61-1 | 30 | ug/l | | **266** | **2600** | **2550** | **839** | **205** | **0.186 J** | **93.8 J** | **1460** | **178** | **34.7** | **12.5** |
| T | Uranium-235 | 15117-96-1 | 30 | ug/l | | **0.575** | **5.4** | **5.34** | **1.74** | **0.388** | < 0.0100 U | **0.193 J** | **2.9 J** | **0.357** | **0.0704 J** | **0.0284 J** |
| T | Uranium-238 | 7440-61-2 | 30 | ug/l | | **265** | **2590** | **2550** | **837** | **205** | **0.186 J** | **93.6 J** | **1460 J** | **178** | **34.6 J** | **12.5** |
| T | **Calc U-235/U-238** | | | ug/l | | **0.00217** | **0.00208** | **0.00209** | **0.00208** | **0.00189** | | **0.00206** | **0.00199** | **0.00201** | **0.00203** | **0.00227** |
| T | **Sum U-235/U-238** | | 30 | ug/l | | **266** | **2595** | **2555** | **839** | **205** | **0.186** | **93.8** | **1463** | **178** | **34.7** | **12.5** |
| T | Vanadium | 7440-62-2 | | ug/l | | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U |
| T | Zinc | 7440-66-6 | | ug/l | | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | **5.34 J** | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 UJ |

Table 4a-1
Summary of Annual Sampling Analytical Results
Metals (Total) - Sitewide Groundwater Sampling Results - April 2023
NMI RD/RA

| | | | | Sample Location | MW-S64 DUP | MW-SD01 | MW-SD24 | MW-SD24 DUP | MW-SD34 | MW-SD60 | MW-SD61 | MW-SD62A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Date | 4/5/2023 | 4/10/2023 | 4/10/2023 | 4/10/2023 | 4/4/2023 | 4/7/2023 | 4/10/2023 | 4/10/2023 |
| | | | | Formation | Overburden | Overburden | Overburden | Overburden | Overburden | Overburden | Overburden | Overburden |
| Fraction | Analyte | Cas No. | ROD CL | Unit | | | | | | | | |
| T | Aluminum | 7429-90-5 | | ug/l | **98.6** | **99.1 J** | **337 J** | **236 J** | **82.2** | **34.8 J** | < 19.3 UJ | **28.2 J** |
| T | Antimony | 7440-36-0 | | ug/l | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U |
| T | Arsenic | 7440-38-2 | 10 | ug/l | < 2.00 U | < 2.00 U | < 2.00 U | < 2.00 U | **4.28 J** | < 2.00 U | **8.69** | < 2.00 U |
| T | Barium | 7440-39-3 | 2000 | ug/l | **4.94** | **13.3** | **8.49** | **8.03** | **39.2** | **3.41 J** | **5.95** | **5.91** |
| T | Beryllium | 7440-41-7 | | ug/l | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U |
| T | Cadmium | 7440-43-9 | | ug/l | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U |
| T | Calcium | 7440-70-2 | | ug/l | **6920** | **13600** | **24800** | **25700** | **163000** | **23300** | **35700** | **26000** |
| T | Chromium | 7440-47-3 | 100 | ug/l | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U |
| T | Cobalt | 7440-48-4 | 6 | ug/l | **0.594 J+** | **0.695 J** | **1.03 J** | **1.3** | **5.85** | **2.47** | **1.07 J+** | **1.13** |
| T | Copper | 7440-50-8 | 1300 | ug/l | **59.6** | **2 J** | **24.3** | **23.5** | **0.692 J+** | **16.6** | **3.88** | **2.28** |
| T | Iron | 7439-89-6 | 14000 | ug/l | **98.9 J** | **137** | **495** | **383** | **10400** | **63.5 J** | **9150** | **6700** |
| T | Lead | 7439-92-1 | | ug/l | < 0.500 U | < 0.500 U | **0.685 J** | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U |
| T | Magnesium | 7439-95-4 | | ug/l | **1560** | **2750 J** | **5830 J** | **6010 J** | **51200** | **5100** | **6410 J** | **6080 J** |
| T | Manganese | 7439-96-5 | 300 | ug/l | **9.09** | **4.29 J** | **33.9 J** | **48.9 J** | **1110** | **106** | **1540 J** | **80.4 J** |
| T | Molybdenum | 7439-98-7 | 100 | ug/l | **0.228 J** | **14.1** | **13** | **12.7** | **0.358 J** | **2.4** | **10.9** | **2.89 J** |
| T | Nickel | 7440-02-0 | | ug/l | **2.52** | **0.809 J+** | **1.94 J+** | **1.68 J+** | **12.7** | **1.69 J+** | < 0.600 U | **1.35 J+** |
| T | Potassium | 7440-09-7 | | ug/l | **1430 J+** | **3260 N** | **4760 N** | **4570 N** | **15800 J** | **3660** | **2920 N** | **4190 N** |
| T | Selenium | 7782-49-2 | | ug/l | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U |
| T | Silver | 7440-22-4 | | ug/l | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | **0.362 J** | < 0.300 U | < 0.300 U |
| T | Sodium | 7440-23-5 | | ug/l | **8850** | **22100** | **31900** | **33000** | **52000** | **32700 J** | **31900** | **39100** |
| T | Thallium | 7440-28-0 | | ug/l | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U |
| T | Thorium | 7440-29-1 | 0.33 | ug/l | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U |
| T | Uranium | 7440-61-1 | 30 | ug/l | **12.1** | **7.78** | **128** | **122** | **6.77 J** | **136** | **5.2** | **1.63** |
| T | Uranium-235 | 15117-96-1 | 30 | ug/l | **0.0268 J** | **0.0178 J** | **0.276 J** | **0.256 J** | **0.0502 J** | **0.267** | **0.0107 J** | < 0.0100 UJ |
| T | Uranium-238 | 7440-61-2 | 30 | ug/l | **12.1** | **7.77 J** | **128 J** | **122 J** | **6.72 J** | **136** | **5.19 J** | **1.63 J** |
| T | **Calc U-235/U-238** | | | ug/l | **0.00221** | **0.00229** | **0.00216** | **0.00210** | **0.00747** | **0.00196** | **0.00206** | |
| T | **Sum U-235/U-238** | | 30 | ug/l | **12.1** | **7.79** | **128** | **122** | **6.77** | **136** | **5.20** | **1.63** |
| T | Vanadium | 7440-62-2 | | ug/l | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U |
| T | Zinc | 7440-66-6 | | ug/l | < 3.30 U | < 3.30 U | **9.36 J** | **7.06 J** | **4.2 J** | < 3.30 U | < 3.30 U | < 3.30 U |

Table 4a-1
Summary of Annual Sampling Analytical Results
Metals (Total) - Sitewide Groundwater Sampling Results - April 2023
NMI RD/RA

Notes:

| | |
|---|---|
| J | The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample |
| J+ | The result is an estimated quantity, but the result may be biased high |
| N | (Metals) The Matrix spike sample recovery is not within specified control limits |
| U | The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit. |
| UJ | The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise |
| DUP | Duplicate sample |
| T | Fraction - Total |
| ug/l | Micrograms per liter |
| Limit | Based on EPA MCL in Overburden and Bedrock except for Thorium (ILCR value), Cobolt (HI value), Copper (Overburden Action Level) Barium MCL is Bedrock only. Shaded cells exceed limit, apply to Totals only. |
| **Bold** | Analyte detected above the laboratory reporting limit (detect) |

Table 4a-2
Summary of Annual Sampling Analytical Results
Metals (Dissolved) - Sitewide Groundwater Sampling Results - April 2023
NMI RD/RA

| | | | | Sample Location | BEW-2 | BEW-3 | BEW-4 | BEW-5 | GZW-10-2 | HA20-CMT-3B(OW) | HA20-CMT-5(OW) | HA20-CMT-6(OW) | MW-B1D13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Date | 4/5/2023 | 4/5/2023 | 4/5/2023 | 4/10/2023 | 4/11/2023 | 4/5/2023 | 4/3/2023 | 4/4/2023 | 4/7/2023 |
| | | | | Formation | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock |
| Fraction | Analyte | Cas No. | ROD CL | Unit | | | | | | | | | |
| D | Aluminum | 7429-90-5 | | ug/l | < 19.3 U | < 19.3 U | **30.5 J** | < 19.3 U | < 19.3 U | < 19.3 U | **37.4 J** | < 19.3 U | < 19.3 U |
| D | Antimony | 7440-36-0 | | ug/l | **10.2** | < 1.00 U | < 1.00 U | < 1.00 U | **3.71** | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U |
| D | Arsenic | 7440-38-2 | 10 | ug/l | **11.1** | **2.16 J** | < 2.00 U | **6.57** | **2.59 J** | **31.3** | < 2.00 U | < 2.00 U | **3.28 J** |
| D | Barium | 7440-39-3 | 2000 | ug/l | **31** | **32.4** | **16.1** | **32.2** | **17.9** | **17.9** | **35.6** | **18.2** | **34.2** |
| D | Beryllium | 7440-41-7 | | ug/l | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U |
| D | Cadmium | 7440-43-9 | | ug/l | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U |
| D | Calcium | 7440-70-2 | | ug/l | **43500** | **70500** | **29400** | **179000** | **73900 J** | **34200** | **47200** | **53400** | **84900** |
| D | Chromium | 7440-47-3 | 100 | ug/l | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U |
| D | Cobalt | 7440-48-4 | 6 | ug/l | **1.52 J+** | < 0.300 U | < 0.300 U | < 0.300 U | **0.332 J+** | < 0.300 U | **0.411 J+** | **0.337 J+** | < 0.300 U |
| D | Copper | 7440-50-8 | 1300 | ug/l | < 0.300 U | < 0.300 U | **0.403 J+** | < 0.300 U | **0.71 J+** | < 0.300 U | < 0.300 U | **0.433 J+** | < 0.300 U |
| D | Iron | 7439-89-6 | 14000 | ug/l | **1410** | **5750** | **256** | **2750** | < 33.0 U | < 33.0 U | **187** | < 33.0 U | **208** |
| D | Lead | 7439-92-1 | | ug/l | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U |
| D | Magnesium | 7439-95-4 | | ug/l | **15600** | **33400** | **8620** | **52000** | **27700** | **9210** | **9280** | **10200** | **30700** |
| D | Manganese | 7439-96-5 | 300 | ug/l | **268** | **313** | **50.3** | **1140** | **23.6** | **352** | **482** | **285** | **85.7** |
| D | Molybdenum | 7439-98-7 | 100 | ug/l | **23.2** | **12.4** | **3.36** | **1.07** | **1.54 J** | **38.7** | **3.07** | **3.44** | **10.1** |
| D | Nickel | 7440-02-0 | | ug/l | **2.96** | **1.32 J** | **1 J** | **0.745 J+** | **2.37 J+** | **0.604 J** | **0.855 J+** | < 0.600 U | **0.773 J+** |
| D | Potassium | 7440-09-7 | | ug/l | **3770 J+** | **7320 J+** | **3760 J+** | **16100 J** | **8670** | **4670 J+** | **7250 J** | **8900 J** | **6210** |
| D | Selenium | 7782-49-2 | | ug/l | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U |
| D | Silver | 7440-22-4 | | ug/l | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U |
| D | Sodium | 7440-23-5 | | ug/l | **29600** | **41700** | **24600** | **46400** | **35200** | **48500** | **12000** | **13300** | **37200** |
| D | Thallium | 7440-28-0 | | ug/l | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U |
| D | Thorium | 7440-29-1 | 0.33 | ug/l | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U |
| D | Uranium | 7440-61-1 | 30 | ug/l | **66.1 J** | **30.1 J** | **0.292 J** | **15.8** | **57.9 J** | **46.8 J** | **4.19 J** | **9.08 J** | **68 J** |
| D | Uranium-235 | 15117-96-1 | 30 | ug/l | **0.482 J** | **0.22 J** | < 0.0100 UJ | **0.116** | **0.428 J** | **0.342 J** | **0.0296 J** | **0.0659 J** | **0.489 J** |
| D | Uranium-238 | 7440-61-2 | 30 | ug/l | **65.7 J** | **29.9 J** | **0.292 J** | **15.7 E** | **57.4 J** | **46.5 J** | **4.16 J** | **9.01 J** | **67.5 J** |
| T | **Calc U-235/U-238** | | | ug/l | **0.00734** | **0.00736** | | **0.00739** | **0.00746** | **0.00735** | **0.00712** | **0.00731** | **0.00724** |
| T | **Sum U-235/U-238** | | 30 | ug/l | **66.2** | **30.1** | **0.292** | **15.8** | **57.8** | **46.8** | **4.19** | **9.08** | **68.0** |
| D | Vanadium | 7440-62-2 | | ug/l | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | **3.58 J** | < 3.30 U | **7.07 J** | **4.06 J** |
| D | Zinc | 7440-66-6 | | ug/l | < 3.30 U | **3.44 J** | **7.5 J** | < 3.30 U | **3.95 J** | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U |

Table 4a-2
Summary of Annual Sampling Analytical Results
Metals (Dissolved) - Sitewide Groundwater Sampling Results - April 2023
NMI RD/RA

| | | | | | Sample Location | MW-B1D13 DUP | MW-B1D28 | MW-B2D13 | MW-B3D13 | MW-BM03 | MW-BS01 | MW-BS02 | MW-BS03 | MW-BS03 DUP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Sample Date | 4/7/2023 | 4/4/2023 | 4/6/2023 | 4/6/2023 | 4/5/2023 | 4/10/2023 | 4/5/2023 | 4/6/2023 | 4/6/2023 |
| | | | | | Formation | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock |
| Fraction | Analyte | Cas No. | ROD CL | Unit | | | | | | | | | | |
| D | Aluminum | 7429-90-5 | | ug/l | | < 19.3 U | **69.2** | < 19.3 U | < 19.3 U | < 19.3 U | **72.6** | < 19.3 U | < 19.3 U | < 19.3 U |
| D | Antimony | 7440-36-0 | | ug/l | | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U | **3.51** | < 1.00 U | **2.08 J** | < 1.00 U | < 1.00 U |
| D | Arsenic | 7440-38-2 | 10 | ug/l | | **3.21 J** | **10.4** | **5.74** | **127** | **389** | **9.2** | **32.7** | **87.9** | **81** |
| D | Barium | 7440-39-3 | 2000 | ug/l | | **33.6** | **19.6** | **51.2** | **97.2** | **54.8** | **20** | **5.31** | **44.4** | **42.6** |
| D | Beryllium | 7440-41-7 | | ug/l | | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U |
| D | Cadmium | 7440-43-9 | | ug/l | | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U |
| D | Calcium | 7440-70-2 | | ug/l | | **81800** | **24400** | **73400** | **64800** | **44100** | **27800** | **53900** | **39200** | **36600** |
| D | Chromium | 7440-47-3 | 100 | ug/l | | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U |
| D | Cobalt | 7440-48-4 | 6 | ug/l | | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | **0.955 J+** | < 0.300 U | **0.427 J+** | **1.93 J+** | **1.88 J** |
| D | Copper | 7440-50-8 | 1300 | ug/l | | < 0.300 U | **0.906 J** | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | **4.51 J** | < 0.300 U | < 0.300 U |
| D | Iron | 7439-89-6 | 14000 | ug/l | | **208** | < 33.0 U | **472** | **409** | **377** | < 33.0 U | < 33.0 U | **1590** | **1550** |
| D | Lead | 7439-92-1 | | ug/l | | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | **0.501 J** | < 0.500 U | < 0.500 U |
| D | Magnesium | 7439-95-4 | | ug/l | | **30800** | **10400** | **26400** | **23100** | **14400** | **8870** | **16100** | **13700** | **12800** |
| D | Manganese | 7439-96-5 | 300 | ug/l | | **84.6** | **1.38 J** | **112** | **68.5** | **149** | **2.22 J+** | **115** | **347** | **323** |
| D | Molybdenum | 7439-98-7 | 100 | ug/l | | **10** | **14** | **20.8** | **52.8** | **14 J** | **7.62** | **10.7** | **6.59** | **6.38** |
| D | Nickel | 7440-02-0 | | ug/l | | **0.936 J+** | < 0.600 U | **0.647 J+** | < 0.600 U | **2.66** | < 0.600 U | **2.96** | **4.37 J** | **4.18 J** |
| D | Potassium | 7440-09-7 | | ug/l | | **6240** | **7850 J** | **8100** | **4460** | **5470 J+** | **6130 J** | **4400 J+** | **6540** | **6700 J** |
| D | Selenium | 7782-49-2 | | ug/l | | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U |
| D | Silver | 7440-22-4 | | ug/l | | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U |
| D | Sodium | 7440-23-5 | | ug/l | | **37200** | **23200** | **50000** | **39100** | **31100** | **31400** | **37600** | **29800** | **28100** |
| D | Thallium | 7440-28-0 | | ug/l | | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U |
| D | Thorium | 7440-29-1 | 0.33 | ug/l | | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U |
| D | Uranium | 7440-61-1 | 30 | ug/l | | **66.8 J** | **1.03** | **16.5** | **3.71** | **14.6 J** | **7.69** | **90.4 J** | **40.9** | **37.7** |
| D | Uranium-235 | 15117-96-1 | 30 | ug/l | | **0.481 J** | < 0.0100 U | **0.118** | **0.0251 J** | **0.106 J** | **0.0573 J** | **0.656 J** | **0.297** | **0.279** |
| D | Uranium-238 | 7440-61-2 | 30 | ug/l | | **66.3 J** | **1.03** | **16.3** | **3.68** | **14.5 J** | **7.63 E** | **89.7 J** | **40.6** | **37.4** |
| T | Calc U-235/U-238 | | | ug/l | | 0.00725 | | 0.00724 | 0.00682 | 0.00731 | 0.00751 | 0.00731 | 0.00732 | 0.00746 |
| T | **Sum U-235/U-238** | | 30 | ug/l | | **66.8** | **1.03** | **16.4** | **3.71** | **14.6** | **7.69** | **90.4** | **40.9** | **37.7** |
| D | Vanadium | 7440-62-2 | | ug/l | | **4.25 J** | **4.99 J** | **3.87 J** | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U |
| D | Zinc | 7440-66-6 | | ug/l | | < 3.30 U | **6.33 J** | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | **15.1 J** | < 3.30 U | < 3.30 U |

Table 4a-2
Summary of Annual Sampling Analytical Results
Metals (Dissolved) - Sitewide Groundwater Sampling Results - April 2023
NMI RD/RA

| | | | | | Sample Location | MW-BS10 | MW-BS13 | MW-BS14 | MW-BS15 | MW-BS28 | MW-BS52 | MW-BS52 DUP | MW-BS54 | MW-BS7-2 | GZW-7-1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Sample Date | 4/6/2023 | 4/7/2023 | 4/10/2023 | 4/10/2023 | 4/4/2023 | 4/5/2023 | 4/5/2023 | 4/7/2023 | 4/11/2023 | 4/11/2023 |
| | | | | | Formation | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Overburden |
| Fraction | Analyte | Cas No. | ROD CL | Unit | | | | | | | | | | | |
| D | Aluminum | 7429-90-5 | | ug/l | | < 19.3 U | < 19.3 U | **27.3 J** | < 19.3 U | < 19.3 U | < 19.3 U | < 19.3 U | < 19.3 U | < 19.3 U | < 19.3 U |
| D | Antimony | 7440-36-0 | | ug/l | | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U |
| D | Arsenic | 7440-38-2 | 10 | ug/l | | **3.13 J** | **3.4 J** | < 2.00 U | **2.35 J** | **2.79 J** | **2.91 J** | **2.95 J** | **2.74 J** | **2.3 J** | < 2.00 U |
| D | Barium | 7440-39-3 | 2000 | ug/l | | **6.89** | **34.8** | **49.5** | **13.4** | **23.8** | **18.5** | **18.1** | **43.7** | **31.2** | **6.89** |
| D | Beryllium | 7440-41-7 | | ug/l | | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U |
| D | Cadmium | 7440-43-9 | | ug/l | | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U |
| D | Calcium | 7440-70-2 | | ug/l | | **16900** | **96300** | **49400** | **99100** | **119000** | **28600** | **28000** | **46500** | **64600 J** | **26300** |
| D | Chromium | 7440-47-3 | 100 | ug/l | | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U |
| D | Cobalt | 7440-48-4 | 6 | ug/l | | < 0.300 U | < 0.300 U | **2.76** | **2.53** | **1.27 J+** | < 0.300 U | < 0.300 U | **0.396 J+** | **1.07 J+** | < 0.300 U |
| D | Copper | 7440-50-8 | 1300 | ug/l | | < 0.300 U | < 0.300 U | < 0.300 U | **0.378 J** | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | **2.3** | **18.5** |
| D | Iron | 7439-89-6 | 14000 | ug/l | | **167** | **109** | **844** | **103** | **321** | **2120** | **2170** | **452** | < 33.0 U | < 33.0 U |
| D | Lead | 7439-92-1 | | ug/l | | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U |
| D | Magnesium | 7439-95-4 | | ug/l | | **6120** | **34000** | **19200** | **30400** | **39000** | **8460** | **8300** | **17500** | **17200** | **6510** |
| D | Manganese | 7439-96-5 | 300 | ug/l | | **288** | **182** | **1020** | **138** | **985** | **428** | **419** | **92.9** | **396** | **1.1 J+** |
| D | Molybdenum | 7439-98-7 | 100 | ug/l | | **16.6** | **0.791 J** | **2.05** | **6.16** | **1.93** | **2.09 J** | **2.14 J** | **6.81** | **51.2** | **1** |
| D | Nickel | 7440-02-0 | | ug/l | | < 0.600 U | **1.21 J+** | **4.37** | **2.05 J+** | **3.75** | < 0.600 U | < 0.600 U | < 0.600 U | **1.16 J+** | **0.853 J+** |
| D | Potassium | 7440-09-7 | | ug/l | | **2670** | **12100** | **8030 J** | **12400 J** | **13600 J** | **10700 J+** | **10500 J+** | **6980** | **7320** | **4140** |
| D | Selenium | 7782-49-2 | | ug/l | | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U |
| D | Silver | 7440-22-4 | | ug/l | | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U |
| D | Sodium | 7440-23-5 | | ug/l | | **13100** | **39900** | **28200** | **65200** | **47200** | **20700** | **20400** | **29300** | **75500 J** | **38000** |
| D | Thallium | 7440-28-0 | | ug/l | | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U |
| D | Thorium | 7440-29-1 | 0.33 | ug/l | | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U |
| D | Uranium | 7440-61-1 | 30 | ug/l | | **25.7** | **50.3** | **1.74** | **3.16** | **19 J** | **0.288** | **0.275** | **0.208** | **47.4** | **63.1** |
| D | Uranium-235 | 15117-96-1 | 30 | ug/l | | **0.188** | **0.359** | **0.0124 J** | **0.0232 J** | **0.137 J** | < 0.0100 U | < 0.0100 U | < 0.0100 U | **0.344** | **0.127** |
| D | Uranium-238 | 7440-61-2 | 30 | ug/l | | **25.5** | **50** | **1.73 E** | **3.14 E** | **18.9 J** | **0.288** | **0.275** | **0.208** | **47.1 J** | **62.9** |
| T | **Calc U-235/U-238** | | | ug/l | | **0.00737** | **0.00718** | **0.00717** | **0.00739** | **0.00725** | | | | **0.00730** | **0.00202** |
| T | **Sum U-235/U-238** | | 30 | ug/l | | **25.7** | **50.4** | **1.74** | **3.16** | **19.0** | **0.288** | **0.275** | **0.208** | **47.4** | **63.0** |
| D | Vanadium | 7440-62-2 | | ug/l | | < 3.30 U | **4.41 J** | < 3.30 U | **4.28 J** | **4.97 J** | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U |
| D | Zinc | 7440-66-6 | | ug/l | | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | **3.9 J** |

Table 4a-2
Summary of Annual Sampling Analytical Results
Metals (Dissolved) - Sitewide Groundwater Sampling Results - April 2023
NMI RD/RA

| | | | | Sample Location | HA20-CMT-3T(OW) | HB-12 | HB-13 | HB-13 DUP | HBPZ-2R | MW-8A | MW-S02 | MW-S16 | MW-S24 | MW-S60 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Date | 4/4/2023 | 4/11/2023 | 4/11/2023 | 4/11/2023 | 4/11/2023 | 4/7/2023 | 4/5/2023 | 4/5/2023 | 4/10/2023 | 4/7/2023 |
| | | | | Formation | Overburden | Overburden | Overburden | Overburden | Overburden | Overburden | Overburden | Overburden | Overburden | Overburden |
| Fraction | Analyte | Cas No. | ROD CL | Unit | | | | | | | | | | |
| D | Aluminum | 7429-90-5 | | ug/l | < 19.3 U | < 19.3 U | < 19.3 U | < 19.3 U | < 19.3 U | < 19.3 U | < 19.3 U | < 19.3 U | < 19.3 U | < 19.3 U |
| D | Antimony | 7440-36-0 | | ug/l | **8.77 J** | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U |
| D | Arsenic | 7440-38-2 | 10 | ug/l | **3.47 J** | < 2.00 U | < 2.00 U | < 2.00 U | < 2.00 U | **3.05 J** | < 2.00 U | < 2.00 U | < 2.00 U | < 2.00 U |
| D | Barium | 7440-39-3 | 2000 | ug/l | **183** | **3.31 J** | **8.12** | **8.13** | **3.45 J** | **10** | **6.29** | **6.63** | **6.81** | **7.51** |
| D | Beryllium | 7440-41-7 | | ug/l | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U |
| D | Cadmium | 7440-43-9 | | ug/l | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | **0.987 J+** | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U |
| D | Calcium | 7440-70-2 | | ug/l | **227000** | **17200** | **20400** | **20200** | **17500** | **22400** | **9110** | **26300** | **28600** | **24100** |
| D | Chromium | 7440-47-3 | 100 | ug/l | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U |
| D | Cobalt | 7440-48-4 | 6 | ug/l | < 0.300 U | **0.474 J+** | **1.14 J+** | **1.14 J+** | **0.757 J+** | **3.16** | **0.38 J+** | < 0.300 U | **1.78** | **7.26 J** |
| D | Copper | 7440-50-8 | 1300 | ug/l | **0.553 J+** | **8.59** | **10.8** | **10.9** | **16.7** | **2.52** | **1.69 J+** | **21.2** | **7.54** | **15.9** |
| D | Iron | 7439-89-6 | 14000 | ug/l | **102** | < 33.0 U | < 33.0 U | < 33.0 U | < 33.0 U | **157** | < 33.0 U | < 33.0 U | **362 J** | **1530** |
| D | Lead | 7439-92-1 | | ug/l | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | **0.716 J** | < 0.500 U | < 0.500 U | < 0.500 U |
| D | Magnesium | 7439-95-4 | | ug/l | **63600** | **6010** | **5230** | **5280** | **7680** | **5110** | **988** | **6000** | **7410** | **5740** |
| D | Manganese | 7439-96-5 | 300 | ug/l | **1100** | **4.4 J+** | **24** | **24.3** | **14.6 J+** | **699 J** | < 1.00 U | **8.61** | **44.4 J** | **84.9 J** |
| D | Molybdenum | 7439-98-7 | 100 | ug/l | **19.6** | **74** | **282** | **270** | **1140** | **64.3** | < 0.200 U | **2.69** | **302** | **17.9** |
| D | Nickel | 7440-02-0 | | ug/l | **0.877 J+** | **1.52 J+** | **1.65 J+** | **1.75 J+** | **2.55 J+** | **1.22 J+** | < 0.600 U | **1.39 J** | **1.92 J+** | **11.8 J** |
| D | Potassium | 7440-09-7 | | ug/l | **17600 J** | **2790** | **2890** | **2900** | **2970** | **3400** | **2020 J+** | **3910 J+** | **4060 J** | **3330** |
| D | Selenium | 7782-49-2 | | ug/l | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U |
| D | Silver | 7440-22-4 | | ug/l | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U |
| D | Sodium | 7440-23-5 | | ug/l | **117000** | **24200** | **18800** | **18900** | **24000** | **28500** | **22700** | **37200** | **20600** | **28600** |
| D | Thallium | 7440-28-0 | | ug/l | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U |
| D | Thorium | 7440-29-1 | 0.33 | ug/l | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U |
| D | Uranium | 7440-61-1 | 30 | ug/l | **6.99** | **232** | **2450** | **2460** | **850** | **136** | **0.0885 J** | **75.6 J** | **1400** | **147** |
| D | Uranium-235 | 15117-96-1 | 30 | ug/l | **0.0472 J** | **0.501** | **5.24** | **5.28** | **1.74** | **0.279** | < 0.0100 U | **0.152 J** | **2.83** | **0.312** |
| D | Uranium-238 | 7440-61-2 | 30 | ug/l | **6.94** | **232** | **2450** | **2460** | **848** | **136** | **0.0885 J** | **75.5 J** | **1400 E** | **147** |
| T | **Calc U-235/U-238** | | | ug/l | **0.00680** | **0.00216** | **0.00214** | **0.00215** | **0.00205** | **0.00205** | | **0.00201** | **0.00202** | **0.00212** |
| T | **Sum U-235/U-238** | | 30 | ug/l | **6.99** | **233** | **2455** | **2465** | **850** | **136** | **0.089** | **75.7** | **1403** | **147** |
| D | Vanadium | 7440-62-2 | | ug/l | **4.94 J** | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U |
| D | Zinc | 7440-66-6 | | ug/l | **5.48 J** | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | **3.8 J** | < 3.30 U | **3.3 J** | < 3.30 U | < 3.30 U |

Table 4a-2
Summary of Annual Sampling Analytical Results
Metals (Dissolved) - Sitewide Groundwater Sampling Results - April 2023
NMI RD/RA

| | | | | | Sample Location | MW-S62A | MW-S64 | MW-S64 DUP | MW-SD01 | MW-SD24 | MW-SD24 DUP | MW-SD34 | MW-SD60 | MW-SD61 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Sample Date | 4/10/2023 | 4/5/2023 | 4/5/2023 | 4/10/2023 | 4/10/2023 | 4/10/2023 | 4/4/2023 | 4/7/2023 | 4/10/2023 |
| | | | | | Formation | Overburden | Overburden | Overburden | Overburden | Overburden | Overburden | Overburden | Overburden | Overburden |
| Fraction | Analyte | Cas No. | ROD CL | Unit | | | | | | | | | | |
| D | Aluminum | 7429-90-5 | | ug/l | | < 19.3 U | < 19.3 U | < 19.3 U | < 19.3 U | < 19.3 U | **33.5 J** | < 19.3 U | < 19.3 U | < 19.3 U |
| D | Antimony | 7440-36-0 | | ug/l | | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U | < 1.00 U |
| D | Arsenic | 7440-38-2 | 10 | ug/l | | **2.14 J** | < 2.00 U | < 2.00 U | < 2.00 U | < 2.00 U | < 2.00 U | **3.76 J** | < 2.00 U | **8.62** |
| D | Barium | 7440-39-3 | 2000 | ug/l | | **12.4** | **4.61** | **4.65** | **12.7** | **7.11** | **7.52** | **40.6** | **3.36 J** | **5.12** |
| D | Beryllium | 7440-41-7 | | ug/l | | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U | < 0.200 U |
| D | Cadmium | 7440-43-9 | | ug/l | | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U |
| D | Calcium | 7440-70-2 | | ug/l | | **24000** | **6790** | **6850** | **13400** | **25700** | **24600** | **159000** | **23500** | **33800** |
| D | Chromium | 7440-47-3 | 100 | ug/l | | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U | < 3.00 U |
| D | Cobalt | 7440-48-4 | 6 | ug/l | | **0.696 J** | **0.583 J+** | **0.588 J+** | **0.614 J** | **1.32 J** | **1.1** | **5.49** | **2.29** | **1.07 J+** |
| D | Copper | 7440-50-8 | 1300 | ug/l | | **0.389 J+** | **62.8** | **64.2** | **1.87 J** | **17.6** | **18.4** | < 0.300 U | **15.6** | **0.563 J** |
| D | Iron | 7439-89-6 | 14000 | ug/l | | **680** | < 33.0 U | < 33.0 U | < 33.0 U | **127** | **124** | **9360** | < 33.0 U | **8730** |
| D | Lead | 7439-92-1 | | ug/l | | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U | < 0.500 U |
| D | Magnesium | 7439-95-4 | | ug/l | | **5960** | **1520** | **1530** | **2660** | **6010** | **5750** | **48300** | **5080** | **5960** |
| D | Manganese | 7439-96-5 | 300 | ug/l | | **433** | **7.75** | **7.65** | **1.46 J+** | **56.5 J** | **44.9** | **1070** | **98.9** | **1510** |
| D | Molybdenum | 7439-98-7 | 100 | ug/l | | **44.8** | **0.242 J** | **0.283 J** | **13.9** | **12.2** | **11.8** | **0.3 J** | **2.51** | **9.69** |
| D | Nickel | 7440-02-0 | | ug/l | | **0.705 J+** | **2.5** | **2.43** | **0.613 J+** | **1.38 J+** | **1.52 J+** | **11.9** | **1.62 J+** | < 0.600 U |
| D | Potassium | 7440-09-7 | | ug/l | | **3680 J** | **1380 J+** | **1430 J+** | **3200 J** | **5080 J** | **4640 J** | **15100 J** | **3640** | **2770 J** |
| D | Selenium | 7782-49-2 | | ug/l | | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U | < 1.50 U |
| D | Silver | 7440-22-4 | | ug/l | | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U | < 0.300 U |
| D | Sodium | 7440-23-5 | | ug/l | | **37000** | **8550** | **8610** | **21400** | **33800** | **32100** | **47100** | **32700** | **29800** |
| D | Thallium | 7440-28-0 | | ug/l | | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U | < 0.600 U |
| D | Thorium | 7440-29-1 | 0.33 | ug/l | | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U | < 0.700 U |
| D | Uranium | 7440-61-1 | 30 | ug/l | | **30.2** | **11.5** | **13.3** | **5.4** | **88.7** | **82.7** | **6.61** | **128 J** | **4.19** |
| D | Uranium-235 | 15117-96-1 | 30 | ug/l | | **0.0624 J** | **0.0259 J** | **0.0276 J** | **0.0109 J** | **0.187** | **0.173** | **0.0497 J** | **0.248 J** | < 0.0100 U |
| D | Uranium-238 | 7440-61-2 | 30 | ug/l | | **30.1 E** | **11.5** | **13.3** | **5.39 E** | **88.5 E** | **82.5 E** | **6.56** | **127** | **4.19 E** |
| T | **Calc U-235/U-238** | | | ug/l | | **0.00207** | **0.00225** | **0.00208** | **0.00202** | **0.00211** | **0.00210** | **0.00758** | **0.00195** | |
| T | **Sum U-235/U-238** | | 30 | ug/l | | **30.2** | **11.5** | **13.3** | **5.40** | **88.7** | **82.7** | **6.61** | **127** | **4.19** |
| D | Vanadium | 7440-62-2 | | ug/l | | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U | < 3.30 U |
| D | Zinc | 7440-66-6 | | ug/l | | < 3.30 U | **3.58 J** | < 3.30 U | < 3.30 U | **4.49 J** | **4.92 J** | < 3.30 U | < 3.30 U | < 3.30 U |

Table 4a-2
Summary of Annual Sampling Analytical Results
Metals (Dissolved) - Sitewide Groundwater Sampling Results - April 2023
NMI RD/RA

| | | | | | |
|---|---|---|---|---|---|
| | | | | Sample Location | MW-SD62A |
| | | | | Sample Date | 4/10/2023 |
| | | | | Formation | Overburden |
| Fraction | Analyte | Cas No. | ROD CL | Unit | |
| D | Aluminum | 7429-90-5 | | ug/l | < 19.3 U |
| D | Antimony | 7440-36-0 | | ug/l | < 1.00 U |
| D | Arsenic | 7440-38-2 | 10 | ug/l | < 2.00 U |
| D | Barium | 7440-39-3 | 2000 | ug/l | **6.07** |
| D | Beryllium | 7440-41-7 | | ug/l | < 0.200 U |
| D | Cadmium | 7440-43-9 | | ug/l | < 0.300 U |
| D | Calcium | 7440-70-2 | | ug/l | **25800** |
| D | Chromium | 7440-47-3 | 100 | ug/l | < 3.00 U |
| D | Cobalt | 7440-48-4 | 6 | ug/l | **1.08** |
| D | Copper | 7440-50-8 | 1300 | ug/l | **1.08 J+** |
| D | Iron | 7439-89-6 | 14000 | ug/l | **6060** |
| D | Lead | 7439-92-1 | | ug/l | < 0.500 U |
| D | Magnesium | 7439-95-4 | | ug/l | **5990** |
| D | Manganese | 7439-96-5 | 300 | ug/l | **78.2** |
| D | Molybdenum | 7439-98-7 | 100 | ug/l | **3.27 J** |
| D | Nickel | 7440-02-0 | | ug/l | **1.24 J+** |
| D | Potassium | 7440-09-7 | | ug/l | **4110 J** |
| D | Selenium | 7782-49-2 | | ug/l | < 1.50 U |
| D | Silver | 7440-22-4 | | ug/l | < 0.300 U |
| D | Sodium | 7440-23-5 | | ug/l | **38000** |
| D | Thallium | 7440-28-0 | | ug/l | < 0.600 U |
| D | Thorium | 7440-29-1 | 0.33 | ug/l | < 0.700 U |
| D | Uranium | 7440-61-1 | 30 | ug/l | **1.17** |
| D | Uranium-235 | 15117-96-1 | 30 | ug/l | < 0.0100 U |
| D | Uranium-238 | 7440-61-2 | 30 | ug/l | **1.17 E** |
| T | **Calc U-235/U-238** | | | ug/l | |
| T | **Sum U-235/U-238** | | 30 | ug/l | **1.17** |
| D | Vanadium | 7440-62-2 | | ug/l | < 3.30 U |
| D | Zinc | 7440-66-6 | | ug/l | < 3.30 U |

Table 4a-2
Summary of Annual Sampling Analytical Results
Metals (Dissolved) - Sitewide Groundwater Sampling Results - April 2023
NMI RD/RA

Notes:

| | |
|---|---|
| E | (Metals) % difference of sample and SD is >10%. Sample concentration must meet flagging criteria |
| J | The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample |
| J+ | The result is an estimated quantity, but the result may be biased high |
| U | The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit. |
| UJ | The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise |
| DUP | Duplicate sample |
| D | Fraction - Dissolved |
| ug/l | Micrograms per liter |
| Limit | Based on EPA MCL in Overburden and Bedrock except for Thorium (ILCR value), Cobolt (HI value), Copper (Overburden Action Level) Barium MCL is Bedrock only. Shaded cells exceed limit, apply to Totals only. |
| **Bold** | Analyte detected above the laboratory reporting limit (detect) |

Table 4a-3
Summary of Annual Sampling Analytical Results
Uranium (Total) - Sitewide Groundwater Sampling Results April 2021-2023
NMI RD/RA

| | | Analyte | Uranium (Total) | | |
|---|---|---|---|---|---|
| | | Cas No. | 7440-61-1 | | |
| | | Unit | ug/L | | |
| | | ROD CL | 30 | | |
| | | ROD CL | 30 | | |
| Sitewide Groundwater Sampling Event | | | April 2021 | April 2022 | April 2023 |
| Sample Location | Formation | | | | |
| BEW-2 | Bedrock | | 83.4 | 62.9 | 70.8 J |
| BEW-3 | Bedrock | | 71.2 | 72.2 | 28.9 |
| BEW-4 | Bedrock | | 0.882 | 0.784 | 0.494 J |
| BEW-5 | Bedrock | | -- | 10.2 | 15.9 |
| GZW-10-2 | Bedrock | | 63.5 | 48.3 | 52.3 J |
| HA20-CMT-3B(OW) | Bedrock | | 45.9 | 53.4 | 48 J |
| HA20-CMT-5(OW) | Bedrock | | 5.01 | 4.95 | 4.48 J |
| HA20-CMT-6(OW) | Bedrock | | 8.07 | 8.97 | 9.77 J |
| MW-B1D13 | Bedrock | | -- | 64.6 J | 68.2 J |
| MW-B1D28 | Bedrock | | -- | 0.954 J | 1.06 |
| MW-B2D13 | Bedrock | | -- | 24.4 | 15.7 J |
| MW-B3D13 | Bedrock | | -- | 8.46 | 3.51 J |
| MW-BM03 | Bedrock | | 56.6 | 7.97 | 15.3 J |
| MW-BS01 | Bedrock | | 6.73 | 7.41 | 7.06 |
| MW-BS02 | Bedrock | | 144 | 35 | 90.9 J |
| MW-BS03 | Bedrock | | 117 | 43.5 | 43.9 J |
| MW-BS10 | Bedrock | | 29.0 | 33.4 | 28.2 J |
| MW-BS13 | Bedrock | | 35.2 | 46.1 | 52.4 |
| MW-BS14 | Bedrock | | 1.56 | 1.49 | 1.87 |
| MW-BS15 | Bedrock | | 5.48 | 5.76 | 3 |
| MW-BS28 | Bedrock | | 36.0 | 24.6 J | 20.1 J |
| MW-BS52 | Bedrock | | -- | -- | 0.481 |
| MW-BS54 | Bedrock | | 0.280 | 0.19 J | 0.239 |
| MW-BS7-2 | Bedrock | | 55.3 | 48.8 | 47.8 J |
| GZW-7-1 | Overburden | | 68.1 | 80.2 | 82.2 |
| HA20-CMT-3T(OW) | Overburden | | 4.11 | 6.57 | 7.65 |
| HB-12 | Overburden | | 387 | 252 | 266 |
| HB-13 | Overburden | | 3080 | 2580 J | 2600 |
| HBPZ-2R | Overburden | | 889 | 750 J | 839 |
| MW-8A | Overburden | | 282 | 232 | 205 |
| MW-S02 | Overburden | | 0.466 | 0.24 | 0.186 J |
| MW-S16 | Overburden | | 72.6 | 107 | 93.8 J |
| MW-S24 | Overburden | | 3070 | 480 | 1460 |
| MW-S60 | Overburden | | 50.9 | 97.6 | 178 |
| MW-S62A | Overburden | | 1.33 | 9.16 | 34.7 |
| MW-S64 | Overburden | | 16.0 | 12.2 | 12.5 |
| MW-SD01 | Overburden | | 8.49 | 7.34 | 7.78 |
| MW-SD24 | Overburden | | 160 | 281 | 128 |
| MW-SD34 | Overburden | | 9.01 | -- | 6.77 J |
| MW-SD60 | Overburden | | 155 | 144 | 136 |
| MW-SD61 | Overburden | | 27.9 | 14.1 | 5.2 |
| MW-SD62A | Overburden | | 78.5 | 24.9 | 1.63 |

Table 4a-4
Summary of Annual Sampling Analytical Results
Uranium-235 (Total) - Sitewide Groundwater Sampling Results April 2021-2023
NMI RD/RA

| | | | | |
|---|---|---|---|---|
| | Analyte | Uranium-235 (Total) | | |
| | Cas No. | 7440-61-1 | | |
| | Unit | ug/L | | |
| | ROD CL | 30 | | |
| | ROD CL | 30 | | |
| Sitewide Groundwater Sampling Event | | April 2021 | April 2022 | April 2023 |
| Sample Location | Formation | | | |
| BEW-2 | Bedrock | 0.614 | 0.461 | 0.51 J |
| BEW-3 | Bedrock | 0.494 | 0.527 | 0.213 |
| BEW-4 | Bedrock | < 0.0100 U | < 0.0100 U | < 0.0100 UJ |
| BEW-5 | Bedrock | -- | 0.0739 | 0.114 J |
| GZW-10-2 | Bedrock | 0.466 | 0.347 | 0.375 J |
| HA20-CMT-3B(OW) | Bedrock | 0.332 | 0.389 | 0.35 J |
| HA20-CMT-5(OW) | Bedrock | 0.0341 J | 0.0372 J | 0.0339 J |
| HA20-CMT-6(OW) | Bedrock | 0.0573 J | 0.0635 J | 0.0689 J |
| MW-B1D13 | Bedrock | -- | 0.456 J | 0.5 J |
| MW-B1D28 | Bedrock | -- | < 0.0100 U | < 0.0100 U |
| MW-B2D13 | Bedrock | -- | 0.18 | 0.117 |
| MW-B3D13 | Bedrock | -- | 0.0606 J | 0.0252 J |
| MW-BM03 | Bedrock | 0.401 | 0.0554 J | 0.111 J |
| MW-BS01 | Bedrock | 0.047 J | 0.0547 J | 0.0507 J |
| MW-BS02 | Bedrock | 1.05 | 0.248 | 0.66 J |
| MW-BS03 | Bedrock | 0.869 | 0.311 | 0.319 |
| MW-BS10 | Bedrock | 0.203 | 0.239 | 0.205 |
| MW-BS13 | Bedrock | 0.250 | 0.333 | 0.382 |
| MW-BS14 | Bedrock | 0.0105 J | 0.011 J | 0.014 J |
| MW-BS15 | Bedrock | 0.0382 J | 0.0429 J | 0.0218 J |
| MW-BS28 | Bedrock | 0.268 | 0.177 J | 0.141 J |
| MW-BS52 | Bedrock | -- | -- | < 0.0100 U |
| MW-BS54 | Bedrock | < 0.0100 U | < 0.0100 U | < 0.0100 U |
| MW-BS7-2 | Bedrock | 0.393 | 0.356 | 0.341 |
| GZW-7-1 | Overburden | 0.135 | 0.164 | 0.173 |
| HA20-CMT-3T(OW) | Overburden | 0.0292 J | 0.0435 J | 0.0513 J |
| HB-12 | Overburden | 0.836 J | 0.553 | 0.575 |
| HB-13 | Overburden | 6.45 | 5.07 J | 5.4 |
| HBPZ-2R | Overburden | 1.82 | 1.5 J | 1.74 |
| MW-8A | Overburden | 0.536 | 0.476 | 0.388 |
| MW-S02 | Overburden | < 0.0100 U | < 0.0100 U | < 0.0100 U |
| MW-S16 | Overburden | 0.147 J | 0.233 | 0.193 J |
| MW-S24 | Overburden | 6.24 | 0.956 | 2.9 J |
| MW-S60 | Overburden | 0.114 | 0.219 | 0.357 |
| MW-S62A | Overburden | < 0.0100 U | 0.0184 J | 0.0704 J |
| MW-S64 | Overburden | 0.0349 J | 0.0285 J | 0.0284 J |
| MW-SD01 | Overburden | 0.020 J | 0.0169 J | 0.0178 J |
| MW-SD24 | Overburden | 0.313 | 0.57 | 0.276 J |
| MW-SD34 | Overburden | 0.064 J | -- | 0.0502 J |
| MW-SD60 | Overburden | 0.30 | 0.316 | 0.267 |
| MW-SD61 | Overburden | 0.0619 J | 0.033 J | 0.0107 J |
| MW-SD62A | Overburden | 0.165 | 0.0522 J | < 0.0100 UJ |

Table 4a-5
Summary of Annual Sampling Analytical Results
Uranium-238 (Total) - Sitewide Groundwater Sampling Results April 2021-2023
NMI RD/RA

| | | Analyte | Uranium-238 (Total) | | |
|---|---|---|---|---|---|
| | | Cas No. | 7440-61-1 | | |
| | | Unit | ug/L | | |
| | | ROD CL | 30 | | |
| | | ROD CL | 30 | | |
| Sitewide Groundwater Sampling Event | | | April 2021 | April 2022 | April 2023 |
| Sample Location | Formation | | | | |
| BEW-2 | Bedrock | | 82.8 | 62.4 | 70.3 J |
| BEW-3 | Bedrock | | 70.7 | 71.7 | 28.7 |
| BEW-4 | Bedrock | | 0.882 | 0.784 | 0.494 J |
| BEW-5 | Bedrock | | -- | 10.1 | 15.8 J |
| GZW-10-2 | Bedrock | | 63.1 | 48 | 51.9 J |
| HA20-CMT-3B(OW) | Bedrock | | 45.6 | 53 | 47.6 J |
| HA20-CMT-5(OW) | Bedrock | | 4.98 | 4.91 | 4.45 J |
| HA20-CMT-6(OW) | Bedrock | | 8.01 | 8.9 | 9.7 J |
| MW-B1D13 | Bedrock | | -- | 64.1 | 67.7 J |
| MW-B1D28 | Bedrock | | -- | 0.954 J | 1.06 |
| MW-B2D13 | Bedrock | | -- | 24.2 | 15.5 J |
| MW-B3D13 | Bedrock | | -- | 8.4 | 3.48 J |
| MW-BM03 | Bedrock | | 56.2 | 7.92 | 15.2 J |
| MW-BS01 | Bedrock | | 6.69 | 7.36 | 7.01 J |
| MW-BS02 | Bedrock | | 143 | 34.8 | 90.2 J |
| MW-BS03 | Bedrock | | 116 | 43.2 | 43.5 J |
| MW-BS10 | Bedrock | | 28.8 | 33.2 | 28 J |
| MW-BS13 | Bedrock | | 35.0 | 45.8 | 52 |
| MW-BS14 | Bedrock | | 1.55 | 1.48 | 1.86 J |
| MW-BS15 | Bedrock | | 5.44 | 5.72 | 2.98 J |
| MW-BS28 | Bedrock | | 35.7 | 24.4 | 19.9 J |
| MW-BS52 | Bedrock | | -- | -- | 0.481 |
| MW-BS54 | Bedrock | | 0.280 | 0.19 J | 0.239 |
| MW-BS7-2 | Bedrock | | 54.9 | 48.5 | 47.5 J |
| GZW-7-1 | Overburden | | 67.9 | 80 | 82.1 |
| HA20-CMT-3T(OW) | Overburden | | 4.08 | 6.53 | 7.6 |
| HB-12 | Overburden | | 387 J | 252 | 265 |
| HB-13 | Overburden | | 3080 | 2580 | 2590 |
| HBPZ-2R | Overburden | | 887 | 748 | 837 |
| MW-8A | Overburden | | 282 | 232 | 205 |
| MW-S02 | Overburden | | 0.466 | 0.24 | 0.186 J |
| MW-S16 | Overburden | | 72.5 J | 106 | 93.6 J |
| MW-S24 | Overburden | | 3070 | 479 | 1460 J |
| MW-S60 | Overburden | | 50.7 | 97.4 | 178 |
| MW-S62A | Overburden | | 1.33 | 9.14 | 34.6 J |
| MW-S64 | Overburden | | 16.0 | 12.1 | 12.5 |
| MW-SD01 | Overburden | | 8.47 | 7.33 | 7.77 J |
| MW-SD24 | Overburden | | 160 | 280 | 128 J |
| MW-SD34 | Overburden | | 8.94 | -- | 6.72 J |
| MW-SD60 | Overburden | | 154 | 143 | 136 |
| MW-SD61 | Overburden | | 27.8 | 14.1 | 5.19 J |
| MW-SD62A | Overburden | | 78.3 | 24.8 | 1.63 J |

Table 4a-6
Summary of Annual Sampling Analytical Results
Calc U-235/U-238 (Total) - Sitewide Groundwater Sampling Results April 2021-2023
NMI RD/RA

| | | Analyte | Calc U-235/U-238 (Total) | | |
|---|---|---|---|---|---|
| | | Cas No. | -- | | |
| | | Unit | ug/L | | |
| | | ROD CL | -- | | |
| | | ROD CL | -- | | |
| Sitewide Groundwater Sampling Event | | | April 2021 | April 2022 | April 2023 |
| Sample Location | Formation | | | | |
| BEW-2 | Bedrock | | 0.00742 | 0.00739 | 0.00725 |
| BEW-3 | Bedrock | | 0.00699 | 0.00735 | 0.00742 |
| BEW-5 | Bedrock | | -- | 0.00732 | 0.00722 |
| GZW-10-2 | Bedrock | | 0.00739 | 0.00723 | 0.00723 |
| HA20-CMT-3B(OW) | Bedrock | | 0.00728 | 0.00734 | 0.00735 |
| HA20-CMT-5(OW) | Bedrock | | 0.00685 | 0.00758 | 0.00762 |
| HA20-CMT-6(OW) | Bedrock | | 0.00715 | 0.00713 | 0.00710 |
| MW-B1D13 | Bedrock | | -- | 0.00711 | 0.00739 |
| MW-B2D13 | Bedrock | | -- | 0.00744 | 0.00755 |
| MW-B3D13 | Bedrock | | -- | 0.00721 | 0.00724 |
| MW-BM03 | Bedrock | | 0.00714 | 0.00699 | 0.00730 |
| MW-BS01 | Bedrock | | 0.00703 | 0.00743 | 0.00723 |
| MW-BS02 | Bedrock | | 0.00734 | 0.00713 | 0.00732 |
| MW-BS03 | Bedrock | | 0.00749 | 0.00720 | 0.00733 |
| MW-BS10 | Bedrock | | 0.00705 | 0.00720 | 0.00732 |
| MW-BS13 | Bedrock | | 0.00714 | 0.00727 | 0.00735 |
| MW-BS14 | Bedrock | | 0.00677 | 0.00743 | 0.00753 |
| MW-BS15 | Bedrock | | 0.00758 | 0.00750 | 0.00732 |
| MW-BS28 | Bedrock | | 0.00751 | 0.00725 | 0.00709 |
| MW-BS7-2 | Bedrock | | 0.00716 | 0.00734 | 0.00718 |
| GZW-7-1 | Overburden | | 0.00199 | 0.00205 | 0.00211 |
| HA20-CMT-3T(OW) | Overburden | | 0.00716 | 0.00666 | 0.00675 |
| HB-12 | Overburden | | 0.00216 | 0.00219 | 0.00217 |
| HB-13 | Overburden | | 0.00209 | 0.00197 | 0.00208 |
| HBPZ-2R | Overburden | | 0.00205 | 0.00201 | 0.00208 |
| MW-8A | Overburden | | 0.00190 | 0.00205 | 0.00189 |
| MW-S16 | Overburden | | 0.00203 | 0.00220 | 0.00206 |
| MW-S24 | Overburden | | 0.00203 | 0.00200 | 0.00199 |
| MW-S60 | Overburden | | 0.00225 | 0.00225 | 0.00201 |
| MW-S62A | Overburden | | -- | 0.00201 | 0.00203 |
| MW-S64 | Overburden | | 0.00218 | 0.00236 | 0.00227 |
| MW-SD01 | Overburden | | 0.00236 | 0.00231 | 0.00229 |
| MW-SD24 | Overburden | | 0.00196 | 0.00204 | 0.00216 |
| MW-SD34 | Overburden | | 0.00716 | -- | 0.00747 |
| MW-SD60 | Overburden | | 0.00195 | 0.00221 | 0.00196 |
| MW-SD61 | Overburden | | 0.00223 | 0.00234 | 0.00206 |

Table 4a-7
Summary of Annual Sampling Analytical Results
Sum U-235/U-238 (Total) - Sitewide Groundwater Sampling Results April 2021-2023
NMI RD/RA

| | | | | |
|---|---|---|---|---|
| | Analyte | Sum U-235/U-238 (Total) | | |
| | Cas No. | -- | | |
| | Unit | ug/L | | |
| | ROD CL | -- | | |
| | ROD CL | -- | | |
| Sitewide Groundwater Sampling Event | | April 2021 | April 2022 | April 2023 |
| Sample Location | Formation | | | |
| BEW-2 | Bedrock | **83.4** | **62.9** | **70.8** |
| BEW-3 | Bedrock | **71.2** | **62.9** | **28.9** |
| BEW-4 | Bedrock | **0.882** | **0.784** | **0.494** |
| BEW-5 | Bedrock | -- | **10.2** | **15.9** |
| GZW-10-2 | Bedrock | **63.6** | **48.3** | **52.3** |
| HA20-CMT-3B(OW) | Bedrock | **45.9** | **53.4** | **48.0** |
| HA20-CMT-5(OW) | Bedrock | **5.71** | **4.95** | **4.48** |
| HA20-CMT-6(OW) | Bedrock | **8.07** | **8.96** | **9.77** |
| MW-B1D13 | Bedrock | -- | **64.6** | **68.2** |
| MW-B1D28 | Bedrock | -- | **0.954** | **1.06** |
| MW-B2D13 | Bedrock | -- | **24.4** | **15.6** |
| MW-B3D13 | Bedrock | -- | **8.46** | **3.51** |
| MW-BM03 | Bedrock | **56.6** | **7.98** | **15.3** |
| MW-BS01 | Bedrock | **6.74** | **7.41** | **7.06** |
| MW-BS02 | Bedrock | **144** | **35.0** | **90.9** |
| MW-BS03 | Bedrock | **117** | **43.5** | **43.8** |
| MW-BS10 | Bedrock | **29.0** | **33.4** | **28.2** |
| MW-BS13 | Bedrock | **35.3** | **46.1** | **52.4** |
| MW-BS14 | Bedrock | **1.56** | **1.49** | **1.87** |
| MW-BS15 | Bedrock | **5.48** | **5.76** | **3.00** |
| MW-BS28 | Bedrock | **36.0** | **24.6** | **20.0** |
| MW-BS52 | Bedrock | -- | -- | **0.481** |
| MW-BS54 | Bedrock | **0.280** | **0.190** | **0.239** |
| MW-BS7-2 | Bedrock | **55.3** | **48.9** | **47.8** |
| GZW-7-1 | Overburden | **68.0** | **80.2** | **82.3** |
| HA20-CMT-3T(OW) | Overburden | **4.11** | **6.57** | **7.65** |
| HB-12 | Overburden | **388** | **253** | **266** |
| HB-13 | Overburden | **3090** | **2585** | **2595** |
| HBPZ-2R | Overburden | **889** | **750** | **839** |
| MW-8A | Overburden | **283** | **232** | **205** |
| MW-S02 | Overburden | **0.466** | **0.240** | **0.186** |
| MW-S16 | Overburden | **72.6** | **106** | **93.8** |
| MW-S24 | Overburden | **3080** | **480** | **1463** |
| MW-S60 | Overburden | **50.8** | **97.6** | **178** |
| MW-S62A | Overburden | **1.33** | **9.16** | **34.7** |
| MW-S64 | Overburden | **16.0** | **12.1** | **12.5** |
| MW-SD01 | Overburden | **8.49** | **7.35** | **7.79** |
| MW-SD24 | Overburden | **160** | **281** | **128** |
| MW-SD34 | Overburden | **9.00** | -- | **6.77** |
| MW-SD60 | Overburden | **154** | **143** | **136** |
| MW-SD61 | Overburden | **27.9** | **14.1** | **5.20** |
| MW-SD62A | Overburden | **78.5** | **24.9** | **1.63** |

Footnotes
Summary of Annual Sampling Analytical Results Sitewide
Groundwater Sampling Results
NMI RD/RA

Notes:

| | |
|---|---|
| -- | Not applicable/not sampled |
| J | The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample |
| U | The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit. |
| UJ | The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise. |
| ug/l | Micrograms per liter |
| Limit | Shaded cells exceed Record of Decision Cleanup Level (ROD CL) limit, apply to Totals only. |
| **Bold** | Analyte detected above the laboratory reporting limit (detect) |

Table 4b
Summary of Comprehensive Sampling Analytical Results
Semivolatiles - Sitewide Groundwater Sampling Results - April 2021 - April 2023
NMI RD/RA

| Analyte | | 1,4-Dioxane | | |
|---|---|---|---|---|
| Cas No. | | 123-91-1 | | |
| Unit | | ug/l | | |
| ROD CL | | 0.46 | | |
| ROD CL | | 0.46 | | |
| Sitewide Groundwater Sampling Event | | April 2021 | April 2022 | April 2023 |
| Sample Location | Formation | | | |
| BEW-2 | Bedrock | **6.78** | **5.43** | **3.95** |
| BEW-3 | Bedrock | **37.9** | **40.3** | **32.9** |
| BEW-4 | Bedrock | **4.78** | **2.16 J-** | **0.999** |
| BEW-5 | Bedrock | -- | **54.6** | **53.6** |
| GZW-10-2 | Bedrock | **42.0** | **37.3** | **27.9 J-** |
| GZW-8-2 | Bedrock | < 0.150 U | **0.0762 J** | < 0.144 U |
| HA20-CMT-3B(OW) | Bedrock | **2.53** | **2.44** | **2.18** |
| HA20-CMT-5(OW) | Bedrock | **0.221** | **0.239** | **0.230** |
| HA20-CMT-6(OW) | Bedrock | **0.226** | **0.220** | **0.190** |
| ML-1-3 | Bedrock | **12.4** | **6.68** | **4.25** |
| ML-3-3 | Bedrock | **1.80** | **1.28** | **1.40** |
| MW-B1D13 | Bedrock | -- | **39.6** | **31.8** |
| MW-B1D13 (DUP) | | -- | -- | **32.3** |
| MW-B1D28 | Bedrock | -- | **1.68** | **1.39** |
| MW-B2D13 | Bedrock | -- | **28.5** | **28.8** |
| MW-B3D13 | Bedrock | -- | **15.2** | **11.4** |
| MW-BM03 | Bedrock | **4.34** | **4.01** | **4.80** |
| MW-BM15 | Bedrock | **0.795** | **0.303** | **0.279** |
| MW-BS01 | Bedrock | **29.7** | **29.8** | **28.7** |
| MW-BS02 | Bedrock | **6.98** | **3.66** | **5.70** |
| MW-BS03 | Bedrock | **10.6** | **4.70** | **5.44** |
| MW-BS03 (DUP) | Bedrock | -- | -- | **5.71** |
| MW-BS10 | Bedrock | **0.375** | **0.533** | **0.394** |
| MW-BS13 | Bedrock | **44.4** | **47.8** | **57.6** |
| MW-BS14 | Bedrock | **1.83** | **2.04** | **1.99** |
| MW-BS15 | Bedrock | **69.8** | **62.2** | **53.8** |
| MW-BS28 | Bedrock | **31.6** | **29.2** | **24.5** |
| MW-BS32 | Bedrock | **2.32** | **12.9** | < 0.144 U |
| MW-BS50 | Bedrock | **13.2** | **12.7** | **8.95** |
| MW-BS51 | Bedrock | **17.3** | **19.8** | **16.0 J-** |
| MW-BS52 | Bedrock | -- | **12.5** | **3.75** |
| MW-BS52 (DUP) | Bedrock | -- | -- | **3.56** |
| MW-BS53 | Bedrock | -- | **0.286** | **0.291** |
| MW-BS54 | Bedrock | **5.37** | **4.67** | **5.84** |
| MW-BS7-2 | Bedrock | **21.0** | **22.8** | **17.2 J-** |
| EW-1 | Overburden | **2.91** | **2.76** | **2.46** |
| HA20-CMT-3T(OW) | Overburden | **43.7** | **56.4** | **54.6** |
| HB-13 | Overburden | < 0.144 U | < 0.134 U | < 0.147 UJ |
| HB-13 (DUP) | Overburden | -- | -- | < 0.144 UJ |
| MW-8A | Overburden | < 0.139 U | **0.216** | < 0.144 U |
| MW-S24 | Overburden | **0.135 J** | **0.199 J** | **0.103 J** |
| MW-S32 | Overburden | **0.973** | **1.24** | **1.11** |
| MW-S46 | Overburden | -- | **0.326** | **0.286** |

Table 4b
Summary of Comprehensive Sampling Analytical Results
Semivolatiles - Sitewide Groundwater Sampling Results - April 2021 - April 2023
NMI RD/RA

| Analyte | | 1,4-Dioxane | | |
|---|---|---|---|---|
| Cas No. | | 123-91-1 | | |
| Unit | | ug/l | | |
| ROD CL | | 0.46 | | |
| ROD CL | | 0.46 | | |
| **Sitewide Groundwater Sampling Event** | | **April 2021** | **April 2022** | **April 2023** |
| **Sample Location** | **Formation** | | | |
| MW-S62A | Overburden | **0.117 J** | **0.266** | < 0.144 U |
| MW-SD01 | Overburden | **4.57** | **1.96** | **5.56** |
| MW-SD15 | Overburden | -- | **0.305** | **0.291** |
| MW-SD17 | Overburden | **0.376** | **0.385** | **0.369** |
| MW-SD24 | Overburden | < 0.144 U | < 0.139 UJ | **0.0862 J** |
| MW-SD24 (DUP) | Overburden | -- | -- | < 0.144 U |
| MW-SD26 | Overburden | **1.41** | **1.60** | **1.20** |
| MW-SD32 | Overburden | **0.533** | **0.768** | **0.389** |
| MW-SD34 | Overburden | **39.9** | **51.2** | **40.9** |
| MW-SD38 | Overburden | **1.14** | **0.498** | **0.419** |
| MW-SD40 | Overburden | **4.32** | -- | **15.1** |
| MW-SD42A | Overburden | **6.19** | **4.84** | **1.92** |
| MW-SD42A (DUP) | Overburden | -- | -- | **2.02** |
| MW-SD44 | Overburden | **2.90** | **1.77** | **1.16** |
| MW-SD46 | Overburden | **0.490** | **0.483** | **0.554** |
| MW-SD52 | Overburden | -- | **0.0974 J** | < 0.136 U |

Notes:
J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J- = The result is an estimated quantity, but the result may be biased low.
U = The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.
UJ = The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
DUP = Duplicate sample
1. Results represented in micrograms per liter (ug/l)
2. Shaded cells indicate values which exceed the EPA MCL with the exception of 1,4 Dioxane (ILCR value)
3. Bold cells indicate the analyte detected above the laboratory reporting limit (detect)

Table 4c
Summary of Comprehensive Sampling Analytical Results
Volatiles - Sitewide Groundwater Sampling Results - April 2023
NMI RD/RA

| | | | Sample Location | BEW-2 | BEW-3 | BEW-4 | BEW-5 | GZW-10-2 | HA20-CMT-3B(OW) | HA20-CMT-5(OW) | HA20-CMT-6(OW) | MW-BS01 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Date | 4/5/2023 | 4/19/2023 | 4/5/2023 | 4/10/2023 | 4/11/2023 | 4/5/2023 | 4/3/2023 | 4/4/2023 | 4/10/2023 |
| | | | Formation | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock |
| Analyte | Cas No. | **ROD CL** | Unit | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 UJ | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,1,1-Trichloroethane | 71-55-6 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 UJ | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 UJ | < 1.0 U | < 1.0 U | < 1.0 UJ | < 1.0 U |
| 1,1,2-Trichloroethane | 79-00-5 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 UJ | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,1-Dichloroethane | 75-34-3 | 2.7 | ug/l | **0.53 J** | **2.2** | **0.60 J** | **1.4** | **1.8 J** | < 1.0 U | < 1.0 U | < 1.0 U | **5.3** |
| 1,1-Dichloroethene | 75-35-4 | | ug/l | < 1.0 U | **0.30 J** | < 1.0 U | **0.59 J** | **0.18 J** | **0.17 J** | < 1.0 U | < 1.0 U | **0.59 J** |
| 1,1-Dichloropropene | 563-58-6 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,2,3-Trichlorobenzene | 87-61-6 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,2,3-Trichloropropane | 96-18-4 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,2,4-Trichlorobenzene | 120-82-1 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,2,4-Trimethylbenzene | 95-63-6 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 UJ | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U |
| 1,2-Dibromoethane | 106-93-4 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,2-Dichlorobenzene | 95-50-1 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 UJ | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,2-Dichloroethane | 107-06-2 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 UJ | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,2-Dichloroethylene (total) | 540-59-0 | | ug/l | **2.6** | **0.94 J** | **0.23 J** | **4.5** | **0.49 J** | **0.31 J** | < 1.0 U | < 1.0 U | **0.23 J** |
| 1,2-Dichloropropane | 78-87-5 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 UJ | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,3,5-Trimethylbenzene | 108-67-8 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,3-Dichlorobenzene | 541-73-1 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 UJ | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,3-Dichloropropane | 142-28-9 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,3-Dichloropropene, Total | 542-75-6 | | ug/l | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 UJ | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U |
| 1,4-Dichlorobenzene | 106-46-7 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 UJ | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 2,2-Dichloropropane | 594-20-7 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 2-Chlorotoluene | 95-49-8 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 2-Hexanone | 591-78-6 | | ug/l | < 5.0 U | < 5.0 UJ | < 5.0 U | < 5.0 UJ | < 5.0 UJ | < 5.0 U | < 5.0 UJ | < 5.0 UJ | < 5.0 U |
| 4-Chlorotoluene | 106-43-4 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 4-Methyl-2-Pentanone | 108-10-1 | | ug/l | < 5.0 UJ | < 5.0 UJ | < 5.0 UJ | < 5.0 UJ | < 5.0 UJ | < 5.0 UJ | < 5.0 UJ | < 5.0 UJ | < 5.0 UJ |
| Acetone | 67-64-1 | | ug/l | < 5.0 U | **4.3 J** | **2.3 J+** | < 5.0 U | < 5.0 UJ | < 5.0 U | < 5.0 U | < 5.0 U | < 5.0 U |
| Benzene | 71-43-2 | | ug/l | < 0.50 U | < 0.50 U | < 0.50 U | < 0.50 U | < 0.50 UJ | < 0.50 U | < 0.50 U | < 0.50 U | < 0.50 U |
| Bromobenzene | 108-86-1 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Bromochloromethane | 74-97-5 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Bromodichloromethane | 75-27-4 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 UJ | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| Bromoform | 75-25-2 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Bromomethane | 74-83-9 | | ug/l | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 UJ | < 2.0 UJ | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U |
| Carbon disulfide | 75-15-0 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Carbon tetrachloride | 56-23-5 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 UJ | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| Chlorobenzene | 108-90-7 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 UJ | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| Chloroethane | 75-00-3 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 UJ | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U |
| Chloroform | 67-66-3 | | ug/l | < 1.0 U | < 1.0 U | **0.52 J** | < 1.0 U | < 1.0 UJ | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| Chloromethane | 74-87-3 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 UJ | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U |
| cis-1,2-Dichloroethene | 156-59-2 | | ug/l | **2.6** | **0.94 J** | **0.23 J** | **4.5** | **0.49 J** | **0.31 J** | < 1.0 U | < 1.0 U | **0.23 J** |
| cis-1,3-Dichloropropene | 10061-01-5 | | ug/l | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 UJ | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U |
| Dibromochloromethane | 124-48-1 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 UJ | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| Dibromomethane | 74-95-3 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Dichlorodifluoromethane | 75-71-8 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 UJ | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U |
| Ethyl ether | 60-29-7 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 UJ | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U |
| Ethyl tert-butyl ether | 637-92-3 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Ethylbenzene | 100-41-4 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 UJ | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| Hexachlorobutadiene | 87-68-3 | | ug/l | < 0.60 U | < 0.60 U | < 0.60 U | < 0.60 U | < 0.60 UJ | < 0.60 U | < 0.60 U | < 0.60 U | < 0.60 U |
| Isopropyl Ether | 108-20-3 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Isopropylbenzene | 98-82-8 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| m-&p-Xylenes | 179601-23-1 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Methyl Ethyl Ketone (2-Butanone) | 78-93-3 | | ug/l | < 5.0 U | **8.3** | **2.4 J** | < 5.0 U | < 5.0 UJ | < 5.0 U | < 5.0 U | < 5.0 U | < 5.0 U |

Table 4c
Summary of Comprehensive Sampling Analytical Results
Volatiles - Sitewide Groundwater Sampling Results - April 2023
NMI RD/RA

| | | | Sample Location | BEW-2 | BEW-3 | BEW-4 | BEW-5 | GZW-10-2 | HA20-CMT-3B(OW) | HA20-CMT-5(OW) | HA20-CMT-6(OW) | MW-BS01 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Date | 4/5/2023 | 4/19/2023 | 4/5/2023 | 4/10/2023 | 4/11/2023 | 4/5/2023 | 4/3/2023 | 4/4/2023 | 4/10/2023 |
| | | | Formation | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock |
| Analyte | Cas No. | **ROD CL** | Unit | | | | | | | | | |
| Methyl tert-butyl ether | 1634-04-4 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Methylene Chloride | 75-09-2 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Naphthalene | 91-20-3 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| N-Butylbenzene | 104-51-8 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| N-Propylbenzene | 103-65-1 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| o-Xylene | 95-47-6 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 UJ | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| P-Isopropyltoluene | 99-87-6 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Sec-Butylbenzene | 135-98-8 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Styrene | 100-42-5 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 UJ | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| tert-Amyl methyl ether | 994-05-8 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Tert-Butylbenzene | 98-06-6 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Tetrachloroethylene | 127-18-4 | 5 | ug/l | **0.41 J** | **0.68 J** | **0.73 J** | < 1.0 U | **0.27 J** | **0.75 J** | < 1.0 U | < 1.0 U | < 1.0 U |
| Tetrahydrofuran | 109-99-9 | | ug/l | < 2.0 U | **4.4 J** | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Toluene | 108-88-3 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 UJ | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| trans-1,2-Dichloroethene | 156-60-5 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 UJ | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| trans-1,3-Dichloropropene | 10061-02-6 | | ug/l | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 UJ | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U |
| Trichloroethene | 79-01-6 | 5 | ug/l | **1.8** | **1.3** | **0.55 J** | **1.1** | **1.1 J** | **0.85 J** | < 1.0 U | < 1.0 U | **0.60 J** |
| Trichlorofluoromethane | 75-69-4 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Vinyl Chloride | 75-01-4 | 2 | ug/l | < 1.0 U | < 1.0 UJ | < 1.0 U | < 1.0 UJ | < 1.0 UJ | < 1.0 U | < 1.0 UJ | < 1.0 U | < 1.0 U |
| Xylenes (total) | 1330-20-7 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 UJ | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |

Table 4c
Summary of Comprehensive Sampling Analytical Results
Volatiles - Sitewide Groundwater Sampling Results - April 2023
NMI RD/RA

| | | | Sample Location | MW-BS15 | MW-BS50 | MW-BS51 | MW-BS52 | MW-BS52 DUP | MW-BS53 | MW-BS54 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Date | 4/10/2023 | 4/7/2023 | 4/11/2023 | 4/5/2023 | 4/5/2023 | 4/5/2023 | 4/7/2023 |
| | | | Formation | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock |
| Analyte | Cas No. | **ROD CL** | Unit | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,1,1-Trichloroethane | 71-55-6 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,1,2-Trichloroethane | 79-00-5 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,1-Dichloroethane | 75-34-3 | 2.7 | ug/l | **1.6** | **5.4** | **0.58 J** | < 1.0 U | < 1.0 U | < 1.0 U | **0.61 J** |
| 1,1-Dichloroethene | 75-35-4 | | ug/l | **0.76 J** | **0.30 J** | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,1-Dichloropropene | 563-58-6 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,2,3-Trichlorobenzene | 87-61-6 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,2,3-Trichloropropane | 96-18-4 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,2,4-Trichlorobenzene | 120-82-1 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,2,4-Trimethylbenzene | 95-63-6 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | | ug/l | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,2-Dibromoethane | 106-93-4 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,2-Dichlorobenzene | 95-50-1 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,2-Dichloroethane | 107-06-2 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,2-Dichloroethylene (total) | 540-59-0 | | ug/l | **0.52 J** | **0.48 J** | **1.3** | < 1.0 U | < 1.0 U | **0.27 J** | **0.43 J** |
| 1,2-Dichloropropane | 78-87-5 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,3,5-Trimethylbenzene | 108-67-8 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,3-Dichlorobenzene | 541-73-1 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,3-Dichloropropane | 142-28-9 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,3-Dichloropropene, Total | 542-75-6 | | ug/l | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U |
| 1,4-Dichlorobenzene | 106-46-7 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 2,2-Dichloropropane | 594-20-7 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 2-Chlorotoluene | 95-49-8 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 2-Hexanone | 591-78-6 | | ug/l | < 5.0 UJ | < 5.0 UJ | < 5.0 UJ | < 5.0 U | < 5.0 U | < 5.0 U | < 5.0 UJ |
| 4-Chlorotoluene | 106-43-4 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 4-Methyl-2-Pentanone | 108-10-1 | | ug/l | < 5.0 UJ | < 5.0 UJ | < 5.0 UJ | < 5.0 UJ | < 5.0 UJ | < 5.0 UJ | < 5.0 UJ |
| Acetone | 67-64-1 | | ug/l | < 5.0 U | < 5.0 U | < 5.0 U | < 5.0 U | < 5.0 U | < 5.0 U | < 5.0 U |
| Benzene | 71-43-2 | | ug/l | < 0.50 U | < 0.50 U | < 0.50 U | < 0.50 U | < 0.50 U | < 0.50 U | < 0.50 U |
| Bromobenzene | 108-86-1 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Bromochloromethane | 74-97-5 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Bromodichloromethane | 75-27-4 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| Bromoform | 75-25-2 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Bromomethane | 74-83-9 | | ug/l | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Carbon disulfide | 75-15-0 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | 37 | < 2.0 U |
| Carbon tetrachloride | 56-23-5 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| Chlorobenzene | 108-90-7 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| Chloroethane | 75-00-3 | | ug/l | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | **0.18 J** | < 2.0 U |
| Chloroform | 67-66-3 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | **0.40 J** | **0.42 J** | < 1.0 U | < 1.0 U |
| Chloromethane | 74-87-3 | | ug/l | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | **0.45 J** | < 2.0 U |
| cis-1,2-Dichloroethene | 156-59-2 | | ug/l | **0.52 J** | **0.48 J** | **1.3** | < 1.0 U | < 1.0 U | **0.27 J** | **0.43 J** |
| cis-1,3-Dichloropropene | 10061-01-5 | | ug/l | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U |
| Dibromochloromethane | 124-48-1 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| Dibromomethane | 74-95-3 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Dichlorodifluoromethane | 75-71-8 | | ug/l | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Ethyl ether | 60-29-7 | | ug/l | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Ethyl tert-butyl ether | 637-92-3 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Ethylbenzene | 100-41-4 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| Hexachlorobutadiene | 87-68-3 | | ug/l | < 0.60 U | < 0.60 U | < 0.60 U | < 0.60 U | < 0.60 U | < 0.60 U | < 0.60 U |
| Isopropyl Ether | 108-20-3 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | **0.62 J** | < 2.0 U |
| Isopropylbenzene | 98-82-8 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| m-&p-Xylenes | 179601-23-1 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Methyl Ethyl Ketone (2-Butanone) | 78-93-3 | | ug/l | < 5.0 U | < 5.0 U | < 5.0 U | < 5.0 U | < 5.0 U | < 5.0 U | < 5.0 U |

Table 4c
Summary of Comprehensive Sampling Analytical Results
Volatiles - Sitewide Groundwater Sampling Results - April 2023
NMI RD/RA

| | | | Sample Location | MW-BS15 | MW-BS50 | MW-BS51 | MW-BS52 | MW-BS52 DUP | MW-BS53 | MW-BS54 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Date | 4/10/2023 | 4/7/2023 | 4/11/2023 | 4/5/2023 | 4/5/2023 | 4/5/2023 | 4/7/2023 |
| | | | Formation | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock | Bedrock |
| Analyte | Cas No. | **ROD CL** | Unit | | | | | | | |
| Methyl tert-butyl ether | 1634-04-4 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Methylene Chloride | 75-09-2 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Naphthalene | 91-20-3 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| N-Butylbenzene | 104-51-8 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| N-Propylbenzene | 103-65-1 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| o-Xylene | 95-47-6 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| P-Isopropyltoluene | 99-87-6 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Sec-Butylbenzene | 135-98-8 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Styrene | 100-42-5 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| tert-Amyl methyl ether | 994-05-8 | | ug/l | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ |
| Tert-Butylbenzene | 98-06-6 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Tetrachloroethylene | 127-18-4 | 5 | ug/l | **0.50 J** | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| Tetrahydrofuran | 109-99-9 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Toluene | 108-88-3 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| trans-1,2-Dichloroethene | 156-60-5 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| trans-1,3-Dichloropropene | 10061-02-6 | | ug/l | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U |
| Trichloroethene | 79-01-6 | 5 | ug/l | **2.5** | **0.22 J** | < 1.0 U | **0.28 J** | **0.26 J** | < 1.0 U | **0.18 J** |
| Trichlorofluoromethane | 75-69-4 | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Vinyl Chloride | 75-01-4 | 2 | ug/l | < 1.0 UJ | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | **0.30 J** | < 1.0 U |
| Xylenes (total) | 1330-20-7 | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |

Table 4c
Summary of Annual Sampling Analytical Results Volatiles -
Sitewide Groundwater Sampling Results -
April 2023 NMI RD/RA

| | | | | Sample Location | HA20-CMT-3T(OW) | HB-13 | HB-13 DUP | MW-S32 | MW-S60 | MW-S62A | MW-S64 | MW-S64 DUP | MW-SD34 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Date | 4/4/2023 | 4/11/2023 | 4/11/2023 | 4/6/2023 | 4/7/2023 | 4/10/2023 | 4/5/2023 | 4/5/2023 | 4/4/2023 |
| | | | | Formation | Overburden | Overburden | Overburden | Overburden | Overburden | Overburden | Overburden | Overburden | Overburden |
| Analyte | Cas No. | ROD CL | VISL | Unit | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,1,1-Trichloroethane | 71-55-6 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | 0.40 J | < 1.0 U | < 1.0 U | 5.4 | 5.0 | < 1.0 U |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | | ug/l | < 1.0 UJ | < 1.0 UJ | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 UJ |
| 1,1,2-Trichloroethane | 79-00-5 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,1-Dichloroethane | 75-34-3 | | 7.64 | ug/l | 1.7 | < 1.0 U | < 1.0 U | 1.2 | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | 1.8 |
| 1,1-Dichloroethene | 75-35-4 | | | ug/l | 7.4 | < 1.0 U | < 1.0 U | 0.38 J | < 1.0 U | < 1.0 U | 0.30 J | 0.24 J | 2.4 |
| 1,1-Dichloropropene | 563-58-6 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,2,3-Trichlorobenzene | 87-61-6 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,2,3-Trichloropropane | 96-18-4 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,2,4-Trichlorobenzene | 120-82-1 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,2,4-Trimethylbenzene | 95-63-6 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,2-Dibromoethane | 106-93-4 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,2-Dichlorobenzene | 95-50-1 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,2-Dichloroethane | 107-06-2 | | | ug/l | 0.14 J | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,2-Dichloroethylene (total) | 540-59-0 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | 0.32 J | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | 2.3 |
| 1,2-Dichloropropane | 78-87-5 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,3,5-Trimethylbenzene | 108-67-8 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,3-Dichlorobenzene | 541-73-1 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,3-Dichloropropane | 142-28-9 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,3-Dichloropropene, Total | 542-75-6 | | | ug/l | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U |
| 1,4-Dichlorobenzene | 106-46-7 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 2,2-Dichloropropane | 594-20-7 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 2-Chlorotoluene | 95-49-8 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 2-Hexanone | 591-78-6 | | | ug/l | < 5.0 UJ | < 5.0 UJ | < 5.0 UJ | < 5.0 UJ | < 5.0 UJ | < 5.0 UJ | < 5.0 U | < 5.0 U | < 5.0 UJ |
| 4-Chlorotoluene | 106-43-4 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 4-Methyl-2-Pentanone | 108-10-1 | | | ug/l | < 5.0 UJ | < 5.0 UJ | < 5.0 UJ | < 5.0 UJ | < 5.0 UJ | < 5.0 UJ | < 5.0 UJ | < 5.0 UJ | < 5.0 UJ |
| Acetone | 67-64-1 | | | ug/l | < 5.0 U | < 5.0 U | < 5.0 U | < 5.0 U | 1.5 J+ | < 5.0 U | < 5.0 U | < 5.0 U | < 5.0 U |
| Benzene | 71-43-2 | | | ug/l | < 0.50 U | < 0.50 U | < 0.50 U | < 0.50 U | 0.24 J | 0.66 | < 0.50 U | < 0.50 U | < 0.50 U |
| Bromobenzene | 108-86-1 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Bromochloromethane | 74-97-5 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Bromodichloromethane | 75-27-4 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| Bromoform | 75-25-2 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Bromomethane | 74-83-9 | | | ug/l | 0.61 J | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Carbon disulfide | 75-15-0 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Carbon tetrachloride | 56-23-5 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| Chlorobenzene | 108-90-7 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| Chloroethane | 75-00-3 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Chloroform | 67-66-3 | | | ug/l | 0.46 J | < 1.0 U | < 1.0 U | < 1.0 U | 0.51 J | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| Chloromethane | 74-87-3 | | | ug/l | 0.30 J | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| cis-1,2-Dichloroethene | 156-59-2 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | 0.32 J | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | 2.3 |
| cis-1,3-Dichloropropene | 10061-01-5 | | | ug/l | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U |
| Dibromochloromethane | 124-48-1 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| Dibromomethane | 74-95-3 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Dichlorodifluoromethane | 75-71-8 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Ethyl ether | 60-29-7 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Ethyl tert-butyl ether | 637-92-3 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Ethylbenzene | 100-41-4 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | 0.22 J | < 1.0 U | < 1.0 U | < 1.0 U |
| Hexachlorobutadiene | 87-68-3 | | | ug/l | < 0.60 U | < 0.60 U | < 0.60 U | < 0.60 U | < 0.60 U | < 0.60 U | < 0.60 U | < 0.60 U | < 0.60 U |
| Isopropyl Ether | 108-20-3 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Isopropylbenzene | 98-82-8 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| m-&p-Xylenes | 179601-23-1 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Methyl Ethyl Ketone (2-Butanone) | 78-93-3 | | | ug/l | < 5.0 U | < 5.0 U | < 5.0 U | < 5.0 U | < 5.0 U | < 5.0 U | < 5.0 U | < 5.0 U | < 5.0 U |

Table 4c
Summary of Annual Sampling Analytical Results Volatiles -
Sitewide Groundwater Sampling Results -
April 2023 NMI RD/RA

| | | | | Sample Location<br>Sample Date<br>Formation | HA20-CMT-3T(OW)<br>4/4/2023<br>Overburden | HB-13<br>4/11/2023<br>Overburden | HB-13 DUP<br>4/11/2023<br>Overburden | MW-S32<br>4/6/2023<br>Overburden | MW-S60<br>4/7/2023<br>Overburden | MW-S62A<br>4/10/2023<br>Overburden | MW-S64<br>4/5/2023<br>Overburden | MW-S64 DUP<br>4/5/2023<br>Overburden | MW-SD34<br>4/4/2023<br>Overburden |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Cas No. | ROD CL | VISL | Unit | | | | | | | | | |
| Methyl tert-butyl ether | 1634-04-4 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Methylene Chloride | 75-09-2 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Naphthalene | 91-20-3 | | | ug/l | < 2.0 U | < 2.0 UJ | < 2.0 UJ | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| N-Butylbenzene | 104-51-8 | | | ug/l | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| N-Propylbenzene | 103-65-1 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| o-Xylene | 95-47-6 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| P-Isopropyltoluene | 99-87-6 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Sec-Butylbenzene | 135-98-8 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Styrene | 100-42-5 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| tert-Amyl methyl ether | 994-05-8 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Tert-Butylbenzene | 98-06-6 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Tetrachloroethylene | 127-18-4 | 5 | 5.76 | ug/l | 1.4 | 0.45 J | 0.45 J | < 1.0 U | < 1.0 U | < 1.0 U | 0.30 J | 0.31 J | 0.61 J |
| Tetrahydrofuran | 109-99-9 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Toluene | 108-88-3 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | 0.54 J | < 1.0 U | < 1.0 U | < 1.0 U |
| trans-1,2-Dichloroethene | 156-60-5 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| trans-1,3-Dichloropropene | 10061-02-6 | | | ug/l | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U |
| Trichloroethene | 79-01-6 | 5 | 0.518 | ug/l | 8.8 | 0.44 J | 0.41 J | 1.5 | < 1.0 U | < 1.0 U | 1.6 | 1.6 | 4.8 |
| Trichlorofluoromethane | 75-69-4 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | 0.30 J | 0.27 J | < 2.0 U |
| Vinyl Chloride | 75-01-4 | 2 | 0.147 | ug/l | 0.08 J | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| Xylenes (total) | 1330-20-7 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |

Table 4c
Summary of Annual Sampling Analytical Results Volatiles -
Sitewide Groundwater Sampling Results -
April 2023 NMI RD/RA

| | | | | Sample Location | MW-SD38 | MW-SD52 | MW-SD60 | MW-SD61 | MW-SD62A |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Date | 4/5/2023 | 4/4/2023 | 4/7/2023 | 4/10/2023 | 4/10/2023 |
| | | | | Formation | Overburden | Overburden | Overburden | Overburden | Overburden |
| Analyte | Cas No. | ROD CL | VISL | Unit | | | | | |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,1,1-Trichloroethane | 71-55-6 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | | | ug/l | < 1.0 U | < 1.0 UJ | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,1,2-Trichloroethane | 79-00-5 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,1-Dichloroethane | 75-34-3 | | 7.64 | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,1-Dichloroethene | 75-35-4 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,1-Dichloropropene | 563-58-6 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,2,3-Trichlorobenzene | 87-61-6 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,2,3-Trichloropropane | 96-18-4 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,2,4-Trichlorobenzene | 120-82-1 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,2,4-Trimethylbenzene | 95-63-6 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 UJ |
| 1,2-Dibromoethane | 106-93-4 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,2-Dichlorobenzene | 95-50-1 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,2-Dichloroethane | 107-06-2 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,2-Dichloroethylene (total) | 540-59-0 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,2-Dichloropropane | 78-87-5 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,3,5-Trimethylbenzene | 108-67-8 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,3-Dichlorobenzene | 541-73-1 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 1,3-Dichloropropane | 142-28-9 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 1,3-Dichloropropene, Total | 542-75-6 | | | ug/l | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U |
| 1,4-Dichlorobenzene | 106-46-7 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| 2,2-Dichloropropane | 594-20-7 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 2-Chlorotoluene | 95-49-8 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 2-Hexanone | 591-78-6 | | | ug/l | < 5.0 U | < 5.0 UJ | < 5.0 UJ | < 5.0 UJ | < 5.0 UJ |
| 4-Chlorotoluene | 106-43-4 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| 4-Methyl-2-Pentanone | 108-10-1 | | | ug/l | < 5.0 UJ | < 5.0 UJ | < 5.0 UJ | < 5.0 UJ | < 5.0 UJ |
| Acetone | 67-64-1 | | | ug/l | < 5.0 U | < 5.0 U | < 5.0 U | 6.1 J | 1.9 J |
| Benzene | 71-43-2 | | | ug/l | < 0.50 U | < 0.50 U | < 0.50 U | 0.22 J | 0.23 J |
| Bromobenzene | 108-86-1 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Bromochloromethane | 74-97-5 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Bromodichloromethane | 75-27-4 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| Bromoform | 75-25-2 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Bromomethane | 74-83-9 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 UJ |
| Carbon disulfide | 75-15-0 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Carbon tetrachloride | 56-23-5 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| Chlorobenzene | 108-90-7 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| Chloroethane | 75-00-3 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 UJ |
| Chloroform | 67-66-3 | | | ug/l | < 1.0 U | 0.84 J | 1.6 | < 1.0 U | 0.53 J |
| Chloromethane | 74-87-3 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 UJ |
| cis-1,2-Dichloroethene | 156-59-2 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| cis-1,3-Dichloropropene | 10061-01-5 | | | ug/l | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U |
| Dibromochloromethane | 124-48-1 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| Dibromomethane | 74-95-3 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Dichlorodifluoromethane | 75-71-8 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 UJ |
| Ethyl ether | 60-29-7 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 UJ |
| Ethyl tert-butyl ether | 637-92-3 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Ethylbenzene | 100-41-4 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| Hexachlorobutadiene | 87-68-3 | | | ug/l | < 0.60 U | < 0.60 U | < 0.60 U | < 0.60 U | < 0.60 U |
| Isopropyl Ether | 108-20-3 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Isopropylbenzene | 98-82-8 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| m-&p-Xylenes | 179601-23-1 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Methyl Ethyl Ketone (2-Butanone) | 78-93-3 | | | ug/l | < 5.0 U | < 5.0 U | < 5.0 U | 22 | < 5.0 U |

Table 4c
Summary of Annual Sampling Analytical Results Volatiles -
Sitewide Groundwater Sampling Results -
April 2023 NMI RD/RA

| | | | | Sample Location | MW-SD38 | MW-SD52 | MW-SD60 | MW-SD61 | MW-SD62A |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Date | 4/5/2023 | 4/4/2023 | 4/7/2023 | 4/10/2023 | 4/10/2023 |
| | | | | Formation | Overburden | Overburden | Overburden | Overburden | Overburden |
| Analyte | Cas No. | ROD CL | VISL | Unit | | | | | |
| Methyl tert-butyl ether | 1634-04-4 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Methylene Chloride | 75-09-2 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Naphthalene | 91-20-3 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| N-Butylbenzene | 104-51-8 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| N-Propylbenzene | 103-65-1 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| o-Xylene | 95-47-6 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| P-Isopropyltoluene | 99-87-6 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Sec-Butylbenzene | 135-98-8 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Styrene | 100-42-5 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| tert-Amyl methyl ether | 994-05-8 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 UJ | < 2.0 U | < 2.0 U |
| Tert-Butylbenzene | 98-06-6 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Tetrachloroethylene | 127-18-4 | 5 | 5.76 | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| Tetrahydrofuran | 109-99-9 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Toluene | 108-88-3 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | 0.23 J | < 1.0 U |
| trans-1,2-Dichloroethene | 156-60-5 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |
| trans-1,3-Dichloropropene | 10061-02-6 | | | ug/l | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U | < 0.40 U |
| Trichloroethene | 79-01-6 | 5 | 0.518 | ug/l | < 1.0 U | 0.23 J | < 1.0 U | < 1.0 U | < 1.0 U |
| Trichlorofluoromethane | 75-69-4 | | | ug/l | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U | < 2.0 U |
| Vinyl Chloride | 75-01-4 | 2 | 0.147 | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 UJ | < 1.0 UJ |
| Xylenes (total) | 1330-20-7 | | | ug/l | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U | < 1.0 U |

Table 4c
Summary of Annual Sampling Analytical Results Volatiles -
Sitewide Groundwater Sampling Results -
April 2023 NMI RD/RA

Notes:

| | |
|---|---|
| J | The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample. |
| J+ | The result is an estimated quantity, but the result may be biased high. |
| U | Analyte not detected above the laboratory reporting limit |
| UJ | The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise. |
| DUP | Duplicate sample |
| ug/l | Micrograms per liter |
| Bold | Analyte detected above the laboratory reporting limit (detect) |
| ROD CL | Record of Decision Cleanup Level or Bedrock and Overburden except 1,1 DCA (ILCR value) for Bedrock only. |
| VISL | Vapor Intrusion Screening Level (applies to overburden) |
| Shade | Value exceeds Record of Decision Cleanup Level (ROD CL) |
| Red | Value exceeds VISL |

Table 4d
Summary of Annual Sampling Analytical Results
Nitrate/Nitrite - Sitewide Groundwater Sampling Results -
April 2023 NMI RD/RA

| | | | Sample Location | BEW-5 | MW-BS52 | MW-BS52 DUP | HB-13 | HB-13 DUP | HBPZ-2R | MW-8A | MW-S02 | MW-S16 | MW-S24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Date | 4/10/2023 | 4/5/2023 | 4/5/2023 | 4/11/2023 | 4/11/2023 | 4/11/2023 | 4/7/2023 | 4/5/2023 | 4/5/2023 | 4/10/2023 |
| | | | Formation | Bedrock | Bedrock | Bedrock | Overburden | Overburden | Overburden | Overburden | Overburden | Overburden | Overburden |
| Analyte | Cas No. | MCL | Unit | | | | | | | | | | |
| Nitrite as N | 14797-65-0_N | 1 | mg/l | < 0.050 U | 0.016 J | 0.017 J | < 0.050 U | < 0.050 U | < 0.050 U | < 0.050 U | < 0.050 U | 0.015 J | 0.020 J |
| Nitrogen, Nitrate as N | 14797-55-8_N | 10 | mg/l | < 0.100 U | 0.079 J | 0.091 J | 3.50 | 3.53 | 3.45 | 1.06 | 1.35 | 1.83 | 3.68 |

| | | | Sample Location | MW-S60 | MW-S62A | MW-S64 | MW-S64 DUP | MW-SD24 | MW-SD24 DUP | MW-SD34 | MW-SD60 | MW-SD61 | MW-SD62A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Date | 4/7/2023 | 4/10/2023 | 4/5/2023 | 4/5/2023 | 4/10/2023 | 4/10/2023 | 4/4/2023 | 4/7/2023 | 4/10/2023 | 4/10/2023 |
| | | | Formation | Overburden | Overburden | Overburden | Overburden | Overburden | Overburden | Overburden | Overburden | Overburden | Overburden |
| Analyte | Cas No. | MCL | Unit | | | | | | | | | | |
| Nitrite as N | 14797-65-0_N | 1 | mg/l | < 0.050 U | 0.016 J | 0.025 J | < 0.050 U | 0.013 J | 0.013 J | < 0.050 U | 0.099 | 0.018 J | 0.020 J |
| Nitrogen, Nitrate as N | 14797-55-8_N | 10 | mg/l | 1.43 | 0.255 | 0.565 | 0.567 | 2.16 | 2.03 | 0.032 J | 1.64 | 0.082 J | 0.850 |

Notes:

| | |
|---|---|
| J | The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample. |
| U | The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit. |
| DUP | Duplicate sample |
| mg/l | Milligrams per liter |
| MCL | EPA Maximum Contaminant Levels |
| Shade | Value exceeds MCL |
| **Bold** | Analyte detected above the laboratory reporting limit (detect) |

Table 4e
Summary of Annual Sampling Analytical Results Geochemical -
Sitewide Groundwater Sampling Results -
April 2023 NMI RD/RA

| | | | Sample Location | BEW-2 | BEW-3 | BEW-4 | BEW-5 | HA20-CMT-3B(OW) | HA20-CMT-5(OW) | HA20-CMT-6(OW) | MW-B1D13 | MW-B1D13 DUP | MW-B1D28 | MW-B2D13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Date | 4/5/2023 | 4/5/2023 | 4/5/2023 | 4/10/2023 | 4/5/2023 | 4/3/2023 | 4/4/2023 | 4/7/2023 | 4/7/2023 | 4/4/2023 | 4/6/2023 |
| | | | Formation | BR | BR | BR | BR | BR | BR | BR | BR | BR | BR | BR |
| Analyte | Cas No. | Unit | Fraction | | | | | | | | | | | |
| Alkalinity, Bicarbonate as CaCO3 | ALK_BICARB | mg/l | T | 181 | 165 | 49.4 | -- | 134 | 75.7 | 75.2 | 224 | 254 | -- | 172 |
| Carbonate (as CO3) | 3812-32-6 | mg/l | T | < 2.00 U | < 2.00 U | < 2.00 U | -- | < 2.00 U | < 2.00 U | < 2.00 U | < 2.00 U | < 2.00 U | -- | < 2.00 U |
| Chloride | 16887-00-6 | mg/l | T | -- | -- | -- | 17.1 | -- | -- | -- | -- | -- | -- | -- |
| Fluoride | 16984-48-8 | mg/l | T | -- | -- | -- | 0.037 J | -- | -- | -- | -- | -- | -- | -- |
| Phosphorus | 7723-14-0 | mg/l | D | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Phosphorus | 7723-14-0 | mg/l | T | -- | -- | 0.004 J | -- | 0.057 | 0.042 | 0.011 | < 0.010 U | < 0.010 U | 0.040 | 0.016 |
| Sulfate as SO4 | 14808-79-8 | mg/l | T | -- | -- | -- | 471 | -- | -- | -- | -- | -- | -- | -- |

Notes:

J The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

U The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
-- Not analyzed
DUP Duplicate sample
mg/l Milligrams per liter
Fraction "T" = Total
Fraction "D" = Dissolved
**Bold** Analyte detected above the laboratory reporting limit

Table 4e
Summary of Annual Sampling Analytical Results Geochemical -
Sitewide Groundwater Sampling Results -
April 2023 NMI RD/RA

| | | | Sample Location | MW-B3D13 | MW-BS01 | MW-BS02 | MW-BS03 | MW-BS03 DUP | MW-BS10 | MW-BS13 | MW-BS52 | MW-BS52 DUP | MW-BS7-2 | HA20-CMT-3T(OW) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Date | 4/6/2023 | 4/10/2023 | 4/5/2023 | 4/6/2023 | 4/6/2023 | 4/6/2023 | 4/7/2023 | 4/5/2023 | 4/5/2023 | 4/11/2023 | 4/4/2023 |
| | | | Formation | BR | BR | BR | BR | BR | BR | BR | BR | BR | BR | OB |
| Analyte | Cas No. | Unit | Fraction | | | | | | | | | | | |
| Alkalinity, Bicarbonate as CaCO3 | ALK_BICARB | mg/l | T | 195 | -- | 179 | 187 | 183 | 72.5 | 190 | 87.6 | 88.9 | 112 | 70.7 |
| Carbonate (as CO3) | 3812-32-6 | mg/l | T | < 2.00 U | -- | < 2.00 U | < 2.00 U | < 2.00 U | < 2.00 U | < 2.00 U | < 2.00 U | < 2.00 U | < 2.00 U | < 2.00 U |
| Chloride | 16887-00-6 | mg/l | T | -- | -- | -- | -- | -- | -- | -- | 42.8 | 42.7 | -- | -- |
| Fluoride | 16984-48-8 | mg/l | T | -- | -- | -- | -- | -- | -- | -- | 0.120 | 0.118 | -- | -- |
| Phosphorus | 7723-14-0 | mg/l | D | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Phosphorus | 7723-14-0 | mg/l | T | 0.043 | 0.068 J | -- | -- | -- | -- | -- | -- | -- | -- | 0.146 |
| Sulfate as SO4 | 14808-79-8 | mg/l | T | -- | -- | -- | -- | -- | -- | -- | 26.2 | 26.0 | -- | -- |

Notes:

J The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

U The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
-- Not analyzed
DUP Duplicate sample
mg/l Milligrams per liter
Fraction "T" = Total
Fraction "D" = Dissolved
**Bold** Analyte detected above the laboratory reporting limit

Table 4e
Summary of Annual Sampling Analytical Results Geochemical -
Sitewide Groundwater Sampling Results -
April 2023 NMI RD/RA

| | | | Sample Location | HB-13 | HB-13 DUP | HBPZ-2R | MW-8A | MW-S02 | MW-S16 | MW-S24 | MW-S60 | MW-S62A | MW-S64 | MW-S64 DUP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Date | 4/11/2023 | 4/11/2023 | 4/11/2023 | 4/7/2023 | 4/5/2023 | 4/5/2023 | 4/10/2023 | 4/7/2023 | 4/10/2023 | 4/5/2023 | 4/5/2023 |
| | | | Formation | OB | OB | OB | OB | OB | OB | OB | OB | OB | OB | OB |
| Analyte | Cas No. | Unit | Fraction | | | | | | | | | | | |
| Alkalinity, Bicarbonate as CaCO3 | ALK_BICARB | mg/l | T | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Carbonate (as CO3) | 3812-32-6 | mg/l | T | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Chloride | 16887-00-6 | mg/l | T | -- | -- | 32.9 | 75.0 | -- | -- | 36.7 | 70.5 | 86.3 | -- | -- |
| Fluoride | 16984-48-8 | mg/l | T | -- | -- | 0.113 | -- | -- | -- | 0.059 | -- | 0.051 | -- | -- |
| Phosphorus | 7723-14-0 | mg/l | D | < 0.010 U | < 0.010 U | < 0.010 U | 0.015 | 0.020 | < 0.010 U | 0.014 | 0.004 J | 0.006 J | 0.009 J | 0.009 J |
| Phosphorus | 7723-14-0 | mg/l | T | < 0.010 U | < 0.010 U | < 0.010 U | 0.023 | 0.019 | 0.007 J | 0.024 J | 0.008 J | 0.014 J | 0.013 | 0.015 |
| Sulfate as SO4 | 14808-79-8 | mg/l | T | -- | -- | 29.0 | 10.6 | -- | -- | 39.1 | 13.9 | 10.8 | -- | -- |

Notes:

J The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

U The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
-- Not analyzed
DUP Duplicate sample
mg/l Milligrams per liter
Fraction "T" = Total
Fraction "D" = Dissolved
**Bold** Analyte detected above the laboratory reporting limit

Table 4e
Summary of Annual Sampling Analytical Results Geochemical -
Sitewide Groundwater Sampling Results -
April 2023 NMI RD/RA

| | | | Sample Location | MW-SD01 | MW-SD24 | MW-SD24 DUP | MW-SD34 | MW-SD60 | MW-SD61 | MW-SD62A |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Date | 4/10/2023 | 4/10/2023 | 4/10/2023 | 4/4/2023 | 4/7/2023 | 4/10/2023 | 4/10/2023 |
| | | | Formation | OB | OB | OB | OB | OB | OB | OB |
| Analyte | Cas No. | Unit | Fraction | | | | | | | |
| Alkalinity, Bicarbonate as CaCO3 | ALK_BICARB | mg/l | T | -- | -- | -- | -- | -- | -- | -- |
| Carbonate (as CO3) | 3812-32-6 | mg/l | T | -- | -- | -- | -- | -- | -- | -- |
| Chloride | 16887-00-6 | mg/l | T | -- | 82.2 | 80.7 | 97.1 | 74.6 | 72.9 | 92.5 |
| Fluoride | 16984-48-8 | mg/l | T | -- | < 0.050 U | < 0.050 U | < 0.050 U | -- | 0.071 | < 0.050 U |
| Phosphorus | 7723-14-0 | mg/l | D | -- | 0.011 | 0.011 | -- | < 0.010 U | 0.068 J | 0.010 |
| Phosphorus | 7723-14-0 | mg/l | T | 0.023 J | 0.014 J | 0.048 J | -- | < 0.010 U | 0.053 J | < 0.010 UJ |
| Sulfate as SO4 | 14808-79-8 | mg/l | T | -- | 15.2 | 15.3 | 498 | 19.1 | 2.85 | 15.5 |

Notes:

J The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

U The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
-- Not analyzed
DUP Duplicate sample
mg/l Milligrams per liter
Fraction "T" = Total
Fraction "D" = Dissolved
**Bold** Analyte detected above the laboratory reporting limit

# TABLE 5
# SUMMARY OF FIELD PARAMETERS
# APRIL 2023

Table 5
Summary of Annual Sampling Field Parameters
Sitewide Groundwater Sampling Results April 2023
NMI RD/RA

| | | Analyte | Dissolved Oxygen | Oxidation Reduction Potential | pH | Specific Conductance | Temperature | Turbidity | Notes |
|---|---|---|---|---|---|---|---|---|---|
| | | Unit | mg/L | mV | SU | µS/cm | °C | NTU | |
| Sample Location | Sample Date | Formation | | | | | | | |
| ASSABET-1A | 4/4/2023 | Overburden | - | - | - | - | - | - | No Parameters Collected per SOP |
| ASSABET-2A | Not Sampled | Overburden | - | - | - | - | - | - | Sample was not collected see section 4.1 of the report. |
| BEW-2 | 4/5/2023 | Bedrock | - | - | - | - | - | - | Sampled as outlined in the email correspondence with EPA regarding the proposed Post-Pumping Sampling plan (12/9/2021) |
| BEW-3 | 4/5/2023 | Bedrock | - | - | - | - | - | - | Sampled as outlined in the email correspondence with EPA regarding the proposed Post-Pumping Sampling plan (12/9/2021) |
| BEW-4 | 4/5/2023 | Bedrock | - | - | - | - | - | - | Sampled as outlined in the email correspondence with EPA regarding the proposed Post-Pumping Sampling plan (12/9/2021) |
| BEW-5 | 4/10/2023 | Bedrock | 0.04 | -140.70 | 7.47 | 91.21 | 11.06 | 7.15 | Slow recharge. Drawdown > 0.3'. |
| EW-1 | 4/4/2023 | Overburden | - | - | - | - | - | - | No Parameters Collected per SOP |
| GZW-7-1 | 4/11/2023 | Overburden | 7.38 | 162.4 | 5.92 | 426.500 | 12.20 | 0.02 | |
| GZW-10-2 | 4/11/2023 | Bedrock | 0.33 | 115.3 | 7.41 | 782.000 | 13.90 | 0.60 | |
| GZW-8-2 | 4/4/2023 | Bedrock | 1.33 | -33.0 | 6.61 | 374.500 | 20.40 | 7.57 | BarCad Sampling System - Grab Values |
| MW-B1D28 | 4/4/2023 | Bedrock | 0.28 | 36.8 | 8.15 | 290.800 | 10.20 | 3.89 | |
| HA20-CMT-3B(OW) | 4/5/2023 | Bedrock | 0.88 | -92.3 | 7.88 | 441.000 | 9.50 | 10.30 | |
| HA20-CMT-3T(OW) | 4/4/2023 | Overburden | 0.75 | 84.4 | 7.48 | 2187.000 | 13.30 | 69.00 | |
| HA20-CMT-5(OW) | 4/3/2023 | Bedrock | 1.00 | -4.5 | 7.04 | 383.000 | 11.20 | 38.00 | Well has slow recharge. |
| HA20-CMT-6(OW) | 4/4/2023 | Bedrock | 0.76 | 82.5 | 7.76 | 434.000 | 9.90 | 1.24 | |
| HB-12 | 4/11/2023 | Overburden | 8.80 | 158.1 | 5.85 | 183.000 | 11.90 | 1.40 | |
| HB-13 | 4/11/2023 | Overburden | 9.86 | 188.8 | 5.76 | 249.000 | 10.00 | 1.79 | |
| ML-1-3 | 4/4/2023 | Bedrock | 1.18 | 70.8 | 7.62 | 330.000 | 15.00 | 984.00 | BarCad Sampling System - Grab Values. Cloudy |
| ML-3-3 | 4/4/2023 | Bedrock | 0.98 | -70.1 | 7.36 | 409.400 | 11.10 | 58.90 | BarCad Sampling System - Grab Values. Purged one well volume (ran dry). |
| MW-BM03 | 4/5/2023 | Bedrock | 0.00 | -119.4 | 7.53 | 414.900 | 9.60 | 4.95 | |
| MW-BM15 | 4/7/2023 | Bedrock | 0.97 | -73.5 | 7.33 | 386.770 | 10.70 | 3.61 | |
| MW-BS01 | 4/10/2023 | Bedrock | 0.25 | -5.1 | 8.69 | 335.100 | 10.90 | 4.29 | Collected MS/MSD sample. |
| MW-BS02 | 4/5/2023 | Bedrock | 0.28 | -13.3 | 7.35 | 496.900 | 10.90 | 3.89 | |
| MW-BS03 | 4/6/2023 | Bedrock | 0.00 | -111.1 | 7.12 | 378.500 | 12.30 | 3.56 | Duplicate collected |
| MW-BS10 | 4/6/2023 | Bedrock | 0.00 | -87.3 | 7.41 | 160.100 | 9.40 | 3.39 | |
| MW-BS13 | 4/7/2023 | Bedrock | 0.17 | -160.0 | 7.89 | 863.000 | 11.10 | 1.30 | |
| MW-BS14 | 4/10/2023 | Bedrock | 0.24 | 1.9 | 6.55 | 537.000 | 10.90 | - | Turbidity parameter not collected. |
| MW-B1D13 | 4/7/2023 | Bedrock | 0.18 | -111.5 | 7.74 | 724.000 | 11.10 | 0.60 | Duplicate collected |
| MW-B2D13 | 4/6/2023 | Bedrock | 0.17 | -168.4 | 7.85 | 775.000 | 13.50 | 30.20 | |
| MW-B3D13 | 4/6/2023 | Bedrock | 0.54 | -112.2 | 7.59 | 608.000 | 9.90 | 4.30 | |
| MW-BS15 | 4/10/2023 | Bedrock | 1.43 | 27.6 | 7.94 | 661.750 | 14.87 | 4.71 | |
| MW-BS28 | 4/4/2023 | Bedrock | 0.00 | -74.2 | 6.87 | 911.000 | 11.00 | 12.80 | |
| MW-BS32 | 4/7/2023 | Bedrock | 0.72 | -80.0 | 7.19 | 415.020 | 11.04 | 14.60 | |
| MW-BS50 | 4/7/2023 | Bedrock | 0.90 | 46.0 | 8.04 | 159.500 | 10.10 | 35.90 | |

Table 5
Summary of Annual Sampling Field Parameters
Sitewide Groundwater Sampling Results April 2023
NMI RD/RA

| Analyte | | | Dissolved Oxygen | Oxidation Reduction Potential | pH | Specific Conductance | Temperature | Turbidity | Notes |
|---|---|---|---|---|---|---|---|---|---|
| Unit | | | mg/L | mV | SU | µS/cm | °C | NTU | |
| Sample Location | Sample Date | Formation | | | | | | | |
| MW-BS51 | 4/11/2023 | Bedrock | 3.39 | -73.1 | 12.01 | 3417.500 | 12.38 | 4.60 | |
| MW-BS52 | 4/5/2023 | Bedrock | 0.78 | -107.9 | 7.12 | 475.200 | 11.10 | 8.97 | Black specs in purge water. |
| MW-BS53 | 4/5/2023 | Bedrock | 0.84 | -87.1 | 11.15 | 1068.000 | 10.70 | 3.73 | |
| MW-BS54 | 4/7/2023 | Bedrock | 0.31 | -157.9 | 8.19 | 468.000 | 9.40 | 4.72 | |
| MW-BS7-2 | 4/11/2023 | Bedrock | 0.09 | 48.4 | 7.93 | 613.000 | 16.50 | 1.90 | |
| MW-S02 | 4/5/2023 | Overburden | 7.25 | 125.2 | 5.77 | 157.800 | 12.60 | 0.90 | |
| MW-S16 | 4/5/2023 | Overburden | 8.17 | 164.3 | 5.88 | 405.700 | 10.00 | 2.49 | |
| MW-S24 | 4/10/2023 | Overburden | 2.75 | 96.2 | 5.98 | 228.400 | 10.80 | 1.47 | |
| MW-S32 | 4/6/2023 | Overburden | 7.28 | 121.9 | 6.47 | 356.000 | 10.00 | 4.34 | |
| MW-S46 | 4/5/2023 | Overburden | 0.38 | -65.6 | 6.45 | 957.360 | 10.87 | 2.90 | |
| MW-S60 | 4/7/2023 | Overburden | 5.23 | 89.5 | 5.93 | 347.900 | 10.40 | 7.32 | Faulty water level meter. Purge water orange. |
| MW-S62A | 4/10/2023 | Overburden | 4.70 | 6.2 | 6.43 | 375.200 | 10.20 | 4.83 | Purge water slightly pink. |
| MW-S64 | 4/5/2023 | Overburden | 8.21 | 168.4 | 5.45 | 104.700 | 12.20 | 2.68 | Duplicate collected |
| MW-SD01 | 4/10/2023 | Overburden | 7.21 | 185.1 | 5.70 | 232.500 | 11.00 | 3.45 | |
| MW-SD15 | 4/6/2023 | Overburden | 3.15 | 104.1 | 6.23 | 382.000 | 9.40 | 11.00 | Purge water muddy/cloudy initially. Water level meter seems faulty. |
| MW-SD17 | 4/5/2023 | Overburden | 3.91 | 126.2 | 5.76 | 316.000 | 10.90 | 3.88 | |
| MW-SD24 | 4/10/2023 | Overburden | 8.14 | 156.7 | 6.11 | 258.800 | 11.70 | 15.10 | |
| MW-SD26 | 4/7/2023 | Overburden | 8.37 | 144.1 | 6.00 | 344.300 | 9.00 | 2.30 | Faulty water level meter. |
| MW-SD32 | 4/6/2023 | Overburden | 6.91 | 149.0 | 6.20 | 387.200 | 10.20 | 44.90 | Purge water muddy/cloudy. Faulty water level meter. |
| MW-SD34 | 4/4/2023 | Overburden | 0.67 | -47.8 | 6.43 | 1431.000 | 10.10 | 22.10 | |
| MW-SD38 | 4/5/2023 | Overburden | 0.42 | 52.6 | 6.28 | 301.540 | 9.46 | 2.19 | |
| MW-SD40 | 4/6/2023 | Overburden | 0.05 | 14.9 | 6.74 | 0.100 | 12.13 | 1.38 | |
| MW-SD42A | 4/4/2023 | Overburden | 0.58 | 51.1 | 6.40 | 219.970 | 12.83 | 10.70 | |
| MW-SD44 | 4/4/2023 | Overburden | 0.52 | -4.0 | 6.65 | 167.940 | 12.89 | 10.80 | |
| MW-SD46 | 4/5/2023 | Overburden | 0.72 | -69.6 | 6.64 | 778.080 | 10.15 | 4.96 | |
| MW-SD52 | 4/4/2023 | Overburden | 6.37 | 140.6 | 6.29 | 224.500 | 12.00 | 4.68 | |
| MW-SD60 | 4/7/2023 | Overburden | 7.71 | 172.8 | 5.92 | 368.200 | 10.10 | 1.59 | Faulty water level meter. |
| MW-SD61 | 4/10/2023 | Overburden | 0.79 | -127.3 | 6.91 | 426.700 | 11.50 | 4.59 | Purge water slightly pink. |
| MW-SD62A | 4/10/2023 | Overburden | 2.30 | -32.3 | 6.53 | 431.600 | 12.00 | 12.90 | |
| HBPZ-2R | 4/11/2023 | Overburden | 9.23 | 181.0 | 5.82 | 274.600 | 11.60 | 1.88 | |
| MW-8A | 4/7/2023 | Overburden | 4.13 | 87.8 | 6.33 | 238.40 | 11.30 | 2.76 | |

Notes:

| | |
|---|---|
| mg/L = | milligram per liter |
| mV | millivolts |
| SU = | Standard Units |
| µS/cm | microsiemens per centimeter |
| °C | degrees Celcius |
| NTU | Nephelometric Turbidity Unit |

# TABLE 6
# Vertical Gradient
# Evaluation
# 2023

# Table 6
## Vertical Gradient Evaluation
Nuclear Metals, Inc Superfund Site
Concord, Massachusetts

**Well Cluster MW-01**

| Well | Mid Screen Elevation (ft NGVD) | Groundwater Elevation (ft NGVD) 3-Apr-2023 |
|---|---|---|
| MW-S01 | 125.70 | 129.83 |
| MW-SD01 | 96.50 | 129.69 |
| MW-BS01 | 62.40 | 130.38 |
| **Vertical Gradient Between Adjacent Wells** | | |
| MW-S01 and MW-SD01 | | 0.005 DOWN |
| MW-SD01 and MW-BS01 | | 0.02 UP |
| MW-S01 and MW-BS01 | | 0.009 UP |

**Well Cluster MW-02**

| Well | Mid Screen Elevation (ft NGVD) | Groundwater Elevation (ft NGVD) 3-Apr-2023 |
|---|---|---|
| MW-S02 | 129.79 | 133.14 |
| MW-SD02 | 100.93 | 133.03 |
| MW-BS02 | 69.89 | 133.27 |
| **Vertical Gradient Between Adjacent Wells** | | |
| MW-S02 and MW-SD02 | | 0.004 DOWN |
| MW-SD02 and MW-BS02 | | 0.007 UP |
| MW-S02 and MW-BS02 | | 0.002 UP |

**Well Cluster MW-03**

| Well | Mid Screen Elevation (ft NGVD) | Groundwater Elevation (ft NGVD) 3-Apr-2023 |
|---|---|---|
| MW-S03 | 136.19 | 148.65 |
| MW-BS03 | 55.65 | 134.78 |
| MW-BM03 | 29.40 | 134.83 |
| **Vertical Gradient Between Adjacent Wells** | | |
| MW-S03 and MW-BS03 | | 0.172 DOWN |
| MW-BS03 and MW-BM03 | | 0.002 UP |
| MW-S03 and MW-BM03 | | 0.129 DOWN |

**Well Cluster MW-04**

| Well | Mid Screen Elevation (ft NGVD) | Groundwater Elevation (ft NGVD) 3-Apr-2023 |
|---|---|---|
| MW-S04 | 148.67 | 153.33 |
| MW-BS04 | 57.22 | 133.84 |
| **Vertical Gradient Between Adjacent Wells** | | |
| MW-S04 and MW-BS04 | | 0.213 DOWN |

**Well Cluster MW-06**

| Well | Mid Screen Elevation (ft NGVD) | Groundwater Elevation (ft NGVD) 3-Apr-2023 |
|---|---|---|
| MW-S06 | 128.2 | 132.04 |
| MW-SD06 | 109.3 | 131.91 |
| **Vertical Gradient Between Adjacent Wells** | | |
| MW-S06 and MW-SD06 | | 0.007 DOWN |

**Well Cluster MW-10**

| Well | Mid Screen Elevation (ft NGVD) | Groundwater Elevation (ft NGVD) 3-Apr-2023 |
|---|---|---|
| MW-SD10 | 132.75 | 140.51 |
| MW-T10 | 114.34 | 141.09 |
| MW-BS10 | 88.32 | 138.66 |
| **Vertical Gradient Between Adjacent Wells** | | |
| MW-SD10 and MW-T10 | | 0.032 UP |
| MW-T10 and MW-BS10 | | 0.093 DOWN |
| MW-SD10 and MW-BS10 | | 0.042 DOWN |

**Well Cluster GZW-8**

| Well | Mid Screen Elevation (ft NGVD) | Groundwater Elevation (ft NGVD) 3-Apr-2023 |
|---|---|---|
| GZW-8-1 | 118.13 | 120.83 |
| P-1A | 99.22 | 122.25 |
| GZW-8-2 | 13.20 | 121.73 |
| **Vertical Gradient Between Adjacent Wells** | | |
| GZW-8-1 and P-1A | | 0.075 UP |
| P-1A and GZW-8-2 | | 0.006 DOWN |
| GZW-8-1 and GZW-8-2 | | 0.009 UP |

**Well Cluster GZW-10**

| Well | Mid Screen Elevation (ft NGVD) | Groundwater Elevation (ft NGVD) 3-Apr-2023 |
|---|---|---|
| GZW-10-1 | 126.50 | 131.03 |
| GZW-10-2 | 37.00 | 129.90 |
| **Vertical Gradient Between Adjacent Wells** | | |
| GZW-10-1 and GZW-10-2 | | 0.0126 DOWN |

**Well Cluster MW-12**

| Well | Mid Screen Elevation (ft NGVD) | Groundwater Elevation (ft NGVD) 3-Apr-2023 |
|---|---|---|
| MW-S12 | 139.70 | 145.59 |
| MW-BS12 | 106.90 | 144.78 |
| **Vertical Gradient Between Adjacent Wells** | | |
| MW-S12 and MW-BS12 | | 0.0245 DOWN |

**Well Cluster MW-13**

| Well | Mid Screen Elevation (ft NGVD) | Groundwater Elevation 3-Apr-2023 |
|---|---|---|
| MW-SM13 | 119.60 | 131.23 |
| MW-SD13 | 79.40 | 130.79 |
| MW-BS13 | 57.49 | 131.82 |
| MW-B1D13 | -11.46 | 132.58 |
| MW-B2D13 | -41.19 | 132.55 |
| MW-B3D13 | -76.93 | 132.73 |
| **Vertical Gradient Between Adjacent Wells** | | |
| MW-SM13 and MW-SD13 | | 0.0109 DOWN |
| MW-SD13 and MW-BS13 | | 0.0471 UP |
| MW-BS13 and MW-B1D13 | | 0.011 UP |
| MW-B1D13 and MW-B2D13 | | 0.0008 DOWN |
| MW-B2D13 and MW-B3D13 | | 0.0048 UP |

**Well Cluster MW-15**

| Well | Mid Screen Elevation (ft NGVD) | Groundwater Elevation 3-Apr-2023 |
|---|---|---|
| MW-S15 | 120.40 | 127.62 |
| MW-SD15 | 47.78 | 127.28 |
| MW-BS15 | 23.50 | 126.97 |
| MW-BM15 | -8.40 | 127.40 |
| **Vertical Gradient Between Adjacent Wells** | | |
| MW-S15 and MW-SD15 | | 0.005 DOWN |
| MW-SD15 and MW-BS15 | | 0.013 DOWN |
| MW-BS15 and MW-BM15 | | 0.013 UP |
| MW-S15 and MW-BS15 | | 0.007 DOWN |

# Table 6
## Vertical Gradient Evaluation
Nuclear Metals, Inc Superfund Site
Concord, Massachusetts

**Well Cluster MW-17**

| Well | Mid Screen Elevation (ft NGVD) | Groundwater Elevation (ft NGVD) 3-Apr-2023 |
|---|---|---|
| MW-S17 | 128.09 | 133.32 |
| MW-SD17 | 108.48 | 133.43 |
| MW-BS17 | 84.83 | 133.11 |
| **Vertical Gradient Between Adjacent Wells** | | |
| MW-S17 and MW-SD17 | | 0.005 UP |
| MW-SD17 and MW-BS17 | | 0.013 DOWN |
| MW-S17 and MW-BS17 | | 0.005 DOWN |

**Well Cluster MW-21**

| Well | Mid Screen Elevation (ft NGVD) | Groundwater Elevation (ft NGVD) 3-Apr-2023 |
|---|---|---|
| MW-S21 | 140.00 | 145.40 |
| MW-BS21 | 113.40 | 146.26 |
| **Vertical Gradient Between Adjacent Wells** | | |
| MW-S21 and MW-BS21 | | 0.032 UP |

**Well Cluster MW-24**

| Well | Mid Screen Elevation (ft NGVD) | Groundwater Elevation (ft NGVD) 3-Apr-2023 |
|---|---|---|
| MW-S24 | 126.90 | 135.46 |
| MW-SD24 | 114.46 | 136.07 |
| MW-T24 | 97.97 | 135.99 |
| **Vertical Gradient Between Adjacent Wells** | | |
| MW-S24 and MW-SD24 | | 0.049 UP |
| MW-SD24 and MW-T24 | | 0.005 DOWN |
| MW-S24 and MW-T24 | | 0.018 UP |

**Well Cluster MW-26**

| Well | Mid Screen Elevation (ft NGVD) | Groundwater Elevation (ft NGVD) 3-Apr-2023 |
|---|---|---|
| MW-S26 | 118.60 | 126.41 |
| MW-SD26 | 43.60 | 125.80 |
| MW-BS26 | 10.00 | 127.32 |
| **Vertical Gradient Between Adjacent Wells** | | |
| MW-S26 and MW-SD26 | | 0.008 DOWN |
| MW-SD26 and MW-BS26 | | 0.045 UP |
| MW-S26 and MW-BS26 | | 0.008 UP |

**Well Cluster MW-27**

| Well | Mid Screen Elevation (ft NGVD) | Groundwater Elevation (ft NGVD) 3-Apr-2023 |
|---|---|---|
| MW-S27 | 109.50 | 132.98 |
| MW-SD27 | 57.40 | 132.69 |
| **Vertical Gradient Between Adjacent Wells** | | |
| MW-S27 and MW-SD27 | | 0.006 DOWN |

**Well Cluster MW-28**

| Well | Mid Screen Elevation (ft NGVD) | (ft NGVD) 3-Apr-2023 |
|---|---|---|
| MW-S28 | 129.70 | 129.68 |
| MW-BS28 | 33.30 | 128.78 |
| MW-B1D28 | -10.59 | 129.25 |
| MW-B2D28 | -61.64 | 129.36 |
| **Vertical Gradient Between Adjacent Wells** | | |
| MW-S28 and MW-BS28 | | 0.0093 DOWN |
| MW-BS28 and MW-B1D28 | | 0.0106 UP |
| MW-B1D28 and MW-B2D28 | | 0.0022 UP |

**Well Cluster MW-30**

| Well | Mid Screen Elevation (ft NGVD) | Groundwater Elevation (ft NGVD) 3-Apr-2023 |
|---|---|---|
| MW-S30 | 130.50 | 132.92 |
| MW-SD30 | 110.30 | 117.85 |
| **Vertical Gradient Between Adjacent Wells** | | |
| MW-S30 and MW-SD30 | | 0.746 DOWN |

**Well Cluster MW-32**

| Well | Mid Screen Elevation (ft NGVD) | Groundwater Elevation 3-Apr-2023 |
|---|---|---|
| MW-S32 | 89.50 | 125.78 |
| MW-SD32 | 59.40 | 125.85 |
| MW-BS32 | 32.40 | 126.10 |
| **Vertical Gradient Between Adjacent Wells** | | |
| MW-S32 and MW-SD32 | | 0.002 UP |
| MW-SD32 and MW-BS32 | | 0.009 UP |
| MW-S32 and MW-BS32 | | 0.006 UP |

# Table 6
## Vertical Gradient Evaluation
Nuclear Metals, Inc Superfund Site
Concord, Massachusetts

**Well Cluster MW-34**

| Well | Mid Screen Elevation (ft NGVD) | Groundwater Elevation 3-Apr-2023 |
|---|---|---|
| PT-11P | 119.70 | 125.85 |
| MW-SD34 | 42.20 | 125.83 |
| MW-BS34 | 25.70 | 126.16 |
| **Vertical Gradient Between Adjacent Wells** | | |
| PT-11P and MW-SD34 | | 0.0003 DOWN |
| MW-SD34 and MW-BS34 | | 0.02 UP |
| PT-11P and MW-BS34 | | 0.003 UP |

**Well Cluster MW-35**

| Well | Mid Screen Elevation (ft NGVD) | Groundwater Elevation 3-Apr-2023 |
|---|---|---|
| MW-S35 | 104.60 | 126.38 |
| MW-SD35 | 52.50 | 128.61 |
| MW-BS35 | 29.00 | 129.11 |
| **Vertical Gradient Between Adjacent Wells** | | |
| MW-S35 and MW-SD35 | | 0.043 UP |
| MW-SD35 and MW-BS35 | | 0.021 UP |
| MW-S35 and MW-BS35 | | 0.036 UP |

**Well Cluster MW-37**

| Well | Mid Screen Elevation (ft NGVD) | Groundwater Elevation 3-Apr-2023 |
|---|---|---|
| MW-S37 | 87.00 | 127.35 |
| MW-SD37 | 57.50 | 128.22 |
| MW-BS37 | 41.50 | 128.24 |
| **Vertical Gradient Between Adjacent Wells** | | |
| MW-S37 and MW-SD37 | | 0.029 UP |
| MW-SD37 and MW-BS37 | | 0.001 UP |
| MW-S37 and MW-BS37 | | 0.02 UP |

**Well Cluster MW-38**

| Well | Mid Screen Elevation (ft NGVD) | Groundwater Elevation 3-Apr-2023 |
|---|---|---|
| MW-S38 | 89.40 | 126.84 |
| MW-SD38 | 69.20 | 126.57 |
| MW-BS38 | 44.20 | 127.40 |
| **Vertical Gradient Between Adjacent Wells** | | |
| MW-S38 and MW-SD38 | | 0.013 DOWN |
| MW-SD38 and MW-BS38 | | 0.033 UP |
| MW-S38 and MW-BS38 | | 0.012 UP |

**Well Cluster MW-39**

| Well | Mid Screen Elevation (ft NGVD) | Groundwater Elevation 3-Apr-2023 |
|---|---|---|
| MW-S39 | 92.00 | 128.96 |
| MW-SD39 | 55.10 | 128.76 |
| MW-BS39 | 39.10 | 128.97 |
| **Vertical Gradient Between Adjacent Wells** | | |
| MW-S39 and MW-SD39 | | 0.005 DOWN |
| MW-SD39 and MW-BS39 | | 0.013 UP |
| MW-S39 and MW-BS39 | | 0 UP |

**Well Cluster MW-40**

| Well | Mid Screen Elevation | Groundwater Elevation 3-Apr-2023 |
|---|---|---|
| MW-S40 | 86.73 | 125.99 |
| MW-SD40 | 44.64 | 124.42 |
| MW-BS40 | 15.64 | 125.94 |
| **Vertical Gradient Between Adjacent Wells** | | |
| MW-S40 and MW-SD40 | | 0.037 DOWN |
| MW-SD40 and MW-BS40 | | 0.052 UP |
| MW-S40 and MW-BS40 | | 0.001 DOWN |

**Well Cluster MW-60**

| Well | Mid Screen Elevation | Groundwater Elevation (ft NGVD) 3-Apr-2023 |
|---|---|---|
| MW-S60 | 128.84 | 135.72 |
| MW-SD60 | 115.29 | 136.42 |
| **Vertical Gradient Between Adjacent Wells** | | |
| MW-S60 and MW-SD60 | | 0.052 UP |

**Well Cluster MW-62A**

| Well | Mid Screen Elevation | Groundwater Elevation (ft NGVD) 3-Apr-2023 |
|---|---|---|
| MW-S62A | 128.62 | 134.99 |
| MW-SD62A | 113.62 | 134.67 |
| **Vertical Gradient Between Adjacent Wells** | | |
| MW-S62A and MW-SD62A | | 0.021 DOWN |

**Well Cluster MW-64**

| Well | Mid Screen Elevation | Groundwater Elevation (ft NGVD) 3-Apr-2023 |
|---|---|---|
| MW-S64 | 124.60 | 133.23 |
| MW-SD64 | 102.10 | 133.21 |
| **Vertical Gradient Between Adjacent Wells** | | |
| MW-S64 and MW-SD64 | | 0.001 DOWN |

**Note:**
1.Vertical gradient is calculated as the difference in head between clustered wells divided by the vertical distance between the center of the screened intervals.
ft NGVD = feet above National Geodetic Vertical Datum of 1929.

# APPENDICES

# APPENDIX A
# NUCLEAR METALS, INC. SITE
# CHRONOLOGY OF EVENTS

| Month | Activities Completed |
|---|---|
| **May 2022** | • On May 3rd, 10th, 17th and 24th, 2022, representatives from de maximis, inc. (de maximis), Haley & Aldrich (H&A), and Geosyntec participated in Remedial Design/Remedial Action (RD/RA) project meeting calls with United States of Environmental Protection Agency (USEPA), AECOM and Massachusetts Department of Environmental Protection (MassDEP).<br>• On May 10, 2022, O&M Inc. completed monthly groundwater sampling at BEW-1, -2, -3, & -4 as part of the proposed Post Pumping Sampling Plan.<br>• On May 10, 2022, de maximis submitted the RD/RA Monthly Progress Report No. 29.<br>• On May 24, 2022, tree clearing activities around the proposed Ex-Situ Hi-POx building as well as the grubbing of AOI 8 & 9 finished.<br>• Continued site-wide inspections and completed routine site maintenance (liner patching, perimeter fence repairs, etc., as needed). |
| **June 2022** | • On June 7th, 14th , 21st, and 28th, 2022, representatives from de maximis, H&A, and Geosyntec participated in RD/RA project meeting calls with USEPA, AECOM and MassDEP.<br>• On June 6-10, 2022, Geosyntec completed ISS pilot program monitoring activities in PTA-1 and PTA-2.<br>• On June 10, 2022, de maximis submitted the RD/RA Monthly Progress Report No. 30.<br>• On June 13, 2022, de maximis submitted the PDI Bedrock Groundwater Pump & Treat System Work Plan.<br>• On June 15, 2022, O&M Inc. completed monthly groundwater sampling at BEW-1, -2, -3, & -4 as part of the proposed Post Pumping Sampling Plan.<br>• On June 20, 2022, US Ecology Mobilized to the site to begin trenching and utility work associated with the PDI Bedrock Groundwater Pump and Treat System.<br>• Continued site-wide inspections and completed routine site maintenance (liner patching, perimeter fence repairs, etc., as needed). |
| **July 2022** | • On July 5th, 12th, 19th, and 26th, 2022, representatives from de maximis, H&A, and Geosyntec participated in RD/RA project meeting calls with USEPA, AECOM and MassDEP.<br>• All electrical and influent/effluent piping for the PDI Bedrock Pump & Treat System has been installed.<br>• US Ecology has continued trenching, utility work, and building foundation work associated with the PDI Bedrock Pump & Treat System. |

| | |
|---|---|
| | • On July 10, 2022, de maximis submitted the RD/RA Monthly Progress Report No. 31.<br>• On July 14, 2022, O&M Inc. sampled BEW-1, 2, 3, & 4 as part of the Post-Pumping sampling plan.<br>• From July 25-26, 2022, Geosyntec completed in-situ sequestration (ISS) pilot test groundwater monitoring activities in Pilot Test Area PTA-1 and PTA-2.<br>• On July 26, 2022, LRT successfully completed the first hydrostatic test of the water piping.<br>• On July 19, 2022, de maximis submitted comments on the ISS Treatability Study Report.<br>• On July 22, 2022, de maximis submitted comments on the Draft PDI Bedrock Pump & Treat System Work Plan. The agencies responded to comments on July 26, 2022 and approved the submittal on July 27, 2022.<br>• Continued site-wide inspections and completed routine site maintenance (liner patching, perimeter fence repairs, etc., as needed). |
| **August 2022** | • On August 2nd, 9th, 16th, 23rd, and 30th, 2022, representatives from de maximis, H&A, and Geosyntec participated in RD/RA project meeting calls with USEPA, AECOM and MassDEP.<br>• During the month of August 2022, de maxims subcontractor, US Ecology continued trenching activities, utility work, and backfilling, placement of Bedrock Extraction Well (BEW) vaults the Pre-Design Investigation (PDI) Bedrock Groundwater Pump & Treat System building foundation.<br>• During the month of August 2022, de maximis' subcontractor, Cornerstone construction completed installation of Pre-Design Investigation (PDI) Bedrock Groundwater Pump & Treat System building footer and foundation walls.<br>• During the month of August 2022, de maximis' electrical contractor, Watjus Electric completed the installation of associated electrical conduits and handholes for the PDI Bedrock Groundwater Pump & Treat System.<br>• On August 3, 2022, US Ecology, with oversight from Geosyntec successfully completed the second-round of hydrostatic testing of water pipes for the Bedrock Groundwater Pump and Treat System piping.<br>• On August 4, 2022, de maximis submitted the draft 95% Remedial Design for the Knox Trail Groundwater Extraction Expansion.<br>• On August 8th and 9th, 2022, Geosyntec sampled eleven (11) monitoring wells as part of the Bedrock Extraction Well Post-Pumping Sampling Plan. Data can be seen in Table 4. |

| | |
|---|---|
| | • On August 10, 2022, de maximis received agency comments on the Holding Basin PDI Report.<br>• On August 10, 2022, de maximis submitted the RD/RA Monthly progress Report No. 32.<br>• On August 18, 2022, de maximis submitted to the agencies the *in-situ sequestration* (ISS) Treatability Study Report response to comments. |
| **September 2022** | • On September 6th,13th, 20th, and 27th, 2022, representatives from de maximis, H&A, and Geosyntec participated in RD/RA project meeting calls with USEPA, AECOM and MassDEP.<br>• During the month of September 2022, de maximis' subcontractor US Ecology, continued construction activities associated with the Pre-Design Investigation (PDI) Bedrock Groundwater Pump & Treat System Project:<br>• During the month of September 2022, de maximis' subcontractor, Cornerstone Construction continued installation of the PDI Bedrock Groundwater Pump & Treat System building.<br>• During the month of September 2022, de maximis' electrical contractor, Watjus Electric continued the installation of associated electrical conduits for the PDI Bedrock Groundwater Pump & Treat System.<br>• On September 7th and 8th, 2022, Geosyntec sampled eleven (11) monitoring wells as part of the Bedrock Extraction Well (BEW) post- pumping sampling program.<br>• On September 13, 2022, de maximis received agency comments on the 100% Remedial Design for Site-Wide Soils and Sediment associated with AOI-8 and AOI-9.<br>• On September 13, 2022, de maximis submitted the RD/RA Monthly progress Report No. 33.<br>• On September 15, 2022, de maximis submitted the100% Remedial Design for the Knox Trail Groundwater Extraction System Expansion.<br>• On September 23, 2022, de maximis received agency approval on the 100% Remedial Design for the Knox Trail Groundwater Extraction System Expansion.<br>• On September 26, 2022, de maximis submitted the Holding Basin PDI Report response to EPA comments received on August 10, 2022.<br>• On September 28, 2022, de maximis received agency approval on the 100% Remedial Design for Site-Wide Soils and Sediment associated with AOI-8 and AOI-9.<br>• O&M Inc. continued performing site-wide inspections and routine site maintenance, as needed (iner patching, perimeter fence repairs, etc.,). |

| | |
|---|---|
| **October 2022** | • On October 4th,11th, 18th, and 25th, 2022, representatives from de maximis, H&A, and Geosyntec participated in RD/RA project meeting calls with USEPA, AECOM and MassDEP.<br>• de maximis' subcontractor Cornerstone continued constructing the treatment building. The following activities were completed: installation of the septic and secondary containment tanks, trench drain, slab and entry way concrete floor pours, and the potable water service tie into town water.<br>• On October 3, 2022, Concord Municipal Light and Power began work with Watjus electric to get power from Route 62 to the transformer location.<br>• On October 13, 2022, de maximis inc. received agency approval of the Holding Basin Pre-Design Investigation (PDI) Report.<br>• On October 19, 2022, O&M Inc. completed the semi-annual groundwater gauging event.<br>• On October 20, 2022, de maximis inc. received agency comments on the Interim Bedrock Groundwater PDI Report.<br>• On October 28, 2022, de maximis inc. submitted the AOI-8 & AOI-9 Remedial Action Work Plan to the agencies.<br>• O&M Inc. continued performing site-wide inspections and routine site maintenance, as needed (liner patching, perimeter fence repairs, etc.,). |
| **November 2022** | • On November 1st, 8th,15th, 22nd, and 29th, 2022, representatives from de maximis, H&A, and Geosyntec participated in RD/RA project meeting calls with USEPA, AECOM and MassDEP.<br>• During the month of November 2022, de maximis' subcontractor, Cornerstone completed constructing the on-site Pre-Design Investigation (PDI) Bedrock Pump & Treat building.<br>• During the month of November 2022, O&M Inc. and Watjus Electric continued buildout of all electrical, plumbing, and treatment system related infrastructure associated with the on-site PDI Bedrock Pump & Treat<br>• On November 2, 2022, de maximis inc. submitted the In-Situ Sequestration (ISS) Pre-Design Investigation (PDI) Report to USEPA & MassDEP.<br>• On November 3, 2022, de maximis inc. submitted response to EPA & MassDEP comments on the Knox Trail Groundwater Pump and Treat System Annual Report.<br>• On November 3, 2022, de maximis inc. received comments from USEPA & MassDEP on the Site-wide Soils and Sediments Area of Interest (AOI) Number 8 (AOI-8) & AOI-9 Design Remedial Action Work Plan (RAWP).<br>• On November 4, 2022, de maximis inc. submitted response to EPA & MassDEP comments on the Interim Bedrock Groundwater PDI Report. |

| | |
|---|---|
| | • On November 7, 2022, Charter Contracting mobilized to the site to begin remedial action activities within AOI-8 and AOI-9.<br>• On November 10, 2022, Concord Municipal Light Plant energized the building transformer.<br>• On November 11, 2022, de maximis inc. submitted the 30% Remedial Design (RD) for Site Wide Soil and Sediments to the USEPA & MassDEP.<br>• From November 16th – 21st Geosyntec completed groundwater sampling at all Bedrock Extraction Well post-pumping and ISS pilot testing locations.<br>• On November 17, 2022, de maximis inc. submitted the revised Sitewide Soils and Sediments AOI-8 & 9 RAWP.<br>• On November 21, 2022, de maximis inc. received a second round of comments from USEPA and MassDEP on the Knox Trail Annual Treatment System Report.<br>• On November 23, 2022, de maximis inc. submitted the NMI Site Annual Groundwater Monitoring Report<br>• O&M Inc. continued performing site-wide inspections and routine site maintenance, as needed (iner patching, perimeter fence repairs, etc.,). |
| **December 2022** | • During the month of December 2022, O&M Inc. and Watjus Electric continued buildout of all electrical, plumbing, and treatment system related infrastructure for the PDI Bedrock Groundwater Pump & Treat System.<br>• During the month of December 2022, Charter Contracting completed initial soil excavation work associated with Area of Interest (AOI) number 8 (AOI-8) and AOI-9.<br>• On December 5, 2022, de maximis submitted the revised Knox Trail Annual Report.<br>• On December 5, 2022, de maximis submitted the Knox Trail Groundwater Extraction System Expansion Remedial Action Work Plan.<br>• On December 6th, 13th, 20th, and 27th, 2022, representatives from de maximis, H&A, and Geosyntec participated in RD/RA project meeting calls with USEPA, AECOM and MassDEP.<br>• On December 12, 2022, de maximis submitted the RD/RA November 2022 monthly progress report.<br>• On December 12, 2022, representative of de maximis, Geosyntec, US Ecology and USEPA participated in a pre-construction meeting to discuss the construction of the access road over the Kinder Morgan Right-of-Way (ROW) to BEW-5.<br>• On December 12, 2022, de maximis' subcontractor, US Ecology began constructing the access road to BEW-5 as designed in the Knox Trail Groundwater Extraction System Expansion RAWP. The access road was completed on December 16, 2022. |

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|---|---|
| | • On December 13, 2022, de maximis received EPA comments on the AOI 8 & 9 Remedial Action Work Plan (RAWP).<br>• On December 13, 2022, de maximis received conditional approval of the amendment to AOI-8 and AOI-9 RAWP, associated with the sampling, handling, and dispossessing material containing polychlorinated biphenyls (PCBs) greater than fifty (50) parts per million (ppm).<br>• December 14, 2022, de maximis received EPA approval on the Draft Interim Bedrock Groundwater Pre-Design Investigation Report.<br>• On December 14, 2022, de maximis received EPA approval on the revised Knox Trail Annual Treatment System Report.<br>• On December 14, 2022, de maximis received EPA approval on the RD/RA Knox Trail Annual Treatment System Report. On December 5, 2022, de maximis submitted the revised Knox Trail Annual Report.<br>• On December 14, 2022, de maximis submitted and received EPA approval on the updated Nuclear Metals Inc. (NMI) Transportation & Off-Site Disposal Plan.<br>• On December 27, 2022, de maximis submitted response to comments to USEPA on the AOI 8 & 9 RAWP and received approval from USEPA on the same day.<br>• O&M Inc. continued performing site-wide inspections and routine site maintenance, as needed (liner patching, perimeter fence repairs, etc.). |
| **January 2023** | • During the month of January 2023, de maximis subcontractors, O&M Inc. and Watjus Electric, continued buildout of electrical, plumbing, and treatment system related infrastructure associated with the on-site PDI Bedrock Pump & Treat System.<br>• During the month of January 2023, de maximis' subcontractor, Charter Contracting, continued excavation work associated with Area of Interest (AOI) number 8 and number 9 (AOI-8 & AOI-9).<br>• On January 3rd, 10th,17th, 24th, and 31st, 2023, representatives from de maximis, H&A, and Geosyntec participated in RD/RA project meeting calls with USEPA, AECOM and MassDEP.<br>• From January 16th through 18th, 2023, de maximis' subcontractor, Geosyntec performed quarterly Pre-Design Investigation (PDI) In-situ Sequestration (ISS) groundwater monitoring.<br>• On January 17, 2023, de maximis, H&A, and Geosyntec presented sequence of remedial actions in anticipation of submitting the 95% Enabling Phase Remedial Activities in February 2023.<br>• On January 26, 2023, de maximis submitted responses to comments on AOI 8 & 9 Remedial Action Work Plan (RAWP), more specifically the updated standard operating procedure (SOP) |

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| | for the on-site inductively coupled plasma (ICP) analysis for total uranium and included the determination of the method detection limit.<br>• O&M Inc. continued performing site-wide inspections and routine site maintenance, as needed (liner patching, perimeter fence repairs, etc.). |
| **February 2023** | • During February 2023, de maximis subcontractor, Charter Contracting, continued excavation work associated with Areas of Interest (AOI) number 8 and number 9 (AOI-8 & AOI-9), modified as appropriate based on analytical results.<br>• On February 1, 2023, de maximis received EPA approval on the Knox trail Groundwater Extraction System Expansion 100% RD RAWP.<br>• On February 2, 2023, de maximis received EPA's comments on the 30% RD for Site-Wide Soils and Sediments.<br>• On February 7th, 14th, 21th, and 28th, 2023, representatives from de maximis, H&A, and Geosyntec participated in RD/RA project meeting calls with USEPA, AECOM and MassDEP.<br>• On February 8, 2023, de maximis received EPA's draft comments on the ISS PDI Report.<br>• On February 9, 2023, de maximis submitted the 2nd revision to Knox Trail Groundwater Treatment System Operation & Maintenance Plan.<br>• On February 10, 2023, de maximis submitted the revised AOI 8 & 9 100% Design RAWP and responses to EPA comments.<br>• On February 13, 2023, de maximis submitted the 95% Enabling Phase RD Report.<br>• On February 13, 2023, de maximis submitted the 30% RD for the Holding Basin.<br>• On February 16, 2023, de maximis submitted a request to bypass the 60% RD for Site-Wide Soils and Sediments.<br>• On February 21, 2023 de maximis, H&A, and Geosyntec presented the Enabling Phase RD to EPA and MassDEP.<br>• On February 21, 2023, EPA approved the request to bypass the 60% RD for Side-Wide Soils and Sediments.<br>• On February 28, 2023, de maximis submitted the draft Institutional Control Plan for EPA review.<br>• On February 28, 2023 de maximis submitted the Knox Trail Treatment System Annual O&M Report.<br>• O&M Inc. continued performing site-wide inspections and routine site maintenance, as needed (liner patching, perimeter fence repairs, etc.). |
| **March 2023** | • During the month of March 2023, Charter Contracting (Charter) continued excavation work associated with Area of Interest (AOI) |

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| | number 8 and number 9 (AOI-8 & AOI-9). Excavation was guided by confirmation sampling analytical results. Some tree removal had to be performed at AOI-9 in order to continue excavation in area of exceedances.<br>• On March 2, 2023, tree clearing was performed in preparation for drainage improvements for AOI-8 and AOI-9.<br>• On March 7th, 14th, 21st, and 28th, 2023, representatives from de maximis, H&A, and Geosyntec participated in RD/RA project meeting calls with USEPA, AECOM and MassDEP.<br>• On March 7, 2023, tree clearing was performed for Knox Trail expansion work.<br>• On March 10, 2023, de maximis submitted the RD/RA January 2023 monthly progress report to EPA.<br>• On March 13, 2023, de maximis submitted proposed modifications to the Annual Groundwater Monitoring Plan.<br>• On March 16, 2023, de maximis received EPA comments pertaining to the 2022 Annual Groundwater monitoring report.<br>• On March 28, 2023, de maximis received EPA Conditional Approval of the Proposed Modifications to the Annual Groundwater Monitoring Plan.<br>• On March 29, 2023, de maximis held a meeting with the community groups, MassDEP, EPA, H&A, and Geosyntec to update the community groups on the recent remedial activities and future plans for continued remedial activities.<br>• On March 30, 2023, de maximis received comments for the 95% Enabling Phase Remedial Activities Design Work Plan.<br>• During the month of March 2023, O&M Inc. continued performing site-wide inspections and routine site maintenance, as needed (liner patching, perimeter fence repairs, etc.). |
| **April 2023** | • During the month of April 2023, Charter Contracting (Charter) continued excavation work associated with Area of Interest (AOI) number 8 and number 9 (AOI-8 & AOI-9). Excavation was guided by confirmation sampling analytical results. The new location of the Waste Processing area was completed in April. Additionally, former abandoned utilities, i.e., electrical conduits, stormwater piping and catch basins, were excavated and disposed. Charter installed and repaired the road in the vicinity of AOI-8 and started restoration of AOI-8 in areas where excavation was deemed completed based on confirmation sampling results.<br>• On April 3, 2023, Mayer Tree completed tree clearing in area AOI-9.<br>• On April 3, 2023, Geosyntec, O&M Inc., and de maximis, started the Annual Groundwater Sampling event. |

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| | • On April 3, 2023, de maximis submitted a request to extend the submission date for the 95% RD Sitewide Soil & Sediment to July 12, 2023.<br>• On April 4th, 11th, 18th, and 25th, 2023, representatives from de maximis, H&A, and Geosyntec participated in RD/RA project meeting calls with USEPA, AECOM and MassDEP.<br>• On April 4 and April 12, 2023, TSCA soils were live loaded and transported for disposal.<br>• On April 10, 2023, de maximis submitted the March 2023 monthly progress report to EPA.<br>• On April 10, 2023, Charter and H&A started pre-characterization soil borings per the Enabling Phase Remedial Activities Design Work Plan.<br>• On April 13, 2023, de maximis submitted the Transportation and Off-Site Disposal Plan.<br>• On April 25, 2023, de maximis submitted AOI-8 Stormwater Revised Design Memorandum.<br>• On April 25, 2023, de maximis received EPA comments on the Transportation & Off-Site Disposal Plan, dated April 2023.<br>• On April 28, 2023, de maximis received comments from EPA on the 95% Enabling Phase Remedial Activities Design Work Plan<br>• During the month of April 2023, O&M Inc. continued performing site-wide inspections and routine site maintenance, as needed (liner patching, perimeter fence repairs, etc.). |

# APPENDIX B
# SCANNED FIELD FORMS

# MONTHLY SAMPLING EVENT FORMS
# MAY 2022 - MARCH 2023

# Water Quality Sonde Calibration Form

Inspector: Matthew B Date: 5/17/2022

| | | | |
|---|---|---|---|
| In-Situ Troll S/N: | | | |
| Battery % Remaining | | Batteries Replaced? | Y / N |
| Internal Log Stopped/Downloaded and Sent to Amy Hoffmann? | Y / N | Internal Log Setup and Started? | Y / N |
| Task: | | | |

| *Initial Check* | | *Standard* | *Reading Check* | *Acceptance Criteria* | *Pass / Fail* | *Recalibrated (See Below)* |
|---|---|---|---|---|---|---|
| **pH** | S.U. | 7 | 7.16 | +/- 0.5 pH unit | P / F | Y / N |
| **ORP** | mV | FROM CALIBRATION SCREEN / CHART | 229.8 | +/- 10 mV | P / F | Y / N |
| **Turbidity** | NTU | 10 | | +/- 2 NTU | P / F | Y / N |
| **Sp. Conductivity** | µS/cm | 1,413 @ 25°C | 1,193.4 | +/- 15% (Acceptable range: 1201.05-1624.95) | P / F | Y / N |
| **RDO** (Zero Solution) | mg/L | 0 | 0 | +/- 0.5 mg/L | P / F | Y / N |
| **Temperature** | °C | FROM THERMOMETER | | +/- 0.5 °C | P / F | Annually Only |

| *Calibration:* | *Sensor Range Value* | | *Sensor Acceptance Criteria* | *Sensor Pass / Fail* | *Sensor Replaced or Solution Changed?* | *Sensor S/N:* |
|---|---|---|---|---|---|---|
| **pH** 4-7 | Slope 1: | ~~-59.42~~ | –66 to –50 mV/pH | (P) / F | Y / N | |
| **pH** 7-10 | Slope 2: | -54.2 | | (P) / F | | |
| **pH** 4-7 | Offset 1: | -48.8 | +/- 30 mV | P / (F) | | |
| **pH** 7-10 | Offset 2: | -48.8 | +/- 30 mV | P / (F) | | |
| **ORP** mV | Offset: | ~~-19.33~~ | +/- 30 mV | P / F | | |
| **Turbidity** NTU | Slope: | | 0.7 to 1.3 | P / F | Y / N | |
| **Sp. Conductivity** µS/cm | Cell Constant: | | 0.7 to 1.3 | P / F | Y / N | |
| **RDO (100% and 0% Sat.)** | Slope: | 1.074441 | 0.7 to 1.3 | P / F | Y / N | |
| | Offset: | 0 | +/- 0.3 mg/L | P / F | | |

| *Post Calibration Check* | *Standard* | *Calibration Confirmation* | *Acceptance Criteria* | *Calibration Pass / Fail* |
|---|---|---|---|---|
| **pH** S.U | 10 | | +/- 0.1 pH unit | P / F |
| **ORP** mV | | | +/- 5mV | P / F |
| **Turbidity** NTU | 100 | | +/- 2 NTU | P / F |
| **Sp. Conductivity** µS/cm | 1,413 @ 25°C | | +/- 10% (Acceptable range 1271.10—1554.30) | P / F |
| **RDO** (Zero Solution) | 0 | | +/- 0.3 mg/L | P / F |

Notes Pre and post measurment master calibration standards

Turbidity - 20 NTU - 20.9 / 100 NTU - 101 / 800 NTU - 829

[redacted]

# Water Quality Sonde Calibration Form

Inspector: Matthews Date: 6/15/2022

| | | | |
|---|---|---|---|
| In-Situ Troll S/N: | 9296 | | |
| Battery % Remaining | [redacted] | Batteries Replaced? | Y / N |
| Internal Log Stopped/Downloaded and Sent to Amy Hoffmann? | Y / N | Internal Log Setup and Started? | Y / N |
| Task: | Monthly Samples | | |

| *Initial Check* | | *Standard* | *Reading Check* | *Acceptance Criteria* | *Pass / Fail* | *Recalibrated (See Below)* |
|---|---|---|---|---|---|---|
| **pH** | S.U. | 7 | 6.94 | +/- 0.5 pH unit | P / F | Y / N |
| **ORP** | mV | FROM CALIBRATION SCREEN / CHART 234.03 | 166.1 | +/- 10 mV | P / F | Y / N |
| **Turbidity** | NTU | 10 | | +/- 2 NTU | P / F | Y / N |
| **Sp. Conductivity** | µS/cm | 1,413 @ 25°C | 1,695.9 | +/- 15% (Acceptable range: 1201.05-1624.95) | P / F | Y / N |
| **RDO** (Zero Solution) | mg/L | 0 | | +/- 0.5 mg/L | P / F | Y / N |
| **Temperature** | °C | FROM THERMOMETER | | +/- 0.5 °C | P / F | Annually Only |

| *Calibration:* | *Sensor Range Value* | *Sensor Acceptance Criteria* | *Sensor Pass / Fail* | *Sensor Replaced or Solution Changed?* | *Sensor S/N:* |
|---|---|---|---|---|---|
| **pH** 4-7 | Slope 1: -56.06 | –66 to –50 mV/pH | P / F | Y / N | |
| **pH** 7-10 | Slope 2: -55.2 | | P / F | | |
| **pH** 4-7 | Offset 1: -47.0 | +/- 30 mV | P / F | | |
| **pH** 7-10 | Offset 2: -47.0 | +/- 30 mV | P / F | | |
| **ORP** mV | Offset: 67.7 | +/- 30 mV | P / F | | |
| **Turbidity** NTU | Slope: | 0.7 to 1.3 | P / F | Y / N | |
| **Sp. Conductivity** µS/cm | Cell Constant: .835 | 0.7 to 1.3 | P / F | Y / N | |
| **RDO (100% and 0% Sat.)** | Slope: 1.041924 | 0.7 to 1.3 | P / F | Y / N | |
| | Offset: -0.02 | +/- 0.3 mg/L | P / F | | |

| *Post Calibration Check* | *Standard* | *Calibration Confirmation* | *Acceptance Criteria* | *Calibration Pass / Fail* |
|---|---|---|---|---|
| **pH** S.U | 10 | | +/- 0.1 pH unit | P / F |
| **ORP** mV | | | +/- 5mV | P / F |
| **Turbidity** NTU | 100 | | +/- 2 NTU | P / F |
| **Sp. Conductivity** µS/cm | 1,413 @ 25°C | | +/- 10% (Acceptable range 1271.10—1554.30) | P / F |
| **RDO** (Zero Solution) | 0 | | +/- 0.3 mg/L | P / F |

Notes

[redacted]

# Water Quality Sonde Calibration Form

Inspector: MAATB Date: 7/14/2022

| | | | |
|---|---|---|---|
| In-Situ Troll S/N: | [redacted] 669296 | | |
| Battery % Remaining | — | Batteries Replaced? | Y / N |
| Internal Log Stopped/Downloaded and Sent to Amy Hoffmann? | Y / N | Internal Log Setup and Started? | Y / N |
| Task: | Monthly Sampling | | |

| *Initial Check* | | *Standard* | *Reading Check* | *Acceptance Criteria* | *Pass / Fail* | *Recalibrated (See Below)* |
|---|---|---|---|---|---|---|
| **pH** | S.U. | 7 | 7.11 | +/- 0.5 pH unit | P / F | Y / N |
| **ORP** | mV | FROM CALIBRATION SCREEN / CHART 234.2 | 234.5 | +/- 10 mV | P / F | Y / N |
| **Turbidity** | NTU | 10 | | +/- 2 NTU | P / F | Y / N |
| **Sp. Conductivity** | µS/cm | 1,413 @ 25°C | 1,304.4 | +/- 15% (Acceptable range: 1201.05-1624.95) | P / F | Y / N |
| **RDO** (Zero Solution) | mg/L | 0 | | +/- 0.5 mg/L | P / F | Y / N |
| **Temperature** | °C | FROM THERMOMETER | | +/- 0.5 °C | P / F | Annually Only |

| *Calibration:* | *Sensor Range Value* | *Sensor Acceptance Criteria* | *Sensor Pass / Fail* | *Sensor Replaced or Solution Changed?* | *Sensor S/N:* |
|---|---|---|---|---|---|
| **pH** 4-7 | Slope 1: -57.57 | -66 to -50 mV/pH | P / F | Y / N | |
| **pH** 7-10 | Slope 2: -55.79 | | P / F | | |
| **pH** 4-7 | Offset 1: -8.9 | +/- 30 mV | P / F | | |
| **pH** 7-10 | Offset 2: -8.9 | +/- 30 mV | P / F | | |
| **ORP** mV | Offset: 8.2 | +/- 30 mV | P / F | | |
| **Turbidity** NTU | Slope: | 0.7 to 1.3 | P / F | Y / N | |
| **Sp. Conductivity** µS/cm | Cell Constant: .958 | 0.7 to 1.3 | P / F | Y / N | |
| **RDO (100% and 0% Sat.)** | Slope: 1.118726 | 0.7 to 1.3 | P / F | Y / N | |
| | Offset: -0.03 | +/- 0.3 mg/L | P / F | | |

| *Post Calibration Check* | *Standard* | *Calibration Confirmation* | *Acceptance Criteria* | *Calibration Pass / Fail* |
|---|---|---|---|---|
| **pH** S.U | 10 | | +/- 0.1 pH unit | P / F |
| **ORP** mV | | | +/- 5mV | P / F |
| **Turbidity** NTU | 100 | | +/- 2 NTU | P / F |
| **Sp. Conductivity** µS/cm | 1,413 @ 25°C | | +/- 10% (Acceptable range 1271.10—1554.30) | P / F |
| **RDO** (Zero Solution) | 0 | | +/- 0.3 mg/L | P / F |

Notes

IPLEX OU2 OM/M

# Water Quality Sonde Calibration Form

Inspector: Matthew B Date: 8/16/2022

| | | | |
|---|---|---|---|
| In-Situ Troll S/N: | | | |
| Battery % Remaining | 96% | Batteries Replaced? | Y / N |
| Internal Log Stopped/Downloaded and Sent to Amy Hoffmann? | Y / N | Internal Log Setup and Started? | Y / N |
| Task: | | | |

| *Initial Check* | | *Standard* | *Reading Check* | *Acceptance Criteria* | *Pass / Fail* | *Recalibrated (See Below)* |
|---|---|---|---|---|---|---|
| **pH** | S.U. | 7 | 7.02 | +/- 0.5 pH unit | P / F | Y / N |
| **ORP** | mV | FROM CALIBRATION SCREEN / CHART | 201.4 | +/- 10 mV | P / F | Y / N |
| **Turbidity** | NTU | 10 | | +/- 2 NTU | P / F | Y / N |
| **Sp. Conductivity** | µS/cm | 1,413 @ 25°C | 1,378.6 | +/- 15% (Acceptable range: 1201.05-1624.95) | P / F | Y / N |
| **RDO** (Zero Solution) | mg/L | 0 | 0 | +/- 0.5 mg/L | P / F | Y / N |
| **Temperature** | °C | FROM THERMOMETER | 20.09 | +/- 0.5 °C | P / F | Annually Only |

| *Calibration:* | *Sensor Range Value* | | *Sensor Acceptance Criteria* | *Sensor Pass / Fail* | *Sensor Replaced or Solution Changed?* | *Sensor S/N:* |
|---|---|---|---|---|---|---|
| **pH** 4-7 | Slope 1: | 56.42 | –66 to –50 mV/pH | P / F | Y / N | |
| **pH** 7-10 | Slope 2: | 54.63 | | P / F | | |
| **pH** 4-7 | Offset 1: | 35.3 | +/- 30 mV | P / F | | |
| **pH** 7-10 | Offset 2: | 35.3 | +/- 30 mV | P / F | | |
| **ORP** mV | Offset: | 32.0 | +/- 30 mV | P / F | | |
| **Turbidity** NTU | Slope: | | 0.7 to 1.3 | P / F | Y / N | |
| **Sp. Conductivity** µS/cm | Cell Constant: | | 0.7 to 1.3 | P / F | Y / N | |
| **RDO (100% and 0% Sat.)** | Slope: | 1.032022 | 0.7 to 1.3 | P / F | Y / N | |
| | Offset: | 0.01 | +/- 0.3 mg/L | P / F | | |

| *Post Calibration Check* | *Standard* | *Calibration Confirmation* | *Acceptance Criteria* | *Calibration Pass / Fail* |
|---|---|---|---|---|
| **pH** S.U | 10 | | +/- 0.1 pH unit | P / F |
| **ORP** mV | | | +/- 5mV | P / F |
| **Turbidity** NTU | 100 | | +/- 2 NTU | P / F |
| **Sp. Conductivity** µS/cm | 1,413 @ 25°C | | +/- 10% (Acceptable range 1271.10—1554.30) | P / F |
| **RDO** (Zero Solution) | 0 | | +/- 0.3 mg/L | P / F |

Notes

[redacted]

# Water Quality Sonde Calibration Form

Inspector: Matthew Date: 9/14/2022

| | | | |
|---|---|---|---|
| In-Situ Troll S/N: | | | |
| Battery % Remaining | 97% | Batteries Replaced? | Y / N |
| Internal Log Stopped/Downloaded and Sent to Amy Hoffmann? | Y / N | Internal Log Setup and Started? | Y / N |
| Task: | Work | | |

| *Initial Check* | | *Standard* | *Reading Check* | *Acceptance Criteria* | *Pass / Fail* | *Recalibrated (See Below)* |
|---|---|---|---|---|---|---|
| **pH** | S.U | 7 | 7.02 | +/- 0.5 pH unit | P / F | Y / N |
| **ORP** | mV | FROM CALIBRATION SCREEN / CHART | 236.6 | +/- 10 mV | P / F | Y / N |
| **Turbidity** | NTU | 10 | | +/- 2 NTU | P / F | Y / N |
| **Sp. Conductivity** | µS/cm | 1,413 @ 25°C | 1,413 | +/- 15% (Acceptable range: 1201.05-1624.95) | P / F | Y / N |
| **RDO** (Zero Solution) | mg/L | 0 | 0 | +/- 0.5 mg/L | P / F | Y / N |
| **Temperature** | °C | FROM THERMOMETER | | +/- 0.5 °C | P / F | Annually Only |

| *Calibration:* | *Sensor Range Value* | | *Sensor Acceptance Criteria* | *Sensor Pass / Fail* | *Sensor Replaced or Solution Changed?* | *Sensor S/N:* |
|---|---|---|---|---|---|---|
| **pH** 4-7 | Slope 1: | -56.28 | -66 to -50 mV/pH | P / F | Y / N | |
| **pH** 7-10 | Slope 2: | -53.8 | | P / F | | |
| **pH** 4-7 | Offset 1: | -11.7 | +/- 30 mV | P / F | | |
| **pH** 7-10 | Offset 2: | -11.7 | +/- 30 mV | P / F | | |
| **ORP** mV | Offset: | 19.7 | +/- 30 mV | P / F | | |
| **Turbidity** NTU | Slope: | | 0.7 to 1.3 | P / F | Y / N | |
| **Sp. Conductivity** µS/cm | Cell Constant: | .844 | 0.7 to 1.3 | P / F | Y / N | |
| **RDO (100% and 0% Sat.)** | Slope: | 1.079061 | 0.7 to 1.3 | P / F | Y / N | |
| | Offset: | -0.03 | +/- 0.3 mg/L | P / F | | |

| *Post Calibration Check* | *Standard* | *Calibration Confirmation* | *Acceptance Criteria* | *Calibration Pass / Fail* |
|---|---|---|---|---|
| **pH** S.U | 10 | 10.04 | +/- 0.1 pH unit | P / F |
| **ORP** mV | | | +/- 5mV | P / F |
| **Turbidity** NTU | 100 | | +/- 2 NTU | P / F |
| **Sp. Conductivity** µS/cm | 1,413 @ 25°C | | +/- 10% (Acceptable range 1271.10—1554.30) | P / F |
| **RDO** (Zero Solution) | 0 | | +/- 0.3 mg/L | P / F |

Notes

[redacted]

# Water Quality Sonde Calibration Form

Inspector: Matthew P. Date: 11/16/2022

| | | | |
|---|---|---|---|
| In-Situ Troll S/N: | 614106 | | |
| Battery % Remaining | 97 | Batteries Replaced? | Y / N |
| Internal Log Stopped/Downloaded and Sent to Amy Hoffmann? | Y / N | Internal Log Setup and Started? | Y / N |
| Task: | low flow Sampling | | |

| *Initial Check* | | *Standard* | *Reading Check* | *Acceptance Criteria* | *Pass / Fail* | *Recalibrated (See Below)* |
|---|---|---|---|---|---|---|
| **pH** | S.U | 7 | 7.02 | +/- 0.5 pH unit | P / F | Y / N |
| **ORP** | mV | FROM CALIBRATION SCREEN / CHART | 239.3 | +/- 10 mV | P / F | Y / N |
| **Turbidity** | NTU | 10 | | +/- 2 NTU | P / F | Y / N |
| **Sp. Conductivity** | µS/cm | 1,413 @ 25°C | 1,209.5 | +/- 15% (Acceptable range: 1201.05-1624.95) | P / F | Y / N |
| **RDO** (Zero Solution) | mg/L | 0 | | +/- 0.5 mg/L | P / F | Y / N |
| **Temperature** | °C | FROM THERMOMETER | | +/- 0.5 °C | P / F | Annually Only |

| *Calibration:* | *Sensor Range Value* | | *Sensor Acceptance Criteria* | *Sensor Pass / Fail* | *Sensor Replaced or Solution Changed?* | *Sensor S/N:* |
|---|---|---|---|---|---|---|
| **pH** 4-7 | Slope 1: | -56.15 | -66 to -50 mV/pH | P / F | Y / N | |
| **pH** 7-10 | Slope 2: | -11.4 | | P / F | | |
| **pH** 4-7 | Offset 1: | -54.32 | +/- 30 mV | P / F | | |
| **pH** 7-10 | Offset 2: | -11.5 | +/- 30 mV | P / F | | |
| **ORP** mV | Offset: | 8.3 | +/- 30 mV | P / F | | |
| **Turbidity** NTU | Slope: | | 0.7 to 1.3 | P / F | Y / N | |
| **Sp. Conductivity** µS/cm | Cell Constant: | .955 | 0.7 to 1.3 | P / F | Y / N | |
| **RDO (100% and 0% Sat.)** | Slope: | — | 0.7 to 1.3 | P / F | Y / N | |
| | Offset: | — | +/- 0.3 mg/L | P / F | | |

| *Post Calibration Check* | *Standard* | *Calibration Confirmation* | *Acceptance Criteria* | *Calibration Pass / Fail* |
|---|---|---|---|---|
| **pH** S.U | 10 | | +/- 0.1 pH unit | P / F |
| **ORP** mV | | | +/- 5mV | P / F |
| **Turbidity** NTU | 100 | | +/- 2 NTU | P / F |
| **Sp. Conductivity** µS/cm | 1,413 @ 25°C | | +/- 10% (Acceptable range 1271.10—1554.30) | P / F |
| **RDO** (Zero Solution) | 0 | | +/- 0.3 mg/L | P / F |

Notes

RDO in range but not stabilizing

IPLEX OU2 OM/M

# Water Quality Sonde Calibration Form

Inspector: Matthew B Date: 12/21/2022

| | | | |
|---|---|---|---|
| In-Situ Troll S/N: | 778288 | | |
| Battery % Remaining | 97% | Batteries Replaced? | Y / N |
| Internal Log Stopped/Downloaded and Sent to Amy Hoffmann? | Y / N | Internal Log Setup and Started? | Y / N |
| Task: | low Flow Sampling | | |

| *Initial Check* | | *Standard* | *Reading Check* | *Acceptance Criteria* | *Pass / Fail* | *Recalibrated (See Below)* |
|---|---|---|---|---|---|---|
| **pH** | S.U. | 7 | 7.14 | +/- 0.5 pH unit | P / F | Y / N |
| **ORP** | mV | FROM CALIBRATION SCREEN / CHART | 237.4 | +/- 10 mV | P / F | Y / N |
| **Turbidity** | NTU | 10 | 9.8 | +/- 2 NTU | P / F | Y / N |
| **Sp. Conductivity** | µS/cm | 1,413 @ 25°C | 1,177 | +/- 15% (Acceptable range: 1201.05-1624.95) | P / F | Y / N |
| **RDO** (Zero Solution) | mg/L | 0 | 0 | +/- 0.5 mg/L | P / F | Y / N |
| **Temperature** | °C | FROM THERMOMETER | | +/- 0.5 °C | P / F | Annually Only |

| *Calibration:* | *Sensor Range Value* | *Sensor Acceptance Criteria* | *Sensor Pass / Fail* | *Sensor Replaced or Solution Changed?* | *Sensor S/N:* |
|---|---|---|---|---|---|
| **pH** 4-7 | Slope 1: -55.04 | –66 to –50 mV/pH | P / F | Y / N | |
| **pH** 7-10 | Slope 2: -54.44 | | P / F | | |
| **pH** 4-7 | Offset 1: -38.7 | +/- 30 mV | P / F | | |
| **pH** 7-10 | Offset 2: -38.7 | +/- 30 mV | P / F | | |
| **ORP** mV | Offset: 41.4 | +/- 30 mV | P / F | | |
| **Turbidity** NTU | Slope: | 0.7 to 1.3 | P / F | Y / N | |
| **Sp. Conductivity** µS/cm | Cell Constant: | 0.7 to 1.3 | P / F | Y / N | |
| **RDO (100% and 0% Sat.)** | Slope: 1.049638 | 0.7 to 1.3 | P / F | Y / N | |
| | Offset: -0.034 | +/- 0.3 mg/L | P / F | | |

| *Post Calibration Check* | *Standard* | *Calibration Confirmation* | *Acceptance Criteria* | *Calibration Pass / Fail* |
|---|---|---|---|---|
| **pH** S.U | 10 | ✓ | +/- 0.1 pH unit | P / F |
| **ORP** mV | | | +/- 5mV | P / F |
| **Turbidity** NTU | 100 | 99.9 | +/- 2 NTU | P / F |
| **Sp. Conductivity** µS/cm | 1,413 @ 25°C | 1,413 | +/- 10% (Acceptable range 1271.10—1554.30) | P / F |
| **RDO** (Zero Solution) | 0 | 0 | +/- 0.3 mg/L | P / F |

Notes

IPLEX OU2 OM/M

# Water Quality Sonde Calibration Form

Inspector: MATT.B Date: 1/18/2023

| | | | |
|---|---|---|---|
| In-Situ Troll S/N: | 614106 | Batteries Replaced? | Y / N |
| Battery % Remaining | 97% | | |
| Internal Log Stopped/Downloaded and Sent to Amy Hoffmann? | Y / N | Internal Log Setup and Started? | Y / N |
| Task: | | | |

| *Initial Check* | | *Standard* | *Reading Check* | *Acceptance Criteria* | *Pass / Fail* | *Recalibrated (See Below)* |
|---|---|---|---|---|---|---|
| **pH** | S.U. | 7 | 7.02 | +/- 0.5 pH unit | P / F | Y / N |
| **ORP** | mV | FROM CALIBRATION SCREEN / CHART | 239.6 | +/- 10 mV | P / F | Y / N |
| **Turbidity** | NTU | 10 | .24 | +/- 2 NTU | P / F | Y / N |
| **Sp. Conductivity** | µS/cm | 1,413 @ 25°C | 1,561.4 | +/- 15% (Acceptable range: 1201.05-1624.95) | P / F | Y / N |
| **RDO** (Zero Solution) | mg/L | 0 | N/A | +/- 0.5 mg/L | P / F | Annually Only |
| **Temperature** | °C | FROM THERMOMETER | | +/- 0.5 °C | P / F | |

| *Calibration:* | *Sensor Range Value* | | *Sensor Acceptance Criteria* | *Sensor Pass / Fail* | *Sensor Replaced or Solution Changed?* | *Sensor S/N:* |
|---|---|---|---|---|---|---|
| **pH** 4-7 | Slope 1: | -55.46 | -66 to -50 mV/pH | P / F | Y / N | |
| **pH** 7-10 | Slope 2: | -54.99 | | P / F | | |
| **pH** 4-7 | Offset 1: | -16.5 | +/- 30 mV | P / F | | |
| **pH** 7-10 | Offset 2: | -16.3 | +/- 30 mV | P / F | | |
| **ORP** mV | Offset: | 13.3 | +/- 30 mV | P / F | Y / N | |
| **Turbidity** NTU | Slope: | | 0.7 to 1.3 | P / F | Y / N | |
| **Sp. Conductivity** µS/cm | Cell Constant: | | 0.7 to 1.3 | P / F | Y / N | |
| **RDO (100% and 0% Sat.)** | Slope: | N/A | 0.7 to 1.3 | P / F | | |
| | Offset: | N/A | +/- 0.3 mg/L | P / F | | |

| *Post Calibration Check* | *Standard* | *Calibration Confirmation* | *Acceptance Criteria* | *Calibration Pass / Fail* |
|---|---|---|---|---|
| **pH** S.U | 10 | 10.08 | +/- 0.1 pH unit | P / F |
| **ORP** mV | | 234.6 | +/- 5mV | P / F |
| **Turbidity** NTU | 100 | | +/- 2 NTU | P / F |
| **Sp. Conductivity** µS/cm | 1,413 @ 25°C | | +/- 10% (Acceptable range 1271.10—1554.30) | P / F |
| **RDO** (Zero Solution) | 0 | | +/- 0.3 mg/L | P / F |

Notes

# METER CALIBRATION REPORT

Geosyntec consultants
289 Great Road, Acton, MA 01720
Phone: 978-263-9588, Fax: 978-263-9594

Project Name: NMIRORA
Project Number: 252
Field Personnel: M Boudrot
Recorded By: M Boudrot
Sampler's Initials: MSB

Date: 2/15/23 Page 1 of 1
Primary Activities: Low Flow Sampling
Weather: 40°-48° Sunny

*Meter Summary*

| Meter | Make/Model (ex. YSI 600XL) | Serial # | Rental Company | Rental Company ID # |
|---|---|---|---|---|
| Multi-Parameter Probe (pH, DO, ORP, Conductivity) | | | | |
| Turbidity Meter | | | | |

| dissolved oxygen (DO) and pH calibration | | dissolved oxygen calibration solutions | |
|---|---|---|---|
| | | 100% | 0 mg/L |
| initial | temperature (°C) | 14.9 | 14.9 |
| | instrument reading | 98.5 | 2.01 |
| | Calibrated To | 100 | N/A |
| | Final Reading | 100 | 0 |
| final | temperature (°C) | | |
| | instrument reading | | |
| | Post Cal Check Pass (yes/no) | | |

| pH buffer solutions | | |
|---|---|---|
| 4.01 | 7.00 | 10.00 |
| 15.5 | 15.0 | 16 |
| 3.77 | 7.31 | 10.17 |
| 4 | 7.00 | 16 |
| | 7.01 | 10.11 |
| | | |
| | | |
| | | |

| Specific conductivity, ORP[1] and turbidity calibration ([1]check temperature correction) | | Specific conductivity calibration |
|---|---|---|
| | | 1.413 µs/cm @ 25 °C |
| initial | temperature (°C) | 14.1 |
| | instrument reading | 1.41 |
| | Calibrated To | 1.413 |
| | Final Reading | 1.12 |
| final | Temperature (°C) | |
| | instrument reading | |
| | Post Cal Check Pass (yes/no) | |

| ORP[1] calibration solution (Zobell) |
|---|
| 231 mV Ag/AgCl @ 25 °C |
| 16.5 |
| 240.9 |
| 231 |
| 243 |
| |
| |
| |

| turbidity calibration solutions | | |
|---|---|---|
| #1 | #2 | #3 |
| 10 NTUs | 20 NTUs | 100 NTUs |
| N/A | N/A | N/A |
| .02 | 20.3 | 95.2 |
| .02 | 20.2 | 95.4 |
| .02 | 20.2 | 95.4 |
| N/A | N/A | N/A |
| | | |
| | | |

initial calibration completed at: _____ (time)

final calibration check completed at: _____ (time)

*Comments (DO membrane changed, other equipment issues, etc)*

[1]*See Back for Temperature Correction*

[redacted]

# Water Quality Sonde Calibration Form

Inspector: MATT.B Date: 3/8/2023

| | | | |
|---|---|---|---|
| In-Situ Troll S/N: | 665560 | | |
| Battery % Remaining | 97% | Batteries Replaced? | Y / N |
| Internal Log Stopped/Downloaded and Sent to Amy Hoffmann? | Y / N | Internal Log Setup and Started? | Y / N |
| Task: | GW Sampling | | |

| *Initial Check* | | *Standard* | *Reading Check* | *Acceptance Criteria* | *Pass / Fail* | *Recalibrated (See Below)* |
|---|---|---|---|---|---|---|
| **pH** | S.U | 7 | 7.02 | +/- 0.5 pH unit | P / F | Y / N |
| **ORP** | mV | FROM CALIBRATION SCREEN / CHART | 241.9 | +/- 10 mV | P / F | Y / N |
| **Turbidity** | NTU | 10 | | +/- 2 NTU | P / F | Y / N |
| **Sp. Conductivity** | µS/cm | 1,413 @ 25°C | 1,330 | +/- 15% (Acceptable range: 1201.05-1624.95) | P / F | Y / N |
| **RDO** (Zero Solution) | mg/L | 0 | 0 | +/- 0.5 mg/L | P / F | Y / N |
| **Temperature** | °C | FROM THERMOMETER | | +/- 0.5 °C | P / F | Annually Only |

| *Calibration:* | *Sensor Range Value* | | *Sensor Acceptance Criteria* | *Sensor Pass / Fail* | *Sensor Replaced or Solution Changed?* | *Sensor S/N:* |
|---|---|---|---|---|---|---|
| **pH** 4-7 | Slope 1: | -56.51 | -66 to -50 mV/pH | P / F | Y / N | |
| **pH** 7-10 | Slope 2: | -53.52 | | P / F | | |
| **pH** 4-7 | Offset 1: | 9.9 MV | +/- 30 mV | P / F | | |
| **pH** 7-10 | Offset 2: | 9.8 MV | +/- 30 mV | P / F | | |
| **ORP** mV | Offset: | 21.9 | +/- 30 mV | P / F | | |
| **Turbidity** NTU | Slope: | | 0.7 to 1.3 | P / F | Y / N | |
| **Sp. Conductivity** µS/cm | Cell Constant: | 0.735 | 0.7 to 1.3 | P / F | Y / N | |
| **RDO (100% and 0% Sat.)** | Slope | 1.02464 | 0.7 to 1.3 | P / F | Y / N | |
| | Offset | 0.01 | +/- 0.3 mg/L | P / F | | |

| *Post Calibration Check* | *Standard* | *Calibration Confirmation* | *Acceptance Criteria* | *Calibration Pass / Fail* |
|---|---|---|---|---|
| **pH** S.U | 10 | 10.08 | +/- 0.1 pH unit | P / F |
| **ORP** mV | | 241.9 | +/- 5mV | P / F |
| **Turbidity** NTU | 100 | | +/- 2 NTU | P / F |
| **Sp. Conductivity** µS/cm | 1,413 @ 25°C | 1,413 | +/- 10% (Acceptable range 1271.10—1554.30) | P / F |
| **RDO** (Zero Solution) | 0 | 100 | +/- 0.3 mg/L | P / F |

Notes

## Monitoring Well Gauging Form - Monthly RDRA Sampling

**Project:** Nuclear Metals, Inc. (RD/RA)

**Location:** 2229 Main Street, Concord, MA

**Date:**

**Weather:**

**Company:**

**Sampler Name:**

**NOTES:**

| Well ID | Easting (X) | Northing (Y) | Measuring Point Elevation (Feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Well Diameter (inches) | Flowpath | Time | Depth to Water (feet) | Comment |
|---|---|---|---|---|---|---|---|---|---|---|
| **ASSABET-1A (PZ-1A)** | 675012.6789 | 2986855.744 | 139.08 | 50.8 | 61 | 18 | OB | 9:29 | 12.04 | **Acton Key & Pipe Wrench Needed** |
| **ASSABET-2A (PZ-2A)** | 675197.5497 | 2987402.686 | 137.67 | 26 | 34 | 12 | OB | 9:35 | 14.14 | **Acton Key & Pipe Wrench Needed** |
| EW-1* | 675727.0417 | 2986776.13 | 137.28 | 74 | 98 | 6 | OB | 9:13 | 23.83 | |
| MW-SD34 | 676012.5409 | 2986771.18 | 133.56 | 84.5 | 94.5 | 2 | OB | 9:00 | 8.54 | |
| MW-BS34 | 676012.5409 | 2986771.18 | 133.6 | 101 | 111 | 2 | BR | 9:02 | 8.12 | |
| **MW-SD42A** | 675550.3442 | 2986806.565 | 137.7 | 80 | 90 | 2 | OB | 10:14 | 12.24 | |
| **MW-SD44** | 675483.9521 | 2986843.633 | 137.01 | 76 | 86 | 2 | OB | 12:25 | 10.85 | |
| MW-SD45 | 675738.6844 | 2986856.8 | 140.15 | 75 | 85 | 2 | OB | 9:09 | 14.92 | |
| PT-09 | 675773.483 | 2986659.884 | 134.65 | 79 | 89 | 1.5 | OB | 9:16 | 9.46 | **Grace Key Needed** |
| PT-10 | 675782.9839 | 2986682.389 | 135.23 | 25 | 30 | 1.5 | OB | 9:18 | 9.93 | **Grace Key Needed** |
| PT-11P | 676027.68 | 2986755.09 | 133.33 | 7 | 17 | 2 | OB | 9:04 | 8.28 | |

*EW-1 must be measured from top of concrete vault (marked)

BOLD indicates well to be sampled for laboratory analysis during monitoring event

## Monitoring Well Gauging Form - Monthly RDRA Sampling

**Project:** Nuclear Metals, Inc. (RD/RA)
**Location:** 2229 Main Street, Concord, MA
**Date:** 6/15/2022
**Weather:** 70 and Sunny
**Company:** GZA and Min
**Sampler Name:** Matthew Baden

**NOTES:**

| Well ID | Easting (X) | Northing (Y) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Well Diameter (inches) | Formation | Time | Depth to Water (feet) | Comment |
|---|---|---|---|---|---|---|---|---|---|---|
| **ASSABET-1A (PZ-1A)** | 675012.6789 | 2986855.744 | 139.08 | 50.8 | 61 | 18 | OB | 10:28 | 13.41 | Acton Key & Pipe Wrench Needed |
| **ASSABET-2A (PZ-2A)** | 675197.5497 | 2987402.686 | 137.67 | 26 | 34 | 12 | OB | 10:24 | 14.62 | Acton Key & Pipe Wrench Needed |
| EW-1* | 675727.0417 | 2986776.13 | 137.28 | 74 | 98 | 6 | OB | 10:11 | 25.21 | |
| MW-SD34 | 676012.5409 | 2986771.18 | 133.56 | 84.5 | 94.5 | 2 | OB | 10:01 | 8.84 | |
| MW-BS34 | 676012.5409 | 2986771.18 | 133.6 | 101 | 111 | 2 | BR | 10:02 | 8.51 | |
| **MW-SD42A** | 675550.3442 | 2986806.565 | 137.7 | 80 | 90 | 2 | OB | 10:53 | 13.07 | |
| **MW-SD44** | 675483.9521 | 2986843.633 | 137.01 | 76 | 86 | 2 | OB | 12:53 | 12.28 | |
| MW-SD45 | 675738.6844 | 2986856.8 | 140.15 | 75 | 85 | 2 | OB | 10:12 | 15.61 | |
| PT-09 | 675773.483 | 2986659.884 | 134.65 | 79 | 89 | 1.5 | OB | 10:06 | 9.98 | Grace Key Needed |
| PT-10 | 675782.9839 | 2986682.389 | 135.23 | 25 | 30 | 1.5 | OB | 10:07 | 10.33 | Grace Key Needed |
| PT-11P | 676027.68 | 2986755.09 | 133.33 | 7 | 17 | 2 | OB | 10:00 | 8.52 | |

*EW-1 must be measured from top of concrete vault (marked)
BOLD indicates well to be sampled for laboratory analysis during monitoring event

## Monitoring Well Gauging Form - Monthly RDRA Sampling

**Project:** Nuclear Metals, Inc. (RD/RA)
**Location:** 2229 Main Street, Concord, MA
**Date:** 7/19/2023
**Weather:** Cloudy / 73
**Company:** O and M, inc
**Sampler Name:** Matthew Bordet

**NOTES:**

| Well ID | Easting (X) | Northing (Y) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | [illegible] | [illegible] | Time | [illegible] | Comment |
|---|---|---|---|---|---|---|---|---|---|---|
| **ASSABET-1A (PZ-1A)** | 675012.6789 | 2986855.744 | 139.08 | 50.8 | 61 | 18 | OB | 9:55 | 16.26 | **Acton Key & Pipe Wrench Needed** |
| **ASSABET-2A (PZ-2A)** | 675197.5497 | 2987402.686 | 137.67 | 26 | 34 | 12 | OB | 9:51 | 16.10 | **Acton Key & Pipe Wrench Needed** |
| EW-1* | 675727.0417 | 2986776.13 | 137.28 | 74 | 98 | 6 | OB | 9:40 | 25.62 | |
| MW-SD34 | 676012.5409 | 2986771.18 | 133.56 | 84.5 | 94.5 | 2 | OB | 9:28 | 9:46 | |
| MW-BS34 | 676012.5409 | 2986771.18 | 133.6 | 101 | 111 | 2 | BR | 9:27 | 9.18 | |
| **MW-SD42A** | 675550.3442 | 2986806.565 | 137.7 | 80 | 90 | 2 | OB | [illegible] | [illegible] | 10:27 / 14.08 |
| **MW-SD44** | 675483.9521 | 2986843.633 | 137.01 | 76 | 86 | 2 | OB | 12.02 | 13.41 | |
| MW-SD45 | 675738.6844 | 2986856.8 | 140.15 | 75 | 85 | 2 | OB | 9:37 | 16.42 | |
| PT-09 | 675773.483 | 2986659.884 | 134.65 | 79 | 89 | 1.5 | OB | 9:32 | 10.67 | **Grace Key Needed** |
| PT-10 | 675782.9839 | 2986682.389 | 135.23 | 25 | 30 | 1.5 | OB | 9.34 | 10.98 | **Grace Key Needed** |
| PT-11P | 676027.68 | 2986755.09 | 133.33 | 7 | 17 | 2 | OB | 9.26 | 9.02 | |

*EW-1 must be measured from top of concrete vault (marked)
BOLD indicates well to be sampled for laboratory analysis during monitoring event

## Monitoring Well Gauging Form - Monthly RDRA Sampling

**Project:** Nuclear Metals, Inc. (RD/RA)
**Location:** 2229 Main Street, Concord, MA
**Date:** 3/16/22
**Weather:** Sunny warm
**Company:** OTM
**Sampler Name:** Matthew Boudreau

**NOTES:**

| Well ID | Easting (X) | Northing (Y) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Well Diameter (inches) | Formation | Time | Depth to Water (feet) | Comment |
|---|---|---|---|---|---|---|---|---|---|---|
| **ASSABET-1A (PZ-1A)** | 675012.6789 | 2986855.744 | 139.08 | 50.8 | 61 | 18 | OB | 10:51 | 18.19 | **Acton Key & Pipe Wrench Needed** |
| **ASSABET-2A (PZ-2A)** | 675197.5497 | 2987402.686 | 137.67 | 26 | 34 | 12 | OB | 10:45 | 17.38 | **Acton Key & Pipe Wrench Needed** |
| EW-1* | 675727.0417 | 2986776.13 | 137.28 | 74 | 98 | 6 | OB | 9:45 | 23.91 | |
| MW-SD34 | 676012.5409 | 2986771.18 | 133.56 | 84.5 | 94.5 | 2 | OB | 9:04 | 9.77 | |
| MW-BS34 | 676012.5409 | 2986771.18 | 133.6 | 101 | 111 | 2 | BR | 9:05 | 9.63 | |
| **MW-SD42A** | 675550.3442 | 2986806.565 | 137.7 | 80 | 90 | 2 | OB | 10:55 | 14.84 | |
| **MW-SD44** | 675483.9521 | 2986843.633 | 137.01 | 76 | 86 | 2 | OB | 12:30 | 14.32 | |
| MW-SD45 | 675738.6844 | 2986856.8 | 140.15 | 75 | 85 | 2 | OB | 9:42 | 17.02 | |
| PT-09 | 675773.483 | 2986659.884 | 134.65 | 79 | 89 | 1.5 | OB | 9:20 | 11.15 | **Grace Key Needed** |
| PT-10 | 675782.9839 | 2986682.389 | 135.23 | 25 | 30 | 1.5 | OB | 9:22 | 11.46 | **Grace Key Needed** |
| PT-11P | 676027.68 | 2986755.09 | 133.33 | 7 | 17 | 2 | OB | 9:02 | 9.36 | |

*EW-1 must be measured from top of concrete vault (marked)
BOLD indicates well to be sampled for laboratory analysis during monitoring event

## Monitoring Well Gauging Form - Monthly RDRA Sampling

**Project:** Nuclear Metals, Inc. (RD/RA)

**Location:** 2229 Main Street, Concord, MA

**Date:**

**Weather:**

**Company:**

**Sampler Name:**

**NOTES:**

| Well ID | Easting (X) | Northing (Y) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Well Diameter (inches) | Formation | Time | Depth to Water (feet) | Time Comment Depth Comment |
|---|---|---|---|---|---|---|---|---|---|---|
| ASSABET-1A (PZ-1A) | 675012.6789 | 2986855.744 | 139.08 | 50.8 | 61 | 18 | OB | 10:11 | 18.06 | Acton Key & Pipe Wrench Needed |
| ASSABET-2A (PZ-2A) | 675197.5497 | 2987402.686 | 137.67 | 26 | 34 | 12 | OB | 10:09 | 17.42 | Acton Key & Pipe Wrench Needed |
| EW-1* | 675727.0417 | 2986776.13 | 137.28 | 74 | 98 | 6 | OB | 10:00 | 27.25 | |
| MW-SD34 | 676012.5409 | 2986771.18 | 133.56 | 84.5 | 94.5 | 2 | OB | 9:46 | 9.70 | |
| MW-BS34 | 676012.5409 | 2986771.18 | 133.6 | 101 | 111 | 2 | BR | 9:47 | 9.56 | |
| MW-SD42A | 675550.3442 | 2986806.565 | 137.7 | 80 | 90 | 2 | OB | 10:28 | 14.61 | |
| MW-SD44 | 675483.9521 | 2986843.633 | 137.01 | 76 | 86 | 2 | OB | 11:17 | 13.94 | |
| MW-SD45 | 675738.6844 | 2986856.8 | 140.15 | 75 | 85 | 2 | OB | ~~10:52~~ | ~~18.47~~ | 10:03 16.84 Grace Key Needed |
| PT-09 | 675773.483 | 2986659.884 | 134.65 | 79 | 89 | 1.5 | OB | 9:52 | 10.97 | |
| PT-10 | 675782.9839 | 2986682.389 | 135.23 | 25 | 30 | 1.5 | OB | ~~9:31~~ | ~~9.55~~ | 9:54 Grace Key Needed 10.31 |
| PT-11P | 676027.68 | 2986755.09 | 133.33 | 7 | 17 | 2 | OB | 9:44 | 9.17 | |

*EW-1 must be measured from top of concrete vault (marked)

BOLD indicates well to be sampled for laboratory analysis during monitoring event

## Monitoring Well Gauging Form - Monthly RDRA Sampling

**Project:** Nuclear Metals, Inc. (RD/RA)
**Location:** 2229 Main Street, Concord, MA
**Date:** 11/16/2022
**Weather:** 36° rainy
**Company:** QTM
**Sampler Name:** Matt B

**NOTES:**

| Well ID | Easting (X) | Northing (Y) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | [illegible] | [illegible] | [illegible] | [illegible] | Comment |
|---|---|---|---|---|---|---|---|---|---|---|
| **ASSABET-1A (PZ-1A)** | 675012.6789 | 2986855.744 | 139.08 | 50.8 | 61 | 18 | OB | 10:45 | 17.42 | **Acton Key & Pipe Wrench Needed** |
| **ASSABET-2A (PZ-2A)** | 675197.5497 | 2987402.686 | 137.67 | 26 | 34 | 12 | OB | 10:44 | 17.65 | **Acton Key & Pipe Wrench Needed** |
| EW-1* | 675727.0417 | 2986776.13 | 137.28 | 74 | 98 | 6 | OB | 10:37 | 25.78 | |
| MW-SD34 | 676012.5409 | 2986771.18 | 133.56 | 84.5 | 94.5 | 2 | OB | 10:24 | 8.42 | |
| MW-BS34 | 676012.5409 | 2986771.18 | 133.6 | 101 | 111 | 2 | BR | 10:26 | 8.89 | |
| **MW-SD42A** | 675550.3442 | 2986806.565 | 137.7 | 80 | 90 | 2 | OB | 10:58 | 15.04 | |
| **MW-SD44** | 675483.9521 | 2986843.633 | 137.01 | 76 | 86 | 2 | OB | 12:40 | 13.21 | |
| MW-SD45 | 675738.6844 | 2986856.8 | 140.15 | 75 | 85 | 2 | OB | 10:35 | 16.32 | |
| PT-09 | 675773.483 | 2986659.884 | 134.65 | 79 | 89 | 1.5 | OB | 10:31 | 10.40 | **Grace Key Needed** |
| PT-10 | 675782.9839 | 2986682.389 | 135.23 | 25 | 30 | 1.5 | OB | 10:32 | 10.57 | **Grace Key Needed** |
| PT-11P | 676027.68 | 2986755.09 | 133.33 | 7 | 17 | 2 | OB | 10:23 | 8.26 | |

*EW-1 must be measured from top of concrete vault (marked)
BOLD indicates well to be sampled for laboratory analysis during monitoring event

## Monitoring Well Gauging Form - Monthly RDRA Sampling

**Project:** Nuclear Metals, Inc. (RD/RA)
**Location:** 2229 Main Street, Concord, MA
**Date:** 12/21/2022
**Weather:** 35° Sunny
**Company:** OTM inc
**Sampler Name:** Matthew Boudrot

**NOTES:**

| Well ID | Easting (X) | Northing (Y) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Well Diameter (inches) | Formation | Time | Depth to Water (feet) | Comment |
|---|---|---|---|---|---|---|---|---|---|---|
| ASSABET-1A (PZ-1A) | 675012.6789 | 2986855.744 | 139.08 | 50.8 | 61 | 18 | OB | [illegible] | [illegible] → 10.31 – 17.31 | Acton Key & Pipe Wrench Needed |
| ASSABET-2A (PZ-2A) | 675197.5497 | 2987402.686 | 137.67 | 26 | 34 | 12 | OB | 10:31 | 16.79 | Acton Key & Pipe Wrench Needed |
| EW-1* | 675727.0417 | 2986776.13 | 137.28 | 74 | 98 | 6 | OB | 10:20 | 25.56 | |
| MW-SD34 | 676012.5409 | 2986771.18 | 133.56 | 84.5 | 94.5 | 2 | OB | 10:14 | 8.31 | |
| MW-BS34 | 676012.5409 | 2986771.18 | 133.6 | 101 | 111 | 2 | BR | 10:12 | 7.89 | |
| MW-SD42A | 675550.3442 | 2986806.565 | 137.7 | 80 | 90 | 2 | OB | 10:50 | 14.64 | |
| MW-SD44 | 675483.9521 | 2986843.633 | 137.01 | 76 | 86 | 2 | OB | 12:10 | 12.71 | |
| MW-SD45 | 675738.6844 | 2986856.8 | 140.15 | 75 | 85 | 2 | OB | 10:17 | 15.27 | |
| PT-09 | 675773.483 | 2986659.884 | 134.65 | 79 | 89 | 1.5 | OB | 10:23 | 9.34 | Grace Key Needed |
| PT-10 | 675782.9839 | 2986682.389 | 135.23 | 25 | 30 | 1.5 | OB | 10:25 | 9.82 | Grace Key Needed |
| PT-11P | 676027.68 | 2986755.09 | 133.33 | 7 | 17 | 2 | OB | 10:10 | 7.26 | |

*EW-1 must be measured from top of concrete vault (marked)
BOLD indicates well to be sampled for laboratory analysis during monitoring event

## Monitoring Well Gauging Form - Monthly RDRA Sampling

**Project:** Nuclear Metals, Inc. (RD/RA)
**Location:** 2229 Main Street, Concord, MA
**Date:** 1/18/2023
**Weather:** 42° and Cloudy
**Company:** Otm inc
**Sampler Name:** Matt Boudrot

**NOTES:**

| Well ID | Easting (X) | Northing (Y) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Well Diameter (inches) | Description | Time | Depth to Water (feet) | Comment |
|---|---|---|---|---|---|---|---|---|---|---|
| **ASSABET-1A (PZ-1A)** | 675012.6789 | 2986855.744 | 139.08 | 50.8 | 61 | 18 | OB | 10:13 | 16.59 | **Acton Key & Pipe Wrench Needed** |
| **ASSABET-2A (PZ-2A)** | 675197.5497 | 2987402.686 | 137.67 | 26 | 34 | 12 | OB | 10:09 | 16.14 | **Acton Key & Pipe Wrench Needed** |
| EW-1* | 675727.0417 | 2986776.13 | 137.28 | 74 | 98 | 6 | OB | 9:57 | 25.72 | |
| MW-SD34 | 676012.5409 | 2986771.18 | 133.56 | 84.5 | 94.5 | 2 | OB | 9:51 | 8.24 | |
| MW-BS34 | 676012.5409 | 2986771.18 | 133.6 | 101 | 111 | 2 | BR | 9:52 | 7.91 | |
| **MW-SD42A** | 675550.3442 | 2986806.565 | 137.7 | 80 | 90 | 2 | OB | 10:20 | 13.57 | |
| **MW-SD44** | 675483.9521 | 2986843.633 | 137.01 | 76 | 86 | 2 | OB | 12:15 | 14.21 | |
| MW-SD45 | 675738.6844 | 2986856.8 | 140.15 | 75 | 85 | 2 | OB | 9:55 | 15.25 | |
| PT-09 | 675773.483 | 2986659.884 | 134.65 | 79 | 89 | 1.5 | OB | 10:00 | 9.41 | **Grace Key Needed** |
| PT-10 | 675782.9839 | 2986682.389 | 135.23 | 25 | 30 | 1.5 | OB | 10:01 | 9.76 | **Grace Key Needed** |
| PT-11P | 676027.68 | 2986755.09 | 133.33 | 7 | 17 | 2 | OB | 9:50 | 7.68 | |

*EW-1 must be measured from top of concrete vault (marked)
BOLD indicates well to be sampled for laboratory analysis during monitoring event

## Monitoring Well Gauging Form - Monthly RDRA Sampling

**Project:** Nuclear Metals, Inc. (RD/RA)
**Location:** 2229 Main Street, Concord, MA
**Date:** 2/15/2023
**Weather:** 38° and Sunny
**Company:** O+M inc
**Sampler Name:** Matthew. Boudot

**NOTES:**

| Well ID | Easting (X) | Northing (Y) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Well Diameter (inches) | Formation | Time | Depth to Water (feet) | Comment |
|---|---|---|---|---|---|---|---|---|---|---|
| **ASSABET-1A (PZ-1A)** | 675012.6789 | 2986855.744 | 139.08 | 50.8 | 61 | 18 | OB | 9:39 | 15.62 | **Acton Key & Pipe Wrench Needed** |
| **ASSABET-2A (PZ-2A)** | 675197.5497 | 2987402.686 | 137.67 | 26 | 34 | 12 | OB | 9:35 | 14.88 | **Acton Key & Pipe Wrench Needed** |
| EW-1* | 675727.0417 | 2986776.13 | 137.28 | 74 | 98 | 6 | OB | 9:30 | 26.41 | |
| MW-SD34 | 676012.5409 | 2986771.18 | 133.56 | 84.5 | 94.5 | 2 | OB | 9:14 | 8.34 | |
| MW-BS34 | 676012.5409 | 2986771.18 | 133.6 | 101 | 111 | 2 | BR | 9:15 | 8.14 | |
| **MW-SD42A** | 675550.3442 | 2986806.565 | 137.7 | 80 | 90 | 2 | OB | 9:52 | 12.88 | |
| **MW-SD44** | 675483.9521 | 2986843.633 | 137.01 | 76 | 86 | 2 | OB | 11:30 | 13.21 | |
| MW-SD45 | 675738.6844 | 2986856.8 | 140.15 | 75 | 85 | 2 | OB | 9:27 | 15.34 | |
| PT-09 | 675773.483 | 2986659.884 | 134.65 | 79 | 89 | 1.5 | OB | 9:21 | 9.56 | **Grace Key Needed** |
| PT-10 | 675782.9839 | 2986682.389 | 135.23 | 25 | 30 | 1.5 | OB | 9:23 | 9.95 | **Grace Key Needed** |
| PT-11P | 676027.68 | 2986755.09 | 133.33 | 7 | 17 | 2 | OB | 9:12 | 8.07 | |

*EW-1 must be measured from top of concrete vault (marked)
BOLD indicates well to be sampled for laboratory analysis during monitoring event

## Monitoring Well Gauging Form - Monthly RDRA Sampling

**Project:** Nuclear Metals, Inc. (RD/RA)
**Location:** 2229 Main Street, Concord, MA
**Date:** 9/8/23
**Weather:** 90 & cloudy
**Company:** O+M
**Sampler Name:** Matt B

**NOTES:** 1A is under redevelopment by Marty

| Well ID | Easting (X) | Northing (Y) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | [illegible] | [illegible] | Time | [illegible] | Comment |
|---|---|---|---|---|---|---|---|---|---|---|
| 1A ASSABET-2A (PZ-1A) | 675012.6789 | 2986855.744 | 139.08 | 50.8 | 61 | 18 | OB | N/A | N/A | Acton Key & Pipe Wrench Needed K2A |
| 1A ASSABET-3A (PZ-2A) | 675197.5497 | 2987402.686 | 137.67 | 26 | 34 | 12 | OB | 9.55 | 16.21 | Acton Key & Pipe Wrench Needed K1A |
| EW-1* | 675727.0417 | 2986776.13 | 137.28 | 74 | 98 | 6 | OB | 9:39 | 25.92 | |
| MW-SD34 | 676012.5409 | 2986771.18 | 133.56 | 84.5 | 94.5 | 2 | OB | 9:32 | 7.84 | |
| MW-BS34 | 676012.5409 | 2986771.18 | 133.6 | 101 | 111 | 2 | BR | 9:31 | 7.67 | |
| **MW-SD42A** | 675550.3442 | 2986806.565 | 137.7 | 80 | 90 | 2 | OB | 10:06 | 11.91 | |
| **MW-SD44** | 675483.9521 | 2986843.633 | 137.01 | 76 | 86 | 2 | OB | 11:20 | 11.34 | |
| MW-SD45 | 675738.6844 | 2986856.8 | 140.15 | 75 | 85 | 2 | OB | 9.41 | 14.74 | |
| PT-09 | 675773.483 | 2986659.884 | 134.65 | 79 | 89 | 1.5 | OB | 9:36 | 9.08 | Grace Key Needed |
| PT-10 | 675782.9839 | 2986682.389 | 135.23 | 25 | 30 | 1.5 | OB | 9:37 | 9.51 | Grace Key Needed |
| PT-11P | 676027.68 | 2986755.09 | 133.33 | 7 | 17 | 2 | OB | 9:30 | 7.56 | |

*EW-1 must be measured from top of concrete vault (marked)
BOLD indicates well to be sampled for laboratory analysis during monitoring event

# CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 5/18/22

ALPHA Job #: L2226357


8 Walkup Drive
Westboro, MA 01581
Tel: 508-898-9220

320 Forbes Blvd
Mansfield, MA 02048
Tel: 508-822-9300


## Client Information

Client: deMaximis

Address: 200 Oqr Hill Rd Ste2w
Windsor Ct

Phone:

Email: Rtarding@demaximis.com

Additional Project Information:

## Project Information

Project Name: NM1 RORA

Project Location: 2229 Main St Concord MA

Project #: 252 H

Project Manager: Todd Major

ALPHA Quote #:

## Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)

Date Due:

## Report Information - Data Deliverables

☒ ADEx ☒ EMAIL

## Billing Information

☐ Same as Client info PO#:

## Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler Initials | ANALYSIS: VOC: ☐ 8260 ☐ 624 ☐ 524.2 | SVOC: ☐ ABN ☐ PAH | METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15 | METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13 | EPH: ☐ Ranges & Targets ☐ Ranges Only | VPH: ☐ Ranges & Targets ☐ Ranges Only | ☐ PCB ☐ PEST | TPH: ☐ Quant Only ☐ Fingerprint | 1,4 Dioxane, SIM | SAMPLE INFO: Filtration ☐ Field ☐ Lab to do; Preservation ☐ Lab to do | Sample Comments | TOTAL # BOTTLES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 26357-01 | MW-5042A-05182022 | 5/18/22 | 12:20 | GW | MSB | | | | | | | | | 2 | | | 2 |
| -02 | MW-5044-05182022 | 5/18/22 | 13:10 | GW | MSB | | | | | | | | | 2 | | | 2 |
| -03 | ASSAB13+1A-05182022 | 5/18/22 | 14:20 | GW | MSB | | | | | | | | | 2 | | | 2 |
| -04 | ASSAB1+2A-05182022 | 5/18/22 | 14:25 | GW | MSB | | | | | | | | | 2 | | | 2 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Container Type | | | | | | | | | | | | | | A | | | |
| Preservative | | | | | | | | | | | | | | A | | | |

**Container Type**
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

**Preservative**
A= None
B= HCl
C= $HNO_3$
D= $H_2SO_4$
E= NaOH
F= MeOH
G= NaHSO4
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = $NH_4Cl$
K= Zn Acetate
O= Other

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| [illegible] | 5/18/22 2:55 | [illegible] AAL | 5-18-22 14:55 |
| [illegible] AAL | 5-18-22 15:55 | [illegible] | 5/18/22 15:55 |
| Monique Boring MBL | 5/18/22 19:10 | W. Daniels AAL | 5/18/22 20:10 |
| W. Daniels AAL | 5/18/22 21:32 | AAL | 5/18/22 2132 |

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

# CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd In Lab: 6/15/22

ALPHA Job #: L2231842


8 Walkup Drive
Westboro, MA 01581
Tel: 508-898-9220

320 Forbes Blvd
Mansfield, MA 02048
Tel: 508-822-9300


**Client Information**

Client: Demax, MIS

Address: 200 Day Hill RD Ste 200 Windsor, CT

Phone: 978-505-5762

Email: rharding@demax-mis.com

**Project Information**

Project Name: NMI RDRA

Project Location: 2229 Main St Concord, MA

Project #: 252H

Project Manager: Amy Hoffmann

ALPHA Quote #:

**Turn-Around Time**

☒ Standard ☐ RUSH (only confirmed if pre-approved)

Date Due:

**Report Information - Data Deliverables**

☒ ADEx ☒ EMAIL

**Billing Information**

☐ Same as Client Info PO #:

**Regulatory Requirements & Project Information Requirements**

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods

☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)

☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)

☐ Yes ☐ No NPDES RGP

☐ Other State /Fed Program _____ Criteria _____

Additional Project Information:

ANALYSIS

VOC: ☐ 8260 ☐ 624 ☐ 524.2

SVOC: ☐ ABN ☐ PAH

METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15

METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13

EPH: ☐ Ranges & Targets ☐ Ranges Only

VPH: ☐ Ranges & Targets ☐ Ranges Only

☐ PCB ☐ PEST

TPH: ☐ Quant Only ☐ Fingerprint

1,4 Dioxane SIM

SAMPLE INFO

*Filtration*
☐ Field
☐ Lab to do

*Preservation*
☐ Lab to do

Sample Comments

TOTAL # BOTTLES

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler Initials | 1,4 Dioxane SIM | TOTAL # BOTTLES |
|---|---|---|---|---|---|---|---|
| 31842.01 | MWS042A06152022 | 6/15/22 | 12:10 | GW | MSB | 2 | |
| .02 | MWS044-06152022 | 6/15/22 | 13:35 | GW | MSB | 2 | |
| .03 | ASSABETIA-06152022 | 6/15/22 | 14:10 | GW | MSB | 2 | |
| .04 | ASSABETZA-06152022 | 6/15/22 | 14:15 | GW | MSB | 2 | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | Container Type | A |
| | | | | | | Preservative | A |

***Container Type***
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

***Preservative***
A= None
B= HCl
C= $HNO_3$
D= $H_2SO_4$
E= NaOH
F= MeOH
G= $NaHSO_4$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = $NH_4Cl$
K= Zn Acetate
O= Other

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| Matthew Bastian | 6/15/22 14:39 | W. Hamel AAL | 6/15/22 16:00 |
| W. Hamel AAL | 6/15/22 16:56 | | |

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

# CHAIN OF CUSTODY

PAGE 1 OF 1


ALPHA ANALYTICAL
World Class Chemistry

8 Walkup Drive
Westboro, MA 01581
Tel: 508-898-9220

320 Forbes Blvd
Mansfield, MA 02048
Tel: 508-822-9300


**Date Rec'd in Lab:**

**ALPHA Job #:**

## Client Information

Client: AE MaxMS Inc

Address: 200 Old Hill Road
Windsor CT

Phone: 413-743-1163

Email: Engineering@aemaxms.com

Additional Project Information:

## Project Information

Project Name: Nuclear Metals

Project Location: Concord MA

Project #: 3252H

Project Manager: Ryan Harding

ALPHA Quote #:

## Turn-Around Time

☐ Standard ☐ RUSH *(only confirmed if pre-approved!)*

**Date Due:**

## Report Information - Data Deliverables

☐ ADEx ☐ EMAIL

## Billing Information

☐ Same as Client info PO #: 3252H

## Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

**ANALYSIS**

VOC: ☐ 8260 ☐ 624 ☐ 524.2
SVOC: ☐ ABN ☐ PAH
METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15
METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13
EPH: ☐ Ranges & Targets ☐ Ranges Only
VPH: ☐ Ranges & Targets ☐ Ranges Only
☐ PCB ☐ PEST
TPH: ☐ Quant Only ☐ Fingerprint

**SAMPLE INFO**

*Filtration*
☐ Field
☐ Lab to do

*Preservation*
☐ Lab to do

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler Initials | Sample Comments | TOTAL # BOTTLES |
|---|---|---|---|---|---|---|---|
| | MW09D-A07192022 | 7/19/22 | 11:55 | GW | MSB | | 2 |
| | MW09MW-A07192022 | 7/19/22 | 13:00 | GW | MSB | | 2 |
| | ASSABET1A-07192022 | 7/19/22 | 13:55 | GW | MSB | | 2 |
| | ASSABET2A-07192022 | 7/19/22 | 14:00 | GW | MSB | | 2 |

**Container Type**
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

**Preservative**
A= None
B= HCl
C= $HNO_3$
D= $H_2SO_4$
E= NaOH
F= MeOH
G= $NaHSO_4$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = $NH_4Cl$
K= Zn Acetate
O= Other

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Container Type | | | | | | | | | | | | | | | | | | | | | | | | |
| Preservative | | | | | | | | | | | | | | | | | | | | | | | | |

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| Matthew Moore | 7/19/22 | [illegible] | 7/19/22 1457 |
| | | | |
| | | | |

All samples submitted are subject to Alpha's Terms and Conditions.
See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

# CHAIN OF CUSTODY

PAGE 1 OF 1

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 8/16/22

ALPHA Job #: L2244213

**Project Information**

Project Name: NMI RDRA
Project Location: 2229 Main St, Concord MA
Project #: 252H
Project Manager: Ryan Harding
ALPHA Quote #:

**Report Information** — ☐ FAX ☒ ADEx ☒ EMAIL ☐ Add'l Deliverables

**Billing Information** — ☐ Same as Client info PO #:

**Regulatory Requirements/Report Limits**

State/Fed Program: Criteria:

**Client Information**

Client: Demaximis
Address: 200 Day Hill Rd Ste 200
Windsor, CT
Phone:
Fax:
Email: rharding@demaximis.com

**Turn-Around Time**

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: ASAP Time:

☐ These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

MonthlyLow Flow Samples
1,4 dioxane

**ANALYSIS**

1,4 Dioxane, sim

SAMPLE HANDLING
*Filtration*
☐ Done
☐ Not Needed
☐ Lab to do
*Preservation*
☐ Lab to do
*(Please specify below)*

Sample Specific Comments

TOTAL # BOTTLES

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler's Initials | 1,4 Dioxane, sim | TOTAL # BOTTLES |
|---|---|---|---|---|---|---|---|
| 44213-01 | MW-SD42A-08162022 | 8/16/22 | 11:50 | GW | MSB | ☒ | 2 |
| -02 | MW-SD44-08162022 | 8/16/22 | 13:20 | GW | MSB | ☒ | 2 |
| -03 | ASSABET1A-08162022 | 8/16/22 | 14:20 | GW | MSB | ☒ | 2 |
| -04 | ASSABET2A-08162022 | 8/16/22 | 14:25 | GW | MSB | ☒ | 2 |
| | | | | | | ☐ | |
| | | | | | | ☐ | |
| | | | | | | ☐ | |
| | | | | | | ☐ | |
| | | | | | | ☐ | |
| | | | | | | ☐ | |
| | | | | | | ☐ | |

Container Type: A
Preservative: A

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| Matthew Bouchard | 8/16/22 14:56 | [illegible] | 8-16-22 16:10 |
| [illegible] | 8/16/22 1710 | [illegible] | 8/16/22 1710 |
| [illegible] | 8/16/22 19:04 | R. Marden | 8/16/22 1904 |
| R. Marden 8/16/22 20:00 | | [illegible] | 8/16/22 20:30 |

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

FORM NO. 01-01(A) (rev. 3-JAN-12)

# CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL — Mission Class Capability

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 9/14/22

ALPHA Job #: L2250195

## Client Information

Client: de maximis, inc
Address: 200 Day Hill Road
Windsor, CT
Phone: ~~978-793-7165~~ 978-505-5762
Fax:
Email: ~~ahoffmann@demaximis.com~~ rharding@demaximis.com

☐ These samples have been Previously analyzed by Alpha

## Project Information

Project Name: Nuclear Metals
Project Location: Concord, MA
Project #: 3252H
Project Manager: ~~Nathan Hunt~~ RYAN HARDING
ALPHA Quote #:

## Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)
Due Date: Time:

## Report Information — Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

## Billing Information

☒ Same as Client Info PO #: 3252H

## Regulatory Requirements/Report Limits

State/Fed Program | Criteria

## MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:
For sample issues or questions, please contact Amy at ahoffmann@demaximis.com

Level IV Report
I.D = Isotope Dilution

## ANALYSIS

1,4 Dioxane

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

Sample Specific Comments

TOTAL # BOTTLES

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler's Initials | 1,4 Dioxane | TOTAL # BOTTLES |
|---|---|---|---|---|---|---|---|
| 50195-01 | MWSD42A09142022 | 9/14/22 | 11:25 | GW | MSB | ☒ | 2 |
| -02 | MWSD44D09142022 | 9/14/22 | 13:10 | GW | MSB | ☒ | 2 |
| -03 | ASSABE+1A09142022 | 9/14/22 | 14:00 | GW | MSB | ☒ | 2 |
| -04 | ASSABE+2A09142022 | 9/14/22 | 14:05 | GW | MSB | ☒ | 2 |
| | | | | | | ☐ | |
| | | | | | | ☐ | |
| | | | | | | ☐ | |
| | | | | | | ☐ | |
| | | | | | | ☐ | |
| | | | | | | ☐ | |
| | | | | | | ☐ | 8 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Container Type | V | A | - | - | - | - | - | - | - | - | - | - | |
| Preservative | B | A | - | - | - | - | - | - | - | - | - | - | |

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| [illegible] AAL | 9/14/22 1425 | [illegible] AAL | 9/14/22 1534 |
| [illegible] | 9/14/22 1640 | [illegible] | 9/14/22 1640 |
| [illegible] | 9/14/22 1900 | [illegible] | 9/14/22 1900 |
| R. MacKay | 9/14/22 2015 | [illegible] AAL | 9/14/22 2010 |

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

DeMAX

# CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 11/16/22

ALPHA Job #: L2264683


8 Walkup Drive
Westboro, MA 01581
Tel: 508-898-9220

320 Forbes Blvd
Mansfield, MA 02048
Tel: 508-822-9300


## Client Information

Client: deMaximis, Inc

Address: 200 Ogy Hill Road
Windsor, CT

Phone: 978-505-5762

Email: rharding@demaxims.com

Additional Project Information:

## Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 3252H

Project Manager: Ryan harding

ALPHA Quote #:

## Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)

Date Due:

## Report Information - Data Deliverables

☒ ADEx ☒ EMAIL

## Billing Information

☐ Same as Client info PO #:

## Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

ANALYSIS

VOC: ☐ 8260 ☐ 624 ☐ 524.2
SVOC: ☐ ABN ☐ PAH
METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15
METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13
EPH: ☐ Ranges & Targets ☐ Ranges Only
VPH: ☐ Ranges & Targets ☐ Ranges Only
☐ PCB ☐ PEST
TPH: ☐ Quant Only ☐ Fingerprint
1,4 Dioxane

SAMPLE INFO
*Filtration*
☐ Field
☐ Lab to do
*Preservation*
☐ Lab to do

Sample Comments

TOTAL # BOTTLES

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler Initials | TOTAL # BOTTLES |
|---|---|---|---|---|---|---|
| 64683-01 | MWSD42A11162022 | 11/16/22 | 12:00 | GW | MSB | 2 |
| -02 | MWSD4411162022 | 11/16/22 | 13:40 | GW | MSB | 2 |
| -03 | ASSABET1A11162022 | 11/16/22 | 14:15 | GW | MSB | 2 |
| -04 | ASSABET2A11162022 | 11/16/22 | 14:20 | GW | MSB | 2 |

***Container Type***
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

***Preservative***
A= None
B= HCl
C= $HNO_3$
D= $H_2SO_4$
E= NaOH
F= MeOH
G= $NaHSO_4$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = $NH_4Cl$
K= Zn Acetate
O= Other

| Container Type | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Preservative | | | | | | | | | | | | | | | | | | | | | | | |

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| Matthew Bousquet | 11/16/22 2:54 | Storage | |
| Storage | 11.16.22 1610 | Rob Macedo AAC | 11-16-22 1610 |
| Rob Macedo | 11/16/22 1900 | | 11/16/22 1900 |

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FORM NO: 01-01 (rev. 12-Mar-2012)

11/16/22 2058

# CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 12/21/22

ALPHA Job #: L2271971


8 Walkup Drive
Westboro, MA 01581
Tel: 508-898-9220

320 Forbes Blvd
Mansfield, MA 02048
Tel: 508-822-9300


## Client Information

Client: dEMAX M.S. Inc

Address: 200 Day Hill Road
Windsor, CT

Phone: 978-505-5762

Email: rharding@demax.ms.com

Additional Project Information:

## Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 32524

Project Manager: Ryan harding

ALPHA Quote #:

## Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)

Date Due:

## Report Information - Data Deliverables

☒ ADEx ☒ EMAIL

## Billing Information

☐ Same as Client info PO #: 32524

## Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler Initials | ANALYSIS: VOC: ☐ 8260 ☐ 624 ☐ 524.2 / SVOC: ☐ ABN ☐ PAH / METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15 / METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13 / EPH: ☐ Ranges & Targets ☐ Ranges Only / VPH: ☐ Ranges & Targets ☐ Ranges Only / ☐ PCB ☐ PEST / TPH: ☐ Quant Only ☐ Fingerprint / 1,4-Dioxane | SAMPLE INFO: Filtration ☐ Field ☐ Lab to do / Preservation ☐ Lab to do / Sample Comments | TOTAL # BOTTLES |
|---|---|---|---|---|---|---|---|
| 71971-01 | MWS042A 12 2022 | 12/21/22 | 12:10 | GW | MSB | 2 | | |
| 02 | MWS044 12 2022 | 12/21/22 | 13:40 | GW | MSB | 2 | | |
| 03 | ASSADETA 12 2022 | 12/21/22 | 14:15 | GW | MSB | 2 | | |
| 04 | ASSADETA 12 2022 | 12/21/22 | 14:20 | GW | MSB | 2 | | |

**Container Type**
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

**Preservative**
A= None
B= HCl
C= $HNO_3$
D= $H_2SO_4$
E= NaOH
F= MeOH
G= $NaHSO_4$
H= $Na_2S_2O_3$
I= Ascorbic Acid
J= $NH_4Cl$
K= Zn Acetate
O= Other

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Container Type | | | | | | | | | | | | | | | | | | | | | |
| Preservative | | | | | | | | | | | | | | | | | | | | | |

8

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| Matthew Bourdeau | 12/21/22 1941 | AAC | 12/21/22 1441 |
| AAC | 12/21/22 1630 | | 12/21/22 1636 |
| | 12/21/22 1930 | | 12/21/22 1936 |
| | 12/21/22 2030 | | |

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FORM NO: 01-01 (rev. 12-Mar-2012)

# CHAIN OF CUSTODY

PAGE 1 OF 1


ALPHA ANALYTICAL — World Class Chemistry

8 Walkup Drive
Westboro, MA 01581
Tel: 508-898-9220

320 Forbes Blvd
Mansfield, MA 02048
Tel: 508-822-9300


**Date Rec'd in Lab:**

**ALPHA Job #:**

## Client Information

Client: dEMaxMS Inc

Address: 200 Ogx Hill Rd
Windsor CT

Phone: 978-375-0635

Email: TMajer@dEMaxMS.com

Additional Project Information:

## Project Information

Project Name: Nuclear Metals

Project Location: Concord MA

Project #: 3252 H

Project Manager: Todd Majer

ALPHA Quote #:

## Turn-Around Time

☒ Standard ☐ RUSH *(only confirmed if pre-approved!)*

**Date Due:**

## Report Information - Data Deliverables

☒ ADEx ☐ EMAIL

## Billing Information

☐ Same as Client info PO #:

## Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

**ANALYSIS**

- VOC: ☐ 8260 ☐ 624 ☐ 524.2
- SVOC: ☐ ABN ☐ PAH
- METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15
- METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13
- EPH: ☐ Ranges & Targets ☐ Ranges Only
- VPH: ☐ Ranges & Targets ☐ Ranges Only
- ☐ PCB ☐ PEST
- TPH: ☐ Quant Only ☐ Fingerprint
- 14 dioxane

**SAMPLE INFO**

*Filtration*
☐ Field
☐ Lab to do

*Preservation*
☐ Lab to do

Sample Comments

TOTAL # BOTTLES

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler Initials | TPH: Quant Only | TOTAL # BOTTLES |
|---|---|---|---|---|---|---|---|
| | MWS042A 11820 23 | 11/18/23 | 11:30 | GW | MSB | 2 | |
| | MWS044 11820 23 | 11/18/23 | 13:40 | GW | MSB | 2 | |
| | ASSADet1A 11820 23 | 11/18/23 | 14:00 | GW | MSB | 2 | |
| | ASSADet2A 11820 23 | 11/18/23 | 14:05 | GW | MSB | 2 | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

8

***Container Type***
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

***Preservative***
A= None
B= HCl
C= $HNO_3$
D= $H_2SO_4$
E= NaOH
F= MeOH
G= $NaHSO_4$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = $NH_4Cl$
K= Zn Acetate
O= Other

| | |
|---|---|
| Container Type | |
| Preservative | |

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| Natasha Mann | 11/18/23 14:11 | W Lawler ALPHA | 11/18/23 14:11 |
| | | | |
| | | | |

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See reverse side.

# CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 2/15/23

ALPHA Job #: L2308232


8 Walkup Drive
Westboro, MA 01581
Tel: 508-898-9220

320 Forbes Blvd
Mansfield, MA 02048
Tel: 508-822-9300


## Client Information

Client: dEMAXIMUS, INC

Address: 200 Day Hill Road
Windsor, CT

Phone: 978-375-0635

Email: TMajer@dEMAXIMUS.com

Additional Project Information:

## Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 32521

Project Manager: Todd Majer

ALPHA Quote #:

## Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due:

## Report Information - Data Deliverables

☒ ADEx ☒ EMAIL

## Billing Information

☐ Same as Client info PO #: 22224

## Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

ANALYSIS

VOC: ☐ 8260 ☐ 624 ☐ 524.2
SVOC: ☐ ABN ☐ PAH
METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15
METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13
EPH: ☐ Ranges & Targets ☐ Ranges Only
VPH: ☐ Ranges & Targets ☐ Ranges Only
☐ PCB ☐ PEST
TPH: ☐ Quant Only ☐ Fingerprint
1,4-Dioxane

SAMPLE INFO
Filtration
☐ Field
☐ Lab to do
Preservation
☐ Lab to do
Sample Comments

TOTAL # BOTTLES

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler Initials | TOTAL # BOTTLES |
|---|---|---|---|---|---|---|
| 08232-01 | MWS042A02152023 | 2/15/23 | 11:20 | GW | MSG | 2 |
| -02 | MWS044 02152023 | 2/15/23 | 12:40 | GW | MDS | 2 |
| -03 | ASSABETIA02152023 | 2/15/23 | 13:30 | GW | MSO | 2 |
| -04 | ASSABET2A 02152023 | 2/15/23 | 13:35 | GW | MSO | 2 |

Container Type
Preservative

**Container Type**
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

**Preservative**
A= None
B= HCl
C= $HNO_3$
D= $H_2SO_4$
E= NaOH
F= MeOH
G= $NaHSO_4$
H= $Na_2S_2O_3$
I= Ascorbic Acid
J= $NH_4Cl$
K= Zn Acetate
O= Other

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| Matthew Boudrot | 2/15/23 1403 | AAL | 2-15-23 1530 |
| [illegible] | 2-15-23 1645 | [illegible] | 2/15/23 1645 |
| [illegible] | 2/15/23 1930 | [illegible] | 2/16/23 1130 |

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

# CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 3/8/23

ALPHA Job #: L2312147


8 Walkup Drive
Westboro, MA 01581
Tel: 508-898-9220

320 Forbes Blvd
Mansfield, MA 02048
Tel: 508-822-9300


## Client Information

Client: deMaximis Inc

Address: 203 Day Hill Road
Windsor CT

Phone: ~~978-588~~ 978-875-0636

Email: tmaier@demaximis.com

## Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 3252H

Project Manager: Todd Major

ALPHA Quote #:

## Report Information - Data Deliverables

ADEx ☐ EMAIL

## Billing Information

☐ Same as Client Info PO #: 3252H

## Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

## Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)

Date Due:

Additional Project Information:

ANALYSIS

VOC: ☐ 8260 ☐ 624 ☐ 524.2
SVOC: ☐ ABN ☐ PAH
METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15
METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13
EPH: ☐ Ranges & Targets ☐ Ranges Only
VPH: ☐ Ranges & Targets ☐ Ranges Only
☐ PCB ☐ PEST
TPH: ☐ Quant Only ☐ Fingerprint
1,4 Dioxane by SIM

SAMPLE INFO
Filtration
☐ Field
☐ Lab to do
Preservation
☐ Lab to do
Sample Comments

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler Initials | TOTAL # BOTTLES |
|---|---|---|---|---|---|---|
| 12147-01 | MW5042A03082023 | 03/08 | 11:55 | GW | MSB | 2 |
| -02 | MW5044O308 2023 | 03/08 | 12:50 | GW | MSB | 2 |
| -03 | ASSABETIA 03082023 | 03/08 | 13:30 | GW | MSB | 2 |

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= $HNO_3$
D= $H_2SO_4$
E= NaOH
F= MeOH
G= $NaHSO_4$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = $NH_4Cl$
K= Zn Acetate
O= Other

| | Container Type | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Preservative | | | | | | | | | | | | |

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| Matthew Bernhardt | 03/08/23 1400 | MSB / AM | 3/8/23 1400 |
| MSB | 3/8/23 1400 | AM - AM | 3/8/23 1700 |

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO. 01-01 (rev. 12-Mar-2012)

# CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 3/16/23

ALPHA Job #: L2313857


Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288


## Client Information

Client: Demaximis

Address: 200 Day Hill Rd Ste 200

Windsor, CT

Phone:

Fax:

Email: tmajer@demaximis.com

## Project Information

Project Name: NMI RDRA

Project Location: 2229 Main St, Concord MA

Project #: 252H

Project Manager: Todd Majer

ALPHA Quote #:

## Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: ASAP Time:

☐ These samples have been Previously analyzed by Alpha

## Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

## Billing Information

☐ Same as Client info PO #:

## Regulatory Requirements/Report Limits

State/Fed Program Criteria

Other Project Specific Requirements/Comments/Detection Limits:

MonthlyLow Flow Samples
1,4 dioxane

## ANALYSIS

1,4 Dioxane, sim

SAMPLE HANDLING
*Filtration*
☐ Done
☐ Not Needed
☐ Lab to do
*Preservation*
☐ Lab to do
*(Please specify below)*

Sample Specific Comments

TOTAL # BOTTLES

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler's Initials | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13857-01 | Assabet2A | 3/16/23 | 10:50 | GW | MSB | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | 2 |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Container Type | A | - | - | - | - | - | - | - | - | - | - | - | |
| Preservative | A | - | - | - | - | - | - | - | - | - | - | - | |

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| [illegible] | 3/16/23 11:09 | [illegible] DAUS | 3-16-23 16:10 |
| [illegible] DAUS AAL | 3-16-23 16:10 | [illegible] | 3/16/23 1610 |

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

FORM NO: 01-01(HL) (rev. 5-JAN-12)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

Geosyntec
consultants
289 Great Road, Suite 202
Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: MYSOU4 | Well Diameter: 2 | Intake Depth: 81
Project Name: NMIRORA | Total Depth of Well: 86
Project Number: 3252 | Initial Depth to Water: 10.85 | Time: 12:25
Date: 5/18/2022 | Casing Volume:
Recorded By: Matthew Boudrot | Depth to Water after Purging: 10.84 | Time: 1:41
Sample ID: MYSOU4 05182022 | Method of Purging: low flow Sleeve
Duplicate ID: | Method of Sampling:
Weather: Sunny 67 | Multi-meter ID: 4128 | Turbid ID: 5TM

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 12:30 | 10.85 | 150 | | 15.49 | 6.49 | >21.44 | .85 | 18 | 1200 | |
| 12:35 | ↓ | 150 | | 15.51 | 6.15 | 226.02 | .44 | 27.8 | 7.41 | |
| 12:40 | | ↓ | | 15.43 | 6.18 | 228.86 | .34 | 26.8 | 4.55 | |
| 12:45 | | | | 15.41 | 6.18 | 226.86 | .33 | 26.8 | 3.92 | |
| 12:50 | ✓ | | | 15.42 | 6.20 | 229.0 | .33 | 24.9 | 4.03 | |
| 12:55 | | ↓ | | 15.51 | 6.24 | 226.64 | .23 | 23.3 | 4.07 | |
| 13:00 | 10.85 | 150 | | 15.49 | 6.28 | 229.52 | .18 | 20.8 | 2.81 | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

Geosyntec consultants
289 Great Road, Suite 202
Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: MW SO42A
Project Name: NMI RORA
Project Number: 252
Date: 5/18/2022
Recorded By: Matthew Boedeker
Sample ID: MW SO42A 05182022
Duplicate ID:
Weather: Sunny 64°

Well Diameter: 2
Total Depth of Well: 90
Initial Depth to Water: 12.22
Casing Volume:
Depth to Water after Purging: [redacted]
Method of Purging: GW Flow Sipper
Method of Sampling:
Multi-meter ID: 4124

Intake Depth: 85
Time: 10:14
Time: 12:40 12.28
Turbid ID: 5744

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 11:45 | 12.22 | 150 | | 14.52 | 6.21 | 305.03 | 1.05 | 113.0 | 45.7 | |
| 11:50 | 12.22 | 150 | | 15.52 | 6.15 | 301.62 | .83 | 66.6 | 38.6 | |
| 11:55 | 12.22 | 150 | | 15.80 | 6.10 | 299.96 | .51 | 57.9 | 26.9 | |
| 12:00 | 12.22 | 150 | | 15.41 | 6.08 | 297.83 | .32 | 53.0 | 22.0 | |
| 12:05 | 12.22 | 150 | | 15.4 | 6.11 | 293.95 | .24 | 50.7 | 18.4 | Milky Green |
| 12:10 | 12.22 | 150 | | 15.34 | 6.13 | 299.09 | .20 | 49.0 | 19.8 | |
| 12:15 | 12.22 | 150 | | 15.35 | 6.14 | 293.11 | .16 | 47.6 | 18.9 | |
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| Samples collected | Time collected | Container type | Container size | Preservative |
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Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

Geosyntec consultants
289 Great Road, Suite 202
Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

| | | | |
|---|---|---|---|
| Well ID: MW S044 | Well Diameter: 2 in | Intake Depth: 81 | |
| Project Name: NMI RORA | Total Depth of Well: 86 | | |
| Project Number: 3252 | Initial Depth to Water: 12.28 | Time: 12:53 | |
| Date: 6/15/2022 | Casing Volume: 12.01 | | |
| Recorded By: Matt. Boedeker | Depth to Water after Purging: 12.25 | Time: 13:39 | |
| Sample ID: MWS044 06152022 | Method of Purging: low flow bladder | | |
| Duplicate ID: | Method of Sampling: | | |
| Weather: 70 sunny | Multi-meter ID: 9296 | Turbid ID: 2179 | |

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 13:00 | 12.28 | 150 | | 18.62 | 6.52 | 195.15 | .95 | 17.3 | 20.8 | |
| 13:05 | 12.28 | 150 | | 17.96 | 6.28 | 198.10 | .69 | 21.5 | 11.7 | |
| 13:10 | 12.28 | 150 | | 17.36 | 6.18 | 201.19 | .53 | 24.4 | 7.86 | |
| 13:15 | 12.28 | 150 | | 16.96 | 6.11 | 204.77 | .410 | 26.1 | 5.28 | |
| 13:20 | 12.28 | 150 | | 16.85 | 6.12 | 206.90 | .32 | 28.0 | 4.26 | |
| 13:25 | 12.28 | 150 | | 16.81 | 6.13 | 208.23 | .28 | 27.9 | 4.14 | |
| 13:30 | 12.28 | 150 | | 16.92 | 6.13 | 209.10 | .23 | 28.0 | 3.88 | |
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| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4 Dioxane | 13:35 | | | |
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Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Well ID: MW-5042A
Well Diameter: 2inch
Intake Depth: 85
Project Name: NMIROPA
Total Depth of Well: 90
Project Number: 3252
Initial Depth to Water: 13.07
Time: 11:15
Date: 6/15/2022
Casing Volume: 12.54
Recorded By: Matt. Boudrot
Depth to Water after Purging:
Time:
Sample ID: MW5042A6152022
Method of Purging: low flow bladder
Duplicate ID:
Method of Sampling:
Weather: 70 Sunny
Multi-meter ID: 9296
Turbid ID: 2179

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 11:20 | 13.07 | 120 | | 20.48 | 6.48 | 3455.3 | 1.82 | 65.1 | 96.5 | |
| 11:25 | 13.07 | 120 | | 19.55 | 6.19 | 2283.0 | .43 | 73.2 | 92.5 | |
| 11:30 | 13.07 | 120 | | 19.39 | 6.11 | 242.00 | .46 | 68.6 | 67.7 | |
| 11:35 | 13.07 | 120 | | 19.39 | 6.10 | 248.32 | .40 | 64.1 | 46.5 | |
| 11:40 | 13.07 | 120 | | 18.20 | 6.05 | 244.62 | .32 | 42.3 | 32.1 | |
| 11:45 | 13.07 | 120 | | 17.71 | 6.04 | 245.30 | .29 | 42.7 | 22.2 | |
| 11:50 | 13.07 | 120 | | 18.32 | 6.06 | 244.86 | .27 | 42.6 | 17.8 | |
| 11:55 | 13.07 | 120 | | 19.44 | 6.08 | 243.82 | .24 | 36.3 | 18.2 | |
| 12:00 | 13.07 | 120 | | 19.79 | 6.07 | 242.01 | .22 | 42.7 | 17.7 | |
| 12:05 | 13.07 | 120 | | 19.46 | 6.05 | 242.37 | .20 | 42.0 | 18.6 | |
| 12:10 | 13.07 | 120 | | | | | | | | |
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| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4Dioxane | 12:10 | | | |
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Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

Geosyntec consultants
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(978)263-9588 Fax(978)263-9594

Well ID: MW 5044
Project Name: NMIRORA
Project Number: 3252
Date: 7/14/2022
Recorded By: MAH-G
Sample ID: MW5044071422022
Duplicate ID:
Weather: 78 Sunny

Well Diameter: 2in
Total Depth of Well: 86
Initial Depth to Water: 13.41
Casing Volume: 11.84
Depth to Water after Purging: 13.36
Method of Purging: low flow Sight
Method of Sampling:
Multi-meter ID:

Intake Depth: 81
Time: 12:02
Time: 12:02
Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 12:25 | 13.38 | 150 | 0 | 22.87 | 6.97 | 231.51 | 4.88 | 59.8 | 6.86 | |
| 12:30 | 13.38 | 150 | 750 | 18.77 | 6.40 | 236.98 | .88 | 3.6 | 5.24 | |
| 12:35 | 13.38 | 150 | 1,500 | 18.56 | 6.16 | 240.88 | .39 | 9.4 | 4.14 | |
| 12:40 | 13.38 | 150 | 2,250 | 18.50 | 6.17 | 241.80 | .28 | 10.6 | 4.71 | |
| 12:45 | 13.38 | 150 | 3,000 | 18.39 | 6.03 | 241.55 | .20 | 11.0 | 4.23 | |
| 12:50 | 13.38 | 150 | 3,750 | 18.21 | 6.01 | 241.20 | .17 | 9.3 | 4.47 | |
| 12:55 | 13.38 | 150 | 4,500 | 18.56 | 6.03 | 241.62 | .15 | 6.3 | 4.78 | |
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| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4 Dioxane | 13:00 | | | |
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Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: MW-5042A
Project Name: NMIRORA
Project Number: 32.52
Date: 7/14/2020
Recorded By: MJH-B
Sample ID: MW5042A07142020
Duplicate ID:
Weather: 78 and Sunny

Well Diameter: 2 in
Total Depth of Well: 90
Initial Depth to Water: 14.08
Casing Volume: 12.39
Depth to Water after Purging: 14.02
Method of Purging: low flow bladder
Method of Sampling:
Multi-meter ID:

Intake Depth: 85
Time: 10:27
Time: 12:00
Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 11:00 | 14.14 | 125 | 0 | 21.72 | 6.30 | 256.32 | .47 | -11.7 | 21.2 | |
| 11:05 | 14.14 | 125 | 625 | 20.93 | 6.06 | 253.68 | .48 | -10.9 | 17.2 | |
| 11:10 | 14.14 | 125 | 1250 | 19.88 | 5.90 | 249.50 | .34 | -12.9 | 13.0 | |
| 11:15 | 14.14 | 125 | 1875 | 19.40 | 5.83 | 247.92 | .31 | -21.8 | 11.5 | |
| 11:20 | 14.14 | 125 | 2,500 | 19.23 | 5.78 | 242.46 | .23 | -16.0 | 9.66 | |
| 11:25 | 14.14 | 125 | 3,125 | 18.43 | 5.75 | 241.90 | .22 | -12.3 | 9.57 | |
| 11:30 | 14.14 | 125 | 3,750 | 18.91 | 5.72 | 251.17 | .18 | -14.3 | 9.32 | |
| 11:35 | 14.14 | 125 | 4,375 | 18.78 | 5.66 | >273.16 | .17 | 1.9 | 9.61 | |
| 11:40 | 14.14 | 125 | 5,000 | 19.81 | 5.65 | 240.9 | .16 | 9.8 | 9.47 | |
| 11:45 | 14.14 | 125 | 5,625 | 20.01 | 5.67 | 300.01 | .15 | 12.4 | ~~9.59~~ 9.53 | |
| 11:50 | 14.14 | 125 | 6,250 | 19.59 | 5.69 | 301.73 | .14 | 14.9 | 9.69 | |
| | | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4 dioxane | ~~11:55~~ 11:55 | | | |
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Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

**O&M, Inc.**
Environmental Solutions

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

Well ID: MW5042A
Project Name: NAIRORA
Project Number: 252
Date: 8/16/2022
Recorded By: Matthew Baydar
Sample ID: DUP-5042A 08162022
Duplicate ID: —
Weather: Sunny warm

Well Diameter: 2
Total Depth: ~~90~~ well pump at 85
Initial Depth to Water: ~~0~~
Casing Volume:
Depth to Water after Purging: 15.01
Method of Purging: ~~PP~~ GW Flow bladder
Method of Sampling:
Multi-Meter ID:

| Time | Depth to Water (ft btoc) | Pumping Rate mL/m | Cumulative Volume L or gal | Temp F or C | pH (units) | Specific Conductance us/cm | D.O. mg/L | ORP (mv) | Turbidity (NTU) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 11:20 | 14.92 | 150 | 0 | 19.88 | 6.52 | 245.51 | .65 | -24.5 | 18.3 | |
| 11:25 | 14.92 | 150 | | 19.37 | 6.51 | 240.29 | .33 | -33.3 | 13.7 | |
| 11:30 | 14.92 | 150 | | 19.22 | 6.49 | 240.91 | .24 | -31.4 | ~~12.46~~ | 11.6 |
| 11:35 | 14.92 | 150 | | 18.94 | 6.46 | 240.32 | .19 | -29.5 | 9.29 | |
| 11:40 | 14.92 | 150 | | 19.14 | 6.42 | 241.00 | .16 | -26.2 | 4.81 | |
| 11:45 | 14.92 | 150 | | 19.02 | 6.40 | 241.78 | .13 | -22.3 | 4.36 | |
| 11:50 | 14.92 | 150 | | 19.02 | 6.39 | 246.35 | .12 | -20.3 | 3.67 | |
| 11:55 | | | | | | | | | | |
| 12:00 | | | | | | | | | | |
| 12:05 | | | | | | | | | | |
| 12:10 | | | | | | | | | | |

| Samples Collected | Time Collected | Container Type | Container Size | Preservative |
|---|---|---|---|---|
| 1,4 Dioxane | 11:50 | | | |
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Notes: (well condition; nearby activities, odors, problems, deviations, etc. )

| Parameter | 3 Readings Within |
|---|---|
| pH | +/- 0.1 |
| Specific Cond | 3% |
| Dissolved O2 | 10% if greater than 0.5 mg/L<br>Or under 0.5 mg/L |

| Well Casing Volume Per foot Of Depth | |
|---|---|
| Diameter (In) | Gallons/Foot |
| 1 | 0.041 |

**O&M, Inc.**
Environmental Solutions

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

Well ID: MWSD44
Project Name: NMIROIRA
Project Number: 3252
Date: 8/16/2022
Recorded By: Matthew Boedrot
Sample ID: MW-SD44-08162022
Duplicate ID:
Weather: Sunny warm

Well Diameter: 2
Total Depth: 86
Initial Depth to Water: 14.32
Casing Volume:
Depth to Water after Purging: ~~Low flow bailer~~ 14.28
Method of Purging: low flow bladder
Method of Sampling:
Multi-Meter ID:

| Time | Depth to Water (ft btoc) | Pumping Rate mL/m | Cumulative Volume L or gal | Temp F or C | pH (units) | Specific Conductance us/cm | D.O. mg/L | ORP (mv) | Turbidity (NTU) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 12:45 | 14.31 | 125 | | 22.26 | 6.67 | 294.31 | 2.26 | 13.6 | 13.4 | |
| 12:50 | 14.31 | 125 | | 20.93 | 6.44 | 324.19 | .74 | -0.9 | 10.20 | |
| 12:55 | 14.31 | 125 | | 20.67 | 6.40 | 326.45 | .44 | 0.0 | 7.62 | |
| 13:00 | 14.31 | 125 | | 20.16 | 6.43 | 327.84 | .33 | -4.1 | 9.45 | |
| 13:05 | 14.31 | 125 | | 19.37 | 6.47 | 327.52 | .26 | -6.4 | 4.63 | |
| 13:10 | 14.31 | 125 | | 20.19 | 6.46 | 328.73 | .22 | -9.5 | 4.39 | |
| 13:15 | 14.31 | 125 | | 20.49 | 6.45 | 328.91 | .19 | -11.6 | 3.61 | |
| 13:20 | 14.31 | 125 | | 20.20 | 6.47 | 328.78 | .16 | -13.0 | ~~4.08~~ | 4.69 |
| 13:25 | | | | | | | | | | |

| Samples Collected | Time Collected | Container Type | Container Size | Preservative |
|---|---|---|---|---|
| 1,4 Dioxane | 13:20 | | | |

Notes: (well condition; nearby activities, odors, problems, deviations, etc. )

| Parameter | 3 Readings Within |
|---|---|
| pH | +/- 0.1 |
| Specific Cond | 3% |
| Dissolved O2 | 10% if greater than 0.5 mg/L Or under 0.5 mg/L |

| Well Casing Volume Per foot Of Depth | |
|---|---|
| Diameter (In) | Gallons/Foot |
| 1 | 0.041 |

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

Geosyntec
consultants
289 Great Road, Suite 202
Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: MW5044
Project Name: NMIRRA
Project Number: 3252
Date: 9/14/2022
Recorded By: MATTHEW BALDRA
Sample ID: MW-5044-09142022
Duplicate ID: —
Weather: Sunny warm

Well Diameter: 2 Intake Depth: 81
Total Depth of Well:
Initial Depth to Water: 13.91 Time: 11:17
Casing Volume:
Depth to Water after Purging: 13.96 Time: 13:28
Method of Purging:
Method of Sampling:
Multi-meter ID: Turbid ID:

| Time | Depth to water | Pumping rate | Cumulative volume | Temp | pH | Specific conductance | D.O | ORP | Turbidity | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| | (ft btoc) | mLpm | L or gals | °F or °C | (units) | (µS / cm) | (mg / L) | (mV) | (NTU) | odor, color, sediment load, well condition, presence of product |
| 12:50 | 13.96 | 125 | | 19.64 | 6.32 | 299.06 | 1.10 | -7.4 | 32.4 | |
| 12:55 | 13.96 | 125 | | 17.67 | 5.88 | 294.84 | 0.05 | 12.1 | 30.1 | |
| 13:00 | 13.96 | 125 | | 18.00 | 5.89 | 294.45 | 0.04 | 12.1 | 32.2 | |
| 13:05 | 13.96 | 125 | | 17.53 | 5.85 | 292.44 | 0.04 | 11.8 | 32.5 | |
| 13:10 | 13.96 | 125 | | 17.61 | 5.88 | 288.82 | 0.03 | 12.8 | 32.8 | |
| 13:15 | 13.96 | 125 | | | | | | | | |
| 13:20 | | 125 | | | | | | | | |
| 13:25 | | 125 | | | | | | | | |
| 13:30 | | 125 | | | | | | | | |
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| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4 Dioxane | 13:10 | | | |
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Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: MW5DUP A
Project Name: NMi RDRA
Project Number: 252
Date: 9/14/22
Recorded By: Matthew Barbosa
Sample ID: SW42A 09142022
Duplicate ID: —
Weather: Sunny warm

Well Diameter: 2 Intake Depth: 85
Total Depth of Well: 90
Initial Depth to Water: 14.61 Time: 1028
Casing Volume:
Depth to Water after Purging: Time:
Method of Purging: low flow bladder
Method of Sampling: Sample
Multi-meter ID: Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 10:45 | 14.61 | 150 | [redacted] | 20.78 | 6.44 | 249.01 | .95 | 36.3 | 42.9 | |
| 10:50 | | 150 | | 19.59 | 6.43 | 238.02 | .44 | .44 | 27.1 | |
| 10:55 | | 150 | | 19.45 | 6.33 | 235.64 | .33 | -22.3 | 23.3 | |
| 11:00 | | 150 | | 19.42 | 6.30 | 232.70 | .28 | -48.9 | 14.2 | |
| 11:05 | | 150 | | 19.79 | 6.30 | 228.10 | .24 | -37.6 | 17.5 | |
| 11:10 | | 150 | | 19.96 | 6.27 | 223.32 | .21 | -30.0 | 11.2 | |
| 11:15 | | 150 | | 19.76 | 6.25 | 219.03 | .18 | -23.3 | 4.8 | |
| 11:20 | | 150 | | 19.71 | 6.25 | 216.69 | .17 | -19.2 | 3.7 | |
| 11:25 | | 150 | | 20.04 | 6.25 | 214.31 | .15 | -16.2 | 4.3 | |
| 11:30 | | 150 | | | | | | | | |
| 11:40 | | 150 | | | | | | | | |
| | | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4 Dioxane | 11:25 | Amber | — | |
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Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

Geosyntec consultants
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Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: SO44
Project Name: NMTRORA
Project Number: 3252
Date: 11/16/22
Recorded By: Matt. Bradat
Sample ID: MW-SO44-1116 2022
Duplicate ID: —
Weather: cold raining 36°

Well Diameter: 2
Total Depth of Well: 86
Initial Depth to Water: [redacted] 13.21 Time: 12:40
Casing Volume: [redacted] 11.86 gallons
Depth to Water after Purging: 13.87 Time: 13:53
Method of Purging: GW Flow bladder
Method of Sampling:
Multi-meter ID: Turbid ID:
Intake Depth: 81

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 12:50 | [redacted] | 150 | | 11.55 | 7.26 | 286.05 | 1.74 | -75.6 | 37.1 | |
| 12:55 | 13.21 | 150 | | 11.71 | 6.84 | 285.93 | 1.52 | -25.0 | 28.6 | |
| 13:00 | 13.21 | 150 | | 11.86 | 6.79 | 282.61 | 1.86 | -14.8 | 22.1 | |
| 13:05 | 13.21 | 150 | | 11.88 | 6.77 | 281.73 | 2.28 | -10.5 | 14.3 | |
| 13:10 | 13.21 | 150 | | 11.82 | 6.76 | 281.01 | 2.51 | -7.3 | 7.2 | |
| 13:15 | 13.21 | 150 | | 11.84 | 6.76 | 278.19 | 2.80 | -5.4 | 4.81 | |
| 13:20 | 13.21 | 150 | | 11.69 | 6.75 | 277.00 | 2.99 | -4.0 | 3.68 | |
| 13:25 | 13.21 | 150 | | 11.64 | 6.75 | 275.49 | 3.22 | -2.6 | 4.32 | |
| 13:30 | 13.21 | 150 | | 11.71 | 6.74 | 272.56 | 3.27 | -0.9 | 2.91 | Green |
| 13:35 | 13.21 | 150 | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4 Dioxane | 13:40 | | | |
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Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: MWSD42A | Well Diameter: 2 | Intake Depth: 85
Project Name: NMIRORA | Total Depth of Well: 90
Project Number: 252 | Initial Depth to Water: 15.04 | Time: 10:58
Date: 11/16/2022 | Casing Volume: 12.22 gallons
Recorded By: Matthew. Boudet | Depth to Water after Purging: 14.01 | Time: 12:05
Sample ID: MW-SD42A-11/16-22 | Method of Purging: GW Flow bladder
Duplicate ID: | Method of Sampling:
Weather: 43° and raining | Multi-meter ID: | Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 11:20 | 14.12 | 125 | | 11.77 | 6.59 | 211.85 | 3.45 | 24.5 | 370 | |
| 11:25 | 14.12 | 125 | | 11.88 | 6.56 | 213.21 | 1 | 13.7 | 34.5 | |
| 11:30 | 14.12 | 125 | | 11.91 | 6.53 | 213.41 | .65 | 16.5 | 29 | |
| 11:35 | 14.12 | 125 | | 11.84 | 6.51 | 212.61 | .55 | 18 | 19.3 | |
| 11:40 | 14.12 | 125 | | 11.70 | 6.51 | 212.13 | .50 | 18.2 | 6.81 | Green |
| 11:45 | 14.12 | 125 | | 11.74 | 6.52 | 211.84 | 1.07 | 19.1 | 5.47 | |
| 11:50 | 14.12 | 125 | | 11.78 | 6.51 | 211.53 | 1.21 | 21.8 | 4.31 | |
| 11:55 | 14.12 | 125 | | 11.88 | 6.51 | 211.50 | 1.07 | 22.5 | 4.81 | Green |
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| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| ~~12:00~~ 1,4 DOX | 12:00 | | | |
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Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

**O&M, Inc.**
Environmental Solutions

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

Well ID: MWS042A
Project Name: NMIRORA
Project Number: 252
Date: 12/21/2022
Recorded By: Matthew. Baydra
Sample ID: MW-S042A-12212022
Duplicate ID:
Weather: 35° Sunny

Well Diameter: 2
Total Depth: 90 / intake 85
Initial Depth to Water: 14.64
Casing Volume:
Depth to Water after Purging: 14.67
Method of Purging: GW Flow bladder
Method of Sampling:
Multi-Meter ID:

| Time | Depth to Water (ft btoc) | Pumping Rate mL/m | Cumulative Volume L or gal | Temp F or C | pH (units) | Specific Conductance us/cm | D.O. mg/L | ORP (mv) | Turbidity (NTU) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 11:50 | 13.42 | 150 | | 11.04 | 6.33 | 237.04 | .12 | -13.8 | 1.43 | |
| 11:55 | 13.42 | 150 | | 11.24 | 6.35 | 234.29 | .11 | -11.3 | 2.25 | |
| 12:00 | 13.42 | 150 | | 11.28 | 6.36 | 227.93 | .085 | -5.7 | .45 | |
| 12:05 | 13.42 | 150 | | 11.20 | 6.35 | 233.45 | .08 | -4.0 | 1.32 | Green |
| 12:10 | 13.42 | 150 | | 10.94 | 6.34 | 230.91 | .08 | -3.3 | .86 | Green |

| Samples Collected | Time Collected | Container Type | Container Size | Preservative |
|---|---|---|---|---|
| 1,4 Dioxane | 12:10 | A | | |

Notes: (well condition; nearby activities, odors, problems, deviations, etc. )

| Parameter | 3 Readings Within |
|---|---|
| pH | +/- 0.1 |
| Specific Cond | 3% |
| Dissolved O2 | 10% if greater than 0.5 mg/L Or under 0.5 mg/L |

| Well Casing Volume Per foot Of Depth | |
|---|---|
| Diameter (In) | Gallons/Foot |
| 1 | 0.041 |

**O&M, Inc.**
Environmental Solutions

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

Well ID: SO44
Project Name: NMF RORA
Project Number: 3252
Date: 12/21/2022
Recorded By: Matt Bayard
Sample ID: MWSO44 12212022
Duplicate ID:
Weather: 35° Sunny

Well Diameter: 2
Total Depth: 86 / intake 81
Initial Depth to Water: 12.71
Casing Volume:
Depth to Water after Purging: 12.73
Method of Purging: GW Flow bladder
Method of Sampling:
Multi-Meter ID:

| Time | Depth to Water (ft btoc) | Pumping Rate mL/m | Cumulative Volume L or gal | Temp F or C | pH (units) | Specific Conductance us/cm | D.O. mg/L | ORP (mv) | Turbidity (NTU) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 12:55 | 12.62 | 125 | | 10.16 | 6.54 | 354.80 | 2.19 | 1.5 | 12.3 | |
| 13:00 | 12.62 | 125 | | 10.40 | 6.52 | 355.50 | 2.00 | 1.8 | 8.7 | |
| 13:05 | 12.62 | 125 | | 10.58 | 6.50 | 355.54 | 2.03 | 1.5 | 5.1 | Green |
| 13:10 | 12.62 | 125 | | 10.75 | 6.51 | 354.33 | 2.42 | 2.5 | 4.4 | |
| 13:15 | 12.62 | 125 | | 10.86 | 6.51 | 354.20 | 2.65 | 4.3 | 3.6 | |
| 13:20 | 12.62 | 125 | | 10.32 | 6.51 | 354.33 | 2.88 | 5.4 | 4.8 | |
| 13:25 | 12.62 | 125 | | 10.76 | 6.50 | 354.01 | 3.06 | 6.4 | 1.3 | |
| 13:30 | 12.62 | 125 | | 10.77 | 6.51 | 354.11 | 3.23 | 7.5 | 2.6 | |
| 13:35 | 12.62 | 125 | | 10.77 | 6.51 | 353.50 | 3.35 | 8.7 | 3.17 | Green |

| Samples Collected | Time Collected | Container Type | Container Size | Preservative |
|---|---|---|---|---|
| 1,4 Dioxane | 13:40 | A | | |

Notes: (well condition; nearby activities, odors, problems, deviations, etc. )

| Parameter | 3 Readings Within |
|---|---|
| pH | +/- 0.1 |
| Specific Cond | 3% |
| Dissolved O2 | 10% if greater than 0.5 mg/L<br>Or under 0.5 mg/L |

| Well Casing Volume Per foot Of Depth | |
|---|---|
| Diameter (In) | Gallons/Foot |
| 1 | 0.041 |

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

Geosyntec consultants
289 Great Road, Suite 105
Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: [redacted] SO44 | Well Diameter: 2 | Intake Depth: [redacted] 81
Project Name: NMIKORA | Total Depth of Well: 40
Project Number: 257 | Initial Depth to Water: 14.21 | Time: 12:15
Date: [redacted] 11/18/23 | Casing Volume:
Recorded By: Matthew Boudrot | Depth to Water after Purging: | Time:
Sample ID: SW-[redacted]-1-8-23 | Method of Purging: CW Flow Guide
Duplicate ID: SO44 | Method of Sampling:
Weather: 46° Sunny/Cloudy | Multi-meter ID: | Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 12:30 | 12.24 | 150 | | 11.27 | 6.42 | 204.14 | 8.40 | 58.3 | 20.7 | |
| 12:35 | 12.24 | 150 | | 11.20 | 6.83 | 174.09 | 7.29 | 57.8 | 11.1 | |
| 12:40 | 12.24 | 150 | | 11.34 | 6.73 | 182.17 | 6.52 | 60.9 | 9.8 | |
| 12:45 | 12.24 | 150 | | 11.21 | 6.73 | 194.81 | 5.41 | 63.5 | 7.3 | |
| 12:50 | 12.24 | 150 | | 11.21 | 6.69 | 186.28 | 5.99 | 63.5 | 5.9 | |
| 12:55 | 12.24 | 150 | | 11.20 | 6.66 | 183.94 | 4.90 | 63.0 | 4.1 | |
| 1:00 | 12.24 | 150 | | 11.24 | 6.64 | 187.31 | 4.51 | 58.1 | 2.8 | |
| 1:05 | 12.24 | 150 | | 11.24 | 6.61 | 224.8 | 3.84 | 51.9 | 4.8 | |
| 1:10 | 12.24 | 150 | | 11.21 | 6.60 | 218.06 | 3.54 | 64.3 | 3.4 | |
| 1:15 | 12.24 | 150 | | 11.32 | 6.59 | 209.43 | 3.34 | 57 | 3.2 | |
| 1:20 | 12.24 | 150 | | 11.15 | 6.57 | 181.03 | 3.14 | 58.9 | 1.8 | |
| 1:25 | 12.24 | 150 | | 11.26 | 6.55 | 167.26 | 2.87 | 60.4 | 2.4 | |
| 1:30 | 12.24 | 150 | | 11.40 | 6.53 | 166.80 | 2.53 | 60.6 | 1.3 | |
| 1:35 | 12.24 | 150 | | 11.63 | 6.51 | 163.80 | 2.19 | 60.9 | 1.8 | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4 dioxane | 1:40 | | | |
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Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

Geosyntec consultants
289 Great Road, Suite 105
Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: MWS042A
Project Name: NMIRORA
Project Number: 252
Date: 11/18/2023
Recorded By: Matthew
Sample ID: MW-S042A-11172023
Duplicate ID:
Weather: 42° and Cloudy

Well Diameter: 2
Total Depth of Well: 90
Initial Depth to Water:
Casing Volume:
Depth to Water after Purging:
Method of Purging: GW Flow Bladder
Method of Sampling:
Multi-meter ID:

Intake Depth: 85
Time:
Time:
Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 10:40 | 12.97 | 150 | | 10.93 | 6.48 | 215.84 | 1.14 | -44.6 | 12.8 | |
| 10:45 | 12.97 | 150 | | 10.70 | 6.43 | 220.89 | .66 | -31.7 | 7.78 | |
| 10:50 | 12.97 | 150 | | 10.34 | 6.17 | 286.19 | .52 | .6 | 4.88 | |
| 10:55 | 12.97 | 150 | | 10.40 | 6.11 | 319.35 | .45 | 20.6 | 4.15 | |
| 11:00 | 12.97 | 150 | | 11.05 | 6.10 | 329.41 | .35 | 30.3 | 3.91 | |
| 11:05 | 12.97 | 150 | | 11.07 | 6.10 | 336.36 | .31 | .31 | 2.55 | |
| 11:10 | 12.97 | 150 | | 11.14 | 6.10 | 342.86 | .29 | 42.5 | 2.81 | |
| 11:15 | 12.97 | 150 | | 11.17 | 6.11 | 348.48 | .29 | 48.3 | 3.48 | |
| 11:20 | 12.97 | 150 | | 11.26 | 6.11 | 345.06 | .21 | 53.0 | 2.57 | |
| 11:25 | 12.97 | 150 | | 11.02 | 6.12 | 342.8 | .17 | 56.9 | | Green |
| | | | | | | | | | | |
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| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4 Dioxane | 11:30 | AA | | |
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Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

Geosyntec consultants
289 Great Road, Suite 105
Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: MWSD42A
Project Name: NMIRORA
Project Number: 252
Date: 2/15/2023
Recorded By: MAH
Sample ID: MW-SD42A-02152023
Duplicate ID:
Weather: 43° cloudy

Well Diameter: 2
Total Depth of Well: 86
Initial Depth to Water: 13.88 Time: 9:52
Casing Volume:
Depth to Water after Purging: 12.78 Time: 14:07
Method of Purging:
Method of Sampling:
Multi-meter ID: Turbid ID:
Intake Depth: 81

| Time | Depth to water (ft btoc) | Pumping rate mL/m | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 10:20 | 13.24 | 125 | | 8.7 | 7.07 | .202 | 2.99 | 10.7 | 490 | |
| 10:25 | 13.24 | 125 | | 9.3 | 6.63 | .216 | 1.01 | 20.2 | 32.1 | |
| 10:30 | 13.24 | 125 | | 9.4 | 6.43 | .248 | .69 | 34.1 | 16.2 | |
| 10:40 | 13.24 | 125 | | 9.6 | 6.35 | .274 | .65 | 41.3 | 10.8 | |
| 10:45 | 13.24 | 125 | | 9.6 | 6.30 | .294 | .77 | 46.2 | 4.83 | |
| 10:50 | 13.24 | 125 | | 9.6 | 6.28 | .301 | .61 | 48.1 | 3.72 | |
| 10:55 | 13.24 | 125 | | 9.5 | 6.28 | .307 | .54 | 50.1 | 4.31 | |
| 11:00 | 13.24 | 125 | | 9.5 | 6.26 | .311 | .46 | 52.5 | 2.91 | |
| 11:05 | 13.24 | 125 | | 9.6 | 6.25 | .318 | .40 | 54.9 | 3.15 | |
| 11:10 | 13.24 | 125 | | 9.7 | 6.24 | .321 | .39 | 53.4 | 4.62 | |
| 11:15 | 13.24 | 125 | | 9.6 | 6.24 | .323 | .38 | 55.1 | 4.12 | |
| | | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| ~~11:20~~ | | | | |
| 1,4 Dioxane | 11:20 | | | |
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Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

Geosyntec consultants
289 Great Road, Suite 105
Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: SD44 | Well Diameter: 2 | Intake Depth: 81
Project Name: NMERQRA | Total Depth of Well: 86' intake
Project Number: 3252 | Initial Depth to Water: 13.24 | Time: 11:30
Date: 2/15/2023 | Casing Volume:
Recorded By: Matt Boudrot | Depth to Water after Purging: 11.92 | Time: 14:12
Sample ID: MWSD44 02152023 | Method of Purging:
Duplicate ID: | Method of Sampling:
Weather: 48° and Sunny | Multi-meter ID: | Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 12:00 | 11.88 | 125 | | 10.3 | 6.76 | .168 | 3.33 | 15.1 | 22.1 | |
| 12:05 | 11.88 | 125 | | 10.4 | 6.75 | .169 | 1.54 | 15.7 | 18.4 | |
| 12:10 | 11.88 | 125 | | 10.8 | 6.74 | .171 | 1.78 | 17.4 | 9.7 | |
| 12:15 | 11.88 | 125 | | 11.1 | 6.74 | .174 | 2.14 | 19.5 | 5.83 | |
| 12:20 | 11.88 | 125 | | 11.3 | 6.74 | .176 | 1.98 | 19.6 | 4.27 | |
| 12:25 | 11.88 | 125 | | 11.3 | 6.73 | .177 | 2.26 | 19.4 | 3.89 | 3.41 |
| 12:30 | 11.88 | 125 | | 11.3 | 6.72 | .178 | 2.28 | 20.2 | 4.87 | |
| 12:35 | 11.88 | 125 | | 11.4 | 6.72 | .178 | 2.29 | 20.4 | 2.96 | |
| 12:40 | | | | | | | | | | |
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| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| ~~1,4 Dioxane~~ | | | | |
| 1,4 Dioxane | 12:40 | | | |
| | | | | |
| | | | | |
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| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

Geosyntec consultants
289 Great Road, Suite 202
Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: MW-SO42A | Well Diameter: 2 | Intake Depth: 81
Project Name: NMIRORA | Total Depth of Well: 86
Project Number: 252 | Initial Depth to Water: | Time:
Date: 3/8/2023 | Casing Volume:
Recorded By: M+L.S | Depth to Water after Purging: | Time:
Sample ID: MW-SO42A-03082023 | Method of Purging:
Duplicate ID: | Method of Sampling:
Weather: 36°C Cloudy | Multi-meter ID: | Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 10:20 | 12.97 | 150 | | 9.67 | 7.26 | 211.13 | 1.17 | -32.7 | 9.8 | |
| 10:25 | 12.97 | 150 | | 10.01 | 7.06 | 203.89 | .36 | -115.4 | 7.62 | |
| 10:30 | 12.97 | 150 | | 9.73 | 6.97 | 203.52 | .29 | -110.1 | 4.36 | |
| 10:35 | 12.97 | 150 | | 9.96 | 6.50 | 275.70 | .28 | -70.4 | 3.91 | |
| 10:40 | 12.97 | 150 | | 10.24 | 6.32 | 341.46 | .27 | -15.8 | 2.43 | |
| 10:45 | 12.27 | 150 | | 10.45 | 6.32 | 355.23 | .16 | 11.2 | 4.18 | |
| 10:50 | 12.27 | 150 | | 10.36 | 6.40 | 357.85 | .067 | 40.8 | 3.71 | |
| 10:55 | 12.27 | 150 | | 10.75 | 6.45 | 360.74 | 0.08 | 40.1 | 4.29 | |
| 11:00 | 12.27 | 150 | | 10.14 | 6.49 | 363.76 | .11 | 39.4 | 3.91 | |
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| | | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4 Dioxane | 11:55 | | | |
| | | | | |
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| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

Geosyntec consultants
289 Great Road, Suite 202
Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

| | | | |
|---|---|---|---|
| Well ID: SO44 | Well Diameter: 2 | Intake Depth: 81 | |
| Project Name: NMT ROA | Total Depth of Well: 86 | | |
| Project Number: 3252 | Initial Depth to Water: 11.34 | Time: 11:20 | |
| Date: 3/8/2023 | Casing Volume: | | |
| Recorded By: MAT. B | Depth to Water after Purging: | Time: | |
| Sample ID: MWSO44 03082023 | Method of Purging: | | |
| Duplicate ID: | Method of Sampling: | | |
| Weather: 40° and cloudy | Multi-meter ID: | Turbid ID: | |

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 12:00 | 11.42 | 150 | | 7.88 | 7.82 | 172.21 | 10.58 | 30.9 | 22.4 | |
| 12:05 | 11.42 | 150 | | 9.14 | 7.08 | 161.12 | 2.26 | -34.3 | 16.3 | |
| 12:10 | 11.42 | 150 | | 9.31 | 6.97 | 162.09 | 2.08 | -34.2 | 10.1 | |
| 12:15 | 11.42 | 150 | | 9.44 | 6.97 | 163.84 | 2.75 | -32.7 | 5.18 | |
| 12:20 | 11.42 | 150 | | 10.57 | 6.96 | 174.99 | 1.16 | -38.0 | 3.62 | |
| 12:25 | 11.42 | 150 | | 10.74 | 6.96 | 176.8 | 1.4 | -36.7 | 2.91 | |
| 12:30 | 11.42 | 150 | | 10.79 | 6.93 | 179.10 | .72 | -36.9 | 4.78 | |
| 12:35 | 11.42 | 150 | | 10.71 | 6.95 | 180.51 | .50 | -38.5 | 4.38 | |
| 12:40 | 11.42 | 150 | | 10.74 | 6.90 | 179.60 | .43 | -34.7 | 3.41 | |
| | | | | | | | | | | |
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| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4 DIOXane | 12:50 | | | |
| | | | | |
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Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# SEMI-ANNUAL GAUGING EVENT FORM
# OCTOBER 2022

## Monitoring Well Gauging Form - Semi-Annual RDRA Sampling

**Project:** Nuclear Metals, Inc. (RD/RA)

**Location:** 2229 Main Street, Concord, MA

**Date:** 10-19-22

**Weather:** 50's Sunny

**Company:** OTM

**Sampler Name:** KR, DP, JC, JS

**NOTES:**

| Well ID | Easting (X) | Northing (Y) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Time | Depth to Water (feet) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9-78 | 676096.827 | 2987274.821 | 138.96 | N/A | 58 | 58 | OB | N/A | 11:24 | 14.00 | |
| A-2E | 675299.016 | 2987354.769 | 132.70 | N/A | 74 | 74 | OB | N/A | 11:49 | 11.79 | |
| AR-01 | 674733.403 | 2986826.979 | 139.91 | N/A | 122 | 122 | OB | N/A | 11:32 | 14.19 | |
| AR-02 | 675913.415 | 2987545.893 | 137.38 | N/A | 120 | 120 | OB | N/A | 11.72 | 11:17 | |
| AR-PHS | 675813.999 | 2986615.917 | 128.62 | -- | -- | -- | SW | -- | 13:12 | 3.52 | |
| ASBRV-D2 | 677203.791 | 2986906.699 | N/A | -- | -- | -- | SW | -- | 8:45 | 2.60 | |
| ASBRV-U1 | 675239.488 | 2985706.537 | 140.85 | -- | -- | -- | SW | -- | 13:25 | 12.69 | |
| ASBRV-U2 | 676058.199 | 2986109.991 | 138.48 | -- | -- | -- | SW | -- | 13:30 | 12.64 | |
| ASSABET-1A (PZ-1A) | 675012.679 | 2986855.744 | 139.08 | 50.8 | 61 | 61 | OB | 18 | 9:57 | 17.62 | Acton Key & Pipe Wrench Needed |
| ASSABET-2A (PZ-2A) | 675197.550 | 2987402.686 | 137.67 | 26 | 34 | 34 | OB | 12 | 9:54 | 17.48 | Acton Key & Pipe Wrench Needed |
| B-06 | 675423.942 | 2987568.250 | 139.13 | N/A | N/A | N/A | OB | N/A | 11:55 | 15.19 | |
| BEW-1* | 677509.410 | 2985933.649 | 193.88 | 114 | 175.4 | 178 | BR | 6 | 5882 | 11:46 | |
| BEW-2* | 677172.855 | 2986034.777 | 192.31 | 134.5 | 227 | 229 | BR | 6 | 9:10 | 56.40 | |
| BEW-3* | 676986.190 | 2986131.727 | 179.69 | 119 | 212.5 | 215 | BR | 6 | 45_11 | 9:45 | |
| BEW-4* | 677298.570 | 2986420.305 | 172.07 | 74.5 | 142 | 144 | BR | 6 | 10:33 | 39.57 | |
| BEW-5* | 676541.404 | 2986620.006 | 132.48 | 107 | 127 | -- | BR | 6 | 09:08 | 6-56 | |
| BEW-6* | 676364.690 | 2986842.848 | 132.91 | 119 | 162 | -- | BR | 6 | 09:05 | 7-23 | |
| EW-1 | 675727.042 | 2986776.130 | 137.28 | 74 | 98 | 98 | OB | 6 | 09:40 | 24.72 | |

## Monitoring Well Gauging Form - Semi-Annual RDRA Sampling

**Project:** Nuclear Metals, Inc. (RD/RA)

**Location:** 2229 Main Street, Concord, MA

**Date:** 10-19-22

**Weather:**

**Company:** O+M

**Sampler Name:**

**NOTES:**

| Well ID | Easting (X) | Northing (Y) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Time | Depth to Water (feet) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GZW-10-1 | 676891.080 | 2986108.060 | 186.30 | 55 | 60 | 164 | OB | 0.5 | 9:48 | 56.71 | |
| GZW-10-2 | 676891.084 | 2986108.069 | 186.30 | 142 | 152 | 164 | BR | 1.5 | 9:47 | 57.45 | |
| GZW-11-2 | 676916.293 | 2986308.467 | 195.45 | 155 | 175 | 176 | BR | 1.5 | 10:01 | 67.43 | |
| GZW-5 | 678388.326 | 2985878.371 | 196.02 | 40 | 55 | 55 | OB | 1.5 | 8:15 | 50.69 | |
| GZW-6-1 | 677089.774 | 2986141.090 | 178.61 | 32 | 42 | 45 | OB | 1.5 | Compromised | | |
| GZW-7-1 | 677625.824 | 2985932.510 | 195.62 | 68 | 78 | 122 | OB | 1.5 | 14:41 | 60.42 | |
| GZW-7-2 | 677625.824 | 2985932.510 | 195.19 | 111.5 | 113 | 122 | BR | 1.5 | | | |
| MW-BS7-2* | 677603.080 | 2985932.637 | 188.53 | 104.5 | 114.5 | 114.5 | BR | 2 | 11:25 | 52.90 | |
| GZW-7S | 677631.281 | 2985926.516 | 193.67 | 61 | 71 | 71 | OB | 2 | 14:20 | 58.81 | |
| GZW-8-1 | 677208.084 | 2986826.318 | 127.57 | 2 | 12 | 12 | OB | 2 | 8:56 | 7.20 | |
| GZW-8-2 | 677198.012 | 2986842.544 | 127.10 | 114.5 | 116 | 133.5 | BR | 1.5 | 8:55 | 16.70 | |
| GZW-9-2 | 677932.608 | 2986501.571 | 183.15 | 45 | 50 | 64 | OB | 1.5 | 11:11 | 42.56 | |
| HA-09 | 677351.560 | 2985459.930 | 205.80 | 49 | 69 | 70 | OB | 2 | 8:30 | 55.19 | |
| HA-10A | 677774.000 | 2985571.206 | 180.94 | 27.6 | 47.6 | 47.6 | OB | 2 | 8:46 | 37.83 | |
| HA20-CMT-3B(OW)* | 677671.468 | 2985858.746 | 184.30 | 98 | 108 | 108 | BR | 2 | 11:34 | 46.68 | |
| HA20-CMT-3T(OW)* | 677669.070 | 2985870.862 | 184.79 | 82 | 92 | 92 | OB | 2 | 11:31 | 49.29 | |
| HA20-CMT-5(OW)* | 677836.950 | 2985870.380 | 175.64 | 90 | 100 | 100 | BR | 2 | 8:55 | 32.71 | |
| HA20-CMT-6(OW)* | 677816.820 | 2985799.050 | 180.29 | 79 | 84 | 84 | BR | 2 | 8:50 | 36.78 | |

## Monitoring Well Gauging Form - Semi-Annual RDRA Sampling

**Project:** Nuclear Metals, Inc. (RD/RA)

**Location:** 2229 Main Street, Concord, MA

**Date:** 10-19-22

**Weather:**

**Company:** QTM

**Sampler Name:** KR, JC, DP, JS

**NOTES:**

| Well ID | Easting (X) | Northing (Y) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Time | Depth to Water (feet) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HB-10 | 677832.308 | 2985825.495 | 180.37 | 49 | 64 | 65 | OB | 1.5 | 8:51 | 38.42 | |
| HB-10S | 677831.039 | 2985822.409 | 179.81 | 32 | 42 | 42 | OB | 2 | 8:53 | 37.74 | |
| HB-11 | 677821.837 | 2985934.359 | 175.01 | 30 | 40 | 42 | OB | 2 | 8:57 | 35.47 | |
| HB-12 | 677685.443 | 2985900.362 | 182.85 | 45 | 55 | 57 | OB | 2 | 15:55 | 47.15 | |
| HB-13* | 677744.743 | 2985834.135 | 162.11 | 28 | 38 | 38 | OB | 2 | 14:31 | 23.52 | |
| HB-620 | 677653.637 | 2985845.275 | 181.87 | 40 | 55 | 55 | OB | 2 | 13:40 | 45.40 | |
| HBPZ-2R | 677708.467 | 2985883.407 | 176.05 | 36 | 51 | 52.5 | OB | 2 | 13:22 | 40.34 | |
| ML-1-2 | 677351.080 | 2986481.280 | 175.35 | 65.5 | 67 | 82.5 | OB | 1.5 | 11:00 | 45.80 | |
| MW-1 | 676918.700 | 2986521.010 | 155.60 | 23 | 38 | 39 | OB | 2 | 10:42 | 27.10 | |
| MW-11 | 677611.840 | 2985787.100 | 189.70 | 55 | 65 | 65 | OB | 2 | 11:36 | 52.48 | |
| MW-2 | 677522.349 | 2986579.572 | 149.02 | 13.6 | 23.6 | 24 | OB | 2 | 10:45 | 17.97 | |
| MW-8A | 677537.207 | 2986026.898 | 191.72 | 60 | 70 | 70 | OB | 2 | 15:51 | 58.71 | |
| MW-S01 | 677066.570 | 2986335.650 | 193.37 | 60.5 | 70.5 | 72 | OB | 2 | 10:00 | 64.83 | |
| MW-SD01 | 677054.010 | 2986336.790 | 193.54 | 90 | 100 | 119 | OB | 2 | 10:05 | 65.07 | |
| MW-BS01 | 677059.740 | 2986329.040 | 194.03 | 124 | 134 | 134.5 | BR | 2 | 10:07 | 64.93 | |
| MW-S02 | 677381.430 | 2986132.980 | 191.40 | 57 | 67 | 103 | OB | 2 | [redacted] | [redacted] 60.08 | 10:39 |
| MW-SD02 | 677376.030 | 2986139.930 | 190.73 | 85 | 95 | 95 | OB | 2 | 10:40 | 59.04 | |
| MW-BS02 | 677384.300 | 2986139.420 | 191.74 | 117 | 127 | 127.5 | BR | 2 | 10:33 | 59.99 | |

## Monitoring Well Gauging Form - Semi-Annual RDRA Sampling

**Project:** Nuclear Metals, Inc. (RD/RA)

**Location:** 2229 Main Street, Concord, MA

**Date:** 10-19-22

**Weather:** 50's Sunny

**Company:** OTM

**Sampler Name:**

**NOTES:**

| Well ID | Easting (X) | Northing (Y) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Time | Depth to Water (feet) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-S03 | 677171.050 | 2985985.210 | 191.20 | 50 | 60 | 60.5 | OB | 2 | 09:20 | 43.70 | |
| MW-BS03 | 677176.090 | 2985991.350 | 190.14 | 130.8 | 140.8 | 142.5 | BR | 2 | 09:21 | 57.53 | |
| MW-BM03 | 677178.500 | 2986000.500 | 191.06 | 157 | 167 | 200 | BR | 2 | 09:22 | 57.26 | |
| MW-S04 | 676928.030 | 2985754.980 | 177.34 | 22 | 32 | 32 | OB | 2 | 9:11 | 26.62 | |
| MW-BS04 | 676917.330 | 2985761.010 | 178.07 | 111 | 126.3 | 126.3 | BR | 2 | 9:10 | 45.65 | |
| MW-S06 | 677287.970 | 2986267.830 | 177.92 | 45 | 55 | 56 | OB | 2 | 14:52 | 47.43 | |
| MW-SD06 | 677283.710 | 2986256.420 | 178.23 | 64 | 74 | 81 | OB | 2 | 14:51 | 47.79 | |
| MW-S07 | 677613.800 | 2986198.590 | 190.33 | 59 | 69 | 105 | OB | 2 | 14:03 | 57.93 | |
| MW-S09 | 677320.560 | 2985832.740 | 191.08 | 51 | 61 | 106 | OB | 2 | 13:18 | 45.25 | |
| MW-SD10 | 677462.750 | 2985610.210 | 194.29 | 54.3 | 64.3 | 65 | OB | 2 | 11:40 | 55.13 | |
| MW-BS10 | 677468.040 | 2985613.500 | 194.00 | 98.5 | 108.5 | 109 | BR | 2 | 11:41 | 53.83 | |
| MW-S12 | 677676.990 | 2985340.840 | 184.43 | 40 | 50 | 53 | OB | 2 | 8:36 | 41.00 | |
| MW-BS12 | 677676.260 | 2985336.240 | 184.33 | 73 | 83 | 83.5 | BR | 2 | 8:35 | 40.06 | |
| MW-SD13 | 677055.420 | 2986101.420 | 180.68 | 94.8 | 104.8 | 105.5 | OB | 2 | 9:36 | 51.24 | |
| MW-SM13 | 677060.660 | 2986109.140 | 181.10 | 54.5 | 64.5 | 65 | OB | 2 | 9:37 | 51.48 | |
| MW-BS13 | 677055.070 | 2986114.950 | 181.52 | 116.5 | 126.5 | 127.2 | BR | 2 | 9:41 | 51.35 | |
| MW-B1D13* | 677070.533 | 2986109.304 | 180.53 | 184 | 194 | 194 | BR | 2 | 9:40 | 49.00 | |
| MW-B2D13* | 677067.893 | 2986105.092 | 180.63 | 214 | 224 | 224 | BR | 2 | 9:39 | 49.11 | |

## Monitoring Well Gauging Form - Semi-Annual RDRA Sampling

**Project:** Nuclear Metals, Inc. (RD/RA)

**Location:** 2229 Main Street, Concord, MA

**Date:** 10-19-22

**Weather:** 50's Sunny

**Company:** OFM

**Sampler Name:**

**NOTES:**

| Well ID | Easting (X) | Northing (Y) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Time | Depth to Water (feet) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-B3D13* | 677065.299 | 2986100.428 | 181.05 | 250 | 260 | 260 | BR | 2 | 9:38 | 49.38 | |
| MW-S14 | 676591.250 | 2986181.970 | 194.90 | 61 | 71 | 71 | OB | 2 | 9:58 | 66.02 | |
| MW-BS14 | 676585.660 | 2986183.740 | 193.84 | 170 | 180 | 180 | BR | 2 | 9:59 | 65.85 | |
| MW-S15 | 676513.520 | 2986671.240 | 134.14 | 5 | 15 | 24 | OB | 2 | 9:10 | 7.45 | |
| MW-SD15* | 676469.274 | 2986702.030 | 136.44 | 81 | 91 | 91 | OB | 2 | 9:18 | 10.03 | |
| MW-BS15 | 676480.200 | 2986710.900 | 135.28 | 105 | 115 | 115 | BR | 2 | 9:17 | 9.30 | |
| MW-BM15 | 676472.900 | 2986715.000 | 135.61 | 137 | 147 | 157 | BR | 2 | 9:18 | 9.90 | |
| MW-S16 | 677613.300 | 2985989.710 | 187.40 | 68.8 | 78.8 | 81.5 | OB | 2 | 11:19 | 53.38 | |
| MW-S17 | 677562.620 | 2986389.930 | 188.17 | 56 | 66 | 69 | OB | 2 | 11:04 | 57.64 | |
| MW-SD17 | 677571.780 | 2986376.840 | 189.28 | 76 | 86 | 89 | OB | 2 | 11:03 | 57.80 | |
| MW-BS17 | 677556.850 | 2986373.910 | 189.30 | 99.8 | 109.8 | 113 | BR | 2 | 11:05 | 56.92 | |
| MW-S18 | 677890.840 | 2985811.990 | 158.23 | 9.5 | 19.5 | 30 | OB | 2 | 09:00 | 11.85 | |
| MW-S19 | 678066.170 | 2985562.920 | 187.50 | 39 | 49 | 66 | OB | 2 | 8:20 | 42.92 | |
| MW-S20 | 678090.290 | 2985836.480 | 156.59 | 19 | 29 | 50 | OB | 2 | 7:50 | 11.80 | |
| MW-S21 | 678281.600 | 2985599.500 | 187.56 | 43 | 53 | 55 | OB | 2 | 8:07 | 42.83 | |
| MW-BS21 | 678287.850 | 2985603.230 | 188.11 | 70 | 80 | 80.5 | BR | 2 | 8:09 | 43.14 | |
| MW-S22 | 677912.910 | 2986682.140 | 175.62 | 33.6 | 43.6 | 44 | OB | 2 | 11:09 | 39.70 | |
| MW-BS22 | 677921.110 | 2986701.510 | 174.59 | 48 | 58 | 58.5 | BR | 2 | 11:10 | 33.80 | |

## Monitoring Well Gauging Form - Semi-Annual RDRA Sampling

**Project:** Nuclear Metals, Inc. (RD/RA)

**Location:** 2229 Main Street, Concord, MA

**Date:** 10-19-22

**Weather:** 50's Sunny

**Company:** OTA

**Sampler Name:**

**NOTES:**

| Well ID | Easting (X) | Northing (Y) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Time | Depth to Water (feet) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-S23 | 677178.150 | 2985766.840 | 184.25 | 40 | 50 | 89 | OB | 2 | 13:16 | 33.16 | |
| MW-S24 | 677663.300 | 2985949.330 | 185.53 | 53.8 | 63.8 | 65 | OB | 2 | 11:27 | 50.49 | |
| MW-SD24* | 677657.895 | 2985939.351 | 185.06 | 66 | 76 | 76 | OB | 2 | 13:30 | 50.35 | |
| MW-BS25 | 677190.620 | 2986469.390 | 152.95 | 68 | 78 | 78.5 | BR | 2 | 10:30 | 24.26 | |
| MW-S26 | 676672.841 | 2986809.146 | 130.65 | 5 | 15 | 90 | OB | 2 | 9:13 | 4.89 | |
| MW-SD26 | 676672.841 | 2986809.146 | 130.56 | 80 | 90 | 90 | OB | 2 | 9:13 | 5.55 | |
| MW-BS26 | 676667.230 | 2986809.980 | 131.84 | 114 | 124 | 124.5 | BR | 2 | 9:12 | 6.16 | |
| MW-S27 | 677423.740 | 2986300.100 | 186.14 | 124 | 134 | 134.5 | OB | 2 | 10:52 | 54.65 | |
| MW-SD27 | 677419.350 | 2986301.890 | 185.90 | 72 | 82 | 82 | OB | 2 | 10:54 | 54.66 | |
| MW-S28 | 676746.300 | 2986268.430 | 196.94 | 60 | 70 | 92 | OB | 2 | 9:53 | 67.83 | |
| MW-BS28 | 676750.550 | 2986267.520 | 197.35 | 156.4 | 166.4 | 168 | BR | 2 | 9:51 | 69.65 | |
| MW-B1D28* | 676734.155 | 2986257.635 | 197.25 | 200 | 210 | 210 | BR | 2 | 9:54 | 69.19 | |
| MW-B2D28* | 676738.463 | 2986261.708 | 197.25 | 251 | 261 | 261 | BR | 2 | 9:55 | 69.37 | |
| MW-S30 | 677400.480 | 2986228.300 | 187.23 | 52 | 62 | 62 | OB | 2 | 10:50 | 55.84 | |
| MW-SD30 | 677394.250 | 2986230.440 | 187.06 | 72 | 82 | 82 | OB | 2 | 10:44 | 55.75 | |
| MW-BS31 | 676330.800 | 2986457.800 | 139.40 | 119 | 129 | 129 | BR | 2 | 9:45 | 13.10 | |
| MW-S32 | 676249.333 | 2986973.333 | 131.23 | 35 | 45 | 45 | OB | 2 | 9:25 | 6.11 | |
| MW-SD32 | 676245.126 | 2986975.518 | 131.37 | 65 | 75 | 75 | OB | 2 | 9:26 | 6.25 | |

## Monitoring Well Gauging Form - Semi-Annual RDRA Sampling

**Project:** Nuclear Metals, Inc. (RD/RA)

**Location:** 2229 Main Street, Concord, MA

**Date:** 10/19/2021

**Weather:** 50's sunny

**Company:** Otie

**Sampler Name:** David Pierce

**NOTES:**

| Well ID | Easting (X) | Northing (Y) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Time | Depth to Water (feet) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-BS32 | 676245.126 | 2986975.518 | 131.36 | 92 | 102 | 102 | BR | 2 | 9:26 | 6.22 | |
| MW-SD34 | 676012.541 | 2986771.180 | 133.56 | 84.5 | 94.5 | 94.5 | OB | 2 | 9:26 | 8.63 | |
| MW-BS34 | 676012.541 | 2986771.180 | 133.60 | 101 | 111 | 111 | BR | 2 | 9:27 | 8.73 | |
| MW-S35 | 676173.470 | 2986230.135 | 138.95 | 30 | 40 | 40 | OB | 2 | 9:25 | 13.25 | |
| MW-SD35 | 676167.742 | 2986228.569 | 138.79 | 82 | 92 | 92 | OB | 2 | 9:55 | 11.55 | |
| MW-BS35 | 676167.742 | 2986228.569 | 138.80 | 105.5 | 115.5 | 115.5 | BR | 2 | 9:55 | 11.39 | |
| MW-S36 | 675629.002 | 2986454.906 | 135.09 | 38 | 48 | 48 | OB | 2 | 15:00 | 10.50 | |
| MW-SD36 | 675633.119 | 2986455.835 | 134.78 | 92 | 102 | 102 | OB | 2 | 15:00 | 9.68 | |
| MW-BS36 | 675633.119 | 2986455.835 | 134.76 | 113 | 123 | 123 | BR | 2 | 15:00 | 9.74 | |
| MW-S37 | 675275.464 | 2986754.678 | 140.96 | 47 | 57 | 57 | OB | 2 | 13:49 | 17.50 | |
| MW-SD37 | 675280.991 | 2986753.462 | 141.11 | 76 | 86 | 86 | OB | 2 | 13:50 | 17.68 | |
| MW-BS37 | 675280.991 | 2986753.462 | 140.69 | 92 | 102 | 102 | BR | 2 | 13:51 | 17.25 | |
| MW-S38 | 675276.911 | 2987036.356 | 136.56 | 40 | 50 | 50 | OB | 2 | 14:13 | 13.79 | |
| MW-SD38 | 675272.149 | 2987036.888 | 135.95 | 60 | 70 | 70 | OB | 2 | 14:12 | 13.59 | |
| MW-BS38 | 675272.149 | 2987036.888 | 136.39 | 85 | 95 | 95 | BR | 2 | 14:13 | 6.90 | |
| MW-S39 | 675198.697 | 2986594.507 | 136.79 | 38 | 48 | 48 | OB | 2 | 14:02 | 13.02 | |
| MW-SD39 | 675194.853 | 2986592.584 | 136.77 | 75 | 85 | 85 | OB | 2 | 14:03 | 13.22 | |
| MW-BS39 | 675194.853 | 2986592.584 | 136.52 | 91 | 101 | 101 | BR | 2 | 14:03 | 12.00 | |

## Monitoring Well Gauging Form - Semi-Annual RDRA Sampling

**Project:** Nuclear Metals, Inc. (RD/RA)

**Location:** 2229 Main Street, Concord, MA

**Date:** 10/14/2022

**Weather:** 50 sunny

**Company:** O&M

**Sampler Name:** David Pierce

**NOTES:**

| Well ID | Easting (X) | Northing (Y) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Time | Depth to Water (feet) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-540 | 675752.877 | 2986773.872 | 138.71 | 45 | 55 | 55 | OB | 2 | 15:15 | 13.98 | |
| MW-SD40 | 675748.209 | 2986776.318 | 138.67 | 87 | 97 | 97 | OB | 2 | 15:15 | 13.63 | |
| MW-8540 | 675748.309 | 2986775.842 | 138.76 | 116 | 126 | 126 | BR | 2 | 15:15 | 14.68 | |
| MW-5D41 | 675514.802 | 2986915.587 | 136.60 | 72 | 82 | 82 | OB | 2 | 15:09 | 12.90 | |
| MW-5D42A | 675550.344 | 2986806.565 | 137.70 | 80 | 90 | 90 | OB | 2 | 10:09 | 13.96 | |
| MW-SD43 | 675465.857 | 2986640.193 | 137.78 | 80 | 90 | 90 | OB | 2 | 15:40 | 13.65 | |
| MW-SD44 | 675483.952 | 2986843.633 | 137.01 | 76 | 86 | 86 | OB | 2 | 10:14 | 13.36 | |

## Monitoring Well Gauging Form - Semi-Annual RDRA Sampling

**Project:** Nuclear Metals, Inc. (RD/RA)

**Location:** 2229 Main Street, Concord, MA

**Date:** 10/19/2022

**Weather:** 50's Sunny

**Company:** QHM

**Sampler Name:** David Pierce

**NOTES:**

| Well ID | Easting (X) | Northing (Y) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Time | Depth to Water (feet) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-SD45 | 675738.684 | 2986856.800 | 140.15 | 75 | 85 | 85 | OB | 2 | 9:36 | 15.98 | |
| MW-S46 | 675121.081 | 2986864.268 | 140.22 | 53 | 63 | 109 | OB | 2 | 13:35 | 17.62 | |
| MW-SD46 | 675119.845 | 2986869.830 | 140.37 | 77.5 | 87.5 | 87.5 | OB | 2 | 13:35 | 17.68 | |
| MW-BS46 | 675121.081 | 2986864.268 | 140.13 | 98 | 108 | 109 | BR | 2 | 13:35 | 16.80 | |
| MW-BS50* | 677548.152 | 2986695.846 | 150.32 | 63 | 73 | 73.5 | BR | 2 | 10:50 | 25.97 | |
| MW-B551* | 676811.835 | 2986634.506 | 140.90 | 102 | 112 | 112 | BR | 2 | 10:40 | 14.68 | |
| MW-SD52* | 676213.515 | 2986759.174 | 132.57 | 78 | 88 | 88 | OB | 2 | 9:30 | 6.86 | |
| MW-B552* | 676213.222 | 2986759.159 | 132.58 | 100 | 110 | 110 | BR | 2 | 9:30 | 7.05 | |
| MW-B553* | 676274.354 | 2986275.880 | 140.36 | 126 | 136 | 139 | BR | 2 | 12:09 | 14.24 | |
| MW-BS54* | 676724.768 | 2985909.439 | 169.39 | 176 | 186 | 186 | BR | 2 | 7:40 | 39.37 | |
| MW-BS55* | TBD | TBD | TBD | TBD | TBD | TBD | BR | 2 | — | — | ~~Dont Exist~~ |
| MW-BS56* | TBD | TBD | TBD | TBD | TBD | TBD | BR | 2 | — | — | |
| MW-S60* | 677626.130 | 2985959.287 | 186.55 | 53 | 63 | 63 | OB | 2 | 11:21 | 52.39 | |
| MW-SD60* | 677624.916 | 2985954.461 | 186.58 | 64 | 79 | 79 | OB | 2 | 11:22 | 52.17 | |
| MW-SD61* | 677527.771 | 2986014.149 | 194.61 | 72 | 82 | 82 | OB | 2 | 13:46 | 61.70 | |
| MW-562A* | 677549.730 | 2986013.388 | 193.55 | 58 | 68 | 68 | OB | 2 | 14:07 | 60.56 | |
| MW-SD62A* | 677549.497 | 2986013.456 | 193.48 | 73 | 83 | 83 | OB | 2 | 14:09 | 60.53 | |
| MW-S63* | 677560.385 | 2985999.730 | 192.70 | 58 | 68 | 68 | OB | 2 | 14:10 | 59.19 | |

## Monitoring Well Gauging Form - Semi-Annual RDRA Sampling

**Project:** Nuclear Metals, Inc. (RD/RA)

**Location:** 2229 Main Street, Concord, MA

**Date:** 10/19/22

**Weather:** Sunny 50

**Company:** OTM

**Sampler Name:** DAP

**NOTES:**

| Well ID | Easting (X) | Northing (Y) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Time | Depth to Water (feet) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-5D63* | 677560.281 | 2985999.609 | 192.77 | 73 | 83 | 83 | OB | 2 | 14:11 | 55.78 | |

## Monitoring Well Gauging Form - Semi-Annual RDRA Sampling

**Project:** Nuclear Metals, Inc. (RD/RA)

**Location:** 2229 Main Street, Concord, MA

**Date:** 10/19/22

**Weather:** 50's Sunny

**Company:** GZA

**Sampler Name:** AJP

**NOTES:**

| Well ID | Easting (X) | Northing (Y) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Time | Depth to Water (feet) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-564* | 677386.193 | 2986081.430 | 194.91 | 60 | 75 | 75 | OB | 2 | 10:44 | 63.34 | |
| MW-SD64* | 677385.944 | 2986081.152 | 194.91 | 85 | 95 | 95 | OB | 2 | 10:45 | 63.37 | |
| MW-T10 | 677467.190 | 2985619.510 | 194.86 | 75 | 80 | 81 | OB | 2 | 13:24 | 56.53 | |
| MW-T24 | 677665.210 | 2985942.930 | 185.11 | 85.5 | 89.5 | 91 | OB | 2 | 16:04 | 50.46 | |
| OW-2 | 676745.475 | 2986552.420 | 151.90 | 17.8 | 27.8 | 27.8 | OB | 2 | 10:35 | 22.06 | |
| P-1 | 677203.865 | 2986863.384 | 127.80 | 48 | 53 | 53 | OB | 1.5 | 8:58 | 7.25 | |
| P-1A | 677175.538 | 2986865.383 | 128.80 | 25 | 30 | 30 | OB | 1.5 | 8:57 | 7.00 | |
| PT-09 | 675799.306 | 2986676.424 | 134.60 | 79 | 89 | 89 | OB | 1.5 | 9:46 | 10.05 | Grace Key Needed |
| PT-10 | 675808.123 | 2986692.785 | 135.23 | 25 | 30 | 30 | OB | 1.5 | 9:47 | 10.36 | Grace Key Needed |
| PT-11P | 676018.462 | 2986759.402 | 133.30 | 7 | 17 | 17 | OB | 1.5 | 9:24 | 8.14 | |
| PW-6 | 677783.613 | 2985664.423 | 182.65 | N/A | N/A | 55 | OB | 2.5 | 8:00 | 43.40 | |
| PZ-Mpond | 675896.365 | 2987167.500 | 129.01 | 7.67 | 8.67 | 8.67 | OB | 1 | 14:40 | 3.13 | |
| PZ-Tpond | 675352.989 | 2987425.881 | 128.64 | 3.5 | 4.5 | 4.5 | OB | 1 | 11:50 | 5.44 | |
| SG-Mpond | 675896.365 | 2987167.500 | 128.85 | -- | -- | -- | SW | -- | 14:40 | 2.92 | |
| SG-Tpond | 675352.989 | 2987425.881 | 128.00 | -- | -- | -- | SW | -- | 11:50 | 2.60 | |
| SW-2A | 677487.020 | 2985621.610 | 193.26 | 103 | 537 | 537 | BR | 8 | 11:45 | 48.81 | |

* indicates wells that were installed as part of RD/RA PDI activities and were included as part of the sampling event if installed at the time of sampling.
EW-1 must be measured from top of concrete vault (marked)

# ANNUAL SAMPLING EVENT FORMS
# APRIL 2023

# METER CALIBRATION REPORT

Geosyntec consultants
289 Great Road, Acton, MA 01720
Phone: 978-263-9588, Fax: 978-263-9594

Project Name: NMI Concord
Project Number:
Field Personnel: SRP
Recorded By: SRP
Sampler's Initials: SRP

Date: 4/3/23 Page 1 of 1
Primary Activities: GW Sampling
Weather: Sunny 40-50°F

*Meter Summary*

| Meter | Make/Model (ex. YSI 600XL) | Serial # | Rental Company | Rental Company ID # |
|---|---|---|---|---|
| Multi-Parameter Probe (pH, DO, ORP, Conductivity) | YSI Pro DSS | 19J101314 | Palms | 0431 |
| Turbidity Meter | Grotech | 19092242 | Palms | 2242 |

| dissolved oxygen (DO) and pH calibration | | dissolved oxygen calibration solutions | |
|---|---|---|---|
| | | 100% | 0 mg/L |
| initial | temperature (°C) | 17.6 | 14.3 |
| | instrument reading | 98.6 | 0.21 |
| | Calibrated To | 100 | N/A |
| | Final Reading | 100.1 | |
| final | temperature (°C) | 21.0 | 20.6 |
| | instrument reading | 98.8 | 0.13 |
| | Post Cal Check Pass (yes/no) | Yes | Yes |

| pH buffer solutions | | |
|---|---|---|
| 4.01 | 7.00 | 10.00 |
| 13.7 | 13.6 | 13.6 |
| 3.99 | 7.08 | 10.19 |
| 4.00 | 7.05 | 10.14 |
| 4.00 | 7.05 | 10.14 |
| 20.6 | 20.7 | 20.6 |
| 4.01 | 7.06 | 10.16 |
| Yes | Yes | Yes |

| Specific conductivity, ORP[1] and turbidity calibration ([1]check temperature correction) | | Specific conductivity calibration |
|---|---|---|
| | | 1413 µs/cm @ 25 °C |
| initial | temperature (°C) | 14.9 |
| | instrument reading | 1441 |
| | Calibrated To | 1413 |
| | Final Reading | 1413 |
| final | Temperature (°C) | 20.4 |
| | instrument reading | 1416 |
| | Post Cal Check Pass (yes/no) | Yes |

| ORP[1] calibration solution (Zobell) |
|---|
| 231 mV Ag/AgCl @ 25 °C |
| 15.1 |
| 243.0 |
| 243.8 |
| 243.3 |
| 20.4 |
| 237.3 |
| Yes |

| turbidity calibration solutions | | |
|---|---|---|
| #1 | #2 | #3 |
| 20 NTUs | 100 NTUs | 800 NTUs |
| N/A | N/A | N/A |
| — | — | — |
| 20 | 100 | 800 |
| 20.3 | 100 | 796 |
| N/A | N/A | N/A |
| 20.1 | 100 | 797 |
| Yes | Yes | Yes |

initial calibration completed at: 1030 (time)

final calibration check completed at: 1600 (time)

*Comments (DO membrane changed, other equipment issues, etc)*

[1]*See Back for Temperature Correction*

# METER CALIBRATION REPORT

Geosyntec consultants
289 Great Road, Acton, MA 01720
Phone: 978-263-9588, Fax: 978-263-9594

Project Name: NMI
Project Number: BR0090D
Field Personnel: G. Wanjiru, E. Bushman
Recorded By:
Sampler's Initials:
Date: 4/4/23 Page ___ of ___
Primary Activities: GW sampling
Weather: 50s, overcast

*Meter Summary*

| Meter | Make/Model (ex. YSI 600XL) | Serial # | Rental Company | Rental Company ID # |
|---|---|---|---|---|
| Multi-Parameter Probe (pH, DO, ORP, Conductivity) | Pro Quatro | 22H103077 | PALMS | — |
| Turbidity Meter | geotech | 22074265 | PALMS | — |

| dissolved oxygen (DO) and pH calibration | | dissolved oxygen calibration solutions | |
|---|---|---|---|
| | | 100% | 0 mg/L |
| initial | temperature (°C) | 21.1 | 20.1 |
| | instrument reading | 105.2 | 0.07 |
| | Calibrated To | 99.9 | N/A |
| | Final Reading | 99.8 | — |
| final | temperature (°C) | 19.7 | 22.7 |
| | instrument reading | 92.1 | 0.03 |
| | Post Cal Check Pass (yes/no) | Y | Y |

| pH buffer solutions | | |
|---|---|---|
| 4.01 | 7.00 | 10.00 |
| 19.9 | 20.1 | 19.9 |
| 4.00 | 7.11 | 10.05 |
| 4.00 | 7.00 | 10.00 |
| 4.00 | 7.00 | 10.00 |
| 22.6 | 22.6 | 22.7 |
| 4.04 | 7.07 | 10.01 |
| Y | Y | Y |

| Specific conductivity, ORP[1] and turbidity calibration ([1]check temperature correction) | | Specific conductivity calibration |
|---|---|---|
| | | 1413 µs/cm @ 25 °C |
| initial | temperature (°C) | 19.3 |
| | instrument reading | 1478 |
| | Calibrated To | 1413 |
| | Final Reading | 1413 |
| final | Temperature (°C) | 22.9 |
| | instrument reading | 1352 |
| | Post Cal Check Pass (yes/no) | Y |

| ORP[1] calibration solution (Zobell) |
|---|
| 231 mV Ag/AgCl @ 25 °C |
| 20.3 |
| 232.4 |
| 237.5 |
| 237.5 |
| 22.9 |
| 231.3 |
| Y |

| turbidity calibration solutions | | | |
|---|---|---|---|
| #1 | #2 | #3 | |
| 0.02 NTUs | 20 NTUs | 100 NTUs | 800 |
| N/A | N/A | N/A | |
| 0.02 | 37.4 | 103 | 841 |
| 0.02 | 20 | 100 | 800 |
| 0.04 | 20.1 | 100 | 803 |
| N/A | N/A | N/A | |
| 0.02 | 20.0 | 99.5 | 792 |
| Y | Y | Y | Y |

initial calibration completed at: ___ (time)
final calibration check completed at: ___ (time)

*Comments (DO membrane changed, other equipment issues, etc)*

[1]*See Back for Temperature Correction*

# METER CALIBRATION REPORT

Geosyntec consultants
289 Great Road, Acton, MA 01720
Phone: 978-263-9588, Fax: 978-263-9594

Project Name: NM1
Project Number:
Field Personnel: PBarton
Recorded By: PBarton
Sampler's Initials: WPB

Date: 4/4/23 Page 1 of 1
Primary Activities:
Weather: cloudy 57°

*Meter Summary*

| Meter | Make/Model (ex. YSI 600XL) | Serial # | Rental Company | Rental Company ID # |
|---|---|---|---|---|
| Multi-Parameter Probe (pH, DO, ORP, Conductivity) | YSI ProDSS | 22B103383 | Palms | 3383 |
| Turbidity Meter | Geotech Turb | 19062113 | Palms | 2113 |

| dissolved oxygen (DO) and pH calibration | | dissolved oxygen calibration solutions | |
|---|---|---|---|
| | | 100% | 0 mg/L |
| initial | temperature (°C) | 19.1 | 18.2 |
| | instrument reading | 100.5 | 0.19 |
| | Calibrated To | 99.8 | N/A |
| | Final Reading | 99.8 | 0.19 |
| final | temperature (°C) | 22.1 | |
| | instrument reading | 97.7 | |
| | Post Cal Check Pass (yes/no) | | |

| pH buffer solutions | | |
|---|---|---|
| 4.01 | 7.00 | 10.00 |
| 19.0 | 18.3 | 19.0 |
| 4.05 | 7.12 | 10.10 |
| 4.00 | 7.03 | 10.07 |
| 4.00 | 7.03 | 10.07 |
| 23.0 | 22.7 | 22.9 |
| 4.03 | 7.09 | 9.96 |
| | | |

| Specific conductivity, ORP[1] and turbidity calibration ([1]check temperature correction) | | Specific conductivity calibration |
|---|---|---|
| | | 1413 µs/cm @ 25 °C |
| | | 18.3 |
| initial | temperature (°C) | 18.3 |
| | instrument reading | 1645 |
| | Calibrated To | 1413 |
| | Final Reading | 1413 |
| final | Temperature (°C) | 22.7 |
| | instrument reading | 1654 |
| | Post Cal Check Pass (yes/no) | |

| ORP[1] calibration solution (Zobell) |
|---|
| 231 mV Ag/AgCl @ 25 °C |
| 19.2 |
| 216.2 |
| 238.54 |
| 23854 |
| 23.2 |
| 235.1 |
| |

| turbidity calibration solutions | | |
|---|---|---|
| #1 | #2 | #3 |
| 20 NTUs | 100 NTUs | 800 NTUs |
| N/A | N/A | N/A |
| 20.1 | 106 | 806 |
| 20 | 100 | 800 |
| 20.1 | 100 | 796 |
| N/A | N/A | N/A |
| 208 | 110 | 820 |
| | | |

initial calibration completed at: 1008 (time)

final calibration check completed at: (time)

*Comments (DO membrane changed, other equipment issues, etc)*

[1]*See Back for Temperature Correction*

Inspector: DAP

# Water Quality Sonde Calibration Form

Date: 4/4/23

| | | | |
|---|---|---|---|
| In-Situ Troll S/N: | 614106 | | |
| Battery % Remaining | 100 | Batteries Replaced? | Y / N |
| ~~Internal Log Stopped/Downloaded and Sent to Amy Hofmann?~~ | ~~Y / N~~ | ~~Internal Log Setup and Started?~~ | ~~Y / N~~ |
| Task: | GW Sampling | | |

| *Initial Check* | | *Standard* | *Reading Check* | *Acceptance Criteria* | *Pass / Fail* | *Recalibrated (See Below)* |
|---|---|---|---|---|---|---|
| **pH** | S.U. | 7 | 7.40 | +/- 0.5 pH unit | P / F | Y / N |
| **ORP** | mV | FROM CALIBRATION SCREEN / CHART 237.67 | 218.9 | +/- 10 mV | P / F | Y / N |
| **Turbidity** | NTU | 10 | N/A | +/- 2 NTU | P / F | Y / N |
| **Sp. Conductivity** | µS/cm | 1,413 @ 25°C | 1629.7 | +/- 15% (Acceptable range 1201.05-1624.95) | P / F | Y / N |
| **RDO** (Zero Solution) | mg/L | 0 | 0 | +/- 0.5 mg/L | P / F | Y / N |
| **Temperature** | °C | FROM THERMOMETER 20 | 20.04 | +/- 0.5 °C | P / F | Annually Only |

| *Calibration:* | *Sensor Range Value* | *Sensor Acceptance Criteria* | *Sensor Pass / Fail* | *Sensor Replaced or Solution Changed?* | *Sensor S/N:* |
|---|---|---|---|---|---|
| **pH 4-7** | Slope 1: -56.18 | -66 to -50 mV/pH | (P) F | Y (N) | 879911 |
| **pH 7-10** | Slope 2: -55.13 | | (P) F | | |
| **pH 4-7** | Offset 1: -21.1 | +/- 30 mV | (P) F | | |
| **pH 7-10** | Offset 2: -21.1 | +/- 30 mV | (P) F | | |
| **ORP** mV | Offset: 18.7 | +/- 30 mV | (P) F | | |
| **Turbidity** NTU | Slope: N/A | 0.7 to 1.3 | (P) F | Y / (N) | — |
| **Sp. Conductivity** µS/cm | Cell Constant: 0.867 | 0.7 to 1.3 | (P) F | Y / (N) | 932863 |
| **RDO (100% and 0% Sat.)** | Slope: | 0.7 to 1.3 | P / F | Y / N | |
| | Offset: | +/- 0.3 mg/L | P / F | | |

| *Post Calibration Check* | *Standard* | *Calibration Confirmation* | *Acceptance Criteria* | *Calibration Pass / Fail* |
|---|---|---|---|---|
| **pH** S.U. | 10 | 10 | +/- 0.1 pH unit | P / F |
| **ORP** mV | 237.67 | 237.7 | +/- 5mV | P / F |
| **Turbidity** NTU | 100 | 100 | +/- 2 NTU | P / F |
| **Sp. Conductivity** µS/cm | 1,413 @ 25°C | 1413 | +/- 10% (Acceptable range 1271.10—1554.30) | P / F |
| **RDO** (Zero Solution) | 0 | 0 | +/- 0.3 mg/L | P / F |

Notes

# METER CALIBRATION REPORT

Geosyntec consultants
289 Great Road, Acton, MA 01720
Phone: 978-263-9588, Fax: 978-263-9594

Project Name: NMI
Project Number:
Field Personnel: J. Conway
Recorded By: J. Conway
Sampler's Initials: JC

Date: 4/4/23 Page 1 of 1
Primary Activities: Groundwater samplings
Weather: 40s, overcast

*Meter Summary*

| Meter | Make/Model (ex. YSI 600XL) | Serial # | Rental Company | Rental Company ID # |
|---|---|---|---|---|
| Multi-Parameter Probe (pH, DO, ORP, Conductivity) | YSI ProPSS | 17E101955 | Palms | — |
| Turbidity Meter | Geotech | 21073394 | Palms | — |

| dissolved oxygen (DO) and pH calibration | | dissolved oxygen calibration solutions | |
|---|---|---|---|
| | | 100% | 0 mg/L |
| initial | temperature (°C) | 15.8 | 18.8 |
| | instrument reading | 98.3 | 0.49 |
| | Calibrated To | 100.3 | N/A |
| | Final Reading | 100.3 | — |
| final | temperature (°C) | 22.7 | 21.9 |
| | instrument reading | 101.2 | 0.49 |
| | Post Cal Check Pass (yes/no) | Y | Y |

| pH buffer solutions | | |
|---|---|---|
| 4.01 | 7.00 | 10.00 |
| 19.2 | 19.2 | 19.2 |
| 3.90 | 7.17 | 10.09 |
| 4.00 | 7.00 | 10.00 |
| — | 7.11 | — |
| 20.8 | 21.0 | 21.3 |
| 3.98 | 7.10 | 9.92 |
| Y | Y | Y |

| Specific conductivity, ORP[1] and turbidity calibration ([1]check temperature correction) | | Specific conductivity calibration |
|---|---|---|
| | | 1413 µs/cm @ 25 °C |
| initial | temperature (°C) | 19.3 |
| | instrument reading | 1267 |
| | Calibrated To | 1413 |
| | Final Reading | 1415 |
| final | Temperature (°C) | 20.7 |
| | instrument reading | 1417 |
| | Post Cal Check Pass (yes/no) | Y |

| ORP[1] calibration solution (Zobell) |
|---|
| 231 mV Ag/AgCl @ 25 °C |
| 19.2 |
| 241.7 |
| 238.0 |
| 237.7 |
| 20.7 |
| 235.0 |
| Y |

| turbidity calibration solutions | | | |
|---|---|---|---|
| #1 | #2 | #3 | |
| ~~10~~ 0 .02 NTUs | 20 NTUs | 100 NTUs | 800 |
| N/A | N/A | N/A | |
| 0.24 | 7.96 | 101 | 838 |
| .02 | 20.0 | 100 | 800 |
| .02 | 20.0 | 100 | 811 |
| N/A | N/A | N/A | |
| 0.14 | 22.1 | 97.4 | 766 |
| N | N | Y | Y |

initial calibration completed at: _____ (time)

final calibration check completed at: _____ (time)

*Comments (DO membrane changed, other equipment issues, etc)*

[1]*See Back for Temperature Correction*

# METER CALIBRATION REPORT

Geosyntec consultants
289 Great Road, Acton, MA 01720
Phone: 978-263-9588, Fax: 978-263-9594

Project Name: NMI Concord
Project Number:
Field Personnel: SRP
Recorded By: SRP
Sampler's Initials: SRP

Date: 4/4/23 Page 1 of 1
Primary Activities: GW Sampling
Weather: Overcast 50s

*Meter Summary*

| Meter | Make/Model (ex. YSI 600XL) | Serial # | Rental Company | Rental Company ID # |
|---|---|---|---|---|
| Multi-Parameter Probe (pH, DO, ORP, Conductivity) | YSI Pro DSS | 19J10314 | Palms | 0431 |
| Turbidity Meter | Geotech | 19092242 | Palms | 2242 |

| dissolved oxygen (DO) and pH calibration | | dissolved oxygen calibration solutions | |
|---|---|---|---|
| | | 100% | 0 mg/L |
| initial | temperature (°C) | 19.7 | 20.1 |
| | instrument reading | 99.7 | 0.23 |
| | Calibrated To | 99.6 | N/A |
| | Final Reading | 99.7 | 0.23 |
| final | temperature (°C) | 19.8 | 19.8 |
| | instrument reading | 99.8 | 0.27 |
| | Post Cal Check Pass (yes/no) | Yes | Yes |

| pH buffer solutions | | |
|---|---|---|
| 4.01 | 7.00 | 10.00 |
| 20.6 | 20.8 | 20.6 |
| 3.97 | 7.05 | 10.02 |
| 4.00 | 7.02 | 10.05 |
| 4.00 | 7.02 | 10.05 |
| 19.8 | 19.8 | 19.8 |
| 3.99 | 7.03 | 10.07 |
| Y | Y | Y |

| Specific conductivity, ORP[1] and turbidity calibration ([1]check temperature correction) | | Specific conductivity calibration |
|---|---|---|
| | | 1413 µs/cm @ 25 °C |
| initial | temperature (°C) | 20.7 |
| | instrument reading | 1402 |
| | Calibrated To | 1413 |
| | Final Reading | 1414 |
| final | Temperature (°C) | 20.1 |
| | instrument reading | 1415 |
| | Post Cal Check Pass (yes/no) | Y |

| ORP[1] calibration solution (Zobell) |
|---|
| 231 mV Ag/AgCl @ 25 °C |
| 20.7 |
| 235 |
| 236.6 |
| 236.6 |
| 20.2 |
| 237.3 |
| Y |

| turbidity calibration solutions | | |
|---|---|---|
| #1 | #2 | #3 |
| 20 NTUs | 100 NTUs | 800 NTUs |
| N/A | N/A | N/A |
| [redacted] | — | — |
| 20 | 100 | 800 |
| 20.1 | 100 | 798 |
| N/A | N/A | N/A |
| 20.3 | 99.8 | 799 |
| Y | Y | Y |

initial calibration completed at: 0745 (time)

final calibration check completed at: 1600 (time)

*Comments (DO membrane changed, other equipment issues, etc)*

[1]See Back for Temperature Correction

# METER CALIBRATION REPORT

Geosyntec consultants
289 Great Road, Acton, MA 01720
Phone: 978-263-9588, Fax: 978-263-9594

Project Name: NM1
Project Number:
Field Personnel: PBurton
Recorded By: DBurton
Sampler's Initials: WPB
Date: 4/5/23 Page ___ of ___
Primary Activities:
Weather: Cloudy 44°

*Meter Summary*

| Meter | Make/Model (ex. YSI 600XL) | Serial # | Rental Company | Rental Company ID # |
|---|---|---|---|---|
| Multi-Parameter Probe (pH, DO, ORP, Conductivity) | YSI ProDSS | 22B103383 | Palms | 3383 |
| Turbidity Meter | Geotech Turb | 19062113 | Palms | 2113 |

| dissolved oxygen (DO) and pH calibration | | dissolved oxygen calibration solutions | |
|---|---|---|---|
| | | 100% | 0 mg/L |
| initial | temperature (°C) | 17.8 | 18.6 |
| | instrument reading | 100.4 | 0.5 |
| | Calibrated To | 100.9 | N/A |
| | Final Reading | 100.9 | 0.5 |
| final | temperature (°C) | 15.2 | |
| | instrument reading | 99.3 | |
| | Post Cal Check Pass (yes/no) | | |

| pH buffer solutions | | |
|---|---|---|
| 4.01 | 7.00 | 10.00 |
| 18. | 18.7 | 18.5 |
| 4.00 | 7.07 | 10.00 |
| 4.00 | 7.03 | 10.08 |
| 4.00 | 7.03 | 10.08 |
| 4.05 | 16.8 | 16.8 |
| 16.6 | 7.17 | 10.01 |
| | | |

| Specific conductivity, ORP[1] and turbidity calibration ([1]check temperature correction) | | Specific conductivity calibration |
|---|---|---|
| | | 1413 µs/cm @ 25 °C |
| initial | temperature (°C) | 18.9 |
| | instrument reading | 1355 |
| | Calibrated To | 1355 |
| | Final Reading | 1355 |
| final | Temperature (°C) | 16.5 |
| | instrument reading | 1752 |
| | Post Cal Check Pass (yes/no) | |

| ORP[1] calibration solution (Zobell) |
|---|
| 231 mV Ag/AgCl @ 25 °C |
| 18.5 |
| 239.5 |
| 246.0 |
| 240.0 |
| |
| 17.0 |
| 242.6 |
| |

| turbidity calibration solutions | | |
|---|---|---|
| #1 | #2 | #3 |
| 20 NTUs | 100 NTUs | 800 NTUs |
| N/A | N/A | N/A |
| 21.0 | 104 | 823 |
| 20 | 100 | 800 |
| 20.0 | 98.5 | 807 |
| N/A | N/A | N/A |
| 20.5 | 105 | 819 |
| | | |

initial calibration completed at: ___ (time)
final calibration check completed at: ___ (time)

*Comments (DO membrane changed, other equipment issues, etc)*

[1]*See Back for Temperature Correction*

# METER CALIBRATION REPORT

Geosyntec consultants
289 Great Road, Acton, MA 01720
Phone: 978-263-9588, Fax: 978-263-9594

Project Name: NMI
Project Number:
Field Personnel: S. Conway
Recorded By: S. Conway
Sampler's Initials: SC

Date: 4/5/23 Page 1 of 1
Primary Activities: Groundwater sampling
Weather: 40s, overcast

*Meter Summary*

| Meter | Make/Model (ex. YSI 600XL) | Serial # | Rental Company | Rental Company ID # |
|---|---|---|---|---|
| Multi-Parameter Probe (pH, DO, ORP, Conductivity) | YSI ProDSS | 17E101955 | Palms | — |
| Turbidity Meter | Geotech | 21073394 | Palms | — |

| dissolved oxygen (DO) and pH calibration | | dissolved oxygen calibration solutions | |
|---|---|---|---|
| | | 100% | 0 mg/L |
| initial | temperature (°C) | ~~22.7~~ 19.7 (SD) | 20.0 |
| | instrument reading | ~~101.2~~ 101.6 | 0.49 |
| | Calibrated To | 101.3 | N/A |
| | Final Reading | 101.4 | — |
| final | temperature (°C) | 15.2 | 19.1 |
| | instrument reading | 105.6 | 0.49 |
| | Post Cal Check Pass (yes/no) | Y | Y |

| pH buffer solutions | | |
|---|---|---|
| 4.01 | 7.00 | 10.00 |
| 20.8 | 21.0 | 21.3 |
| 3.98 | 7.10 | 9.92 |
| 4.00 | 7.00 | 10.00 |
| — | 7.10 | — |
| 19.4 | 19.4 | 19.1 |
| 4.05 | 7.12 | 9.91 |
| Y | Y | Y |

| Specific conductivity, ORP[1] and turbidity calibration ([1]check temperature correction) | | Specific conductivity calibration |
|---|---|---|
| | | 1413 µs/cm @ 25 °C |
| initial | temperature (°C) | 20.7 |
| | instrument reading | 1417 |
| | Calibrated To | 1413 |
| | Final Reading | 1413 |
| final | Temperature (°C) | 19.2 |
| | instrument reading | 1428 |
| | Post Cal Check Pass (yes/no) | Y |

| ORP[1] calibration solution (Zobell) |
|---|
| 231 mV Ag/AgCl @ 25 °C |
| 20.7 |
| 235.0 |
| 237.0 |
| 236.7 |
| 19.2 |
| 240.6 |
| Y |

| turbidity calibration solutions | | | |
|---|---|---|---|
| #1 | #2 | #3 | |
| .02 NTUs | 20 NTUs | 100 NTUs | 800 |
| N/A | N/A | N/A | |
| .14 | 22.1 | 97.4 | 766 |
| .02 | 20.0 | 100 | 800 |
| .02 | 20.5 | 101 | 812 |
| N/A | N/A | N/A | |
| 0.50 | 22.3 | 102 | 827 |
| N | N | Y | Y |

initial calibration completed at: _____ (time)

final calibration check completed at: _____ (time)

*Comments (DO membrane changed, other equipment issues, etc)*

[1]*See Back for Temperature Correction*

# METER CALIBRATION REPORT

Geosyntec consultants
289 Great Road, Acton, MA 01720
Phone: 978-263-9588, Fax: 978-263-9594

Project Name: NM1
Project Number: BR00900
Field Personnel:
Recorded By: EB
Sampler's Initials: EB

Date: 4/5/23 Page ___ of ___
Primary Activities: GW sampling
Weather: 40s, overcast

*Meter Summary*

| Meter | Make/Model (ex. YSI 600XL) | Serial # | Rental Company | Rental Company ID # |
|---|---|---|---|---|
| Multi-Parameter Probe (pH, DO, ORP, Conductivity) | Pro Quatro | 22H103077 | PALMS | — |
| Turbidity Meter | geotech | 22074265 | PALMS | — |

| dissolved oxygen (DO) and pH calibration | | dissolved oxygen calibration solutions | |
|---|---|---|---|
| | | 100% | 0 mg/L |
| initial | temperature (°C) | 20.0 | 19.5 |
| | instrument reading | 102.0 | 0.18 |
| | Calibrated To | 101.0 | N/A |
| | Final Reading | 101.0 | — |
| final | temperature (°C) | 16.9 | 19.4 |
| | instrument reading | 92.0 | 0.02 |
| | Post Cal Check Pass (yes/no) | Y | Y |

| pH buffer solutions | | |
|---|---|---|
| 4.00 | 7.00 | 10.00 |
| 22.6 | 22.6 | 22.7 |
| 4.04 | 7.07 | 10.01 |
| 4.00 | 7.00 | 10.00 |
| 4.00 | 7.00 | 10.00 |
| 19.2 | 19.7 | 19.8 |
| 4.16 | 7.04 | 10.00 |
| Y | Y | Y |

| Specific conductivity, ORP[1] and turbidity calibration ([1]check temperature correction) | | Specific conductivity calibration |
|---|---|---|
| | | 1413 µs/cm @ 25 °C |
| initial | temperature (°C) | 22.9 |
| | instrument reading | 1352 |
| | Calibrated To | 1413 |
| | Final Reading | 1413 |
| final | Temperature (°C) | 19.4 |
| | instrument reading | 1435 |
| | Post Cal Check Pass (yes/no) | Y |

| ORP[1] calibration solution (Zobell) |
|---|
| 231 mV Ag/AgCl @ 25 °C |
| 22.9 |
| 231.3 |
| 234.3 |
| 234.3 |
| 19.8 |
| 239.7 |
| Y |

| turbidity calibration solutions | | | |
|---|---|---|---|
| #1 | #2 | #3 | |
| ~~0.02~~ NTUs | 20 NTUs | 100 NTUs | 800 |
| N/A | N/A | N/A | |
| 0.02 | 20.0 | 99.5 | 792 |
| 002 | 20 | 100 | 800 |
| 0.02 | 19.9 | 99.3 | 792 |
| N/A | N/A | N/A | |
| 0.18 | 21.1 | 102 | 813 |
| N | Y | Y | Y |

initial calibration completed at: ___ (time)

final calibration check completed at: ___ (time)

*Comments (DO membrane changed, other equipment issues, etc)*

[1]*See Back for Temperature Correction*

# METER CALIBRATION REPORT

Geosyntec consultants
289 Great Road, Acton, MA 01720
Phone: 978-263-9588, Fax: 978-263-9594

Project Name: NMI Concord
Project Number:
Field Personnel: SRP
Recorded By: SRP
Sampler's Initials: SRP

Date: 4/5 Page 1 of 1
Primary Activities: GW Sampling
Weather: Overcast 40s

*Meter Summary*

| Meter | Make/Model (ex. YSI 600XL) | Serial # | Rental Company | Rental Company ID # |
|---|---|---|---|---|
| Multi-Parameter Probe (pH, DO, ORP, Conductivity) | YSI Pro DSS | 19J101314 | Palms | 0431 |
| Turbidity Meter | Geotech | 1909224Z | Palms | 224Z |

| dissolved oxygen (DO) and pH calibration | | dissolved oxygen calibration solutions | |
|---|---|---|---|
| | | 100% | 0 mg/L |
| initial | temperature (°C) | 19.9 | 19.9 |
| | instrument reading | 100.3 | 0.39 |
| | Calibrated To | 100.8 | N/A |
| | Final Reading | 100.8 | 0.39 |
| final | temperature (°C) | 19.8 | — |
| | instrument reading | 100.5 | — |
| | Post Cal Check Pass (yes/no) | Yes | — |

| pH buffer solutions | | |
|---|---|---|
| 4.01 | 7.00 | 10.00 |
| 19.9 | 19.9 | 20.0 |
| ~~4.00~~ 3.95 | 7.08 | 10.00 |
| 4.00 | 7.02 | 10.06 |
| 4.00 | 7.02 | 10.03 |
| 19.8 | 19.8 | 19.8 |
| 4.01 | 7.03 | 10.04 |
| Yes | Yes | Yes |

| Specific conductivity, ORP[1] and turbidity calibration ([1]check temperature correction) | | Specific conductivity calibration |
|---|---|---|
| | | 1413 µs/cm @ 25 °C |
| initial | temperature (°C) | 19.9 |
| | instrument reading | 1425 |
| | Calibrated To | 1413 |
| | Final Reading | 1414 |
| final | Temperature (°C) | 20.0 |
| | instrument reading | 1420 |
| | Post Cal Check Pass (yes/no) | Yes |

| ORP[1] calibration solution (Zobell) |
|---|
| 231 mV Ag/AgCl @ 25 °C |
| 19.9 |
| 237.0 |
| 237.6 |
| 237.5 |
| 20.0 |
| 237.9 |
| Yes |

| turbidity calibration solutions | | |
|---|---|---|
| #1 | #2 | #3 |
| 20 NTUs | 100 NTUs | 800 NTUs |
| N/A | N/A | N/A |
| 21 | 101 | 788 |
| 20 | 100 | 800 |
| 20 | 100 | 798 |
| N/A | N/A | N/A |
| 20.3 | 99 | 796 |
| Yes | Yes | Yes |

initial calibration completed at: 800 (time)

final calibration check completed at: 1330 (time)

*Comments (DO membrane changed, other equipment issues, etc)*

[1]*See Back for Temperature Correction*

Inspector: _____

# Water Quality Sonde Calibration Form

Date: 4/5/23

| | | | |
|---|---|---|---|
| In-Situ Troll S/N: | 503907 | | |
| Battery % Remaining | 87 | Batteries Replaced? | Y (N) |
| Internal Log Stopped/~~Downloaded and Sent to Amy Hoffmann~~? | ~~Y/N~~ | Internal ~~Log Setup and Started~~? | ~~Y/N~~ |
| Task: | GW Sampling | | |

| *Initial Check* | | *Standard* | *Reading Check* | *Acceptance Criteria* | *Pass / Fail* | *Recalibrated (See Below)* |
|---|---|---|---|---|---|---|
| **pH** | S.U | 7 | 7.23 | +/- 0.5 pH unit | P / F | Y / N |
| **ORP** | mV | FROM CALIBRATION SCREEN / CHART 236.77 | 227.5 | +/- 10 mV | P / F | Y / N |
| **Turbidity** | NTU | 10 | N/A | +/- 2 NTU | P / F | Y / N |
| **Sp. Conductivity** | µS/cm | 1,413 @ 25°C | 1775.7 | +/- 15% (Acceptable range 1201.05-1624.95) | P / F | Y / N |
| **RDO** (Zero Solution) | mg/L | 0 | 0 | +/- 0.5 mg/L | P / F | Y / N |
| **Temperature** | °C | FROM THERMOMETER | — | +/- 0.5 °C | P / F | Annually Only |

| *Calibration:* | *Sensor Range Value* | *Sensor Acceptance Criteria* | *Sensor Pass / Fail* | *Sensor Replaced or Solution Changed?* | *Sensor S/N:* |
|---|---|---|---|---|---|
| **pH 4-7** | Slope 1: -56.96 | -66 to -50 mV/pH | (P) / F | Y / (N) | 672414 |
| **pH 7-10** | Slope 2: -52.68 | | (P) / F | | |
| **pH 4-7** | Offset 1: -12.2 | +/- 30 mV | (P) / F | | |
| **pH 7-10** | Offset 2: -12.2 | +/- 30 mV | (P) / F | | |
| **ORP** mV | Offset: +9.4 | +/- 30 mV | (P) / F | | |
| **Turbidity** NTU | Slope: N/A | ~~0.7 to 1.3~~ | ~~P / F~~ | ~~Y / N~~ | |
| **Sp. Conductivity** µS/cm | Cell Constant: 0.8 | 0.7 to 1.3 | (P) / F | Y / (N) | 693433 |
| **RDO (100% and 0% Sat.)** | Slope: 1.145857 | 0.7 to 1.3 | (P) / F | Y / (N) | 694193 |
| | Offset: 0.01 | +/- 0.3 mg/L | (P) / F | | |

| *Post Calibration Check* | *Standard* | *Calibration Confirmation* | *Acceptance Criteria* | *Calibration Pass / Fail* |
|---|---|---|---|---|
| **pH** S.U | 10 | 10.0 | +/- 0.1 pH unit | P / F |
| **ORP** mV | 236.77 | 236.1 | +/- 5mV | P / F |
| **Turbidity** NTU | 100 | — | +/- 2 NTU | P / F |
| **Sp. Conductivity** µS/cm | 1,413 @ 25°C | 1412.1 | +/- 10% (Acceptable range 1271.10—1554.30) | P / F |
| **RDO** (Zero Solution) | 0 | 0 | +/- 0.3 mg/L | P / F |

Notes

# METER CALIBRATION REPORT

Geosyntec consultants
289 Great Road, Acton, MA 01720
Phone: 978-263-9588, Fax: 978-263-9594

Project Name: NM1
Project Number:
Field Personnel: P Burton
Recorded By: PBurton
Sampler's Initials: PB

Date: 4-6-23 Page ___ of ___
Primary Activities:
Weather: Cloudy 38°

*Meter Summary*

| Meter | Make/Model (ex. YSI 600XL) | Serial # | Rental Company | Rental Company ID # |
|---|---|---|---|---|
| Multi-Parameter Probe (pH, DO, ORP, Conductivity) | YSI DSSPro | 22B103383 | Palms | 3383 |
| Turbidity Meter | Geotech Turb | 19062113 | Palms | 2113 |

| dissolved oxygen (DO) and pH calibration | | dissolved oxygen calibration solutions | |
|---|---|---|---|
| | | 100% | 0 mg/L |
| initial | temperature (°C) | 16.6 | 15.3 |
| | instrument reading | 100.2 | 0.19 |
| | Calibrated To | 100.1 | N/A |
| | Final Reading | 100.1 | |
| final | temperature (°C) | 18.7 | |
| | instrument reading | 99.2 | |
| | Post Cal Check Pass (yes/no) | | |

| pH buffer solutions | | |
|---|---|---|
| 4.01 | 7.00 | 10.00 |
| 15 | 15.5 | 15.4 |
| 3.98 | 7.08 | 10.05 |
| 4.00 | 7.04 | 10.12 |
| 4.00 | 7.04 | 10.12 |
| 17.6 | 18.3 | 17.7 |
| 4.02 | 7.14 | 10.08 |
| | | |

| Specific conductivity, ORP[1] and turbidity calibration ([1]check temperature correction) | | Specific conductivity calibration |
|---|---|---|
| | | 1413 µs/cm @ 25 °C |
| initial | temperature (°C) | 16.2 |
| | instrument reading | 1674 |
| | Calibrated To | 1413 |
| | Final Reading | 1413 |
| final | Temperature (°C) | 18.2 |
| | instrument reading | 1525 |
| | Post Cal Check Pass (yes/no) | |

| ORP[1] calibration solution (Zobell) |
|---|
| 231 mV Ag/AgCl @ 25 °C |
| 16.1 |
| 244.1 |
| 242.6 |
| 242.4 |
| 17.8 |
| 240.1 |
| |

| turbidity calibration solutions | | |
|---|---|---|
| #1 | #2 | #3 |
| 20 NTUs | 100 NTUs | 800 NTUs |
| N/A | N/A | N/A |
| 17.9 | 104 | 808 |
| 20 | 100 | 800 |
| 20.2 | 100 | 800 |
| N/A | N/A | N/A |
| 22.3 | 99.3 | 784 |
| | | |

initial calibration completed at: ___ (time)

final calibration check completed at: ___ (time)

*Comments (DO membrane changed, other equipment issues, etc)*

[1]*See Back for Temperature Correction*

# METER CALIBRATION REPORT

Geosyntec consultants
289 Great Road, Acton, MA 01720
Phone: 978-263-9588, Fax: 978-263-9594

Project Name: NMI
Project Number:
Field Personnel: S. Conway
Recorded By: S. Conway
Sampler's Initials: SC

Date: 4/6/23 Page 1 of 1
Primary Activities: Groundwater sampling
Weather: 40s-50s, overcast

*Meter Summary*

| Meter | Make/Model (ex. YSI 600XL) | Serial # | Rental Company | Rental Company ID # |
|---|---|---|---|---|
| Multi-Parameter Probe (pH, DO, ORP, Conductivity) | YSI ProDSS | 17E101955 | Palms | — |
| Turbidity Meter | Geotech | 21073394 | Palms | — |

| dissolved oxygen (DO) and pH calibration | | dissolved oxygen calibration solutions | |
|---|---|---|---|
| | | 100% | 0 mg/L |
| initial | temperature (°C) | 19.6 | 18.8 |
| | instrument reading | 101.9 | 0.49 |
| | Calibrated To | 100.5 | N/A |
| | Final Reading | 100.6 | — |
| final | temperature (°C) | 19.5 | 20.3 |
| | instrument reading | 100.3 | 0.49 |
| | Post Cal Check Pass (yes/no) | Y | Y |

| pH buffer solutions | | |
|---|---|---|
| 4.01 | 7.00 | 10.00 |
| 19.4 | 19.4 | 19.1 |
| 4.05 | 7.12 | 9.91 |
| 4.00 | 7.00 | 10.00 |
| — | 7.09 | — |
| 19.9 | 19.5 | 19.6 |
| 4.09 | 7.11 | 9.95 |
| Y | Y | Y |

| Specific conductivity, ORP[1] and turbidity calibration ([1]check temperature correction) | | Specific conductivity calibration |
|---|---|---|
| | | 1413 µs/cm @ 25 °C |
| initial | temperature (°C) | 19.2 |
| | instrument reading | 1428 |
| | Calibrated To | 1413 |
| | Final Reading | 1413 |
| final | Temperature (°C) | 19.9 |
| | instrument reading | 1389 |
| | Post Cal Check Pass (yes/no) | Y |

| ORP[1] calibration solution (Zobell) |
|---|
| 231 mV Ag/AgCl @ 25 °C |
| 19.2 |
| 240.6 |
| 238.0 |
| 237.9 |
| 19.8 |
| 234.9 |
| Y |

| turbidity calibration solutions | | | |
|---|---|---|---|
| #1 | #2 | #3 | |
| .02 NTUs | 20 NTUs | 100 NTUs | 800 |
| N/A | N/A | N/A | |
| 0.50 | 22.3 | 102 | 827 |
| .02 | 20 | 100 | 800 |
| .02 | 19.2 | 101 | 805 |
| N/A | N/A | N/A | |
| .02 | 19.7 | 100 | 789 |
| Y | Y | Y | Y |

initial calibration completed at: _____ (time)

final calibration check completed at: _____ (time)

*Comments (DO membrane changed, other equipment issues, etc)*

[1]*See Back for Temperature Correction*

Inspector: DAP

# Water Quality Sonde Calibration Form

Date: 4/6/2023

| | | | |
|---|---|---|---|
| In-Situ Troll S/N: | 503707 | | |
| Battery % Remaining | 85 | Batteries Replaced? | Y / N |
| ~~Internal Log Stopped/Downloaded and Sent to Amy Hoffmann?~~ | ~~Y / N~~ | ~~Internal Log Setup and Started?~~ | ~~Y / N~~ |
| Task: | GW Sampling | | |

| *Initial Check* | | *Standard* | *Reading Check* | *Acceptance Criteria* | *Pass / Fail* | *Recalibrated (See Below)* |
|---|---|---|---|---|---|---|
| **pH** | S.U. | 7 | 7.04 | +/- 0.5 pH unit | P / F | Y / N |
| **ORP** | mV | FROM CALIBRATION SCREEN / CHART 236.3 | 225.8 | +/- 10 mV | P / F | Y / N |
| **Turbidity** | NTU | 10 | | +/- 2 NTU | P / F | Y / N |
| **Sp. Conductivity** | µS/cm | 1,413 @ 25°C | 1896.8 | +/- 15% (Acceptable range: 1201.05-1624.95) | P / F | Y / N |
| **RDO** (Zero Solution) | mg/L | 0 | 0 | +/- 0.5 mg/L | P / F | Y / N |
| **Temperature** | °C | FROM THERMOMETER 18.8 | 18.78 | +/- 0.5 °C | P / F | Annually Only |

| *Calibration:* | *Sensor Range Value* | | *Sensor Acceptance Criteria* | *Sensor Pass / Fail* | *Sensor Replaced or Solution Changed?* | *Sensor S/N:* |
|---|---|---|---|---|---|---|
| **pH 4-7** | Slope 1: | -54.29 | -66 to -50 mV/pH | P / F | Y / N | 612414 |
| **pH 7-10** | Slope 2: | -53.23 | | P / F | | |
| **pH 4-7** | Offset 1: | -8.3 | +/- 30 mV | P / F | | |
| **pH 7-10** | Offset 2: | -8.3 | +/- 30 mV | P / F | | |
| **ORP** mV | Offset: | 10.5 | +/- 30 mV | P / F | | |
| **Turbidity** NTU | Slope: | ~~0.775~~ | 0.7 to 1.3 | ~~P / F~~ | ~~Y / N~~ | — |
| **Sp. Conductivity** µS/cm | Cell Constant: | 0.745 | 0.7 to 1.3 | P / F | Y / N | 693433 |
| **RDO (100% and 0% Sat.)** | Slope: | 1.048973 | 0.7 to 1.3 | P / F | Y / N | 694193 |
| | Offset: | -0.02 | +/- 0.3 mg/L | P / F | | |

| *Post Calibration Check* | *Standard* | *Calibration Confirmation* | *Acceptance Criteria* | *Calibration Pass / Fail* |
|---|---|---|---|---|
| **pH** S.U. | 10 | 10.0 | +/- 0.1 pH unit | P / F |
| **ORP** mV | 236.3 | 233.3 | +/- 5mV | P / F |
| **Turbidity** NTU | 100 | — | +/- 2 NTU | P / F |
| **Sp. Conductivity** µS/cm | 1,413 @ 25°C | 1442.1 | +/- 10% (Acceptable range 1271.10—1554.30) | P / F |
| **RDO** (Zero Solution) | 0 | 0 | +/- 0.3 mg/L | P / F |

~~Notes~~

# METER CALIBRATION REPORT

Geosyntec consultants
289 Great Road, Acton, MA 01720
Phone: 978-263-9588, Fax: 978-263-9594

Project Name: NM1
Project Number: BR00900
Field Personnel: E. Grimes, S. Marshall
Recorded By: E. Grimes
Sampler's Initials: EG / SM

Date: 4/6/2023 Page 1 of 1
Primary Activities: annual GW sampling
Weather: overcast, 50s

*Meter Summary*

| Meter | Make/Model (ex. YSI 600XL) | Serial # | Rental Company | Rental Company ID # |
|---|---|---|---|---|
| Multi-Parameter Probe (pH, DO, ORP, Conductivity) | YSI Pro Quatro | 22H103077 | Palms | — |
| Turbidity Meter | Geotech | 2207426S | Palms | — |

| dissolved oxygen (DO) and pH calibration | | dissolved oxygen calibration solutions | |
|---|---|---|---|
| | | 100% | 0 mg/L |
| initial | temperature (°C) | 18.3 | 19.1 |
| | instrument reading | 101.3 | 0.05 |
| | Calibrated To | 100.1 | N/A |
| | Final Reading | 100.1 | 0.05 |
| final | temperature (°C) | ~~20.2~~ | 19.8 |
| | instrument reading | 92.0 | 0.04 |
| | Post Cal Check Pass (yes/no) | Y | Y |

| pH buffer solutions | | |
|---|---|---|
| 4.01 | 7.00 | 10.00 |
| 18.4 | 18.5 | 18.4 |
| 4.03 | 6.97 | 9.97 |
| 4.00 | 7.00 | 10.00 |
| 4.00 | 7.00 | 10.00 |
| 19.2 | 19.2 | ~~18.11~~ 19.4 |
| 4.15 | 6.92 | 10.11 |
| Y | Y | Y |

| Specific conductivity, ORP[1] and turbidity calibration ([1]check temperature correction) | | Specific conductivity calibration |
|---|---|---|
| | | 1413 µs/cm @ 25 °C |
| initial | temperature (°C) | 18.5 |
| | instrument reading | 1449 |
| | Calibrated To | 1413 |
| | Final Reading | 1413 |
| final | Temperature (°C) | 19.6 |
| | instrument reading | 1472 |
| | Post Cal Check Pass (yes/no) | Y |

| ORP[1] calibration solution (Zobell) |
|---|
| 231 mV Ag/AgCl @ 25 °C |
| 19.4 |
| 241.6 |
| 237.5 |
| 237.5 |
| 19.8 |
| 238.7 |
| Y |

| turbidity calibration solutions | | | |
|---|---|---|---|
| #1 | #2 | #3 | |
| 20 NTUs | ~~100~~ NTUs | 800 NTUs | <.10 |
| N/A | N/A | N/A | |
| — | — | — | — |
| 20 | 100 | 800 | |
| 20.6 | 101 | 807 | 0.10 |
| N/A | N/A | N/A | |
| 23.9 | 103 | 801 | 2.40 |
| N | Y | Y | N |

initial calibration completed at: ~~800~~ (time)

final calibration check completed at: ~~800~~ 1600 (time) EG

*Comments (DO membrane changed, other equipment issues, etc)*

[1]*See Back for Temperature Correction*

Inspector:_____

# Water Quality Sonde Calibration Form

Date: 4/7/23

| | | | |
|---|---|---|---|
| In-Situ Troll S/N: | 503907 | | |
| Battery % Remaining | 71 | Batteries Replaced? | Y / (N) |
| ~~Internal Log Stopped/Downloaded and Sent to Amy Hoffmann?~~ | ~~Y / (N)~~ | ~~Internal Log Setup and Started?~~ | ~~Y / N~~ |
| Task: | GW Sampling | | |

| *Initial Check* | | *Standard* | *Reading Check* | *Acceptance Criteria* | *Pass / Fail* | *Recalibrated (See Below)* |
|---|---|---|---|---|---|---|
| **pH** | S.U. | 7 | 7.05 | +/- 0.5 pH unit | P / F | Y / N |
| **ORP** | mV | FROM CALIBRATION SCREEN / CHART 235.21 | 234.4 | +/- 10 mV | P / F | Y / N |
| **Turbidity** | NTU | 10 | | +/- 2 NTU | P / F | Y / N |
| **Sp. Conductivity** | µS/cm | 1,413 @ 25°C | 1449.5 | +/- 15% (Acceptable range: 1201.05-1624.95) | P / F | Y / N |
| **RDO** (Zero Solution) | mg/L | 0 | 0 | +/- 0.5 mg/L | P / F | Y / N |
| **Temperature** | °C | FROM THERMOMETER 0 | | +/- 0.5 °C | P / F | Annually Only |

| *Calibration:* | *Sensor Range Value* | *Sensor Acceptance Criteria* | *Sensor Pass / Fail* | *Sensor Replaced or Solution Changed?* | *Sensor S/N:* |
|---|---|---|---|---|---|
| **pH 4-7** | Slope 1: -55.35 | -66 to -50 mV/pH | (P) / F | Y / (N) | 612414 |
| **pH 7-10** | Slope 2: -52.15 | | (P) / F | | |
| **pH 4-7** | Offset 1: -9.8 | +/- 30 mV | (P) / F | | |
| **pH 7-10** | Offset 2: -9.9 | +/- 30 mV | (P) / F | | |
| **ORP** mV | Offset: 11.3 | +/- 30 mV | (P) / F | | |
| ~~**Turbidity** NTU~~ | ~~Slope:~~ | ~~0.7 to 1.3~~ | ~~P / F~~ | ~~Y / N~~ | |
| **Sp. Conductivity** µS/cm | Cell Constant: .741 | 0.7 to 1.3 | (P) / F | Y / (N) | 693433 |
| **RDO (100% and 0% Sat.)** | Slope: 1.048262 | 0.7 to 1.3 | P / F | Y / N | |
| | Offset: -0.01 | +/- 0.3 mg/L | P / F | | |

| *Post Calibration Check* | *Standard* | *Calibration Confirmation* | *Acceptance Criteria* | *Calibration Pass / Fail* |
|---|---|---|---|---|
| **pH** S.U | 10 | 10.3 | +/- 0.1 pH unit | P / F |
| **ORP** mV | 235.21 | 240.1 | +/- 5mV | P / F |
| **Turbidity** NTU | 100 | ~~0~~ | +/- 2 NTU | P / F |
| **Sp. Conductivity** µS/cm | 1,413 @ 25°C | 1347.2 | +/- 10% (Acceptable range 1271.10—1554.30) | P / F |
| **RDO** (Zero Solution) | 0 | 0 | +/- 0.3 mg/L | P / F |

Notes

# METER CALIBRATION REPORT

Geosyntec consultants
289 Great Road, Acton, MA 01720
Phone: 978-263-9588, Fax: 978-263-9594

Project Name: NM1
Project Number:
Field Personnel: P Burton
Recorded By: P Burton
Sampler's Initials: PB
Date: 4-7-23 Page ___ of ___
Primary Activities:
Weather: clear 46°

*Meter Summary*

| Meter | Make/Model (ex. YSI 600XL) | Serial # | Rental Company | Rental Company ID # |
|---|---|---|---|---|
| Multi-Parameter Probe (pH, DO, ORP, Conductivity) | YSI DSS Pro | 22B103383 | Palms | 3383 |
| Turbidity Meter | GeoTech Turb | 19062113 | Palms | 2113 |

| dissolved oxygen (DO) and pH calibration | | dissolved oxygen calibration solutions | |
|---|---|---|---|
| | | 100% | 0 mg/L |
| initial | temperature (°C) | 18.3 | 18.0 |
| | instrument reading | 100.2 | 0.14 |
| | Calibrated To | 100.3 | N/A |
| | Final Reading | 100.3 | |
| final | temperature (°C) | 100.0 | |
| | instrument reading | 18.6 | |
| | Post Cal Check Pass (yes/no) | | |

| pH buffer solutions | | |
|---|---|---|
| 4.01 | 7.00 | 10.00 |
| 17.1 | 17.5 | 17.3 |
| 4.00 | 7.10 | 10.04 |
| 4.00 | 7.03 | 10.09 |
| 4.00 | 7.03 | 10.09 |
| 18.1 | 17.4 | 18.1 |
| 4.01 | 7.09 | 9.88 |
| | | |

| Specific conductivity, ORP[1] and turbidity calibration ([1]check temperature correction) | | Specific conductivity calibration |
|---|---|---|
| | | 1413 µs/cm @ 25 °C |
| initial | temperature (°C) | 18.1 |
| | instrument reading | 1531 |
| | Calibrated To | 1413 |
| | Final Reading | 1413 |
| final | Temperature (°C) | 18.9 |
| | instrument reading | 1404 |
| | Post Cal Check Pass (yes/no) | |

| ORP[1] calibration solution (Zobell) |
|---|
| 231 mV Ag/AgCl @ 25 °C |
| 17.8 |
| 238.8 |
| 240.36 |
| 240.36 |
| |
| 239.9 |
| 195 |
| |

| turbidity calibration solutions | | |
|---|---|---|
| #1 | #2 | #3 |
| 20 NTUs | 100 NTUs | 800 NTUs |
| N/A | N/A | N/A |
| 203 | 102 | 799 |
| 20 | 100 | 800 |
| 20 | 101 | 799 |
| N/A | N/A | N/A |
| 21.7 | 102 | 798 |
| | | |

initial calibration completed at: 0745 (time)
final calibration check completed at: 1440 (time)

*Comments (DO membrane changed, other equipment issues, etc)*

[1]*See Back for Temperature Correction*

# METER CALIBRATION REPORT

Geosyntec consultants
289 Great Road, Acton, MA 01720
Phone: 978-263-9588, Fax: 978-263-9594

Project Name: NMI
Project Number:
Field Personnel: S. Conway
Recorded By: S. Conway
Sampler's Initials: SC

Date: 4/7/23 Page 1 of 1
Primary Activities: Groundwater sampling
Weather: 50's, sunny, windy

*Meter Summary*

| Meter | Make/Model (ex. YSI 600XL) | Serial # | Rental Company | Rental Company ID # |
|---|---|---|---|---|
| Multi-Parameter Probe (pH, DO, ORP, Conductivity) | YSI ProDSS | 17E101955 | Palms | — |
| Turbidity Meter | Geotech | 21073394 | Palms | — |

| dissolved oxygen (DO) and pH calibration | | dissolved oxygen calibration solutions | |
|---|---|---|---|
| | | 100% | 0 mg/L |
| initial | temperature (°C) | 20.0 | 19.9 |
| | instrument reading | 100.5 | 0.49 |
| | Calibrated To | 100.7 | N/A |
| | Final Reading | 100.8 | — |
| final | temperature (°C) | 17.0 | 19.8 |
| | instrument reading | 100.9 | 0.49 |
| | Post Cal Check Pass (yes/no) | Y | Y |

| pH buffer solutions | | |
|---|---|---|
| 4.01 | 7.00 | 10.00 |
| 19.9 | 19.5 | 19.6 |
| 4.09 | 7.11 | 9.95 |
| 4.00 | 7.00 | 10.00 |
| — | 7.05 | — |
| 19.7 | 19.5 | 18.9 |
| 3.94 | 6.95 | 9.87 |
| Y | Y | Y |

| Specific conductivity, ORP[1] and turbidity calibration ([1]check temperature correction) | | Specific conductivity calibration |
|---|---|---|
| | | 1413 µs/cm @ 25 °C |
| initial | temperature (°C) | 19.9 |
| | instrument reading | 1389 |
| | Calibrated To | 1413 |
| | Final Reading | 1414 |
| final | Temperature (°C) | 18.9 |
| | instrument reading | 1374 |
| | Post Cal Check Pass (yes/no) | Y |

| ORP[1] calibration solution (Zobell) |
|---|
| 231 mV Ag/AgCl @ 25 °C |
| 19.8 |
| 234.9 |
| 237.7 |
| 237.3 |
| 18.8 |
| 242.1 |
| Y |

| turbidity calibration solutions | | | |
|---|---|---|---|
| #1 | #2 | #3 | |
| .02 NTUs | 20 NTUs | 100 NTUs | 800 |
| N/A | N/A | N/A | |
| .02 | 19.7 | 100 | 789 |
| .02 | 20.0 | 100 | 800 |
| .02 | 20.5 | 100 | 800 |
| N/A | N/A | N/A | |
| 0.23 | 21.0 | 103 | 849 |
| N | Y | Y | N |

initial calibration completed at: _____ (time)
final calibration check completed at: _____ (time)

*Comments (DO membrane changed, other equipment issues, etc)*

[1]*See Back for Temperature Correction*

# METER CALIBRATION REPORT

Geosyntec consultants
289 Great Road, Acton, MA 01720
Phone: 978-263-9588, Fax: 978-263-9594

Project Name: NM1
Project Number: BR00901
Field Personnel: E. Grimes
Recorded By: E. Grimes
Sampler's Initials: EG

Date: 4/7/2023 Page 1 of 1
Primary Activities: annual groundwater event
Weather: Sunny, 50s

*Meter Summary*

| Meter | Make/Model (ex. YSI 600XL) | Serial # | Rental Company | Rental Company ID # |
|---|---|---|---|---|
| Multi-Parameter Probe (pH, DO, ORP, Conductivity) | YSI Pro Quatro | 22H103077 | Palms | — |
| Turbidity Meter | Geotech | 22074265 | Palms | — |

| dissolved oxygen (DO) and pH calibration | | dissolved oxygen calibration solutions | |
|---|---|---|---|
| | | 100% | 0 mg/L |
| initial | temperature (°C) | 18.9 | 19.8 |
| | instrument reading | 99.0 | 0.07 |
| | Calibrated To | 100 | N/A |
| | Final Reading | 100.4 | 0.07 |
| final | temperature (°C) | 15.1 | 19.1 |
| | instrument reading | 94.9 | 0.09 |
| | Post Cal Check Pass (yes/no) | Y | Y |

| pH buffer solutions | | |
|---|---|---|
| 4.01 | 7.00 | 10.00 |
| 19.2 | 19.2 | 19.4 |
| 4.15 | 6.92 | 10.11 |
| 4.00 | 7.00 | 10.00 |
| 4.00 | 7.00 | 10.06 |
| 18.3 | 18.8 | 18.6 |
| 4.26 | 7.18 | 9.93 |
| Y | Y | Y |

7.02 10.06
7.11 10.06

| Specific conductivity, ORP[1] and turbidity calibration ([1]check temperature correction) | | Specific conductivity calibration |
|---|---|---|
| | | 1413 µs/cm @ 25 °C |
| initial | temperature (°C) | 19.6 |
| | instrument reading | 1472 |
| | Calibrated To | 1413 |
| | Final Reading | 1413 |
| final | Temperature (°C) | 18.8 |
| | instrument reading | 1346 |
| | Post Cal Check Pass (yes/no) | Y |

| ORP[1] calibration solution (Zobell) |
|---|
| 231 mV Ag/AgCl @ 25 °C |
| 19.8 |
| 238.7 |
| 237.5 |
| 237.5 |
| 18.9 |
| 243.5 |
| Y |

| turbidity calibration solutions | | |
|---|---|---|
| #1 | #2 | #3 |
| 20 NTUs | 100 NTUs | ~~800~~ 0.1 NTUs |
| N/A | N/A | N/A |
| 20.8 | 103 | 0.02 |
| 20 | 100 | 800 |
| 20.7 | 102 | 809 |
| N/A | N/A | N/A |
| 19.6 | 99 | 780 |
| Y | Y | Y |

notes: HF
~~800~~ ~~23.9~~
<0.10
2.40 801
23.9
0.02
Y

initial calibration completed at: 720 (time)

final calibration check completed at: 1541 (time)

*Comments (DO membrane changed, other equipment issues, etc)*

[1]*See Back for Temperature Correction*

Inspector:_____

# Water Quality Sonde Calibration Form

Date: 4/10/23

| | | | |
|---|---|---|---|
| In-Situ Troll S/N: | 503907 | | |
| Battery % Remaining | 68 | Batteries Replaced? | Y/N |
| Internal Log Stopped/Downloaded and Sent to Amy Hoffmann? | Y/N | Internal Log Setup and Started? | Y/N |
| Task: | GW Sampling | | |

| *Initial Check* | | *Standard* | *Reading Check* | *Acceptance Criteria* | *Pass / Fail* | *Recalibrated (See Below)* |
|---|---|---|---|---|---|---|
| **pH** | S.U. | 7 | 7.03 | +/- 0.5 pH unit | P / F | Y / N |
| **ORP** | mV | FROM CALIBRATION SCREEN / CHART 236.53 | 230.9 | +/- 10 mV | P / F | Y / N |
| **Turbidity** | NTU | 10 | — | +/- 2 NTU | P / F | Y / N |
| **Sp. Conductivity** | µS/cm | 1,413 @ 25°C | 1434.4 | +/- 15% (Acceptable range 1201.05-1624.95) | P / F | Y / N |
| **RDO** (Zero Solution) | mg/L | 0 | 0 | +/- 0.5 mg/L | P / F | Y / N |
| **Temperature** | °C | FROM THERMOMETER | — | +/- 0.5 °C | P / F | Annually Only |

| *Calibration:* | *Sensor Range Value* | | *Sensor Acceptance Criteria* | *Sensor Pass / Fail* | *Sensor Replaced or Solution Changed?* | *Sensor S/N:* |
|---|---|---|---|---|---|---|
| **pH 4-7** | Slope 1: | -55.27 | –66 to –50 mV/pH | P / F | Y / N | 612414 |
| **pH 7-10** | Slope 2: | -51.54 | | P / F | | |
| **pH 4-7** | Offset 1: | -10.2 | +/- 30 mV | P / F | | |
| **pH 7-10** | Offset 2: | -10.3 | +/- 30 mV | P / F | | |
| **ORP** mV | Offset: | 17.0 | +/- 30 mV | P / F | | |
| **Turbidity** NTU | Slope: | ~~0.73~~ | 0.7 to 1.3 | P / F | Y / N | |
| **Sp. Conductivity** µS/cm | Cell Constant: | 0.73 | 0.7 to 1.3 | P / F | Y / N | 693433 |
| **RDO (100% and 0% Sat.)** | Slope: | 1.00366 | 0.7 to 1.3 | P / F | Y / N | |
| | Offset: | 0.01 | +/- 0.3 mg/L | P / F | | |

| *Post Calibration Check* | *Standard* | *Calibration Confirmation* | *Acceptance Criteria* | *Calibration Pass / Fail* |
|---|---|---|---|---|
| **pH** S.U. | 10 | 9.97 | +/- 0.1 pH unit | P / F |
| **ORP** mV | 236.53 | 227.8 | +/- 5mV | P / F |
| **Turbidity** NTU | 100 | — | +/- 2 NTU | P / F |
| **Sp. Conductivity** µS/cm | 1,413 @ 25°C | 1297.2 | +/- 10% (Acceptable range 1271.10—1554.30) | P / F |
| **RDO** (Zero Solution) | 0 | 0 | +/- 0.3 mg/L | P / F |

Notes

20 19.7

100 103

800 801

# METER CALIBRATION REPORT

Geosyntec consultants
289 Great Road, Acton, MA 01720
Phone: 978-263-9588, Fax: 978-263-9594

| | | | |
|---|---|---|---|
| Project Name: | NM1 | Date: | 4-10-23 Page ___ of ___ |
| Project Number: | | Primary Activities: | |
| Field Personnel: | PBurton | | |
| Recorded By: | PBurton | Weather: | Clear |
| Sampler's Initials: | PB | | |

*Meter Summary*

| Meter | Make/Model (ex. YSI 600XL) | Serial # | Rental Company | Rental Company ID # |
|---|---|---|---|---|
| Multi-Parameter Probe (pH, DO, ORP, Conductivity) | YSI DSSPro | 22B103383 | Palms | 3383 |
| Turbidity Meter | Geotech Turb | 19062713 | Palms | 2113 |

| dissolved oxygen (DO) and pH calibration | | dissolved oxygen calibration solutions | |
|---|---|---|---|
| | | 100% | 0 mg/L |
| initial | temperature (°C) | 15.7 | 15.5 |
| | instrument reading | 100.9 | 0 |
| | Calibrated To | 101 | N/A |
| | Final Reading | 101 | |
| final | temperature (°C) | 18.4 | |
| | instrument reading | 100.8 | |
| | Post Cal Check Pass (yes/no) | | |

| pH buffer solutions | | |
|---|---|---|
| 4.01 | 7.00 | 10.00 |
| 14.5 | 14.7 | 14.6 |
| 4.01 | 7.05 | 9.89 |
| 4.00 | 7.06 | 10.13 |
| 4.00 | 7.06 | 10.13 |
| 12.5 | 17.9 | 17.9 |
| 4.05 | 7.11 | 10.04 |
| | | |

| Specific conductivity, ORP[1] and turbidity calibration ([1]check temperature correction) | | Specific conductivity calibration |
|---|---|---|
| | | 1413 µs/cm @ 25 °C |
| initial | temperature (°C) | 16.5 |
| | instrument reading | 1457 |
| | Calibrated To | 1413 |
| | Final Reading | 1413 |
| final | Temperature (°C) | 18.2 |
| | instrument reading | 1383 |
| | Post Cal Check Pass (yes/no) | |

| ORP[1] calibration solution (Zobell) |
|---|
| 231 mV Ag/AgCl @ 25 °C |
| 16.0 |
| 245.0 |
| 242.7 |
| 242.7 |
| |
| 18.8 |
| 238.0 |
| |

| turbidity calibration solutions | | |
|---|---|---|
| #1 | #2 | #3 |
| 20 NTUs | 100 NTUs | 800 NTUs |
| N/A | N/A | N/A |
| 22.1 | 102 | 812 |
| 20 | 100 | 800 |
| 20.1 | 101 | 804 |
| N/A | N/A | N/A |
| 21.6 | 99.3 | 801 |
| | | |

initial calibration completed at: ___ (time)

final calibration check completed at: ___ (time)

*Comments (DO membrane changed, other equipment issues, etc)*

[1]*See Back for Temperature Correction*

# METER CALIBRATION REPORT

Geosyntec consultants
289 Great Road, Acton, MA 01720
Phone: 978-263-9588, Fax: 978-263-9594

| | | | |
|---|---|---|---|
| Project Name: | NMI | Date: | 4/10/23 Page ___ of ___ |
| Project Number: | BR00900 | Primary Activities: | |
| Field Personnel: | | | GW sampling |
| Recorded By: | SM | Weather: | 40s, clear |
| Sampler's Initials: | | | |

*Meter Summary*

| Meter | Make/Model (ex. YSI 600XL) | Serial # | Rental Company | Rental Company ID # |
|---|---|---|---|---|
| Multi-Parameter Probe (pH, DO, ORP, Conductivity) | YSI ProDSS | 17E101955 | PALMS | — |
| Turbidity Meter | Geotech | 2207 74237 | PALMS | — |

| dissolved oxygen (DO) and pH calibration | | dissolved oxygen calibration solutions | |
|---|---|---|---|
| | | 100% | 0 mg/L |
| initial | temperature (°C) | ~~19.7~~ | ~~19.7~~ |
| | instrument reading | 102.2 | 0.88 |
| | Calibrated To | 101.5 | N/A |
| | Final Reading | 101.5 | - |
| final | temperature (°C) | 27.7 | 20.4 |
| | instrument reading | 99.1 | 0.49 |
| | Post Cal Check Pass (yes/no) | Y | Y |

| pH buffer solutions | | |
|---|---|---|
| 4.01 | 7.00 | 10.00 |
| 16.7 | 17.8 | 17.7 |
| 3.97 ~~4.00~~ | ~~7~~.02 | 9.96 |
| 4.00 | 7.00 | 10.00 |
| 4.00 | 7.00 | 10.00 |
| 21.7 | 21.9 | 22.0 |
| 3.97 | 6.97 | 9.85 |
| Y | Y | Y |

| Specific conductivity, ORP[1] and turbidity calibration ([1]check temperature correction) | | Specific conductivity calibration |
|---|---|---|
| | | 1413 µs/cm @ 25 °C |
| initial | temperature (°C) | 18.5 |
| | instrument reading | 1411 |
| | Calibrated To | 1413 |
| | Final Reading | 1413 |
| final | Temperature (°C) | 19.8 |
| | instrument reading | 1463 |
| | Post Cal Check Pass (yes/no) | Y |

| ORP[1] calibration solution (Zobell) |
|---|
| 231 mV Ag/AgCl @ 25 °C |
| 18.5 |
| ~~240.8~~ 236.5 |
| 240.8 |
| 240.8 |
| 21.0 |
| 238.7 |
| Y |

| turbidity calibration solutions | | | |
|---|---|---|---|
| #1 | #2 | #3 | |
| 0.02 NTUs | 20 NTUs | 100 NTUs | 800 |
| N/A | N/A | N/A | |
| 7.28 | 22.7 | 99.1 | 821 |
| 0.02 | 20.0 | 100 | 800 |
| 0.02 | 19.0 | 99.8 | 803 |
| N/A | N/A | N/A | |
| 0.33 | 20.3 | 99.2 | 794 |
| N | Y | Y | Y |

initial calibration completed at: _____ (time)

final calibration check completed at: _____ (time)

*Comments (DO membrane changed, other equipment issues, etc)*

[1] *See Back for Temperature Correction*

# METER CALIBRATION REPORT

Geosyntec consultants
289 Great Road, Acton, MA 01720
Phone: 978-263-9588, Fax. 978-263-9594

| | | | |
|---|---|---|---|
| Project Name: | NMI | Date: | 04/10/2023 Page 1 of ___ |
| Project Number: | BROOD | Primary Activities: | MW Sampling |
| Field Personnel: | K Gombosi, E Grimes | | |
| Recorded By: | K Gombosi | Weather: | Sunny, 40s |
| Sampler's Initials: | KG | | |

*Meter Summary*

| Meter | Make/Model (ex. YSI 600XL) | Serial # | Rental Company | Rental Company ID # |
|---|---|---|---|---|
| Multi-Parameter Probe (pH, DO, ORP, Conductivity) | YSI Pro Quatro | 22G103244 | PALMS | — |
| Turbidity Meter | Geotech | 19092242 | ↓ | — |

| dissolved oxygen (DO) and pH calibration | | dissolved oxygen calibration solutions | |
|---|---|---|---|
| | | 100% | 0 mg/L |
| initial | temperature (°C) | 17.4 | 16.6 |
| | instrument reading | 963 | 0.22 |
| | Calibrated To | 101.1 | N/A |
| | Final Reading | 101.1 | 0.22 |
| final | temperature (°C) | 20.7 | 21.5 |
| | instrument reading | 100.0 | 0.29 |
| | Post Cal Check Pass (yes/no) | Y | Y |

| pH buffer solutions | | |
|---|---|---|
| 4.01 | 7.00 | 10.00 |
| 17.2 | 17.2 | 16.6 |
| 4.03 | 7.09 | 10.28 |
| 4.00 | 7.00 | 10.00 |
| — | 6.98 | — |
| 20.8 | 21.0 | 20.7 |
| 4.01 | 6.99 | 9.96 |
| Y | Y | Y |

| Specific conductivity, ORP[1] and turbidity calibration ([1]check temperature correction) | | Specific conductivity calibration |
|---|---|---|
| | | 1413 µs/cm @ 25 °C |
| initial | temperature (°C) | 14.8 |
| | instrument reading | 1429 |
| | Calibrated To | 1413 |
| | Final Reading | 1413 |
| final | Temperature (°C) | 20.6 |
| | instrument reading | 1359 |
| | Post Cal Check Pass (yes/no) | Y |

| ORP[1] calibration solution (Zobell) |
|---|
| 231 mV Ag/AgCl @ 25 °C |
| 14.9 |
| 239.9 |
| 244.0 |
| 244.0 |
| 20.6 |
| 234.1 |
| Y |

| turbidity calibration solutions | | | |
|---|---|---|---|
| #1 | #2 | #3 | |
| <0.1 NTUs | 100 NTUs | 800 NTUs | 20 |
| N/A | N/A | N/A | |
| 0.50 | 101 | 753 | |
| 0.02 | 100 | 800 | 20 |
| 0.08 | 100 | 804 | 20.1 |
| N/A | N/A | N/A | |
| 0.02 | 99.4 | 783 | 19.6 |
| Y | Y | Y | Y |

| | |
|---|---|
| initial calibration completed at: — (time) | final calibration check completed at: — (time) |

*Comments (DO membrane changed, other equipment issues, etc)*

[1]*See Back for Temperature Correction*

# METER CALIBRATION REPORT

Geosyntec consultants
289 Great Road, Acton, MA 01720
Phone: 978-263-9588, Fax: 978-263-9594

Project Name: NMI
Project Number: BR0090D
Field Personnel: E. Grimes
Recorded By: E. Grimes
Sampler's Initials: EG

Date: 4/10/2023 Page 1 of 1
Primary Activities: annual GW event
Weather: clear, 50-60s

*Meter Summary*

| Meter | Make/Model (ex. YSI 600XL) | Serial # | Rental Company | Rental Company ID # |
|---|---|---|---|---|
| Multi-Parameter Probe (pH, DO, ORP, Conductivity) | YSI Quatro | 22H103077 | Palms | – |
| Turbidity Meter | Geotech | 22074265 | Palms | – |

| dissolved oxygen (DO) and pH calibration | | dissolved oxygen calibration solutions | |
|---|---|---|---|
| | | 100% | 0 mg/L |
| initial | temperature (°C) | 16.3 | 17.1 |
| | instrument reading | 97.5 | 0.05 |
| | Calibrated To | 100 | N/A |
| | Final Reading | 101.1 | 0.05 |
| final | temperature (°C) | 19.4 | 19.0 |
| | instrument reading | 103.3 | 0.07 |
| | Post Cal Check Pass (yes/no) | Y | Y |

| pH buffer solutions | | |
|---|---|---|
| 4.01 | 7.00 | 10.00 |
| 16.3 | 16.6 | 16.3 |
| 4.11 | 6.94 | 10.02 |
| 4.00 | 7.00 | 10.00 |
| 4.00 | 7.00 | 10.00 |
| 18.6 | 18.6 | 19.0 |
| 4.12 | 7.11 | 9.88 |
| Y | Y | Y |

| Specific conductivity, ORP[1] and turbidity calibration ([1]check temperature correction) | | Specific conductivity calibration |
|---|---|---|
| | | 1413 µs/cm @ 25 °C |
| initial | temperature (°C) | 15.9 |
| | instrument reading | 1428 |
| | Calibrated To | 1413 |
| | Final Reading | 1413 |
| final | Temperature (°C) | 20.8 |
| | instrument reading | 1370 |
| | Post Cal Check Pass (yes/no) | 1370 N |

| ORP[1] calibration solution (Zobell) |
|---|
| 231 mV Ag/AgCl @ 25 °C |
| 15.6 |
| 246.0 |
| 244.0 |
| 244.0 |
| 19.1 |
| 238.9 |
| Y |

| turbidity calibration solutions | | | |
|---|---|---|---|
| #1 | #2 | #3 | |
| 20 NTUs | 100 NTUs | 800 NTUs | <0.10 |
| N/A | N/A | N/A | |
| 20 | 99.8 | 813 | 0.02 |
| 20 | 100 | 800 | <0.10 |
| 20 | 100 | 806 | 0.02 |
| N/A | N/A | N/A | |
| 20.4 | 101 | 798 | |
| Y | Y | Y | |

initial calibration completed at: 805 (time)

final calibration check completed at: _____ (time)

*Comments (DO membrane changed, other equipment issues, etc)*

[1]*See Back for Temperature Correction*

Inspector: _____

# Water Quality Sonde Calibration Form

Date: 4/11/23

| | | | |
|---|---|---|---|
| In-Situ Troll S/N: | 503907 | | |
| Battery % Remaining | 63 | Batteries Replaced? | Y / N |
| Internal Log Stopped/Downloaded and Sent to Amy Hoffmann? | Y / N | Internal Log Setup and Started? | Y / N |
| Task: | GW Sampling | | |

| *Initial Check* | | *Standard* | *Reading Check* | *Acceptance Criteria* | *Pass / Fail* | *Recalibrated (See Below)* |
|---|---|---|---|---|---|---|
| **pH** | S.U. | 7 | 7.16 | +/- 0.5 pH unit | P / F | Y / N |
| **ORP** | mV | FROM CALIBRATION SCREEN / CHART 236.28 | 232.4 | +/- 10 mV | P / F | Y / N |
| **Turbidity** | NTU | ~~10~~ | — | +/- 2 NTU | P / F | Y / N |
| **Sp. Conductivity** | µS/cm | 1,413 @ 25°C | 1401.3 | +/- 15% (Acceptable range: 1201.05-1624.95) | P / F | Y / N |
| **RDO** (Zero Solution) | mg/L | 0 | | +/- 0.5 mg/L | P / F | Y / N |
| **Temperature** | °C | FROM THERMOMETER | | +/- 0.5 °C | P / F | Annually Only |

| *Calibration:* | *Sensor Range Value* | *Sensor Acceptance Criteria* | *Sensor Pass / Fail* | *Sensor Replaced or Solution Changed?* | *Sensor S/N:* |
|---|---|---|---|---|---|
| **pH 4-7** | Slope 1: -54.99 | -66 to -50 mV/pH | P / F | Y / N | 612414 |
| **pH 7-10** | Slope 2: -50.17 | | P / F | | |
| **pH 4-7** | Offset 1: -14.7 | +/- 30 mV | P / F | | |
| **pH 7-10** | Offset 2: -14.8 | +/- 30 mV | P / F | | |
| **ORP** mV | Offset: 20.7 | +/- 30 mV | P / F | | |
| **Turbidity** NTU | Slope: — | 0.7 to ~~1.3~~ | P / F | Y / N | |
| **Sp. Conductivity** µS/cm | Cell Constant: 0.715 | 0.7 to 1.3 | P / F | Y / N | 693433 |
| **RDO (100% and 0% Sat.)** | Slope: 0.9775403 | 0.7 to 1.3 | P / F | Y / N | 694193 |
| | Offset: -0.01 | +/- 0.3 mg/L | P / F | | |

| *Post Calibration Check* | *Standard* | *Calibration Confirmation* | *Acceptance Criteria* | *Calibration Pass / Fail* |
|---|---|---|---|---|
| **pH** S.U | 10 | 10.14 | +/- 0.1 pH unit | P / F |
| **ORP** mV | 236.28 | 235.7 | +/- 5mV | P / F |
| **Turbidity** NTU | ~~100~~ | — | +/- 2 NTU | P / F |
| **Sp. Conductivity** µS/cm | 1,413 @ 25°C | 1436.1 | +/- 10% (Acceptable range 1271.10—1554.30) | P / F |
| **RDO** (Zero Solution) | 0 | 0 | +/- 0.3 mg/L | P / F |

Notes

Turbidity: 20 NTU 20.9

100 NTU 110

800 NTU 805

# METER CALIBRATION REPORT

Geosyntec consultants
289 Great Road, Acton, MA 01720
Phone: 978-263-9588, Fax: 978-263-9594

Project Name: NMI
Project Number: BR0090D
Field Personnel: E. Grimes
Recorded By: E. Grimes
Sampler's Initials: EG

Date: 4/11/2023 Page 1 of 1
Primary Activities: annual GW sampling
Weather: Clear, 60-70s

*Meter Summary*

| Meter | Make/Model (ex. YSI 600XL) | Serial # | Rental Company | Rental Company ID # |
|---|---|---|---|---|
| Multi-Parameter Probe (pH, DO, ORP, Conductivity) | YSI Quatro | 22H103077 | Palms | — |
| Turbidity Meter | Geotech | 22074265 | Palms | — |

| dissolved oxygen (DO) and pH calibration | | dissolved oxygen calibration solutions | |
|---|---|---|---|
| | | 100% | 0 mg/L |
| initial | temperature (°C) | 17.1 | 18.4 |
| | instrument reading | 108.5 | 0.08 |
| | Calibrated To | 100 | N/A |
| | Final Reading | 100.1 | 0.08 |
| final | temperature (°C) | 20.7 | 20.4 |
| | instrument reading | 93.9 | 0.07 |
| | Post Cal Check Pass (yes/no) | Y | Y |

| pH buffer solutions | | |
|---|---|---|
| 4.01 | 7.00 | 10.00 |
| 18.6 | 18.6 | 19.0 |
| 4.12 | 7.11 | 9.88 |
| 4.00 | 7.00 | 10.00 |
| 4.00 | 7.00 | 10.00 |
| 20.0 | 20.1 | 19.19 |
| 4.15 | 6.93 | 9.89 |
| Y | Y | Y |

| Specific conductivity, ORP[1] and turbidity calibration ([1]check temperature correction) | | Specific conductivity calibration |
|---|---|---|
| | | 1413 µs/cm @ 25 °C |
| initial | temperature (°C) | 20.8 |
| | instrument reading | 1370 |
| | Calibrated To | 1413 |
| | Final Reading | 1413 |
| final | Temperature (°C) | 20.2 |
| | instrument reading | 1433 |
| | Post Cal Check Pass (yes/no) | Y |

1370
1413

| ORP[1] calibration solution (Zobell) |
|---|
| 231 mV Ag/AgCl @ 25 °C |
| 19.1 |
| 238.9 |
| 237.5 |
| 237.5 |
| 20.2 |
| 257.6 |
| N |

| turbidity calibration solutions | | | |
|---|---|---|---|
| #1 | #2 | #3 | |
| 20 NTUs | 100 NTUs | 800 NTUs | <0.10 |
| N/A | N/A | N/A | |
| 20.4 | 101 | 798 | 0.34 |
| 20 | 100 | 800 | — |
| 20.1 | 99.3 | 806 | 0.02 |
| N/A | N/A | N/A | |
| 19.6 | ~~38.8~~ | 785 | 0.02 |
| Y | 102 Y | Y | Y |

initial calibration completed at: 1601 (time)

final calibration check completed at: ~~722~~ (time) 1402

*Comments (DO membrane changed, other equipment issues, etc)*

[1]*See Back for Temperature Correction*

# METER CALIBRATION REPORT

Geosyntec consultants
289 Great Road, Acton, MA 01720
Phone: 978-263-9588, Fax: 978-263-9594

| | | | |
|---|---|---|---|
| Project Name: | NM1 | Date: | 4-11-23 Page ___ of ___ |
| Project Number: | | Primary Activities: | |
| Field Personnel: | PBurton | | |
| Recorded By: | PBurton | Weather: | Clear 42° |
| Sampler's Initials: | PB | | |

*Meter Summary*

| Meter | Make/Model (ex. YSI 600XL) | Serial # | Rental Company | Rental Company ID # |
|---|---|---|---|---|
| Multi-Parameter Probe (pH, DO, ORP, Conductivity) | YSI ProDSS | 22B103383 | Palms | 3383 |
| Turbidity Meter | Geotech Turb | 19062113 | Palms | 2113 |

| dissolved oxygen (DO) and pH calibration | | dissolved oxygen calibration solutions | |
|---|---|---|---|
| | | 100% | 0 mg/L |
| initial | temperature (°C) | 17.4 | 17.5 |
| | instrument reading | 100.8 | 0.24 |
| | Calibrated To | 100.0 | N/A |
| | Final Reading | 100.0 | |
| final | temperature (°C) | 21.3 | |
| | instrument reading | 99.4 | |
| | Post Cal Check Pass (yes/no) | | |

| pH buffer solutions | | |
|---|---|---|
| 4.01 | 7.00 | 10.00 |
| 16.9 | 17.0 | 17.3 |
| 3.95 | 7.10 | 10.02 |
| 4.00 | 7.04 | 10.10 |
| 4.00 | 7.04 | 10.10 |
| 19.4 | 19.3 | 20.1 |
| 4.03 | 7.09 | 10.09 |
| | | |

| Specific conductivity, ORP[1] and turbidity calibration ([1]check temperature correction) | | Specific conductivity calibration |
|---|---|---|
| | | 1413 µs/cm @ 25 °C |
| initial | temperature (°C) | 17.9 |
| | instrument reading | 1440 |
| | Calibrated To | 1413 |
| | Final Reading | 1413 |
| final | Temperature (°C) | 20.3 |
| | instrument reading | 1149 |
| | Post Cal Check Pass (yes/no) | |

| ORP[1] calibration solution (Zobell) |
|---|
| 231 mV Ag/AgCl @ 25 °C |
| 17.9 |
| 239.7 |
| 240.2 |
| 240.2 |
| 19.2 |
| 237.3 |
| |

| turbidity calibration solutions | | |
|---|---|---|
| #1 | #2 | #3 |
| 20 NTUs | 100 NTUs | 800 NTUs |
| N/A | N/A | N/A |
| 202 | 988 | 811 |
| 20 | 100 | 800 |
| 19.7 | 100 | 801 |
| N/A | N/A | N/A |
| 19.8 | 98.9 | 786 |
| | | |

initial calibration completed at: _____ (time)

final calibration check completed at: _____ (time)

*Comments (DO membrane changed, other equipment issues, etc)*

[1]*See Back for Temperature Correction*

# METER CALIBRATION REPORT

Geosyntec consultants
289 Great Road, Acton, MA 01720
Phone: 978-263-9588, Fax: 978-263-9594

| | | | |
|---|---|---|---|
| Project Name: | NMI | Date: | 4/11/23 Page ___ of ___ |
| Project Number: | BR0090D | Primary Activities: | |
| Field Personnel: | E. Bushman | | GW sampling |
| Recorded By: | EB | Weather: | 60s, sunny |
| Sampler's Initials: | — | | |

*Meter Summary*

| Meter | Make/Model (ex. YSI 600XL) | Serial # | Rental Company | Rental Company ID # |
|---|---|---|---|---|
| Multi-Parameter Probe (pH, DO, ORP, Conductivity) | YSI Pro DSS | 17E101955 | PALMS | — |
| Turbidity Meter | geotech | 22074237 | PALMS | — |

| dissolved oxygen (DO) and pH calibration | | dissolved oxygen calibration solutions | |
|---|---|---|---|
| | | 100% | 0 mg/L |
| initial | temperature (°C) | 19.5 27.7 (EB) | 19.6 |
| | instrument reading | 99.8 99.1 (EB) | 0.49 |
| | Calibrated To | 100.5 | N/A |
| | Final Reading | 100.5 | — |
| final | temperature (°C) | 21.8 | 22.0 |
| | instrument reading | 95.3 | 0.40 |
| | Post Cal Check Pass (yes/no) | Y | Y |

| pH buffer solutions | | |
|---|---|---|
| 4.01 | 7.00 | 10.00 |
| 21.7 | 21.9 | 22.0 |
| 3.97 | 6.97 | 9.85 |
| 4.00 | 7.00 | 10.00 |
| 4.00 | 7.00 | 10.00 |
| 20.8 | 20.8 | 20.9 |
| 3.98 | 6.98 | 9.99 |
| Y | Y | Y |

| Specific conductivity, ORP[1] and turbidity calibration ([1]check temperature correction) | | Specific conductivity calibration |
|---|---|---|
| | | 1413 µs/cm @ 25 °C |
| initial | temperature (°C) | 19.8 |
| | instrument reading | 1463 |
| | Calibrated To | 1413 |
| | Final Reading | 1413 |
| final | Temperature (°C) | 19.6 |
| | instrument reading | 1457 |
| | Post Cal Check Pass (yes/no) | Y |

| ORP[1] calibration solution (Zobell) |
|---|
| 231 mV Ag/AgCl @ 25 °C |
| 21.0 |
| 238.7 |
| 235 |
| 234.9 |
| 20.6 |
| 238.6 |
| Y |

| turbidity calibration solutions | | | |
|---|---|---|---|
| #1 | #2 | #3 | |
| 002 NTUs | 20 NTUs | 100 NTUs | 800 |
| N/A | N/A | N/A | |
| 0.33 | 20.3 | 99.2 | 794 |
| 0.02 | 20 | 100 | 800 |
| 0.36 | 20.8 | 100 | 802 |
| N/A | N/A | N/A | |
| 1.80 | 20.9 | 98.1 | 798 |
| N | Y | Y | Y |

initial calibration completed at: ___ (time)

final calibration check completed at: ___ (time)

*Comments (DO membrane changed, other equipment issues, etc)*

[1]*See Back for Temperature Correction*

## Monitoring Well Gauging Form - Semi-Annual RDRA Sampling

Project: Nuclear Metals, Inc. (RD/RA)
Location: 2229 Main Street, Concord, MA
Date:
Weather:
Company:
Sampler Name:

NOTES:

| Well ID | Easting (X) | Northing (Y) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Time | Depth to Water (feet) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9-78 | 676096.827 | 2987274.821 | 138.96 | N/A | 58 | 58 | OB | N/A | | | |
| A-2E | 675299.016 | 2987354.769 | 132.70 | N/A | 74 | 74 | OB | N/A | | | |
| AR-01 | 674733.403 | 2986826.979 | 139.91 | N/A | 122 | 122 | OB | N/A | | | |
| AR-02 | 675913.415 | 2987545.893 | 137.38 | N/A | 120 | 120 | OB | N/A | | | |
| AR-PHS | 675813.999 | 2986615.917 | 128.62 | -- | -- | -- | SW | -- | | | |
| ASBRV-U1 | 675239.488 | 2985706.537 | 140.85 | -- | -- | -- | SW | -- | | | |
| ASBRV-U2 | 676058.199 | 2986109.991 | 138.48 | -- | -- | -- | SW | -- | | | |
| ASSABET-1A (P2-1A) | 675012.679 | 2986855.744 | 139.08 | 50.8 | 61 | 61 | OB | 18 | | | Acton Key & Pipe Wrench Needed |
| ASSABET-2A (P2-2A) | 675197.550 | 2987402.686 | 137.67 | 26 | 34 | 34 | OB | 12 | | | Acton Key & Pipe Wrench Needed |
| B-06 | 675423.942 | 2987568.250 | 139.13 | N/A | N/A | N/A | OB | N/A | | | |
| EW-1 | 675727.042 | 2986776.130 | 137.28 | 74 | 98 | 98 | OB | 6 | | | |
| MW-536 | 675629.002 | 2986454.906 | 135.09 | 38 | 48 | 48 | OB | 2 | | | |
| MW-SD36 | 675633.119 | 2986455.835 | 134.78 | 92 | 102 | 102 | OB | 2 | | | |
| MW-BS36 | 675633.119 | 2986455.835 | 134.76 | 113 | 123 | 123 | BR | 2 | | | |
| MW-537 | 675275.464 | 2986754.678 | 140.96 | 47 | 57 | 57 | OB | 2 | | | |
| MW-SD37 | 675280.991 | 2986753.462 | 141.11 | 76 | 86 | 86 | OB | 2 | | | |
| MW-BS37 | 675280.991 | 2986753.462 | 140.69 | 92 | 102 | 102 | BR | 2 | | | |
| MW-538 | 675276.911 | 2987036.356 | 136.56 | 40 | 50 | 50 | OB | 2 | | | |
| MW-SD38 | 675272.149 | 2987036.888 | 135.95 | 60 | 70 | 70 | OB | 2 | | | |
| MW-BS38 | 675272.149 | 2987036.888 | 136.39 | 85 | 95 | 95 | BR | 2 | | | |
| MW-539 | 675198.697 | 2986594.507 | 136.79 | 38 | 48 | 48 | OB | 2 | | | |
| MW-SD39 | 675194.853 | 2986592.584 | 136.77 | 75 | 85 | 85 | OB | 2 | | | |
| MW-BS39 | 675194.853 | 2986592.584 | 136.52 | 91 | 101 | 101 | BR | 2 | | | |
| MW-540 | 675752.877 | 2986773.872 | 138.71 | 45 | 55 | 55 | OB | 2 | | | |
| MW-SD40 | 675748.209 | 2986776.318 | 138.67 | 87 | 97 | 97 | OB | 2 | | | |
| MW-BS40 | 675748.309 | 2986775.842 | 138.76 | 116 | 126 | 126 | BR | 2 | | | |
| MW-SD41 | 675514.802 | 2986915.587 | 136.60 | 72 | 82 | 82 | OB | 2 | | | |
| MW-SD42A | 675550.344 | 2986806.565 | 137.70 | 80 | 90 | 90 | OB | 2 | | | |
| MW-SD43 | 675465.857 | 2986640.193 | 137.78 | 80 | 90 | 90 | OB | 2 | | | |
| MW-SD44 | 675483.952 | 2986843.633 | 137.01 | 76 | 86 | 86 | OB | 2 | | | |
| MW-SD45 | 675738.684 | 2986856.800 | 140.15 | 75 | 85 | 85 | OB | 2 | | | |
| MW-546 | 675121.081 | 2986864.268 | 140.22 | 53 | 63 | 109 | OB | 2 | | | |
| MW-SD46 | 675119.845 | 2986869.830 | 140.37 | 77.5 | 87.5 | 87.5 | OB | 2 | | | |
| MW-BS46 | 675121.081 | 2986864.268 | 140.13 | 98 | 108 | 109 | BR | 2 | | | |
| PT-09 | 675799.306 | 2986676.424 | 134.60 | 79 | 89 | 89 | OB | 1.5 | | | Grace Key Needed |
| PT-10 | 675808.123 | 2986692.785 | 135.23 | 25 | 30 | 30 | OB | 1.5 | | | Grace Key Needed |
| PZ-Mpond | 675896.365 | 2987167.500 | 129.01 | 7.67 | 8.67 | 8.67 | OB | 1 | | | |
| PZ-Tpond | 675352.989 | 2987425.881 | 128.64 | 3.5 | 4.5 | 4.5 | OB | 1 | | | |
| SG-Mpond | 675896.365 | 2987167.500 | 128.85 | -- | -- | -- | SW | -- | | | |
| SG-Tpond | 675352.989 | 2987425.881 | 128.00 | -- | -- | -- | SW | -- | | | |
| ASBRV-D2 | 677203.791 | 2986906.699 | N/A | -- | -- | -- | SW | -- | | | |
| BEW-5* | 676541.404 | 2986620.006 | 132.48 | 107 | 127 | -- | BR | 6 | | | |

Done

mw-SD29
mw-529

1025 0624
1028 64.82

## Monitoring Well Gauging Form - Semi-Annual RDRA Sampling

Project: Nuclitec Metals, Inc. (RD/RA)
Location: 2229 Main Street, Concord, MA
Date:
Weather:
Company:
Sampler Name:

NOTES:

| Well ID | Easting (X) | Northing (Y) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Time | Depth to Water (feet) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BEW-6* | 676364.690 | 2986842.848 | 132.91 | 119 | 162 | - | BR | 6 | ✓ | | |
| GZW-8-1 | 677208.084 | 2986826.318 | 127.57 | 2 | 12 | 12 | OB | 2 | ✓ | | |
| GZW-8-2 | 677198.012 | 2986842.544 | 127.10 | 114.5 | 116 | 133.5 | BR | 1.5 | ✓ | | |
| MW-1 | 676918.700 | 2986521.010 | 155.60 | 23 | 38 | 39 | OB | 2 | ✓ | | |
| MW-S14 | 676591.250 | 2986181.970 | 194.90 | 61 | 71 | 71 | OB | 2 | 1410 | 64.26 | |
| MW-B514 | 676585.660 | 2986183.740 | 193.84 | 170 | 180 | 180 | BR | 2 | 1408 | 64.72 | |
| MW-S15 | 676513.520 | 2986671.240 | 134.14 | 5 | 15 | 24 | OB | 2 | [illegible] | [illegible] | |
| MW-SD15* | 676469.274 | 2986702.030 | 136.44 | 81 | 91 | 91 | OB | 2 | ✓ | | |
| MW-B515 | 676480.200 | 2986710.900 | 135.28 | 105 | 115 | 115 | BR | 2 | ✓ | | |
| MW-BM15 | 676472.900 | 2986715.000 | 135.61 | 137 | 147 | 157 | BR | 2 | ✓ | | |
| MW-S26 | 676672.841 | 2986809.146 | 130.65 | 5 | 15 | 90 | OB | 2 | ✓ | | |
| MW-SD26 | 676672.841 | 2986809.146 | 130.56 | 80 | 90 | 90 | OB | 2 | ✓ | | |
| MW-B526 | 676667.230 | 2986809.980 | 131.84 | 114 | 124 | 124.5 | BR | 2 | ✓ | | |
| MW-B531 | 676330.800 | 2986457.800 | 139.40 | 119 | 129 | 129 | BR | 2 | ✓ | | |
| MW-S32 | 676249.333 | 2986973.333 | 131.23 | 35 | 45 | 45 | OB | 2 | ✓ | | |
| MW-SD32 | 676245.126 | 2986975.518 | 131.37 | 65 | 75 | 75 | OB | 2 | ✓ | | |
| MW-B532 | 676245.126 | 2986975.518 | 131.36 | 92 | 102 | 102 | BR | 2 | ✓ | | |
| MW-SD34 | 676012.541 | 2986771.180 | 133.56 | 84.5 | 94.5 | 94.5 | OB | 2 | ✓ | | |
| MW-B534 | 676012.541 | 2986771.180 | 133.60 | 101 | 111 | 111 | BR | 2 | ✓ | | |
| MW-S35 | 676173.470 | 2986230.135 | 138.95 | 30 | 40 | 40 | OB | 2 | ✓ | | |
| MW-SD35 | 676167.742 | 2986228.569 | 138.79 | 82 | 92 | 92 | OB | 2 | ✓ | | |
| MW-B535 | 676167.742 | 2986228.569 | 138.80 | 105.5 | 115.5 | 115.5 | BR | 2 | ✓ | | |
| MW-B550* | 677548.152 | 2986695.846 | 150.32 | 63 | 73 | 73.5 | BR | 2 | ✓ | | |
| MW-B551* | 676811.835 | 2986634.506 | 140.90 | 102 | 112 | 112 | BR | 2 | ✓ | | |
| MW-SD52* | 676213.515 | 2986759.174 | 132.57 | 78 | 88 | 88 | OB | 2 | ✓ | | |
| MW-B552* | 676213.222 | 2986759.159 | 132.58 | 100 | 110 | 110 | BR | 2 | ✓ | | |
| MW-B553* | 676274.354 | 2986275.880 | 140.36 | 126 | 136 | 139 | BR | 2 | ✓ | | |
| MW-B554* | 676724.768 | 2985909.439 | 169.39 | 176 | 186 | 186 | BR | 2 | | | |
| MW-B555* | TBD | TBD | TBD | TBD | TBD | TBD | BR | 2 | NA | | |
| MW-B556* | TBD | TBD | TBD | TBD | TBD | TBD | BR | 2 | NA | | |
| OW-2 | 676745.475 | 2986552.420 | 151.90 | 17.8 | 27.8 | 27.8 | OB | 2 | ✓ | | |
| P-1 | 677203.865 | 2986863.384 | 127.80 | 48 | 53 | 53 | OB | 1.5 | ✓ | | |
| P-1A | 677175.538 | 2986865.383 | 128.80 | 25 | 30 | 30 | OB | 1.5 | ✓ | | |
| PT-11P | 676018.462 | 2986759.402 | 133.30 | 7 | 17 | 17 | OB | 1.5 | ✓ | | |
| BEW-1* | 677509.410 | 2985933.649 | 193.88 | 114 | 175.4 | 178 | BR | 6 | ✓ | | |
| BEW-2* | 677172.855 | 2986034.777 | 192.31 | 134.5 | 227 | 229 | BR | 6 | 1615 | 55.14 | |
| BEW-3* | 676986.190 | 2986131.727 | 179.69 | 119 | 212.5 | 215 | BR | 6 | 1618 | 49.89 | |
| BEW-4* | 677298.570 | 2986420.305 | 172.07 | 74.5 | 142 | 144 | BR | 6 | 1611 | 37.48 | |
| GZW-10-1 | 676891.080 | 2986108.060 | 186.30 | 55 | 60 | 164 | OB | 0.5 | 1054 | 55.18 | |
| GZW-10-2 | 676891.084 | 2986108.069 | 186.30 | 142 | 152 | 164 | BR | 1.5 | 0956 | 56.33 | |
| GZW-11-2 | 676916.293 | 2986308.467 | 195.45 | 155 | 175 | 176 | BR | 1.5 | 1023 | 66.28 | |
| GZW-5 | 678388.326 | 2985878.371 | 196.02 | 40 | 55 | 55 | OB | 1.5 | ✓ | | |

GZW-11-1 1049 65.54

## Monitoring Well Gauging Form - Semi-Annual RDRA Sampling

Project: Nuclear Metals, Inc. (RD/RA)
Location: 2229 Main Street, Concord, MA
Date: 4/3/23
Weather: Clear 39°
Company: GZA
Sampler Name: Pete Buttolph

NOTES:

| Well ID | Easting (X) | Northing (Y) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Time | Depth to Water (feet) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GZW-6-1 | 677089.774 | 2986141.090 | 178.61 | 32 | 42 | 45 | OB | 1.5 | | | |
| GZW-7-1 | 677625.824 | 2985932.510 | 195.62 | 68 | 78 | 122 | OB | 1.5 | ✓ | | |
| MW-BS7-2* | 677603.080 | 2985932.637 | 188.53 | 104.5 | 114.5 | 114.5 | BR | 2 | ✓ | | |
| GZW-7S | 677631.281 | 2985926.516 | 193.67 | 61 | 71 | 71 | OB | 2 | ✓ | | |
| GZW-9-2 | 677932.608 | 2986501.571 | 183.15 | 45 | 50 | 64 | OB | 1.5 | ✓ | | |
| HA-09 | 677351.560 | 2985459.930 | 205.80 | 49 | 69 | 70 | OB | 2 | ✓ | | |
| HA-10A | 677774.000 | 2985571.206 | 180.94 | 27.6 | 47.6 | 47.6 | OB | 2 | ✓ | | |
| HA20-CMT-3B(OW)* | 677671.468 | 2985858.746 | 184.30 | 98 | 108 | 108 | BR | 2 | ✓ | | |
| HA20-CMT-3T(OW)* | 677669.070 | 2985870.862 | 184.79 | 82 | 92 | 92 | OB | 2 | ✓ | | |
| HA20-CMT-5(OW)* | 677836.950 | 2985870.380 | 175.64 | 90 | 100 | 100 | BR | 2 | ✓ | | |
| HA20-CMT-6(OW)* | 677816.820 | 2985799.050 | 180.29 | 79 | 84 | 84 | BR | 2 | ✓ | | |
| HB-10 | 677832.308 | 2985825.495 | 180.37 | 49 | 64 | 65 | OB | 1.5 | ✓ | | |
| HB-10S | 677831.039 | 2985822.409 | 179.81 | 32 | 42 | 42 | OB | 2 | ✓ | | |
| HB-11 | 677821.837 | 2985934.359 | 175.01 | 30 | 40 | 42 | OB | 2 | ✓ | | |
| HB-12 | 677685.443 | 2985900.362 | 182.85 | 45 | 55 | 57 | OB | 2 | ✓ | | |
| HB-13* | 677744.743 | 2985834.135 | 162.11 | 28 | 38 | 38 | OB | 2 | ✓ | | |
| HB-620 | 677653.637 | 2985845.275 | 181.87 | 40 | 55 | 55 | OB | 2 | ✓ | | |
| HBPZ-2R | 677708.467 | 2985883.407 | 176.05 | 36 | 51 | 52.5 | OB | 2 | ✓ | | |
| ML-1-2 | 677351.080 | 2986481.280 | 175.35 | 65.5 | 67 | 82.5 | OB | 1.5 | 1100 | 44.01 | |
| MW-11 | 677611.840 | 2985787.100 | 189.70 | 55 | 65 | 65 | OB | 2 | ✓ | | |
| MW-2 | 677522.349 | 2986579.572 | 149.02 | 13.6 | 23.6 | 24 | OB | 2 | ✓ | | |
| MW-8A | 677537.207 | 2986026.898 | 191.72 | 60 | 70 | 70 | OB | 2 | ✓ | | |
| MW-S01 | 677066.570 | 2986335.650 | 193.37 | 60.5 | 70.5 | 72 | OB | 2 | 1006 | 6348 | |
| MW-S001 | 677054.010 | 2986336.790 | 193.54 | 90 | 100 | 119 | OB | 2 | 1009 | 6378 | |
| MW-B501 | 677059.740 | 2986329.040 | 194.03 | 124 | 134 | 134.5 | BR | 2 | 1003 | 6360 | |
| MW-S02 | 677381.430 | 2986132.980 | 191.40 | 57 | 67 | 103 | OB | 2 | 1340 | 58.4 | |
| MW-S002 | 677376.030 | 2986139.930 | 190.73 | 85 | 95 | 95 | OB | 2 | 1344 | 5739 | |
| MW-B502 | 677384.300 | 2986139.420 | 191.74 | 117 | 127 | 127.5 | BR | 2 | 1342 | 58.35 | |
| MW-S03 | 677171.050 | 2985985.210 | 191.20 | 50 | 60 | 60.5 | OB | 2 | 1540 | 56.33 | |
| MW-B503 | 677176.090 | 2985991.350 | 190.14 | 130.8 | 140.8 | 142.5 | BR | 2 | 1538 | 42.37 | |
| MW-BM03 | 677178.500 | 2986000.500 | 191.06 | 157 | 167 | 200 | BR | 2 | 1536 | 56.20 | |
| MW-S04 | 676928.030 | 2985754.980 | 177.34 | 22 | 32 | 32 | OB | 2 | 1454 | 23.99 | |
| MW-B504 | 676917.330 | 2985761.010 | 178.07 | 111 | 126.3 | 126.3 | BR | 2 | 1447 | 44.22 | |
| MW-S06 | 677287.970 | 2986267.830 | 177.92 | 45 | 55 | 56 | OB | 2 | 1525 | 45.08 | |
| MW-S006 | 677283.710 | 2986256.420 | 178.23 | 64 | 74 | 81 | OB | 2 | 1523 | 46.22 | |
| MW-S07 | 677613.800 | 2986198.590 | 190.33 | 59 | 69 | 105 | OB | 2 | ✓ | | |
| MW-S09 | 677320.560 | 2985832.740 | 191.08 | 51 | 61 | 106 | OB | 2 | ✓ | | |
| MW-SD10 | 677462.750 | 2985610.210 | 194.29 | 54.3 | 64.3 | 65 | OB | 2 | ✓ | | |
| MW-B510 | 677468.040 | 2985613.500 | 194.00 | 98.5 | 108.5 | 109 | BR | 2 | ✓ | | |
| MW-S12 | 677676.990 | 2985340.840 | 184.43 | 40 | 50 | 53 | OB | 2 | ✓ | | |
| MW-B512 | 677676.260 | 2985336.240 | 184.33 | 73 | 83 | 83.5 | BR | 2 | ✓ | | |
| MW-SD13 | 677055.420 | 2986101.420 | 180.68 | 94.8 | 104.8 | 105.5 | OB | 2 | 0936 | 49.94 | |

ML-1-3 1112 4480
ML-1-1 1115 4475

## Monitoring Well Gauging Form - Semi-Annual RDRA Sampling

Project: Nuclear Metals, Inc. (RD/RA)

Location: 2229 Main Street, Concord, MA

Date:

Weather:

Company:

Sampler Name:

NOTES:

| Well ID | Easting (X) | Northing (Y) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Time | Depth to Water (feet) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-SM13 | 677060.660 | 2986109.140 | 181.10 | 54.5 | 64.5 | 65 | OB | 2 | 0938 | 49.92 | |
| MW-BS13 | 677055.070 | 2986114.950 | 181.52 | 116.5 | 126.5 | 127.2 | BR | 2 | 0940 | 49.71 | |
| MW-B1D13* | 677070.533 | 2986109.304 | 180.53 | 184 | 194 | 194 | BR | 2 | 0948 | 47.94 | |
| MW-B2D13* | 677067.893 | 2986105.092 | 180.63 | 214 | 224 | 224 | BR | 2 | 0945 | 48.08 | |
| MW-B3D13* | 677065.299 | 2986100.428 | 181.05 | 250 | 260 | 260 | BR | 2 | 0942 | 48.32 | |
| MW-S16 | 677613.300 | 2985989.710 | 187.40 | 68.8 | 78.8 | 81.5 | OB | 2 | ✓ | | |
| MW-S17 | 677562.620 | 2986389.930 | 188.17 | 56 | 66 | 69 | OB | 2 | 1309 | 55.30 | |
| MW-SD17 | 677571.780 | 2986376.840 | 189.28 | 76 | 86 | 89 | OB | 2 | 1305 | 55.67 | |
| MW-BS17 | 677556.850 | 2986373.910 | 189.30 | 99.8 | 109.8 | 113 | BR | 2 | 1307 | 56.05 | |
| MW-S18 | 677890.840 | 2985811.990 | 158.23 | 9.5 | 19.5 | 30 | OB | 2 | ✓ | | |
| MW-S19 | 678066.170 | 2985562.920 | 187.50 | 39 | 49 | 66 | OB | 2 | ✓ | | |
| MW-S20 | 678090.290 | 2985836.480 | 156.59 | 19 | 29 | 50 | OB | 2 | ✓ | | |
| MW-S21 | 678281.600 | 2985599.500 | 187.56 | 43 | 53 | 55 | OB | 2 | ✓ | | |
| MW-BS21 | 678287.850 | 2985603.230 | 188.11 | 70 | 80 | 80.5 | BR | 2 | ✓ | | |
| MW-S22 | 677912.910 | 2986682.140 | 175.62 | 33.6 | 43.6 | 44 | OB | 2 | ✓ | | |
| MW-BS22 | 677921.110 | 2986701.530 | 174.59 | 48 | 58 | 58.5 | BR | 2 | ✓ | | |
| MW-S23 | 677178.150 | 2985766.840 | 184.25 | 40 | 50 | 89 | OB | 2 | 1544 | 31.50 | |
| MW-S24 | 677663.300 | 2985949.330 | 185.53 | 53.8 | 63.8 | 65 | OB | 2 | ✓ | | |
| MW-SD24* | 677657.895 | 2985939.351 | 185.06 | 66 | 76 | 76 | OB | 2 | ✓ | | |
| MW-BS25 | 677190.620 | 2986469.390 | 152.95 | 68 | 78 | 78.5 | BR | 2 | ✓ | | |
| MW-S27 | 677423.740 | 2986300.100 | 186.14 | 124 | 134 | 134.5 | OB | 2 | 1141 | 53.05 | |
| MW-SD27 | 677419.350 | 2986301.890 | 185.90 | 72 | 82 | 82 | OB | 2 | 1139 | 53.09 | |
| MW-S28 | 676746.300 | 2986268.430 | 196.94 | 60 | 70 | 92 | OB | 2 | 1039 | 67.19 | TOOWC |
| MW-BS28 | 676750.550 | 2986267.520 | 197.35 | 156.4 | 166.4 | 168 | BR | 2 | 1032 | 68.51 | |
| MW-B1D28* | 676734.155 | 2986257.635 | 197.25 | 200 | 210 | 210 | BR | 2 | 1044 | 68.00 | |
| MW-B2D28* | 676738.463 | 2986261.708 | 197.25 | 251 | 261 | 261 | BR | 2 | 1042 | 67.89 | |
| MW-S30 | 677400.480 | 2986728.300 | 187.23 | 52 | 62 | 62 | OB | 2 | 1123 | 54.20 | |
| MW-SD30 | 677394.250 | 2986230.440 | 187.06 | 72 | 82 | 82 | OB | 2 | 1126 | 69.10 | |
| MW-S60* | 677626.180 | 2985959.287 | 186.55 | 53 | 63 | 63 | OB | 2 | ✓ | | |
| MW-SD60* | 677624.916 | 2985954.461 | 186.58 | 64 | 79 | 79 | OB | 2 | ✓ | | |
| MW-SD61* | 677527.771 | 2986014.149 | 194.61 | 72 | 82 | 82 | OB | 2 | ✓ | | |
| MW-S62A* | 677549.730 | 2986013.388 | 193.55 | 58 | 68 | 68 | OB | 2 | 1558 | 58.86 | |
| MW-SD62A* | 677549.497 | 2986013.456 | 193.48 | 73 | 83 | 83 | OB | 2 | 1559 | 58.81 | |
| MW-S63* | 677560.385 | 2985999.730 | 192.70 | 58 | 68 | 68 | OB | 2 | 1607 | 57.90 | |
| MW-SD63* | 677560.281 | 2985999.609 | 192.77 | 73 | 83 | 83 | OB | 2 | 1603 | 55.74 | Obstruction @ 28' |
| MW-S64* | 677386.193 | 2986081.430 | 194.91 | 60 | 75 | 75 | OB | 2 | 1357 | 41.68 | |
| MW-SD64* | 677385.944 | 2986081.352 | 194.91 | 85 | 95 | 95 | OB | 2 | 1349 | 61.70 | |
| MW-T10 | 677467.190 | 2985619.510 | 194.86 | 75 | 80 | 81 | OB | 2 | [illegible] | [illegible] | 1104 53.62 |
| MW-T24 | 677665.210 | 2985942.930 | 185.11 | 85.5 | 89.5 | 91 | OB | 2 | ✓ | | |
| PW-6 | 677783.613 | 2985664.423 | 182.66 | N/A | N/A | 55 | OB | 2.5 | ✓ | | |
| SW-2A | 677487.020 | 2985621.610 | 193.26 | 103 | 537 | 537 | BR | 8 | | | |

* indicates wells that were installed as part of RD/RA PDI activities and were included as part of the sampling event if installed at the time of sampling.
EW-1 must be measured from top of concrete vault (marked)

GZW-9-2
-9-1
MW SD62
MW S62

1321 40.53
1330 40.49
1601 58.85
1602 59.00

## Monitoring Well Gauging Form - Semi-Annual RDRA Sampling

Project: Nuclear Metals, Inc. (RD/RA)
Location: 2229 Main Street, Concord, MA
Date: 4/3,4,3
Weather:
Company:
Sampler Name: David Price Keegan McNamara

NOTES: Cal - MW SD-06 - 46.20 For all meters

| Well ID | Easting (X) | Northing (Y) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Time | Depth to Water (feet) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9-78 | 676096.827 | 2987274.821 | 138.96 | N/A | 58 | 58 | OB | N/A | 13:40 | 11.95 | |
| A-2E | 675299.016 | 2987354.769 | 132.70 | N/A | 74 | 74 | OB | N/A | 8:40 | 6.22 | |
| AR-01 | 674733.403 | 2986826.979 | 139.91 | N/A | 122 | 122 | OB | N/A | 8:50 | 4.51 | |
| AR-02 | 675913.415 | 2987545.893 | 137.38 | N/A | 120 | 120 | OB | N/A | 13:36 | 10.23 | |
| AR-PH5 | 675813.999 | 2986615.917 | 128.62 | – | – | – | SW | – | 10:00 | 3.22 | |
| ASBRV-U1 | 675239.488 | 2985706.537 | 140.85 | – | – | – | SW | – | 13:00 | 12.30 | |
| ASBRV-U2 | 676058.199 | 2986109.991 | 138.48 | – | – | – | SW | – | 14:00 | 12.20 | |
| ASSABET-1A (PZ-1A) | 675012.679 | 2986855.744 | 139.08 | 50.8 | 61 | 61 | OB | 18 | 13:51 | 13.89 | Acton Key & Pipe Wrench Needed |
| ASSABET-2A (PZ-2A) | 675197.550 | 2987402.686 | 137.67 | 26 | 34 | 34 | OB | 12 | 13:54 | 14.45 | Acton Key & Pipe Wrench Needed |
| B-06 | 675423.942 | 2987568.250 | 139.13 | N/A | N/A | N/A | OB | N/A | 8:34 | 12.30 | |
| EW-1 | 675727.042 | 2986776.130 | 137.28 | 74 | 98 | 98 | OB | 6 | 9:45 | 25.41 | |
| MW-536 | 675629.002 | 2986454.906 | 135.09 | 38 | 48 | 48 | OB | 2 | 9:28 | 8.45 | |
| MW-SD36 | 675633.119 | 2986455.835 | 134.78 | 92 | 102 | 102 | OB | 2 | 9:29 | 7.23 | |
| MW-B536 | 675633.119 | 2986455.835 | 134.76 | 113 | 123 | 123 | BR | 2 | 9:29 | 7.14 | |
| MW-537 | 675275.464 | 2986754.678 | 140.96 | 47 | 57 | 57 | OB | 2 | 8:53 | 13.61 | |
| MW-SD37 | 675280.991 | 2986753.462 | 141.11 | 76 | 86 | 86 | OB | 2 | 8:54 | 12.89 | |
| MW-B537 | 675280.991 | 2986753.462 | 140.69 | 92 | 102 | 102 | BR | 2 | 8:54 | 12.45 | |
| MW-538 | 675276.911 | 2987036.356 | 136.56 | 40 | 50 | 50 | OB | 2 | 9:10 | 9.72 | |
| MW-SD38 | 675272.149 | 2987036.888 | 135.95 | 60 | 70 | 70 | OB | 2 | 9:11 | 9.38 | |
| MW-B538 | 675272.149 | 2987036.888 | 136.39 | 85 | 95 | 95 | BR | 2 | 9:11 | 8.99 | |
| MW-539 | 675198.697 | 2986594.507 | 136.79 | 38 | 48 | 48 | OB | 2 | 9:22 | 7.83 | |
| MW-SD39 | 675194.853 | 2986592.584 | 136.77 | 75 | 85 | 85 | OB | 2 | 9:23 | 8.01 | |
| MW-B539 | 675194.853 | 2986592.584 | 136.52 | 91 | 101 | 101 | BR | 2 | 9:23 | 7.55 | |
| MW-540 | 675752.877 | 2986773.872 | 138.71 | 45 | 55 | 55 | OB | 2 | 9:39 | 12.72 | |
| MW-SD40 | 675748.209 | 2986776.318 | 138.67 | 87 | 97 | 97 | OB | 2 | 9:40 | 14.25 | |
| MW-B540 | 675748.309 | 2986775.842 | 138.76 | 116 | 126 | 126 | BR | 2 | 9:40 | 12.82 | |
| MW-SD41 | 675514.802 | 2986915.587 | 136.60 | 72 | 82 | 82 | OB | 2 | 9:15 | 10.13 | |
| MW-SD42A | 675550.344 | 2986806.565 | 137.70 | 80 | 90 | 90 | OB | 2 | 9:18 | 11.34 | |
| MW-SD43 | 675465.857 | 2986640.193 | 137.78 | 80 | 90 | 90 | OB | 2 | 9:05 | 10.24 | |
| MW-SD44 | 675483.952 | 2986843.633 | 137.01 | 76 | 86 | 86 | OB | 2 | 9:16 | 10.27 | |
| MW-SD45 | 675738.684 | 2986856.800 | 140.15 | 75 | 85 | 85 | OB | 2 | 9:50 | 14.42 | |
| MW-546 | 675121.081 | 2986864.268 | 140.22 | 53 | 63 | 109 | OB | 2 | 8:45 | 12.68 | |
| MW-SD46 | 675119.845 | 2986869.830 | 140.37 | 77.5 | 87.5 | 87.5 | OB | 2 | 8:45 | 12.70 | |
| MW-B546 | 675121.081 | 2986864.268 | 140.13 | 98 | 108 | 109 | BR | 2 | 8:46 | 12.01 | |
| PT-09 | 675799.306 | 2986676.424 | 134.60 | 79 | 89 | 89 | OB | 1.5 | 9:55 | 8.70 | Grace Key Needed |
| PT-10 | 675808.123 | 2986692.785 | 135.23 | 25 | 30 | 30 | OB | 1.5 | 9:55 | 9.21 | Grace Key Needed |
| PZ Mpond | 675856.365 | 2987167.500 | 129.01 | 7.67 | 8.67 | 8.67 | OB | 1 | 13:30 | 1.41 | |
| PZ Tpond | 675352.989 | 2987425.881 | 128.64 | 3.5 | 4.5 | 4.5 | OB | 1 | 13:35 | 2.80 | |
| SG-Mpond | 675856.365 | 2987167.500 | 128.85 | – | – | – | SW | – | 13:30 | 1.30 | |
| SG-Tpond | 675352.989 | 2987425.881 | 128.00 | – | – | – | SW | – | 13:35 | 0.44 | |
| ASBRV-D2 | 677203.791 | 2986906.699 | N/A | – | – | – | SW | – | 11:24 | 1.72 | |
| BEW-5* | 676541.404 | 2986620.006 | 132.48 | 107 | 127 | – | BR | 6 | 10:15 | 5.17 | |

PT-3 8:57 11.62

## Monitoring Well Gauging Form - Semi-Annual RDRA Sampling

Project: Nuclear Metals, Inc. (RD/RA)
Location: 2229 Main Street, Concord, MA
Date:
Weather:
Company:
Sampler Name:

NOTES:

| Well ID | Easting (X) | Northing (Y) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Time | Depth to Water (feet) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BEW-6* | 676364.690 | 2986842.848 | 132.91 | 119 | 162 | - | BR | 6 | 11:29 | 5.40 | |
| GZW-8-1 | 677208.084 | 2986826.318 | 127.57 | 2 | 12 | 12 | OB | 2 | 10:25 | 6.74 | |
| GZW-8-2 | 677198.012 | 2986842.544 | 127.10 | 114.5 | 116 | 133.5 | BR | 1.5 | 10:25 | 14.76 | Micro |
| MW-1 | 676818.700 | 2986521.010 | 155.60 | 23 | 38 | 39 | OB | 2 | 14:50 | 26.01 | |
| MW-S14 | 676591.250 | 2986181.970 | 194.90 | 61 | 71 | 71 | OB | 2 | V | | |
| MW-BS14 | 676585.660 | 2986183.740 | 193.84 | 170 | 180 | 180 | BR | 2 | V | | |
| MW-S15 | 676513.520 | 2986671.240 | 134.14 | 5 | 15 | 24 | OB | 2 | 10:50 | 6.58 | |
| MW-SD15* | 676469.274 | 2986702.030 | 136.44 | 81 | 91 | 91 | OB | 2 | 10:55 | 9.16 | |
| MW-BS15 | 676480.200 | 2986710.900 | 135.28 | 105 | 115 | 115 | BR | 2 | 10:55 | 8.32 | |
| MW-BM15 | 676472.900 | 2986715.000 | 135.61 | 137 | 147 | 157 | BR | 2 | 10:55 | 8.20 | |
| MW-S26 | 676672.841 | 2986809.146 | 130.65 | 5 | 15 | 90 | OB | 2 | 10:45 | 4.24 | |
| MW-SD26 | 676672.841 | 2986809.146 | 130.56 | 80 | 90 | 90 | OB | 2 | 10:45 | 4.76 | |
| MW-BS26 | 676667.230 | 2986809.980 | 131.84 | 114 | 124 | 124.5 | BR | 2 | 10:46 | 4.55 | |
| MW-BS31 | 676330.800 | 2986457.800 | 139.40 | 119 | 129 | 129 | BR | 2 | 14:15 | 11.85 | In good condition |
| MW-S32 | 676249.333 | 2986973.333 | 131.23 | 35 | 45 | 45 | OB | 2 | 11:32 | 5.45 | |
| MW-SD32 | 676245.126 | 2986975.518 | 131.37 | 65 | 75 | 75 | OB | 2 | 11:33 | 5.52 | |
| MW-BS32 | 676245.126 | 2986975.518 | 131.36 | 92 | 102 | 102 | BR | 2 | 11:33 | 5.26 | |
| MW-SD34 | 676012.541 | 2986771.180 | 133.56 | 84.5 | 94.5 | 94.5 | OB | 2 | 11:37 | 7.73 | |
| MW-BS34 | 676012.541 | 2986771.180 | 133.60 | 101 | 111 | 111 | BR | 2 | 11:37 | 7.44 | |
| MW-S35 | 676173.470 | 2986230.135 | 138.95 | 30 | 40 | 40 | OB | 2 | 13:56 | 12.57 | |
| MW-SD35 | 676167.742 | 2986228.569 | 138.79 | 82 | 92 | 92 | OB | 2 | 13:56 | 10.18 | |
| MW-BS35 | 676167.742 | 2986228.569 | 138.80 | 105.5 | 115.5 | 115.5 | BR | 2 | 13:56 | 9.69 | |
| MW-BS50* | 677548.152 | 2986695.846 | 150.32 | 63 | 73 | 73.5 | BR | 2 | 14:58 | 24.80 | |
| MW-BS51* | 676811.835 | 2986634.506 | 140.90 | 102 | 112 | 112 | BR | 2 | 14:45 | 13.31 | |
| MW-SD52* | 676213.515 | 2986759.174 | 132.57 | 78 | 88 | 88 | OB | 2 | 14:20 | 5.94 | |
| MW-BS52* | 676213.222 | 2986759.159 | 132.58 | 100 | 110 | 110 | BR | 2 | 14:20 | 6.00 | |
| MW-BS53* | 676274.354 | 2986275.880 | 140.36 | 126 | 136 | 139 | BR | 2 | 14:12 | 12.25 | |
| MW-BS54* | 676724.768 | 2985909.419 | 169.39 | 176 | 186 | 186 | BR | 2 | | | |
| MW-BS55* | TBD | TBD | TBD | TBD | TBD | TBD | BR | 2 | | | |
| MW-BS56* | TBD | TBD | TBD | TBD | TBD | TBD | BR | 2 | | | |
| OW-2 | 676745.475 | 2986552.420 | 151.90 | 17.8 | 27.8 | 27.8 | OB | 2 | 14:48 | 20.63 | |
| P-1 | 677203.865 | 2986663.384 | 127.80 | 48 | 53 | 53 | OB | 1.5 | 10:21 | 6.60 | |
| P-1A | 677175.538 | 2986665.383 | 128.80 | 25 | 30 | 30 | OB | 1.5 | 10:20 | 6.55 | Top of Casing |
| PT-11P | 676018.462 | 2986759.407 | 133.30 | 7 | 17 | 17 | OB | 1.5 | 11:38 | 7.45 | |
| BEW-1* | 677509.410 | 2985933.649 | 193.68 | 114 | 175.4 | 178 | BR | 6 | 57.60 | 0630 | |
| BEW-2* | 677172.855 | 2986034.777 | 192.31 | 134.5 | 227 | 229 | BR | 6 | | | |
| BEW-3* | 676986.190 | 2986131.777 | 179.69 | 119 | 212.5 | 215 | BR | 6 | | | |
| BEW-4* | 677798.570 | 2986420.305 | 172.07 | 74.5 | 142 | 144 | BR | 6 | | | |
| GZW-10-1 | 676891.080 | 2986108.060 | 186.30 | 55 | 60 | 164 | OB | 0.5 | V | | |
| GZW-10-2 | 676891.084 | 2986108.069 | 186.30 | 142 | 152 | 164 | BR | 1.5 | V | | |
| GZW-11-2 | 676916.293 | 2986308.467 | 195.45 | 155 | 175 | 176 | BR | 1.5 | V | | |
| GZW-5 | 678388.326 | 2985878.371 | 196.02 | 40 | 55 | 55 | OB | 1.5 | | | |

## Monitoring Well Gauging Form - Semi-Annual RDRA Sampling

Project: Nuclear Metals, Inc. (RD/RA)
Location: 2229 Main Street, Concord, MA
Date:
Weather:
Company:
Sampler Name:

NOTES:

| Well ID | Easting (X) | Northing (Y) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Time | Depth to Water (feet) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GZW-6-1 | 677089.774 | 2986141.090 | 178.61 | 32 | 42 | 45 | OB | 1.5 | | | |
| GZW-7-1 | 677625.824 | 2985932.510 | 195.62 | 68 | 78 | 122 | OB | 1.5 | 15:33 | 58.90 | |
| MW-BS7-2* | 677603.080 | 2985932.637 | 188.53 | 104.5 | 114.5 | 114.5 | BR | 2 | 15:30 | 51.53 | |
| GZW-7S | 677631.281 | 2985926.516 | 193.67 | 61 | 71 | 71 | OB | 2 | 15:31 | 57.79 | |
| GZW-9-2 | 677932.608 | 2986501.571 | 183.15 | 45 | 50 | 64 | OB | 1.5 | 15:45 | 40.53 | |
| HA-09 | 677351.560 | 2985459.930 | 205.80 | 49 | 69 | 70 | OB | 2 | | | |
| HA-10A | 677774.000 | 2985571.206 | 180.94 | 27.6 | 47.6 | 47.6 | OB | 2 | | | |
| HA20-CMT-3B(OW)* | 677671.468 | 2985858.746 | 184.30 | 98 | 108 | 108 | BR | 2 | | | |
| HA20-CMT-3T(OW)* | 677669.070 | 2985870.862 | 184.79 | 82 | 92 | 92 | OB | 2 | | | |
| HA20-CMT-5(OW)* | 677836.950 | 29858.70.380 | 175.64 | 90 | 100 | 100 | BR | 2 | | | |
| HA20-CMT-6(OW)* | 677816.820 | 2985799.050 | 180.29 | 79 | 84 | 84 | BR | 2 | | | |
| HB-10 | 677832.308 | 2985825.495 | 180.37 | 49 | 64 | 65 | OB | 1.5 | | | |
| HB-10S | 677831.039 | 2985822.409 | 179.81 | 32 | 42 | 42 | OB | 2 | | | |
| HB-11 | 677821.837 | 2985934.359 | 175.01 | 30 | 40 | 42 | OB | 2 | | | |
| HB-12 | 677685.443 | 2985900.362 | 182.85 | 45 | 55 | 57 | OB | 2 | 15:40 | 45.66 | |
| HB-13* | 677744.743 | 2985834.135 | 162.11 | 28 | 38 | 38 | OB | 2 | | | |
| HB-620 | 677653.637 | 2985845.275 | 181.87 | 40 | 55 | 55 | OB | 2 | | | |
| HBPZ-2R | 677708.467 | 2985883.407 | 176.05 | 36 | 51 | 52.5 | OB | 2 | | | |
| ML-1-2 | 677351.080 | 2986481.280 | 175.35 | 65.5 | 67 | 82.5 | OB | 1.5 | | | |
| MW-11 | 677611.840 | 2985787.100 | 189.70 | 55 | 65 | 65 | OB | 2 | | | |
| MW-2 | 677522.349 | 2986579.572 | 149.02 | 13.6 | 23.6 | 24 | OB | 2 | 15:00 | 16.23 | |
| MW-8A | 677537.207 | 2986026.898 | 191.72 | 60 | 70 | 70 | OB | 2 | 15:27 | 59.00 | |
| MW-S01 | 677066.570 | 2986335.650 | 193.37 | 60.5 | 70.5 | 72 | OB | 2 | | | |
| MW-SD01 | 677054.010 | 2986336.790 | 193.54 | 90 | 100 | 119 | OB | 2 | | | |
| MW-BS01 | 677059.740 | 2986329.040 | 194.03 | 124 | 134 | 134.5 | BR | 2 | | | |
| MW-S02 | 677381.430 | 2986132.980 | 191.40 | 57 | 67 | 103 | OB | 2 | | | |
| MW-SD02 | 677376.030 | 2986139.930 | 190.73 | 85 | 95 | 95 | OB | 2 | | | |
| MW-BS02 | 677384.300 | 2986139.420 | 191.74 | 117 | 127 | 127.5 | BR | 2 | | | |
| MW-S03 | 677171.050 | 2985985.210 | 191.20 | 50 | 60 | 60.5 | OB | 2 | | | |
| MW-BS03 | 677176.090 | 2985991.350 | 190.14 | 130.8 | 140.8 | 142.5 | BR | 2 | | | |
| MW-BM03 | 677178.500 | 2986000.500 | 191.06 | 157 | 167 | 200 | BR | 2 | | | |
| MW-S04 | 676928.030 | 2985754.980 | 177.34 | 22 | 32 | 32 | OB | 2 | | | |
| MW-BS04 | 676917.330 | 2985761.010 | 178.07 | 111 | 126.3 | 126.3 | BR | 2 | | | |
| MW-S06 | 677287.970 | 2986267.830 | 177.92 | 45 | 55 | 56 | OB | 2 | | | |
| MW-SD06 | 677283.710 | 2986256.420 | 178.23 | 64 | 74 | 81 | OB | 2 | | | |
| MW-S07 | 677613.800 | 2986198.590 | 190.33 | 59 | 69 | 105 | OB | 2 | | | |
| MW-S09 | 677320.560 | 2985832.740 | 191.08 | 51 | 61 | 106 | OB | 2 | | | |
| MW-SD10 | 677462.750 | 2985610.230 | 194.29 | 54.3 | 64.3 | 65 | OB | 2 | | | |
| MW-BS10 | 677468.040 | 2985613.500 | 194.00 | 98.5 | 108.5 | 109 | BR | 2 | | | |
| MW-S12 | 677676.990 | 2985340.840 | 184.43 | 40 | 50 | 53 | OB | 2 | | | |
| MW-BS12 | 677676.260 | 2985336.240 | 184.33 | 73 | 83 | 83.5 | BR | 2 | | | |
| MW-SD13 | 677055.420 | 2986101.420 | 180.68 | 94.8 | 104.8 | 105.5 | OB | 2 | | | |

| | Time | Depth |
|---|---|---|
| MW-S15 : | 10:50 | 6.55 |
| MW-SD15 | 1055 | 9.16 |
| MW-BM15 | 1055 | 8.20 |
| MW-BS15 | 1055 | 8.32 |

## Monitoring Well Gauging Form - Semi-Annual RDRA Sampling

Project: Nuclear Metals, Inc. (RD/RA)
Location: 2229 Main Street, Concord, MA
Date:
Weather:
Company:
Sampler Name:

NOTES:

| Well ID | Easting (X) | Northing (Y) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Time | Depth to Water (feet) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-SM13 | 677060.660 | 2986109.140 | 181.10 | 54.5 | 64.5 | 65 | OB | 2 | | | |
| MW-BS13 | 677055.070 | 2986114.950 | 181.52 | 116.5 | 126.5 | 127.2 | BR | 2 | | | |
| MW-B1D13* | 677070.533 | 2986109.304 | 180.53 | 184 | 194 | 194 | BR | 2 | | | |
| MW-B2D13* | 677067.893 | 2986105.092 | 180.63 | 214 | 224 | 224 | BR | 2 | | | |
| MW-B3D13* | 677065.299 | 2986100.428 | 181.05 | 250 | 260 | 260 | BR | 2 | | | |
| MW-S16 | 677613.300 | 2985989.710 | 187.40 | 68.8 | 78.8 | 81.5 | OB | 2 | | | |
| MW-S17 | 677562.620 | 2986389.930 | 188.17 | 56 | 66 | 69 | OB | 2 | | | |
| MW-SD17 | 677571.780 | 2986376.840 | 189.28 | 76 | 86 | 89 | OB | 2 | | | |
| MW-BS17 | 677556.850 | 2986373.910 | 189.30 | 99.8 | 109.8 | 113 | BR | 2 | | | |
| MW-S18 | 677890.840 | 2985811.990 | 158.23 | 9.5 | 19.5 | 30 | OB | 2 | | | |
| MW-S19 | 678066.170 | 2985562.920 | 187.50 | 39 | 49 | 66 | OB | 2 | | | |
| MW-S20 | 678090.290 | 2985836.480 | 156.59 | 19 | 29 | 50 | OB | 2 | | | |
| MW-S21 | 678281.600 | 2985599.500 | 187.56 | 43 | 53 | 55 | OB | 2 | | | |
| MW-BS21 | 678287.850 | 2985603.230 | 188.11 | 70 | 80 | 80.5 | BR | 2 | | | |
| MW-S22 | 677912.910 | 2986682.140 | 175.62 | 33.6 | 43.6 | 44 | OB | 2 | 15:50 | 38.79 | |
| MW-BS22 | 677921.110 | 2986701.510 | 174.59 | 48 | 58 | 58.5 | BR | 2 | 15:48 | 32.50 | |
| MW-S23 | 677178.150 | 2985766.840 | 184.25 | 40 | 50 | 89 | OB | 2 | | | |
| MW-S24 | 677663.300 | 2985949.330 | 185.53 | 53.8 | 63.8 | 65 | OB | 2 | | | |
| MW-SD24* | 677657.895 | 2985939.351 | 185.06 | 66 | 76 | 76 | OB | 2 | | | |
| MW-BS25 | 677150.620 | 2986469.390 | 152.95 | 68 | 78 | 78.5 | BR | 2 | | | |
| MW-S27 | 677423.740 | 2986300.100 | 186.14 | 124 | 134 | 134.5 | OB | 2 | | | |
| MW-SD27 | 677419.350 | 2986301.890 | 185.90 | 72 | 82 | 82 | OB | 2 | | | |
| MW-S28 | 676746.300 | 2986268.430 | 196.94 | 60 | 70 | 92 | OB | 2 | | | |
| MW-BS28 | 676750.550 | 2986267.520 | 197.35 | 156.4 | 166.4 | 168 | BR | 2 | | | |
| MW-B1D28* | 676734.155 | 2986257.635 | 197.25 | 200 | 210 | 210 | BR | 2 | | | |
| MW-B2D28* | 676738.463 | 2986261.708 | 197.25 | 251 | 261 | 261 | BR | 2 | | | |
| MW-S30 | 677400.480 | 2986228.300 | 187.23 | 52 | 62 | 62 | OB | 2 | | | |
| MW-SD30 | 677394.250 | 2986230.440 | 187.06 | 72 | 82 | 82 | OB | 2 | | | |
| MW-S60* | 677626.130 | 2985959.287 | 186.55 | 53 | 63 | 63 | OB | 2 | | | |
| MW-SD60* | 677624.916 | 2985954.461 | 186.58 | 64 | 79 | 79 | OB | 2 | | | |
| MW-SD61* | 677527.771 | 2986014.149 | 194.61 | 72 | 82 | 82 | OB | 2 | 15:25 | [illegible] | 60.00 |
| MW-S62A* | 677549.730 | 2986013.388 | 193.55 | 58 | 68 | 68 | OB | 2 | | | |
| MW-SD62A* | 677549.497 | 2986013.456 | 193.48 | 73 | 83 | 83 | OB | 2 | | | |
| MW-S63* | 677560.385 | 2985999.730 | 192.70 | 58 | 68 | 68 | OB | 2 | | | |
| MW-SD63* | 677560.281 | 2985999.609 | 192.77 | 73 | 83 | 83 | OB | 2 | | | |
| MW-S64* | 677386.193 | 2986081.430 | 194.91 | 60 | 75 | 75 | OB | 2 | | | |
| MW-SD64* | 677385.944 | 2986081.152 | 194.91 | 85 | 95 | 95 | OB | 2 | | | |
| MW-I30 | 677467.190 | 2985619.510 | 194.86 | 75 | 80 | 81 | OB | 2 | | | |
| MW-I24 | 677665.230 | 2985947.930 | 185.11 | 85.5 | 89.5 | 91 | OB | 2 | | | |
| PW-6 | 677781.613 | 2985664.423 | 182.65 | N/A | N/A | 55 | OB | 2.5 | | | |
| SW-2A | 677487.020 | 2985621.610 | 193.26 | 103 | 537 | 537 | BR | 8 | | | |

* indicates wells that were installed as part of RD/RA PDI activities and were included as part of the sampling event if installed at the time of sampling.
EW-1 must be measured from top of concrete vault (marked)

## Monitoring Well Gauging Form - Semi-Annual RDRA Sampling

Project: Nuclear Metals, Inc. (RD/RA)
Location: 2229 Main Street, Concord, MA
Date:
Weather:
Company:
Sampler Name:

NOTES:

| Well ID | Easting (X) | Northing (Y) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Time | Depth to Water (feet) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GZW-6-1 | 677089.774 | 2986141.090 | 178.61 | 32 | 42 | 45 | OB | 1.5 | | | |
| GZW-7-1 | 677625.824 | 2985932.510 | 195.62 | 68 | 78 | 122 | OB | 1.5 | | | |
| MW-BS7-2* | 677603.080 | 2985932.637 | 188.53 | 104.5 | 114.5 | 114.5 | BR | 2 | 13:40 | 51.99 | |
| GZW-7S | 677631.281 | 2985926.516 | 193.67 | 61 | 71 | 71 | OB | 2 | | | |
| GZW-9-2 | 677932.608 | 2986501.571 | 183.15 | 45 | 50 | 64 | OB | 1.5 | | | |
| HA-09 | 677351.560 | 2985459.930 | 205.80 | 49 | 69 | 70 | OB | 2 | 11:17 | 55:19 | |
| HA-10A | 677774.000 | 2985571.206 | 180.94 | 27.6 | 47.6 | 47.6 | OB | 2 | 10:49 | 36.65 | 36.65 |
| HA20-CMT-3B(OW)* | 677671.468 | 2985858.746 | 184.30 | 98 | 108 | 108 | BR | 2 | 0824 | 45.69 | |
| HA20-CMT-3T(OW)* | 677669.070 | 2985870.862 | 184.79 | 82 | 92 | 92 | OB | 2 | 0822 | 48.02 | |
| HA20-CMT-5(OW)* | 677836.950 | 2985870.380 | 175.64 | 90 | 100 | 100 | BR | 2 | 0759 | 31.47 | |
| HA20-CMT-6(OW)* | 677816.820 | 2985799.050 | 180.29 | 79 | 84 | 84 | BR | 2 | 7:38 | 35.61 | |
| HB-10 | 677832.308 | 2985825.495 | 180.37 | 49 | 64 | 65 | OB | 1.5 | 0755 | 34.02 | |
| HB-10S | 677831.039 | 2985822.409 | 179.81 | 32 | 42 | 42 | OB | 2 | 0757 | 36.25 | |
| HB-11 | 677821.837 | 2985934.359 | 175.01 | 30 | 40 | 42 | OB | 2 | 0802 | 34.85 | |
| HB-12 | 677685.443 | 2985900.362 | 182.85 | 45 | 55 | 57 | OB | 2 | ~~0815~~ | | |
| HB-13* | 677744.743 | 2985834.135 | 162.11 | 28 | 38 | 38 | OB | 2 | 0751 | 22.20 | |
| HB-620 | 677653.637 | 2985845.275 | 181.87 | 40 | 55 | 55 | OB | 2 | 0826 | 45.60 | |
| HBPZ-2R | 677708.467 | 2985883.407 | 176.05 | 36 | 51 | 52.5 | OB | 2 | 0811 | 38.90 | |
| ML-1-2 | 677351.080 | 2986481.280 | 175.35 | 65.5 | 67 | 82.5 | OB | 1.5 | ✓ | | |
| MW-11 | 677611.840 | 2985787.100 | 189.70 | 55 | 65 | 65 | OB | 2 | 13:23 | 51.76 | |
| MW-2 | 677522.349 | 2986579.572 | 149.02 | 13.6 | 28.6 | 24 | OB | 2 | | | |
| MW-8A | 677537.207 | 2986026.898 | 191.72 | 60 | 70 | 70 | OB | 2 | | | |
| MW-S01 | 677066.570 | 2986335.650 | 193.37 | 60.5 | 70.5 | 72 | OB | 2 | ✓ | | |
| MW-SD01 | 677054.010 | 2986336.790 | 193.54 | 90 | 100 | 119 | OB | 2 | ✓ | | |
| MW-BS01 | 677059.740 | 2986329.040 | 194.03 | 124 | 134 | 134.5 | BR | 2 | ✓ | | |
| MW-S02 | 677381.430 | 2986132.980 | 191.40 | 57 | 67 | 103 | OB | 2 | ✓ | | |
| MW-SD02 | 677376.030 | 2986139.930 | 190.73 | 85 | 95 | 95 | OB | 2 | ✓ | | |
| MW-BS02 | 677384.300 | 2986139.420 | 191.74 | 117 | 127 | 127.5 | BR | 2 | ✓ | | |
| MW-S03 | 677171.050 | 2985985.210 | 191.20 | 50 | 60 | 60.5 | OB | 2 | | | |
| MW-BS03 | 677176.090 | 2985991.350 | 190.14 | 130.8 | 140.8 | 142.5 | BR | 2 | | | |
| MW-BM03 | 677178.500 | 2986000.500 | 191.06 | 157 | 167 | 200 | BR | 2 | | | |
| MW-S04 | 676928.030 | 2985754.980 | 177.34 | 22 | 32 | 32 | OB | 2 | | | |
| MW-BS04 | 676917.330 | 2985761.010 | 178.07 | 111 | 126.3 | 126.3 | BR | 2 | | | |
| MW-S06 | 677287.570 | 2986267.830 | 177.92 | 45 | 55 | 56 | OB | 2 | | | |
| MW-SD06 | 677283.710 | 2986256.420 | 178.23 | 64 | 74 | 81 | OB | 2 | | | |
| MW-S07 | 677613.800 | 2986198.590 | 190.33 | 59 | 69 | 105 | OB | 2 | 13:50 | 56.25 | |
| MW-S09 | 677320.560 | 2985832.740 | 191.08 | 51 | 61 | 106 | OB | 2 | 13:17 | 43.97 | |
| MW-~~S010~~ T10 | 677462.750 | 2985610.210 | 194.29 | 54.3 | 64.3 | 65 | OB | 2 | 1104 | ~~56~~ 53.62 | |
| MW-BS10 | 677468.040 | 2985613.500 | 194.00 | 98.5 | 108.5 | 109 | BR | 2 | 1108 | 55.16 | |
| MW-~~S11~~ 21 | 677676.990 | 2985340.840 | 184.43 | 40 | 50 | 53 | OB | 2 | 10:07 | 42.11 | |
| MW-BS~~11~~ 21 | 677676.260 | 2985336.240 | 184.33 | 73 | 83 | 83.5 | BR | 2 | 10:02 | 41.77 | |
| MW-S013 | 677055.420 | 2986101.420 | 180.68 | 94.8 | 104.8 | 105.5 | OB | 2 | ✓ | | |

MW-~~S10~~ S010 11:10 52.73 13:06 MW S14 → 64.33
MW BS14 64.71 → 13:04

## Monitoring Well Gauging Form - Semi-Annual RDRA Sampling

Project: Nuclear Metals, Inc. (RD/RA)

Location: 2229 Main Street, Concord, MA

Date:

Weather:

Company:

Sampler Name:

NOTES:

| Well ID | Easting (X) | Northing (Y) | Measuring Point Elevation (feet NGVD) | Top of Screen (feet) | Bottom of Screen (feet) | Total Depth (feet) (CMT Channel #, where applicable) | Formation | Well Diameter (inches) | Time | Depth to Water (feet) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-SM13 | 677060.660 | 2986109.140 | 181.10 | 54.5 | 64.5 | 65 | OB | 2 | ↓ | | |
| MW-BS13 | 677055.070 | 2986114.950 | 181.52 | 116.5 | 126.5 | 127.2 | BR | 2 | ↓ | | |
| MW-B1D13* | 677070.533 | 2986109.304 | 180.53 | 184 | 194 | 194 | BR | 2 | ↓ | | |
| MW-B2D13* | 677067.893 | 2986105.092 | 180.63 | 214 | 224 | 224 | BR | 2 | ↓ | | |
| MW-B3D13* | 677065.299 | 2986100.428 | 181.05 | 250 | 260 | 260 | BR | 2 | ↓ | | |
| MW-S16 | 677613.300 | 2985989.710 | 187.40 | 68.8 | 78.8 | 81.5 | OB | 2 | 1342 | 51.76 | |
| MW-S17 | 677562.620 | 2986389.930 | 188.17 | 56 | 66 | 69 | OB | 2 | ↓ | | |
| MW-SD17 | 677571.780 | 2986376.840 | 189.28 | 76 | 86 | 89 | OB | 2 | ↓ | | |
| MW-BS17 | 677556.850 | 2986373.910 | 189.30 | 99.8 | 109.8 | 113 | BR | 2 | ↓ | | |
| MW-S18 | 677890.840 | 2985811.990 | 158.23 | 9.5 | 19.5 | 30 | OB | 2 | 10:58 | 7.00 | |
| MW-S19 | 678066.170 | 2985562.920 | 187.50 | 39 | 49 | 66 | OB | 2 | 10:21 | 41.79 | |
| MW-S20 | 678090.290 | 2985836.480 | 156.59 | 19 | 29 | 50 | OB | 2 | 0935 | 8.00 | |
| ~~MW-S11~~ BS12 | 678281.600 | 2985599.500 | 187.56 | 43 | 53 | 55 | OB | 2 | 0946 | 39.50 | |
| ~~MW-S12~~ S12 | 678287.850 | 2985603.230 | 188.11 | 70 | 80 | 80.5 | BR | 2 | 0944 | 38.78 | |
| MW-S22 | 677912.910 | 2986682.140 | 175.62 | 33.6 | 43.6 | 44 | OB | 2 | | | |
| MW-BS22 | 677921.110 | 2986701.510 | 174.59 | 48 | 58 | 58.5 | BR | 2 | | | |
| MW-S23 | 677178.150 | 2985766.840 | 184.25 | 40 | 50 | 89 | OB | 2 | | | |
| MW-S24 | 677663.300 | 2985949.330 | 185.53 | 53.8 | 63.8 | 65 | OB | 2 | 0833 | 49.81 | |
| MW-SD24* | 677657.895 | 2985939.351 | 185.06 | 66 | 76 | 76 | OB | 2 | 0838 | 48.99 | |
| MW-BS25 | 677190.620 | 2986469.890 | 152.95 | 68 | 78 | 78.5 | BR | 2 | 0840 | 49.81 | |
| MW-S27 | 677423.740 | 2986300.100 | 186.14 | 124 | 134 | 134.5 | OB | 2 | ↓ | | |
| MW-SD27 | 677419.350 | 2986301.890 | 185.90 | 72 | 82 | 82 | OB | 2 | ↓ | | |
| MW-S28 | 676746.300 | 2986268.430 | 196.94 | 60 | 70 | 92 | OB | 2 | ↓ | | |
| MW-BS28 | 676750.550 | 2986267.520 | 197.35 | 156.4 | 166.4 | 168 | BR | 2 | ↓ | | |
| MW-B1D28* | 676734.155 | 2986257.635 | 197.25 | 200 | 210 | 210 | BR | 2 | ↓ | | |
| MW-B2D28* | 676738.463 | 2986261.708 | 197.25 | 251 | 261 | 261 | BR | 2 | ↓ | | |
| MW-S30 | 677400.480 | 2986228.300 | 187.23 | 52 | 62 | 62 | OB | 2 | ↓ | | |
| MW-SD30 | 677394.250 | 2986230.440 | 187.06 | 72 | 82 | 82 | OB | 2 | ↓ | | |
| MW-S60* | 677626.130 | 2985959.287 | 186.55 | 53 | 63 | 63 | OB | 2 | 1335 | 50.83 | |
| MW-SD60* | 677624.916 | 2985954.461 | 186.58 | 64 | 79 | 79 | OB | 2 | 1337 | 50.[illegible]61 | |
| MW-SD61* | 677527.771 | 2986014.149 | 194.61 | 72 | 82 | 82 | OB | 2 | | | |
| MW-S62A* | 677549.730 | 2986013.388 | 193.55 | 58 | 68 | 68 | OB | 2 | | | |
| MW-SD62A* | 677549.497 | 2986013.456 | 193.48 | 73 | 83 | 83 | OB | 2 | | | |
| MW-S63* | 677560.385 | 2985999.730 | 192.70 | 58 | 68 | 68 | OB | 2 | | | |
| MW-SD63* | 677560.281 | 2985999.609 | 192.77 | 73 | 83 | 83 | OB | 2 | | | |
| MW-S64* | 677386.193 | 2986081.430 | 194.91 | 60 | 75 | 75 | OB | 2 | | | |
| MW-SD64* | 677385.944 | 2986081.152 | 194.91 | 85 | 95 | 95 | OB | 2 | ↓ | | |
| MW-T10 | 677467.190 | 2985619.530 | 194.86 | 75 | 80 | 81 | OB | 2 | ↓ | | |
| MW-T24 | 677665.210 | 2985942.930 | 185.11 | 85.5 | 89.5 | 91 | OB | 2 | 0837 | 49.00 | |
| PW-6 | 677783.613 | 2985664.423 | 182.65 | N/A | N/A | 55 | OB | 2.5 | 1054 | 38.80 | |
| SW-2A | 677487.020 | 2985621.610 | 193.26 | 103 | 537 | 537 | BR | 8 | 11:13 | 47.66 | |

* indicates wells that were installed as part of RD/RA PDI activities and were included as part of the sampling event if installed at the time of sampling.
EW-1 must be measured from top of concrete vault (marked)

GZW-5 0956 - 49.95

4/9-20 - CMT-1 07:47 35.05

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

# Sample Receipt Acknowledgement

| | |
|---|---|
| SDG/Report# | 617322 |
| Project ID | Nuclear Metals (NMI) Superfund Site RD/RA |
| PO Number | Laboratory Services Agreement |
| Project Manager | Zachary Worsham |
| Receive Date | 07-APR-23 09:30 |
| Prelim. Due | |
| Report Due | 05-MAY-2023 |
| EDD Required | Y |
| EDD Name | EQUIS_DMAX_DDMS_v3.01 |
| Chain of Custody | |
| Turn Days | 20(Working) |

| | |
|---|---|
| Client | de maximis, inc. |
| Report To | Mr. Todd Majer<br>de maximis, inc.<br>2229 Main Street<br>Concord, Massachusetts 01742 |
| Invoice To | Ms. Jessie McCusker<br>de maximis, inc.<br>2229 Main Street<br>Concord, Massachusetts 01742 |

| GEL ID | Sample ID | Matrix | Collection Date | Analysis Requested *(with due date, when applicable)* |
|---|---|---|---|---|
| 617322001 | HA20-CMT-5(OW)-04032023 | WG | 03-APR-23 14:30 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 617322002 | HA20-CMT-5(OW)-04032023 | WG | 03-APR-23 14:30 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 617322003<br>Field QC | EQ-BLANK-04032023 | WG | 03-APR-23 16:10 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 617322004 | HA20-CMT-6(OW)-04042023 | WG | 04-APR-23 11:30 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 617322005 | HA20-CMT-6(OW)-04042023 | WG | 04-APR-23 11:30 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 617322006 | MW-BS28-04042023 | WG | 04-APR-23 12:30 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 617322007 | MW-BS28-04042023 | WG | 04-APR-23 12:30 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 617322008<br>Lab QC | MW-SD34-04042023 | WG | 04-APR-23 10:00 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 617322009<br>Lab QC | MW-SD34-04042023 | WG | 04-APR-23 10:00 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 617322010 | HA20-CMT-3T(OW)-04042023 | WG | 04-APR-23 15:00 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 617322011 | HA20-CMT-3T(OW)-04042023 | WG | 04-APR-23 15:00 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 617322012<br>Field QC | EQ-BLANK-04042023 | WG | 04-APR-23 15:00 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 617322013 | MW-B1D28-04042023 | WG | 04-APR-23 16:55 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 617322014 | MW-B1D28-04042023 | WG | 04-APR-23 16:55 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |

Original

4/6/23 EV

Page: 1 of 2
Project # 3252E1
GEL Quote #: GELP18-1125

COC Number (1):
PO Number: 3252E1

# GEL Laboratories LLC

gel.com Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

## Chain of Custody and Analytical Request

617322

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

**GEL Work Order Number:** **GEL Project Manager: Zach Worsham**

Client Name: de maximis, inc. Phone # 978-875-0635
Project/Site Name: Nuclear Metals Fax #
Address: 200 Day Hill Road, Windsor CT
Collected By: Various Send Results To: tmajer@demaximis.com

**Sample Analysis Requested** (5) (Fill in the number of containers for each test)

| Sample ID<br>* For composites - indicate start and stop date/time | *Date Collected (mm-dd-yy) | *Time Collected (Military) (hhmm) | QC Code (2) | Field Filtered (3) | Sample Matrix (4) | Should this sample be considered: Radioactive (If yes, please supply isotopic info.) | Should this sample be considered: (7) Known or possible Hazards | Total number of containers | NI Total Metals (6020A ICP-MS) | NI Dissolved Metals (6020A ICP-MS) | NI U-235/U238 Plus Total U Clac | SA Dissolved Inorganic Carbon | SA Dissolved Organic Carbon | <-- Preservative Type (6) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HA20-CMT-5(OW)-04032023 | 4/3/2023 | 14:30 | N | N | GW | U238 | | 1 | X | | X | | | |
| HA20-CMT-5(OW)-04032023 | 4/3/2023 | 14:30 | N | Y | GW | U238 | | 1 | | X | X | | | |
| EQ-BLANK-04032023 | 4/3/2023 | 16:10 | EB | N | GW | U238 | | | X | | | | | |
| | | | | | | U238 | | | | | | | | |
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| | | | | | | U238 | | | | | | | | |

**Comments**
Note: extra sample is required for sample specific QC

Total and Dissolved Metals ICP-MS List: Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, U-235, U-238, Total U Calculation, Vandium, Zinc,

### Chain of Custody Signatures

| Relinquished By (Signed) | Date | Time | Received by (signed) | Date | Time |
|---|---|---|---|---|---|
| 1 | 04/03/23 | 1700 | 1 | 4/3/23 | 1700 |
| 2 | 4/6/23 | 1300 | 2 | 4/7/23 | 930 |
| 3 | | | 3 | | |

**TAT Requested: Normal: X Rush: ____ Specify: _____**

Fax Results: [ ] Yes [X] No
Select Deliverable: [ X ] C of A [ X ] QC Summary [X] Level 5
*Additional Remarks:*
***For Lab Receiving Use Only:*** *Custody Seal Intact?* [ ] *Yes* [ ] *No* ***Cooler Temp:*** ____ °C
***Sample Collection Time Zone*** : [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

> ***For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)***

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a - **Y** - for yes the sample was field filtered or - **N** - for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A)** and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

**RCRA Metals**
**As** = Arsenic **Hg**= Mercury
**Ba** = Barium **Se**= Selenium
**Cd** = Cadmium **Ag**= Silver
**Cr** = Chromium **MR**= Misc. RCRA metals
**Pb** = Lead

**Characteristic Hazards**
**FL** = Flammable/Ignitable
**CO** = Corrosive
**RE** = Reactive

**TSCA Regulated**
**PCB** = Polychlorinated biphenyls

**Listed Waste**
**LW**= Listed Waste
*(F,K,P and U-listed wastes.)*
***Waste code(s):***

**Other**
**OT**= Other / Unknown
*(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)*
***Description:***
Sample analyzed via NAI, nothing detected. CP

***Please provide any additional details below regarding handling and/or disposal concerns.*** *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

Original

Page: 1 of 2
Project # 3252E1
GEL Quote #: GELP18-1125

COC Number [1]:
PO Number: 3252E1

# GEL Laboratories LLC

gel.com Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

## Chain of Custody and Analytical Request

617322

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

***GEL Work Order Number:*** ***GEL Project Manager: Zach Worsham***

Client Name: de maximis, inc. Phone # 978-875-0635
Project/Site Name: Nuclear Metals Fax #
Address: 200 Day Hill Road, Windsor CT
Collected By: Various Send Results To: tmajer@demaximis.com

**Sample Analysis Requested [5]** (Fill in the number of containers for each test)

| Sample ID<br>** For composites - indicate start and stop date/time* | *Date Collected (mm-dd-yy) | *Time Collected (Military) (hhmm) | QC Code [2] | Field Filtered [3] | Sample Matrix [4] | Should this sample be considered: Radioactive (If yes, please supply isotopic info.) | Should this sample be considered: (7) Known or possible Hazards | Total number of containers | NI Total Metals (6020A ICP-MS) | NI Dissolved Metals (6020A ICP-MS) | NI U-235/U238 Plus Total U Clac | SA Dissolved Inorganic Carbon | SA Dissolved Organic Carbon | <-- Preservative Type (6) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HA20-CMT-6(OW)-04042023 | 4/4/2023 | 11:30 | N | Y | GW | U238 | | 1 | | X | X | | | |
| HA20-CMT-6(OW)-04042023 | 4/4/2023 | 11:30 | N | N | GW | U238 | | 1 | X | | X | | | |
| MW-BS28-04042023 | 4/4/2023 | 12:30 | N | Y | GW | U238 | | 1 | | X | X | | | |
| MW-BS28-04042023 | 4/4/2023 | 12:30 | N | N | GW | U238 | | 1 | X | | X | | | |
| MW-SD34-04042023 | 4/4/2023 | 10:00 | N | Y | GW | U238 | | 1 | | X | | | | |
| MW-SD34-04042023 | 4/4/2023 | 10:00 | N | N | GW | U238 | | 1 | X | | | | | |
| MW-SD34-04042023 MS | 4/4/2023 | 10:00 | MS | Y | GW | U238 | | 1 | | X | | | | |
| MW-SD34-04042023 MS | 4/4/2023 | 10:00 | MS | N | GW | U238 | | 1 | X | | | | | |
| MW-SD34-04042023 MSD | 4/4/2023 | 10:00 | MSD | Y | GW | U238 | | 1 | | X | | | | |
| MW-SD34-04042023 MSD | 4/4/2023 | 10:00 | MSD | N | GW | U238 | | 1 | X | | | | | |
| HA20-CMT-3T(OW)-04042023 | 4/4/2023 | 15:00 | N | Y | GW | U238 | | 1 | | X | X | | | |
| HA20-CMT-3T(OW)-04042023 | 4/4/2023 | 15:00 | N | N | GW | U238 | | 1 | X | | X | | | |

**Comments**
Note: extra sample is required for sample specific QC

Total and Dissolved Metals ICP-MS List: Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, U-235, U-238, Total U Calculation, Vandium, Zinc,

### Chain of Custody Signatures

| Relinquished By (Signed) | Date | Time | Received by (signed) | Date | Time |
|---|---|---|---|---|---|
| 1 | 04/04/23 | 1715 | 1 | 4/4/23 | 1715 |
| 2 | 4/6/23 | 1300 | 2 | 4/2/23 | 930 |
| 3 | | | 3 | | |

**TAT Requested: Normal: X Rush: _____ Specify: _____**

Fax Results: [ ] Yes [X] No

Select Deliverable: [ X ] C of A [ X ] QC Summary [X] Level 5

*Additional Remarks:*

***For Lab Receiving Use Only:*** *Custody Seal Intact?* [ ] *Yes* [ ] *No* ***Cooler Temp:*** _____ °C

> ***For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)***

***Sample Collection Time Zone***: [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a **- Y -** for yes the sample was field filtered or **- N -** for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B**, **6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

**RCRA Metals**
**As** = Arsenic **Hg**= Mercury
**Ba** = Barium **Se**= Selenium
**Cd** = Cadmium **Ag**= Silver
**Cr** = Chromium **MR**= Misc. RCRA metals
**Pb** = Lead

**Characteristic Hazards**
**FL** = Flammable/Ignitable
**CO** = Corrosive
**RE** = Reactive

**TSCA Regulated**
**PCB** = Polychlorinated biphenyls

**Listed Waste**
**LW**= Listed Waste
*(F,K,P and U-listed wastes.)*
***Waste code(s):***

**Other**
**OT**= Other / Unknown
*(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)*
***Description:***
Samples analyzed via N.E., methods detected, DW

***Please provide any additional details below regarding handling and/or disposal concerns.*** *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

Original

Page: 2 of 2
Project # 3252E1
GEL Quote #: GELP18-1125

COC Number [1]:
PO Number: 3252E1

# GEL Laboratories LLC

gel.com | Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

## Chain of Custody and Analytical Request

617322

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

***GEL Work Order Number:*** ***GEL Project Manager: Zach Worsham***

Client Name: de maximis, inc. Phone # 978-875-0635

Project/Site Name: Nuclear Metals Fax #

Address: 200 Day Hill Road, Windsor CT

Collected By: Various Send Results To: tmajer@demaximis.com

**Sample Analysis Requested [5]** (Fill in the number of containers for each test)

| Sample ID<br>** For composites - indicate start and stop date/time* | *Date Collected (mm-dd-yy) | *Time Collected (Military) (hhmm) | QC Code [2] | Field Filtered [3] | Sample Matrix [4] | Should this sample be considered: Radioactive (If yes, please supply isotopic info.) | Should this sample be considered: (7) Known or possible Hazards | Total number of containers | NI Total Metals (6020A ICP-MS) | NI Dissolved Metals (6020A ICP-MS) | NI U-235/U238 Plus Total U Clac | SA Dissolved Inorganic Carbon | SA Dissolved Organic Carbon | <-- Preservative Type (6) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EQ-BLANK-04042023 | 4/4/2023 | 15:00 | EB | N | GW | U238 | | 1 | X | | X | | | |
| MW-B1D28-04042023 | 4/4/2023 | 1055 | N | N | GW | U238 | | 1 | X | | X | | | |
| MW-B1D28-04042023 | 4/4/2023 | 1655 | N | Y | GW | U238 | | 1 | | X | X | | | |
| | | | | | GW | U238 | | 1 | | | | | | |
| | | | | | GW | U238 | | 1 | | | | | | |
| | | | | | GW | U238 | | 1 | | | | | | |
| | | | | | GW | U238 | | 1 | | | | | | |
| | | | | | GW | U238 | | 1 | | | | | | |
| | | | | | GW | U238 | | 1 | | | | | | |
| | | | | | GW | U238 | | 1 | | | | | | |
| | | | | | GW | U238 | | 1 | | | | | | |
| | | | | | GW | U238 | | 1 | | | | | | |

**Comments**
Note: extra sample is required for sample specific QC

Total and Dissolved Metals ICP-MS List: Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, U-235, U-238, Total U Calculation, Vandium, Zinc,

### Chain of Custody Signatures

| Relinquished By (Signed) | Date | Time | Received by (signed) | Date | Time |
|---|---|---|---|---|---|
| 1 | 04/04/23 | 1715 | 1 | 4/4/23 | 1715 |
| 2 | 4/6/23 | 1300 | 2 | | |
| 3 | | | 3 | | |

**TAT Requested: Normal: X Rush: _____ Specify: _____**

Fax Results: [ ] Yes [X] No

Select Deliverable: [ X ] C of A [ X ] QC Summary [X] Level 5

*Additional Remarks:*

***For Lab Receiving Use Only:*** *Custody Seal Intact?* [ ] *Yes* [ ] *No* ***Cooler Temp:*** _____ °C

> ***For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)***

***Sample Collection Time Zone***: [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a **- Y -** for yes the sample was field filtered or **- N -** for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B**, **6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

**RCRA Metals**
**As** = Arsenic **Hg**= Mercury
**Ba** = Barium **Se**= Selenium
**Cd** = Cadmium **Ag**= Silver
**Cr** = Chromium **MR**= Misc. RCRA metals
**Pb** = Lead

**Characteristic Hazards**
**FL** = Flammable/Ignitable
**CO** = Corrosive
**RE** = Reactive

**TSCA Regulated**
**PCB** = Polychlorinated biphenyls

**Listed Waste**
**LW**= Listed Waste
*(F,K,P and U-listed wastes.)*
***Waste code(s):***

**Other**
**OT**= Other / Unknown
*(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)*
***Description:***
Samples analyzed via VOA's nothing detected.

***Please provide any additional details below regarding handling and/or disposal concerns.*** *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

!R!PSRC100;EXIT;!R!MTYP99;EXIT;!R!spsz6;stm0;exit;

GEL Laboratories LLC

# SAMPLE RECEIPT & REVIEW FORM

| | |
|---|---|
| **Client:** DMAX | **SDG/AR/COC/Work Order:** PWS #617335 ~~617335~~ 617322 |
| **Received By:** QG | **Date Received:** 4/7/23 |
| **Carrier and Tracking Number** | Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other<br>7717 7700 0263 5°c |

| **Suspected Hazard Information** | Yes | No | *If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation. |
|---|---|---|---|
| A)Shipped as a DOT Hazardous? | | ✓ | Hazard Class Shipped: UN#:<br>If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___ |
| B) Did the client designate the samples are to be received as radioactive? | ✓ | | COC notation or radioactive stickers on containers equal client designation. |
| C) Did the RSO classify the samples as radioactive? | ✓ | | Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 5 CPM / mR/Hr<br>**Classified as:** Rad 1 **Rad 2** **Rad 3** |
| D) Did the client designate samples are hazardous? | | ✓ | COC notation or hazard labels on containers equal client designation. |
| E) Did the RSO identify possible hazards? | | ✓ | If D or E is yes, select Hazards below.<br>PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other: |

| | **Sample Receipt Criteria** | Yes | NA | No | **Comments/Qualifiers (Required for Non-Conforming Items)** |
|---|---|---|---|---|---|
| 1 | Shipping containers received intact and sealed? | ✓ | | | Circle Applicable: Seals broken Damaged container Leaking container Other (describe) |
| 2 | Chain of custody documents included with shipment? | ✓ | | | Circle Applicable: Client contacted and provided COC COC created upon receipt |
| 3 | Samples requiring cold preservation within (0 ≤ 6 deg. C)?* | ✓ | | | Preservation Method: Wet Ice Ice Packs Dry ice None Other:<br>*all temperatures are recorded in Celsius **TEMP:**_____ |
| 4 | Daily check performed and passed on IR temperature gun? | ✓ | | | **Temperature Device Serial #:** IR3-23<br>Secondary Temperature Device Serial # (If Applicable): |
| 5 | Sample containers intact and sealed? | ✓ | | | Circle Applicable: Seals broken Damaged container Leaking container Other (describe) |
| 6 | Samples requiring chemical preservation at proper pH? | ✓ | | | Sample ID's and Containers Affected:<br>If Preservation added, Lot#: |
| 7 | Do any samples require Volatile Analysis? | | | ✓ | If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer)<br>Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No)<br>Are liquid VOA vials free of headspace? Yes___ No___ NA___<br>Sample ID's and containers affected: |
| 8 | Samples received within holding time? | ✓ | | | ID's and tests affected: |
| 9 | Sample ID's on COC match ID's on bottles? | ✓ | | | ID's and containers affected: |
| 10 | Date & time on COC match date & time on bottles? | ✓ | | | Circle Applicable: No dates on containers No times on containers COC missing info Other (describe) |
| 11 | Number of containers received match number indicated on COC? | ✓ | | ✓ | Circle Applicable: No container count on COC Other (describe) MK 4-10-23<br>~~only sent one container (MW-502-0405-2023)~~ |
| 12 | Are sample containers identifiable as GEL provided by use of GEL labels? | ✓ | | | |
| 13 | COC form is properly signed in relinquished/received sections? | ✓ | | | Circle Applicable: Not relinquished Other (describe) |

Comments (Use Continuation Form if needed):

7717 7699 9392 6°c
7717 7700 1154 6°c
7717 7700 0296 5°c

PM (or PMA) review: Initials MK Date 4-10-23 Page 1 of 1

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

# Sample Receipt Acknowledgement

| | |
|---|---|
| SDG/Report# | 617335 |
| Project ID | Nuclear Metals (NMI) Superfund Site RD/RA |
| PO Number | Laboratory Services Agreement |
| Project Manager | Zachary Worsham |
| Receive Date | 07-APR-23 09:30 |
| Prelim. Due | |
| Report Due | 05-MAY-2023 |
| EDD Required | Y |
| EDD Name | EQUIS_DMAX_DDMS_v3.01 |
| Chain of Custody | |
| Turn Days | 20(Working) |

| | |
|---|---|
| Client | de maximis, inc. |
| Report To | Mr. Todd Majer<br>de maximis, inc.<br>2229 Main Street<br>Concord, Massachusetts 01742 |
| Invoice To | Ms. Jessie McCusker<br>de maximis, inc.<br>2229 Main Street<br>Concord, Massachusetts 01742 |

| GEL ID | Sample ID | Matrix | Collection Date | Analysis Requested *(with due date, when applicable)* |
|---|---|---|---|---|
| 617335001 | MW-S02-04052023 | WG | 05-APR-23 09:35 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 617335002 | MW-S02-04052023 | WG | 05-APR-23 09:35 | SW846 3005A/6020B<br>SW846 9060A Dissolved Inorganic Carbon<br>SW846 9060A Dissolved Organic Carbon<br>U-235, U-238 with Total U Calculation |
| 617335003<br>Lab QC | BEW-3-04052023 | WG | 05-APR-23 09:55 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 617335004<br>Lab QC | BEW-3-04052023 | WG | 05-APR-23 09:55 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 617335005 | BEW-4-04052023 | WG | 05-APR-23 10:20 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 617335006 | BEW-4-04052023 | WG | 05-APR-23 10:20 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 617335007 | BEW-2-04052023 | WG | 05-APR-23 09:30 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 617335008 | BEW-2-04052023 | WG | 05-APR-23 09:30 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 617335009 | MW-BS02-04052023 | WG | 05-APR-23 11:20 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 617335010 | MW-BS02-04052023 | WG | 05-APR-23 11:20 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 617335011 | MW-BS52-04052023 | WG | 05-APR-23 09:53 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 617335012 | MW-BS52-04052023 | WG | 05-APR-23 09:53 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 617335013<br>Field QC | MW-BS52-04052023 DUP | WG | 05-APR-23 09:53 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 617335014<br>Field QC | MW-BS52-04052023 DUP | WG | 05-APR-23 09:53 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 617335015 | MW-S64-04052023 | WG | 05-APR-23 11:45 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |

GEL Laboratories LLC

# Sample Receipt Acknowledgement

| | | | |
|---|---|---|---|
| SDG/Report# | 617335 | Client | de maximis, inc. |
| Project ID | Nuclear Metals (NMI) Superfund Site RD/RA | | |

| GEL ID | Sample ID | Matrix | Collection Date | Analysis Requested *(with due date, when applicable)* |
|---|---|---|---|---|
| 617335016 | MW-S64-04052023 | WG | 05-APR-23 11:45 | SW846 3005A/6020B<br>SW846 9060A Dissolved Inorganic Carbon<br>SW846 9060A Dissolved Organic Carbon<br>U-235, U-238 with Total U Calculation |
| 617335017<br>Field QC | MW-S64-04052023 DUP | WG | 05-APR-23 11:45 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 617335018<br>Field QC | MW-S64-04052023 DUP | WG | 05-APR-23 11:45 | SW846 3005A/6020B<br>SW846 9060A Dissolved Inorganic Carbon<br>SW846 9060A Dissolved Organic Carbon<br>U-235, U-238 with Total U Calculation |
| 617335019 | HA20-CMT-3B(OW)-04052023 | WG | 05-APR-23 12:20 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 617335020 | HA20-CMT-3B(OW)-04052023 | WG | 05-APR-23 12:20 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 617335021 | MW-S16-04052023 | WG | 05-APR-23 13:50 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 617335022 | MW-S16-04052023 | WG | 05-APR-23 13:50 | SW846 3005A/6020B<br>SW846 9060A Dissolved Inorganic Carbon<br>SW846 9060A Dissolved Organic Carbon<br>U-235, U-238 with Total U Calculation |
| 617335023<br>Field QC | EQ-BLANK-04052023 | WG | 05-APR-23 15:15 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 617335024 | MW-BM03-04052023 | WG | 05-APR-23 15:40 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 617335025 | MW-BM03-04052023 | WG | 05-APR-23 15:40 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |

Original

Page: 1 of 2
Project # 3252E1
GEL Quote #: GELP18-1125
COC Number (1):
PO Number: 3252E1

GEL Laboratories LLC
gel.com | Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics
Chain of Custody and Analytical Request

L617335

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

**GEL Work Order Number:** **GEL Project Manager: Zach Worsham**

Client Name: de maximis, inc. Phone # 978-875-0635
Project/Site Name: Nuclear Metals Fax #
Address: 200 Day Hill Road, Windsor CT
Collected By: Various Send Results To: tmajer@demaximis.com

**Sample Analysis Requested (5)** (Fill in the number of containers for each test)

| Sample ID * For composites - indicate start and stop date/time | *Date Collected (mm-dd-yy) | *Time Collected (Military) (hhmm) | QC Code (2) | Field Filtered (3) | Sample Matrix (4) | Should this sample be considered: Radioactive (If yes, please supply isotopic info.) | Should this sample be considered: (7) Known or possible Hazards | Total number of containers | NI Total Metals (6020A ICP-MS) | NI Dissolved Metals (6020A ICP-MS) | NI U-235/U238 Plus Total U Clac | SA Dissolved Inorganic Carbon | SA Dissolved Organic Carbon | <-- Preservative Type (6) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-S02-04052023 | 4/5/2023 | 9:35 | N | N | GW | U238 | | 1 | X | | X | | | |
| MW-S02-04052023 | 4/5/2023 | 9:35 | N | Y | GW | U238 | | 3 | | X | X | X | X | |
| BEW-3-04052023 | 4/5/2023 | 9:55 | N | N | GW | U238 | | 1 | X | | X | | | |
| BEW-3-04052023 | 4/5/2023 | 9:55 | N | Y | GW | U238 | | 1 | | X | X | | | |
| BEW-3-04052023 MS | 4/5/2023 | 9:55 | MS | N | GW | U238 | | 1 | X | | X | | | |
| BEW-3-04052023 MS | 4/5/2023 | 9:55 | MS | Y | GW | U238 | | 1 | | X | X | | | |
| BEW-3-04052023 MSD | 4/5/2023 | 9:55 | MSD | N | GW | U238 | | 1 | X | | X | | | |
| BEW-3-04052023 MSD | 4/5/2023 | 9:55 | MSD | Y | GW | U238 | | 1 | | X | X | | | |
| BEW-4-04052023 | 4/5/2023 | 10:20 | N | N | GW | U238 | | 1 | X | | X | | | |
| BEW-4-04052023 | 4/5/2023 | 10:20 | N | Y | GW | U238 | | 1 | | X | X | | | |
| BEW-2-04052023 | 4/5/2023 | 9:30 | N | N | GW | U238 | | 1 | X | | X | | | |
| BEW-2-04052023 | 4/4/2023 | 9:30 | N | Y | GW | U238 | | 1 | | X | X | | | |

**Comments**
Note: extra sample is required for sample specific QC

Total and Dissolved Metals ICP-MS List: Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, U-235, U-238, Total U Calculation, Vandium, Zinc,

**Chain of Custody Signatures**

| Relinquished By (Signed) | Date | Time | Received by (signed) | Date | Time |
|---|---|---|---|---|---|
| 1 | 04/05/23 | 1630 | 1 CCalter | 4/5/23 | 16:30 |
| 2 Cory Carden | 4.5.23 | 1300 | 2 | 4/7/23 | 730 |
| 3 | | | 3 | | |

**TAT Requested:** **Normal: X** **Rush: ____** **Specify: ____**

Fax Results: [ ] Yes [X] No
Select Deliverable: [ X ] C of A [ X ] QC Summary [X] Level 5
*Additional Remarks:*
***For Lab Receiving Use Only:*** *Custody Seal Intact?* [ ] *Yes* [ ] *No* ***Cooler Temp:*** ____ °C

> ***For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)***

***Sample Collection Time Zone*** : [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a - **Y** - for yes the sample was field filtered or - **N** - for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B**, **6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

**RCRA Metals**
**As** = Arsenic **Hg**= Mercury
**Ba** = Barium **Se**= Selenium
**Cd** = Cadmium **Ag**= Silver
**Cr** = Chromium **MR**= Misc. RCRA metals
**Pb** = Lead

**Characteristic Hazards**
**FL** = Flammable/Ignitable
**CO** = Corrosive
**RE** = Reactive

**TSCA Regulated**
**PCB** = Polychlorinated biphenyls

**Listed Waste**
**LW**= Listed Waste
*(F,K,P and U-listed wastes.)*
***Waste code(s):***

**Other**
**OT**= Other / Unknown
*(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)*
***Description:*** Samples analyzed via NaI, no hits detected - CV

***Please provide any additional details below regarding handling and/or disposal concerns.*** *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

Original

Page: 2 of 3
Project # 3252E1
GEL Quote #: GELP18-1125
COC Number [1]:
PO Number: 3252E1

GEL Laboratories LLC
gel.com | Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics
**Chain of Custody and Analytical Request**

U17335

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

***GEL Work Order Number:*** ***GEL Project Manager: Zach Worsham***

Client Name: de maximis, inc. Phone # 978-875-0635
Project/Site Name: Nuclear Metals Fax #
Address: 200 Day Hill Road, Windsor CT
Collected By: Various Send Results To: tmajer@demaximis.com

**Sample Analysis Requested [5]** (Fill in the number of containers for each test)

| Sample ID<br>** For composites - indicate start and stop date/time* | *Date Collected (mm-dd-yy) | *Time Collected (Military) (hhmm) | QC Code [2] | Field Filtered [3] | Sample Matrix [4] | Should this sample be considered: Radioactive (If yes, please supply isotopic info.) | Should this sample be considered: (7) Known or possible Hazards | Total number of containers | NI Total Metals (6020A ICP-MS) | NI Dissolved Metals (6020A ICP-MS) | NI U-235/U238 Plus Total U Clac | SA Dissolved Inorganic Carbon | SA Dissolved Organic Carbon | <-- Preservative Type (6) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-BS02-04052023 | 4/5/2023 | 11:20 | N | N | GW | U238 | | 1 | X | | X | | | |
| MW-BS02-04052023 | 4/5/2023 | 11:20 | N | Y | GW | U238 | | 3 | | X | X | | | |
| MW-BS52-04052023 | 4/5/2023 | 9:53 | N | N | GW | U238 | | 1 | X | | X | | | |
| MW-BS52-04052023 | 4/5/2023 | 9:53 | N | Y | GW | U238 | | 1 | | X | X | | | |
| MW-BS52-04052023 DUP | 4/5/2023 | 9:53 | FD | N | GW | U238 | | 1 | X | | X | | | |
| MW-BS52-04052023 DUP | 4/5/2023 | 9:53 | FD | Y | GW | U238 | | 1 | | X | X | | | |
| MW-S64-04052023 | 4/5/2023 | 11:45 | N | N | GW | U238 | | 1 | X | | X | | | |
| MW-S64-04052023 | 4/5/2023 | 11:45 | N | Y | GW | U238 | | 3 | | X | X | X | X | |
| MW-S64-04052023 DUP | 4/5/2023 | 11:45 | FD | N | GW | U238 | | 1 | X | | X | | | |
| MW-S64-04052023 DUP | 4/5/2023 | 11:45 | FD | Y | GW | U238 | | 3 | | X | X | X | X | |
| HA20-CMT-3B(OW)-04052023 | 4/5/2023 | 12:20 | N | N | GW | U238 | | 1 | X | | X | | | |
| HA20-CMT-3B(OW)-04052023 | 4/5/2023 | 12:20 | N | Y | GW | U238 | | 1 | | X | X | | | |

**Comments**
Note: extra sample is required for sample specific QC

Total and Dissolved Metals ICP-MS List: Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, U-235, U-238, Total U Calculation, Vandium, Zinc,

**Chain of Custody Signatures**

| Relinquished By (Signed) | Date | Time | Received by (signed) | Date | Time |
|---|---|---|---|---|---|
| 1 | 04/05/23 | 1630 | 1 | 4/5/23 | 16:30 |
| 2 | 4.6.23 | 1300 | 2 | 4/7/23 | 930 |
| 3 | | | 3 | | |

**TAT Requested: Normal: X Rush: ____ Specify: _____**

Fax Results: [ ] Yes [X] No
Select Deliverable: [ X ] C of A [ X ] QC Summary [X] Level 5
*Additional Remarks:*
***For Lab Receiving Use Only:*** *Custody Seal Intact?* [ ] *Yes* [ ] *No* ***Cooler Temp:*** ____ °C
***Sample Collection Time Zone***: [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

***> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)***

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a **- Y -** for yes the sample was field filtered or **- N -** for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* **- 3**, *6010B/7470A* **- 1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

**RCRA Metals**
**As** = Arsenic **Hg**= Mercury
**Ba** = Barium **Se**= Selenium
**Cd** = Cadmium **Ag**= Silver
**Cr** = Chromium **MR**= Misc. RCRA metals
**Pb** = Lead

**Characteristic Hazards**
**FL** = Flammable/Ignitable
**CO** = Corrosive
**RE** = Reactive

**TSCA Regulated**
**PCB** = Polychlorinated biphenyls

**Listed Waste**
**LW**= Listed Waste
*(F,K,P and U-listed wastes.)*
***Waste code(s):***

**Other**
**OT**= Other / Unknown
*(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)*
***Description:*** Sample analyzed via NaI, methyl Iodide CV

***Please provide any additional details below regarding handling and/or disposal concerns.*** *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

Original

Page: 3 of 3
Project # 3252E1
GEL Quote #: GELP18-1125

COC Number [1]:
PO Number: 3252E1

# GEL Laboratories LLC

gel.com | Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

## Chain of Custody and Analytical Request

MK 4.6.23 6073 617335

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

**GEL Work Order Number:** **GEL Project Manager: Zach Worsham**

Client Name: de maximis, inc. Phone # 978-875-0635
Project/Site Name: Nuclear Metals Fax #
Address: 200 Day Hill Road, Windsor CT
Collected By: Various Send Results To: tmajer@demaximis.com

**Sample Analysis Requested [5]** (Fill in the number of containers for each test)

| Sample ID (* For composites - indicate start and stop date/time) | *Date Collected (mm-dd-yy) | *Time Collected (Military) (hhmm) | QC Code [2] | Field Filtered [3] | Sample Matrix [4] | Should this sample be considered: Radioactive (If yes, please supply isotopic info.) | Should this sample be considered: (7) Known or possible Hazards | Total number of containers | NI Total Metals (6020A ICP-MS) | NI Dissolved Metals (6020A ICP-MS) | NI U-235/U238 Plus Total U Clac | SA Dissolved Inorganic Carbon | SA Dissolved Organic Carbon | <-- Preservative Type (6) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-S16-04052023 | 4/5/2023 | 13:50 | N | N | GW | U238 | | 1 | X | | X | | | |
| MW-S16-04052023 | 4/5/2023 | 13:50 | N | Y | GW | U238 | | 3 | | X | X | X | X | |
| EQ-BLANK-04052023 | 4/5/2023 | 15:15 | EB | N | GW | U238 | | 1 | X | | X | | | |
| MW-BM03-04052023 | 4/5/2023 | 15:40 | N | Y | GW | U238 | | 1 | | X | X | | | |
| MW-BM03-04052023 | 4/5/2023 | 15:40 | N | N | GW | U238 | | 1 | X | | X | | | |
| | | | | | GW | U238 | | 1 | | | | | | |
| | | | | | GW | U238 | | 1 | | | | | | |
| | | | | | GW | U238 | | 1 | | | | | | |
| | | | | | GW | U238 | | 1 | | | | | | |
| | | | | | GW | U238 | | 1 | | | | | | |
| | | | | | GW | U238 | | 1 | | | | | | |
| | | | | | GW | U238 | | 1 | | | | | | |

**Comments**
Note: extra sample is required for sample specific QC

Total and Dissolved Metals ICP-MS List: Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, U-235, U-238, Total U Calculation, Vandium, Zinc,

### Chain of Custody Signatures

| | Relinquished By (Signed) | Date | Time | Received by (signed) | Date | Time |
|---|---|---|---|---|---|---|
| 1 | Malcolm Pirnie | 04/05/23 | 1630 | CEL | 4/5/23 | 1630 |
| 2 | Colette | 4.6.23 | 1300 | | | |
| 3 | | | | | | |

**TAT Requested:** **Normal: X** **Rush: ____** **Specify: _____**

Fax Results: [ ] Yes [X] No

Select Deliverable: [ X ] C of A [ X ] QC Summary [X] Level 5

*Additional Remarks:*

***For Lab Receiving Use Only:*** *Custody Seal Intact?* [ ] *Yes* [ ] *No* ***Cooler Temp:*** ____ °C

> ***For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)***

***Sample Collection Time Zone*** : [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a **- Y -** for yes the sample was field filtered or **- N -** for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B**, **6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

**RCRA Metals**
**As** = Arsenic **Hg**= Mercury
**Ba** = Barium **Se**= Selenium
**Cd** = Cadmium **Ag**= Silver
**Cr** = Chromium **MR**= Misc. RCRA metals
**Pb** = Lead

**Characteristic Hazards**
**FL** = Flammable/Ignitable
**CO** = Corrosive
**RE** = Reactive

**TSCA Regulated**
**PCB** = Polychlorinated biphenyls

**Listed Waste**
**LW**= Listed Waste
*(F,K,P and U-listed wastes.)*
***Waste code(s):***

**Other**
**OT**= Other / Unknown
*(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)*
***Description:***
Samples analyzed via ICP, nothing detected

***Please provide any additional details below regarding handling and/or disposal concerns.*** *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

!R!PSRC100;EXIT;!R!MTYP99;EXIT;!R!spsz6;stm0;exit;

GEL Laboratories LLC

# SAMPLE RECEIPT & REVIEW FORM

| | |
|---|---|
| **Client:** DMAX | **SDG/AR/COC/Work Order:** mk 4-10-23 617322 617335 |
| **Received By:** QG | **Date Received:** 4/7/23 |
| **Carrier and Tracking Number** | Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other<br>7717 7700 0263 5°c |

| Suspected Hazard Information | Yes | No | |
|---|---|---|---|
| | | | *If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation. |
| A)Shipped as a DOT Hazardous? | | ✓ | Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___ |
| B) Did the client designate the samples are to be received as radioactive? | ✓ | | COC notation or radioactive stickers on containers equal client designation. |
| C) Did the RSO classify the samples as radioactive? | ✓ | | Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 5 (CPM) / mR/Hr<br>Classified as: Rad 1 Rad 2 Rad 3 |
| D) Did the client designate samples are hazardous? | | ✓ | COC notation or hazard labels on containers equal client designation. |
| E) Did the RSO identify possible hazards? | | ✓ | If D or E is yes, select Hazards below.<br>PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other: |

| | Sample Receipt Criteria | Yes | NA | No | Comments/Qualifiers (Required for Non-Conforming Items) |
|---|---|---|---|---|---|
| 1 | Shipping containers received intact and sealed? | ✓ | | | Circle Applicable: Seals broken Damaged container Leaking container Other (describe) |
| 2 | Chain of custody documents included with shipment? | ✓ | | | Circle Applicable: Client contacted and provided COC COC created upon receipt |
| 3 | Samples requiring cold preservation within (0 ≤ 6 deg. C)?* | ✓ | | | Preservation Method: (Wet Ice) Ice Packs Dry ice None Other:<br>*all temperatures are recorded in Celsius TEMP:___ |
| 4 | Daily check performed and passed on IR temperature gun? | ✓ | | | Temperature Device Serial #: IR3-23<br>Secondary Temperature Device Serial # (If Applicable): |
| 5 | Sample containers intact and sealed? | ✓ | | | Circle Applicable: Seals broken Damaged container Leaking container Other (describe) |
| 6 | Samples requiring chemical preservation at proper pH? | ✓ | | | Sample ID's and Containers Affected:<br>If Preservation added, Lot#: |
| 7 | Do any samples require Volatile Analysis? | | | ✓ | If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer)<br>Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No)<br>Are liquid VOA vials free of headspace? Yes___ No___ NA___<br>Sample ID's and containers affected: |
| 8 | Samples received within holding time? | ✓ | | | ID's and tests affected: |
| 9 | Sample ID's on COC match ID's on bottles? | ✓ | | | ID's and containers affected: |
| 10 | Date & time on COC match date & time on bottles? | ✓ | | | Circle Applicable: No dates on containers No times on containers COC missing info Other (describe) |
| 11 | Number of containers received match number indicated on COC? | | | ✓ | Circle Applicable: No container count on COC Other (describe)<br>only sent one container (MW-B502-04052023) |
| 12 | Are sample containers identifiable as GEL provided by use of GEL labels? | ✓ | | | |
| 13 | COC form is properly signed in relinquished/received sections? | ✓ | | | Circle Applicable: Not relinquished Other (describe) |

Comments (Use Continuation Form if needed):

7717 7699 9392 6°c
7717 7700 1154 6°c
7717 7700 0296 5°c

PM (or PMA) review: Initials MK Date 4-10-23 Page 1 of 1

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

# Sample Receipt Acknowledgement

| | |
|---|---|
| SDG/Report# | 618389 |
| Project ID | Nuclear Metals (NMI) Superfund Site RD/RA |

| | |
|---|---|
| Client | de maximis, inc. |

| | |
|---|---|
| PO Number | Laboratory Services Agreement |
| Project Manager | Zachary Worsham |
| Receive Date | 14-APR-23 09:15 |
| Prelim. Due | |
| Report Due | 12-MAY-2023 |
| EDD Required | Y |
| EDD Name | EQUIS_DMAX_DDMS_v3.01 |
| Chain of Custody | |
| Turn Days | 20(Working) |

| | |
|---|---|
| Report To | Mr. Todd Majer<br>de maximis, inc.<br>2229 Main Street<br>Concord, Massachusetts 01742 |
| Invoice To | Ms. Jessie McCusker<br>de maximis, inc.<br>2229 Main Street<br>Concord, Massachusetts 01742 |

| GEL ID | Sample ID | Matrix | Collection Date | Analysis Requested *(with due date, when applicable)* |
|---|---|---|---|---|
| 618389001 | MW-B3D13-04062023 | WG | 06-APR-23 10:23 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618389002 | MW-B3D13-04062023 | WG | 06-APR-23 10:23 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618389003 | MW-BS10-04062023 | WG | 06-APR-23 10:45 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618389004 | MW-BS10-04062023 | WG | 06-APR-23 10:45 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618389005 | MW-BS03-04062023 | WG | 06-APR-23 14:25 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618389006 | MW-BS03-04062023 | WG | 06-APR-23 14:25 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618389007<br>Field QC | MW-BS03-04062023 DUP | WG | 06-APR-23 14:25 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618389008<br>Field QC | MW-BS03-04062023 DUP | WG | 06-APR-23 14:25 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618389009 | MW-B2D13-04062023 | WG | 06-APR-23 13:55 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618389010 | MW-B2D13-04062023 | WG | 06-APR-23 13:55 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618389011<br>Field QC | EQ-BLANK-04062023 | WG | 06-APR-23 16:00 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618389012 | MW-BS54-04072023 | WG | 07-APR-23 09:30 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618389013 | MW-BS54-04072023 | WG | 07-APR-23 09:30 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618389014 | MW-BS13-04072023 | WG | 07-APR-23 11:21 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618389015 | MW-BS13-04072023 | WG | 07-APR-23 11:21 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618389016 | MW-S60-04072023 | WG | 07-APR-23 11:35 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |

GEL Laboratories LLC

# Sample Receipt Acknowledgement

| | | | |
|---|---|---|---|
| SDG/Report# | 618389 | Client | de maximis, inc. |
| Project ID | Nuclear Metals (NMI) Superfund Site RD/RA | | |

| GEL ID | Sample ID | Matrix | Collection Date | Analysis Requested *(with due date, when applicable)* |
|---|---|---|---|---|
| 618389017 | MW-S60-04072023 | WG | 07-APR-23 11:35 | SW846 3005A/6020B<br>SW846 9060A Dissolved Inorganic Carbon<br>SW846 9060A Dissolved Organic Carbon<br>U-235, U-238 with Total U Calculation |
| 618389018 | MW-8A-04072023 | WG | 07-APR-23 13:20 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618389019 | MW-8A-04072023 | WG | 07-APR-23 13:20 | SW846 3005A/6020B<br>SW846 9060A Dissolved Inorganic Carbon<br>SW846 9060A Dissolved Organic Carbon<br>U-235, U-238 with Total U Calculation |
| 618389020<br>Field QC | EQ-BLANK-04072023 | WG | 07-APR-23 14:40 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618389021 | MW-SD60-04072023 | WG | 07-APR-23 14:00 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618389022 | MW-SD60-04072023 | WG | 07-APR-23 14:00 | SW846 3005A/6020B<br>SW846 9060A Dissolved Inorganic Carbon<br>SW846 9060A Dissolved Organic Carbon<br>U-235, U-238 with Total U Calculation |
| 618389023 | MW-B1D13-04072023 | WG | 07-APR-23 14:11 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618389024 | MW-B1D13-04072023 | WG | 07-APR-23 14:11 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618389025<br>Field QC | MW-B1D13-04072023 DUP | WG | 07-APR-23 14:11 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618389026<br>Field QC | MW-B1D13-04072023 DUP | WG | 07-APR-23 14:11 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |

Original

618389

Page: 1 of 1
Project # 3252E1
GEL Quote #: GELP18-1125

COC Number [1]:
PO Number: 3252E1

# GEL Laboratories LLC

gel.com | Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

## Chain of Custody and Analytical Request

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

**GEL Work Order Number:**

**GEL Project Manager: Zach Worsham**

Client Name: de maximis, inc. | Phone # 978-875-0635
Project/Site Name: Nuclear Metals | Fax #
Address: 200 Day Hill Road, Windsor CT
Collected By: Various | Send Results To: tmajer@demaximis.com

**Sample Analysis Requested [5]** (Fill in the number of containers for each test)

| Sample ID (* For composites - indicate start and stop date/time) | *Date Collected (mm-dd-yy) | *Time Collected (Military) (hhmm) | QC Code [2] | Field Filtered [3] | Sample Matrix [4] | Should this sample be considered: Radioactive (If yes, please supply isotopic info.) | Should this sample be considered: (7) Known or possible Hazards | Total number of containers | NI Total Metals (6020A ICP-MS) | NI Dissolved Metals (6020A ICP-MS) | NI U-235/U238 Plus Total U Clac | SA Dissolved Inorganic Carbon | SA Dissolved Organic Carbon | <-- Preservative Type (6) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ~~MW-B1D13-04062023~~ MW-B3D13-04062023 | 4/6/2023 | 10:23 | N | N | GW | U238 | | 1 | X | | X | | | |
| ~~MW-B1D13-04062023~~ MW-B3D13-04062023 | 4/6/2023 | 10:23 | N | Y | GW | U238 | | 1 | | X | X | | | |
| MW-BS10-04062023 | 4/6/2023 | 10:45 | N | N | GW | U238 | | 1 | X | | X | | | |
| MW-BS10-04062023 | 4/6/2023 | 10:45 | N | Y | GW | U238 | | 1 | | X | X | | | |
| MW-BS03-04062023 | 4/6/2023 | 14:25 | N | N | GW | U238 | | 1 | X | | X | | | |
| MW-BS03-04062023 | 4/6/2023 | 14:25 | N | Y | GW | U238 | | 1 | | X | X | | | |
| MW-BS03-04062023 DUP | 4/6/2023 | 14:25 | FD | N | GW | U238 | | 1 | X | | X | | | |
| MW-BS03-04062023 DUP | 4/6/2023 | 14:25 | FD | Y | GW | U238 | | 1 | | X | X | | | |
| MW-B2D13-04062023 | 4/6/2023 | 13:55 | N | N | GW | U238 | | 1 | X | | X | | | |
| MW-B2D13-04062023 | 4/6/2023 | 13:55 | N | Y | GW | U238 | | 1 | | X | X | | | |
| EQ-BLANK-04062023 | 4/6/2023 | 16:00 | N | N | GW | U238 | | 1 | X | | X | | | |

**Comments**
Note: extra sample is required for sample specific QC

Total and Dissolved Metals ICP-MS List: Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, U-235, U-238, Total U Calculation, Vandium, Zinc,

### Chain of Custody Signatures

| | Relinquished By (Signed) | Date | Time | | Received by (signed) | Date | Time |
|---|---|---|---|---|---|---|---|
| 1 | Natalie D | 04/06/23 | 1600 | 1 | C Coyle | 4.6.23 | 1600 |
| 2 | C Hamm | 4/13/23 | 14:00 | 2 | | 4/14/23 | 915 |
| 3 | | | | 3 | | | |

**TAT Requested: Normal: X Rush: ____ Specify: _____**

Fax Results: [ ] Yes [X] No

Select Deliverable: [ X ] C of A [ X ] QC Summary [X] Level 5

*Additional Remarks:*

***For Lab Receiving Use Only:*** *Custody Seal Intact?* [ ] Yes [ ] No ***Cooler Temp:*** ____ °C

***> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)***

***Sample Collection Time Zone*** : [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a - **Y** - for yes the sample was field filtered or - **N** - for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B**, **6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

**RCRA Metals**
**As** = Arsenic **Hg**= Mercury
**Ba** = Barium **Se**= Selenium
**Cd** = Cadmium **Ag**= Silver
**Cr** = Chromium **MR**= Misc. RCRA metals
**Pb** = Lead

**Characteristic Hazards**
**FL** = Flammable/Ignitable
**CO** = Corrosive
**RE** = Reactive

**TSCA Regulated**
**PCB** = Polychlorinated biphenyls

**Listed Waste**
**LW**= Listed Waste
*(F,K,P and U-listed wastes.)*
***Waste code(s):***

**Other**
**OT**= Other / Unknown
*(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)*
***Description:***
Samples analyzed via NaI, nothing detected
CH

***Please provide any additional details below regarding handling and/or disposal concerns.*** *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

Original

U18389

Page: 1 of 2
Project # 3252E1
GEL Quote #: GELP18-1125

COC Number (1):
PO Number: 3252E1

GEL Laboratories LLC
gel.com
Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics
Chain of Custody and Analytical Request

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

**GEL Work Order Number:** **GEL Project Manager: Zach Worsham**

Client Name: de maximis, inc. Phone # 978-875-0635
Project/Site Name: Nuclear Metals Fax #
Address: 200 Day Hill Road, Windsor CT
Collected By: Various Send Results To: tmajer@demaximis.com

**Sample Analysis Requested (5)** (Fill in the number of containers for each test)

| Sample ID<br>* For composites - indicate start and stop date/time | *Date Collected (mm-dd-yy) | *Time Collected (Military) (hhmm) | QC Code (2) | Field Filtered (3) | Sample Matrix (4) | Should this sample be considered: Radioactive (If yes, please supply isotopic info.) | Should this sample be considered: (7) Known or possible Hazards | Total number of containers | NI Total Metals (6020A ICP-MS) | NI Dissolved Metals (6020A ICP-MS) | NI U-235/U238 Plus Total U Clac | SA Dissolved Inorganic Carbon | SA Dissolved Organic Carbon | | | | | | | <-- Preservative Type (6) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-BS54-04072023 | 4/7/2023 | 9:30 | N | N | GW | U238 | | 1 | X | | X | | | | | | | | | |
| MW-BS54-04072023 | 4/7/2023 | 9:30 | N | Y | GW | U238 | | 1 | | X | X | | | | | | | | | |
| MW-BS13-04072023 | 4/7/2023 | 11:21 | N | N | GW | U238 | | 1 | X | | X | | | | | | | | | |
| MW-BS13-04072023 | 4/7/2023 | 11:21 | N | Y | GW | U238 | | 1 | | X | X | | | | | | | | | |
| MW-S60-04072023 | 4/7/2023 | 11:35 | N | N | GW | U238 | | 1 | X | | X | | | | | | | | | |
| MW-S60-04072023 | 4/7/2023 | 11:35 | N | Y | GW | U238 | | 3 | | X | X | X | X | | | | | | | |
| MW-8A-04072023 | 4/7/2023 | 13:20 | N | N | GW | U238 | | 1 | X | | X | | | | | | | | | |
| MW-8A-04072023 | 4/7/2023 | 13:20 | N | Y | GW | U238 | | 3 | | X | X | X | X | | | | | | | |
| EQ-BLANK-04072023 | 4/7/2023 | 14:40 | EB | N | GW | U238 | | 1 | X | | X | | | | | | | | | |
| MW-SD60-04072023 | 4/7/2023 | 14:00 | N | N | GW | U238 | | 1 | X | | X | | | | | | | | | |
| MW-SD60-04072023 | 4/7/2023 | 14:00 | N | Y | GW | U238 | | 3 | | X | X | X | X | | | | | | | |
| MW-B1D13-04072023 | 4/7/2023 | 14:11 | N | N | GW | U238 | | 1 | X | | X | | | | | | | | | |

**Comments**
Note: extra sample is required for sample specific QC

Total and Dissolved Metals ICP-MS List: Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, U-235, U-238, Total U Calculation, Vandium, Zinc,

**Chain of Custody Signatures**

| Relinquished By (Signed) | Date | Time | Received by (signed) | Date | Time |
|---|---|---|---|---|---|
| 1 | 04/07/23 | 1530 | 1 | 4.7.23 | 1530 |
| 2 | 4/13/23 | 1400 | 2 | 4/14/23 | 915 |
| 3 | | | 3 | | |

**TAT Requested: Normal: X Rush: ____ Specify: ____**

Fax Results: [ ] Yes [X] No
Select Deliverable: [ X ] C of A [ X ] QC Summary [X] Level 5
*Additional Remarks:*
***For Lab Receiving Use Only:*** *Custody Seal Intact?* [ ] *Yes* [ ] *No* ***Cooler Temp:*** ____ °C

> ***For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)***

***Sample Collection Time Zone*** : [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a - **Y** - for yes the sample was field filtered or - **N** - for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A)** and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

**RCRA Metals**
**As** = Arsenic **Hg**= Mercury
**Ba** = Barium **Se**= Selenium
**Cd** = Cadmium **Ag**= Silver
**Cr** = Chromium **MR**= Misc. RCRA metals
**Pb** = Lead

**Characteristic Hazards**
**FL** = Flammable/Ignitable
**CO** = Corrosive
**RE** = Reactive

**TSCA Regulated**
**PCB** = Polychlorinated biphenyls

**Listed Waste**
**LW**= Listed Waste
*(F,K,P and U-listed wastes.)*
***Waste code(s):***

**Other**
**OT**= Other / Unknown
*(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)*
***Description:***
Samples analyzed via NAT, notify Jeff w/ OT

***Please provide any additional details below regarding handling and/or disposal concerns.*** *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

Original

618389

Page: 2 of 2
Project # 3252E1
GEL Quote #: GELP18-1125

COC Number [1]:
PO Number: 3252E1

**GEL Laboratories LLC**
gel.com | Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

## Chain of Custody and Analytical Request

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

***GEL Work Order Number:*** ***GEL Project Manager: Zach Worsham***

Client Name: de maximis, inc. Phone # 978-875-0635
Project/Site Name: Nuclear Metals Fax #
Address: 200 Day Hill Road, Windsor CT
Collected By: Various Send Results To: tmajer@demaximis.com

**Sample Analysis Requested [5]** (Fill in the number of containers for each test)

| Sample ID (* For composites - indicate start and stop date/time) | *Date Collected (mm-dd-yy) | *Time Collected (Military) (hhmm) | QC Code [2] | Field Filtered [3] | Sample Matrix [4] | Should this sample be considered: Radioactive (If yes, please supply isotopic info.) | Should this sample be considered: (7) Known or possible Hazards | Total number of containers | NI Total Metals (6020A ICP-MS) | NI Dissolved Metals (6020A ICP-MS) | NI U-235/U238 Plus Total U Clac | SA Dissolved Inorganic Carbon | SA Dissolved Organic Carbon | <-- Preservative Type (6) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-B1D13-04072023 | 4/7/2023 | 14:11 | N | Y | GW | U238 | | 1 | | X | X | | | |
| MW-B1D13-04072023-DUP | 4/7/2023 | 14:11 | FD | N | GW | U238 | | 1 | X | | X | | | |
| MW-B1D13-04072023-DUP | 4/7/2023 | 14:11 | FD | Y | GW | U238 | | 1 | | X | X | | | |
| | | | | | GW | U238 | | | | | | | | |
| | | | | | GW | U238 | | | | | | | | |
| | | | | | GW | U238 | | | | | | | | |
| | | | | | GW | U238 | | | | | | | | |
| | | | | | GW | U238 | | | | | | | | |
| | | | | | GW | U238 | | | | | | | | |
| | | | | | GW | U238 | | | | | | | | |
| | | | | | GW | U238 | | | | | | | | |
| | | | | | GW | U238 | | | | | | | | |

**Comments**
Note: extra sample is required for sample specific QC

Total and Dissolved Metals ICP-MS List: Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, U-235, U-238, Total U Calculation, Vandium, Zinc,

### Chain of Custody Signatures

| | Relinquished By (Signed) | Date | Time | | Received by (signed) | Date | Time |
|---|---|---|---|---|---|---|---|
| 1 | [signature] | 04/07/23 | 1530 | 1 | [signature] | 4.7.23 | 1530 |
| 2 | [signature] | 4/13/23 | 1400 | 2 | [signature] | 4/14/23 | 905 |
| 3 | | | | 3 | | | |

**TAT Requested: Normal: X Rush: ____ Specify: _____**

Fax Results: [ ] Yes [X] No
Select Deliverable: [ X ] C of A [ X ] QC Summary [X] Level 5
*Additional Remarks:*
***For Lab Receiving Use Only:*** *Custody Seal Intact?* [ ] *Yes* [ ] *No* ***Cooler Temp:*** ____ °C

> ***For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)***

***Sample Collection Time Zone*** : [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a - **Y** - for yes the sample was field filtered or - **N** - for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

**RCRA Metals**
**As** = Arsenic **Hg**= Mercury
**Ba** = Barium **Se**= Selenium
**Cd** = Cadmium **Ag**= Silver
**Cr** = Chromium **MR**= Misc. RCRA metals
**Pb** = Lead

**Characteristic Hazards**
**FL** = Flammable/Ignitable
**CO** = Corrosive
**RE** = Reactive

**TSCA Regulated**
**PCB** = Polychlorinated biphenyls

**Listed Waste**
**LW**= Listed Waste
*(F,K,P and U-listed wastes.)*
***Waste code(s):***

**Other**
**OT**= Other / Unknown
*(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)*
***Description:*** Samples analyzed via NAT, nothing detected. CF

***Please provide any additional details below regarding handling and/or disposal concerns.*** *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

GEL Laboratories LLC

# SAMPLE RECEIPT & REVIEW FORM

| | |
|---|---|
| Client: DMAX | SDG/AR/COC/Work Order: 618389 |
| Received By: Stacy Boone | Date Received: 4-15-23 |
| Carrier and Tracking Number | Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other<br>7718 4066 9761 4c 7718 4066 9783 3c |

| Suspected Hazard Information | Yes | No | *If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation. |
|---|---|---|---|
| A)Shipped as a DOT Hazardous? | | ✓ | Hazard Class Shipped: UN#:<br>If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___ |
| B) Did the client designate the samples are to be received as radioactive? | ✓ | | COC notation or radioactive stickers on containers equal client designation. |
| C) Did the RSO classify the samples as radioactive? | ✓ | | Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 CPM / mR/Hr<br>Classified as: Rad 1 Rad 2 Rad 3 |
| D) Did the client designate samples are hazardous? | | ✓ | COC notation or hazard labels on containers equal client designation. |
| E) Did the RSO identify possible hazards? | | ✓ | If D or E is yes, select Hazards below.<br>PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other: |

| | Sample Receipt Criteria | Yes | NA | No | Comments/Qualifiers (Required for Non-Conforming Items) |
|---|---|---|---|---|---|
| 1 | Shipping containers received intact and sealed? | ✓ | | | Circle Applicable: Seals broken Damaged container Leaking container Other (describe) |
| 2 | Chain of custody documents included with shipment? | ✓ | | | Circle Applicable: Client contacted and provided COC COC created upon receipt |
| 3 | Samples requiring cold preservation within (0 ≤ 6 deg. C)?* | | | | Preservation Method: Wet Ice Ice Packs Dry ice None Other:<br>*all temperatures are recorded in Celsius TEMP:_____ |
| 4 | Daily check performed and passed on IR temperature gun? | ✓ | | | Temperature Device Serial #: IR3-22<br>Secondary Temperature Device Serial # (If Applicable): |
| 5 | Sample containers intact and sealed? | ✓ | | | Circle Applicable: Seals broken Damaged container Leaking container Other (describe) |
| 6 | Samples requiring chemical preservation at proper pH? | ✓ | | | Sample ID's and Containers Affected:<br>If Preservation added, Lot#: |
| 7 | Do any samples require Volatile Analysis? | | | ✓ | If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer)<br>Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No)<br>Are liquid VOA vials free of headspace? Yes___ No___ NA___<br>Sample ID's and containers affected: |
| 8 | Samples received within holding time? | ✓ | | | ID's and tests affected: |
| 9 | Sample ID's on COC match ID's on bottles? | ✓ | | | ID's and containers affected: |
| 10 | Date & time on COC match date & time on bottles? | ✓ | | | Circle Applicable: No dates on containers No times on containers COC missing info Other (describe) |
| 11 | Number of containers received match number indicated on COC? | ✓ | | | Circle Applicable: No container count on COC Other (describe) |
| 12 | Are sample containers identifiable as GEL provided by use of GEL labels? | ✓ | | | |
| 13 | COC form is properly signed in relinquished/received sections? | ✓ | | | Circle Applicable: Not relinquished Other (describe) |

Comments (Use Continuation Form if needed):

7718 4067 0916 1c 7718 4066 9989 1c 7718 4067 0835 4c

PM (or PMA) review: Initials MK Date 4-17-23 Page 1 of 1

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

# Sample Receipt Acknowledgement

| | |
|---|---|
| SDG/Report# | 618391 |
| Project ID | Nuclear Metals (NMI) Superfund Site RD/RA |
| PO Number | Laboratory Services Agreement |
| Project Manager | Zachary Worsham |
| Receive Date | 14-APR-23 09:15 |
| Prelim. Due | |
| Report Due | 12-MAY-2023 |
| EDD Required | Y |
| EDD Name | EQUIS_DMAX_DDMS_v3.01 |
| Chain of Custody | |
| Turn Days | 20(Working) |

| | |
|---|---|
| Client | de maximis, inc. |
| Report To | Mr. Todd Majer<br>de maximis, inc.<br>2229 Main Street<br>Concord, Massachusetts 01742 |
| Invoice To | Ms. Jessie McCusker<br>de maximis, inc.<br>2229 Main Street<br>Concord, Massachusetts 01742 |

| GEL ID | Sample ID | Matrix | Collection Date | Analysis Requested *(with due date, when applicable)* |
|---|---|---|---|---|
| 618391001 | HB-12-04112023 | WG | 11-APR-23 09:20 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618391002 | HB-12-04112023 | WG | 11-APR-23 09:20 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618391003 | HB-13-04112023 | WG | 11-APR-23 09:00 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618391004 | HB-13-04112023 | WG | 11-APR-23 09:00 | SW846 3005A/6020B<br>SW846 9060A Dissolved Inorganic Carbon<br>SW846 9060A Dissolved Organic Carbon<br>U-235, U-238 with Total U Calculation |
| 618391005<br>Field QC | HB-13-04112023 DUP | WG | 11-APR-23 09:00 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618391006<br>Field QC | HB-13-04112023 DUP | WG | 11-APR-23 09:00 | SW846 3005A/6020B<br>SW846 9060A Dissolved Inorganic Carbon<br>SW846 9060A Dissolved Organic Carbon<br>U-235, U-238 with Total U Calculation |
| 618391007 | GZW-7-1-04112023 | WG | 11-APR-23 09:46 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618391008 | GZW-7-1-04112023 | WG | 11-APR-23 09:46 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618391009 | HBPZ-2R-04112023 | WG | 11-APR-23 11:30 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618391010 | HBPZ-2R-04112023 | WG | 11-APR-23 11:30 | SW846 3005A/6020B<br>SW846 9060A Dissolved Inorganic Carbon<br>SW846 9060A Dissolved Organic Carbon<br>U-235, U-238 with Total U Calculation |
| 618391011 | MW-BS7-2-04112023 | WG | 11-APR-23 12:00 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618391012 | MW-BS7-2-04112023 | WG | 11-APR-23 12:00 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618391013 | GZW-10-2-04112023 | WG | 11-APR-23 12:25 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |

GEL Laboratories LLC

# Sample Receipt Acknowledgement

| | | | |
|---|---|---|---|
| SDG/Report# | 618391 | Client | de maximis, inc. |
| Project ID | Nuclear Metals (NMI) Superfund Site RD/RA | | |

| GEL ID | Sample ID | Matrix | Collection Date | Analysis Requested *(with due date, when applicable)* |
|---|---|---|---|---|
| 618391014 | GZW-10-2-04112023 | WG | 11-APR-23 12:25 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618391015<br>Field QC | EQ-BLANK-04112023 | WG | 11-APR-23 14:00 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |

Original

618391

Page: 1 of 2
Project # 3252E1
GEL Quote #: GELP18-1125

COC Number (1):
PO Number: 3252E1

GEL Laboratories LLC
gel.com | Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

**Chain of Custody and Analytical Request**

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

***GEL Work Order Number:*** ***GEL Project Manager: Zach Worsham***

Client Name: de maximis, inc. Phone # 978-875-0635
Project/Site Name: Nuclear Metals Fax #
Address: 200 Day Hill Road, Windsor CT
Collected By: Various Send Results To: tmajer@demaximis.com

**Sample Analysis Requested (5)** (Fill in the number of containers for each test)

| Sample ID<br>* For composites - indicate start and stop date/time | *Date Collected (mm-dd-yy) | *Time Collected (Military) (hhmm) | QC Code (2) | Field Filtered (3) | Sample Matrix (4) | Should this sample be considered: Radioactive (If yes, please supply isotopic info.) | Should this sample be considered: (7) Known or possible Hazards | Total number of containers | NI Total Metals (6020A ICP-MS) | NI Dissolved Metals (6020A ICP-MS) | NI U-235/U238 Plus Total U Clac | SA Dissolved Inorganic Carbon | SA Dissolved Organic Carbon | <-- Preservative Type (6) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HB-12-04112023 | 4/11/2023 | 9:20 | N | N | GW | U238 | | 1 | X | | X | | | |
| HB-12-04112023 | 4/11/2023 | 9:20 | N | Y | GW | U238 | | 1 | | X | X | | | |
| HB-13-04112023 | 4/11/2023 | 9:00 | N | N | GW | U238 | | 1 | X | | X | | | |
| HB-13-04112023 | 4/11/2023 | 9:00 | N | Y | GW | U238 | | 3 | | X | X | X | X | |
| HB-13-04112023 DUP | 4/11/2023 | 9:00 | FD | N | GW | U238 | | 1 | X | | X | | | |
| HB-13-04112023 DUP | 4/11/2023 | 9:00 | FD | Y | GW | U238 | | 3 | | X | X | X | X | |
| GZW-7-1-04112023 | 4/11/2023 | 9:46 | N | N | GW | U238 | | 1 | X | | X | | | |
| GZW-7-1-04112023 | 4/11/2023 | 9:46 | N | Y | GW | U238 | | 1 | | X | X | | | |
| HBPZ-2R-04112023 | 4/11/2023 | 11:30 | N | N | GW | U238 | | 1 | X | | X | | | |
| HBPZ-2R-04112023 | 4/11/2023 | 11:30 | N | Y | GW | U238 | | 3 | | X | X | X | X | |
| MW-BS7-2-04112023 | 4/11/2023 | 12:00 | N | N | GW | U238 | | 1 | X | | X | | | |
| MW-BS7-2-04112023 | 4/11/2023 | 12:00 | N | Y | GW | U238 | | 1 | | X | X | | | |

**Comments**
Note: extra sample is required for sample specific QC

Total and Dissolved Metals ICP-MS List: Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, U-235, U-238, Total U Calculation, Vandium, Zinc,

**Chain of Custody Signatures**

| Relinquished By (Signed) | Date | Time | Received by (signed) | Date | Time |
|---|---|---|---|---|---|
| 1 | 04/11/23 | 1511 | 1 | 4/11/23 | 1511 |
| 2 | 4/13/23 | 1400 | 2 | 4/14/23 | 915 |
| 3 | | | 3 | | |

**TAT Requested: Normal: X Rush: ____ Specify: _____**

Fax Results: [ ] Yes [X] No
Select Deliverable: [ X ] C of A [ X ] QC Summary [X] Level 5
*Additional Remarks:*
***For Lab Receiving Use Only:*** *Custody Seal Intact?* [ ] *Yes* [ ] *No* ***Cooler Temp:*** ____ °C

> ***For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)***

***Sample Collection Time Zone***: [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a - **Y** - for yes the sample was field filtered or - **N** - for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

**RCRA Metals**
**As** = Arsenic **Hg**= Mercury
**Ba** = Barium **Se**= Selenium
**Cd** = Cadmium **Ag**= Silver
**Cr** = Chromium **MR**= Misc. RCRA metals
**Pb** = Lead

**Characteristic Hazards**
**FL** = Flammable/Ignitable
**CO** = Corrosive
**RE** = Reactive

**TSCA Regulated**
**PCB** = Polychlorinated biphenyls

**Listed Waste**
**LW**= Listed Waste
*(F,K,P and U-listed wastes.)*
***Waste code(s):***

**Other**
**OT**= Other / Unknown
*(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)*
***Description:*** Samples analyzed via NaI, nothing detected

***Please provide any additional details below regarding handling and/or disposal concerns.*** *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

Original

618391

Page: 2 of 2
Project # 3252E1
GEL Quote #: GELP18-1125

COC Number (1):
PO Number: 3252E1

GEL Laboratories LLC
gel.com | Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

**Chain of Custody and Analytical Request**

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

***GEL Work Order Number:*** ***GEL Project Manager: Zach Worsham***

Client Name: de maximis, inc. Phone # 978-875-0635
Project/Site Name: Nuclear Metals Fax #
Address: 200 Day Hill Road, Windsor CT
Collected By: Various Send Results To: tmajer@demaximis.com

**Sample Analysis Requested (5)** (Fill in the number of containers for each test)

| Sample ID<br>* For composites - indicate start and stop date/time | *Date Collected (mm-dd-yy) | *Time Collected (Military) (hhmm) | QC Code (2) | Field Filtered (3) | Sample Matrix (4) | Should this sample be considered: Radioactive (if yes, please supply isotopic info.) | Should this sample be considered: (7) Known or possible Hazards | Total number of containers | NI Total Metals (6020A ICP-MS) | NI Dissolved Metals (6020A ICP-MS) | NI U-235/U238 Plus Total U Clac | SA Dissolved Inorganic Carbon | SA Dissolved Organic Carbon | <-- Preservative Type (6) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 GZW-10-2-04112023 | 4/11/2023 | 12:25 | N | N | GW | U238 | | 1 | X | | X | | | |
| 3 GZW-10-2-04112023 | 4/11/2023 | 12:25 | N | Y | GW | U238 | | 1 | | X | X | | | |
| 5 EQ-BLANK-04112023 | 4/11/2023 | 14:00 | EB | N | GW | U238 | | 1 | X | | X | | | |
| | | | | | GW | U238 | | | | | | | | |
| | | | | | GW | U238 | | | | | | | | |
| | | | | | GW | U238 | | | | | | | | |
| | | | | | GW | U238 | | | | | | | | |
| | | | | | GW | U238 | | | | | | | | |
| | | | | | GW | U238 | | | | | | | | |
| | | | | | GW | U238 | | | | | | | | |
| | | | | | GW | U238 | | | | | | | | |
| | | | | | GW | U238 | | | | | | | | |

**Comments**
Note: extra sample is required for sample specific QC

Total and Dissolved Metals ICP-MS List: Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, U-235, U-238, Total U Calculation, Vandium, Zinc,

**Chain of Custody Signatures**

| Relinquished By (Signed) | Date | Time | Received by (signed) | Date | Time |
|---|---|---|---|---|---|
| 1 | 04/11/23 | 1511 | 1 | 4/11/23 | 1511 |
| 2 | 4/13/23 | 1400 | 2 | 4/14/23 | 965 |
| 3 | | | 3 | | |

**TAT Requested: Normal: X Rush: ____ Specify: _____**

Fax Results: [ ] Yes [X] No
Select Deliverable: [ X ] C of A [ X ] QC Summary [X] Level 5
*Additional Remarks:*
***For Lab Receiving Use Only:*** *Custody Seal Intact?* [ ] *Yes* [ ] *No* ***Cooler Temp:*** ____ *°C*

> ***For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)***

***Sample Collection Time Zone*** : [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a **- Y -** for yes the sample was field filtered or **- N -** for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* **- 3**, *6010B/7470A* **- 1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

**RCRA Metals**
**As** = Arsenic **Hg**= Mercury
**Ba** = Barium **Se**= Selenium
**Cd** = Cadmium **Ag**= Silver
**Cr** = Chromium **MR**= Misc. RCRA metals
**Pb** = Lead

**Characteristic Hazards**
**FL** = Flammable/Ignitable
**CO** = Corrosive
**RE** = Reactive

**TSCA Regulated**
**PCB** = Polychlorinated biphenyls

**Listed Waste**
**LW**= Listed Waste
*(F,K,P and U-listed wastes.)*
***Waste code(s):***

**Other**
**OT**= Other / Unknown
*(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)*
***Description:***
Samples analyzed via ICP, nothing detected. PM

***Please provide any additional details below regarding handling and/or disposal concerns.*** *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

GEL | Laboratories LLC

# SAMPLE RECEIPT & REVIEW FORM

| | |
|---|---|
| Client: DMAX | SDG/AR/COC/Work Order: 618391 |
| Received By: Stacy Boone | Date Received: 4-15-23 |
| Carrier and Tracking Number | Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other<br>7718 4066 9761 4°c 7718 4066 9783 3°c |

| Suspected Hazard Information | Yes | No | |
|---|---|---|---|
| | | | *If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation. |
| A)Shipped as a DOT Hazardous? | | ✓ | Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___ |
| B) Did the client designate the samples are to be received as radioactive? | ✓ | | COC notation or radioactive stickers on containers equal client designation. |
| C) Did the RSO classify the samples as radioactive? | ✓ | | Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 CPM / mR/Hr<br>Classified as: Rad 1 Rad 2 Rad 3 |
| D) Did the client designate samples are hazardous? | | ✓ | COC notation or hazard labels on containers equal client designation. |
| E) Did the RSO identify possible hazards? | | ✓ | If D or E is yes, select Hazards below.<br>PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other: |

| | Sample Receipt Criteria | Yes | NA | No | Comments/Qualifiers (Required for Non-Conforming Items) |
|---|---|---|---|---|---|
| 1 | Shipping containers received intact and sealed? | ✓ | | | Circle Applicable: Seals broken Damaged container Leaking container Other (describe) |
| 2 | Chain of custody documents included with shipment? | ✓ | | | Circle Applicable: Client contacted and provided COC COC created upon receipt |
| 3 | Samples requiring cold preservation within (0 ≤ 6 deg. C)?* | | | | Preservation Method: Wet Ice Ice Packs Dry Ice None Other:<br>*all temperatures are recorded in Celsius TEMP:___ |
| 4 | Daily check performed and passed on IR temperature gun? | ✓ | | | Temperature Device Serial #: IR3-22<br>Secondary Temperature Device Serial # (If Applicable): |
| 5 | Sample containers intact and sealed? | ✓ | | | Circle Applicable: Seals broken Damaged container Leaking container Other (describe) |
| 6 | Samples requiring chemical preservation at proper pH? | ✓ | | | Sample ID's and Containers Affected:<br>If Preservation added, Lot#: |
| 7 | Do any samples require Volatile Analysis? | | | ✓ | If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer)<br>Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No)<br>Are liquid VOA vials free of headspace? Yes___ No___ NA___<br>Sample ID's and containers affected: |
| 8 | Samples received within holding time? | ✓ | | | ID's and tests affected: |
| 9 | Sample ID's on COC match ID's on bottles? | ✓ | | | ID's and containers affected: |
| 10 | Date & time on COC match date & time on bottles? | ✓ | | | Circle Applicable: No dates on containers No times on containers COC missing info Other (describe) |
| 11 | Number of containers received match number indicated on COC? | ✓ | | | Circle Applicable: No container count on COC Other (describe) |
| 12 | Are sample containers identifiable as GEL provided by use of GEL labels? | ✓ | | | |
| 13 | COC form is properly signed in relinquished/received sections? | ✓ | | | Circle Applicable: Not relinquished Other (describe) |

Comments (Use Continuation Form if needed):

7718 4067 0916 1°c 7718 4066 9989 1°c 7718 4067 0835 4°c

PM (or PMA) review: Initials MK Date 4-17-23 Page 1 of 1

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

# Sample Receipt Acknowledgement

| | |
|---|---|
| SDG/Report# | 618393 |
| Project ID | Nuclear Metals (NMI) Superfund Site RD/RA |
| PO Number | Laboratory Services Agreement |
| Project Manager | Zachary Worsham |
| Receive Date | 14-APR-23 09:15 |
| Prelim. Due | |
| Report Due | 12-MAY-2023 |
| EDD Required | Y |
| EDD Name | EQUIS_DMAX_DDMS_v3.01 |
| Chain of Custody | |
| Turn Days | 20(Working) |

| | |
|---|---|
| Client | de maximis, inc. |
| Report To | Mr. Todd Majer<br>de maximis, inc.<br>2229 Main Street<br>Concord, Massachusetts 01742 |
| Invoice To | Ms. Jessie McCusker<br>de maximis, inc.<br>2229 Main Street<br>Concord, Massachusetts 01742 |

| GEL ID | Sample ID | Matrix | Collection Date | Analysis Requested *(with due date, when applicable)* |
|---|---|---|---|---|
| 618393001 | MW-S24-04102023 | WG | 10-APR-23 09:50 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618393002 | MW-S24-04102023 | WG | 10-APR-23 09:50 | SW846 3005A/6020B<br>SW846 9060A Dissolved Inorganic Carbon<br>SW846 9060A Dissolved Organic Carbon<br>U-235, U-238 with Total U Calculation |
| 618393003<br>Lab QC | MW-S62A-04102023 | WG | 10-APR-23 09:45 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618393004<br>Lab QC | MW-S62A-04102023 | WG | 10-APR-23 09:45 | SW846 3005A/6020B<br>SW846 9060A Dissolved Inorganic Carbon<br>SW846 9060A Dissolved Organic Carbon<br>U-235, U-238 with Total U Calculation |
| 618393005 | BEW-5-04102023 | WG | 10-APR-23 10:55 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618393006 | BEW-5-04102023 | WG | 10-APR-23 10:55 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618393007 | MW-SD01-04102023 | WG | 10-APR-23 11:05 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618393008 | MW-SD01-04102023 | WG | 10-APR-23 11:05 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618393009<br>Lab QC | MW-BS01-04102023 | WG | 10-APR-23 11:00 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618393010<br>Lab QC | MW-BS01-04102023 | WG | 10-APR-23 11:00 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618393011 | MW-SD24-04102023 | WG | 10-APR-23 12:30 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618393012 | MW-SD24-04102023 | WG | 10-APR-23 12:30 | SW846 3005A/6020B<br>SW846 9060A Dissolved Inorganic Carbon<br>SW846 9060A Dissolved Organic Carbon<br>U-235, U-238 with Total U Calculation |
| 618393013<br>Field QC | MW-SD24-04102023 DUP | WG | 10-APR-23 12:30 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |

GEL Laboratories LLC

# Sample Receipt Acknowledgement

| | | | |
|---|---|---|---|
| SDG/Report# | 618393 | Client | de maximis, inc. |
| Project ID | Nuclear Metals (NMI) Superfund Site RD/RA | | |

| GEL ID | Sample ID | Matrix | Collection Date | Analysis Requested *(with due date, when applicable)* |
|---|---|---|---|---|
| 618393014<br>Field QC | MW-SD24-04102023 DUP | WG | 10-APR-23 12:30 | SW846 3005A/6020B<br>SW846 9060A Dissolved Inorganic Carbon<br>SW846 9060A Dissolved Organic Carbon<br>U-235, U-238 with Total U Calculation |
| 618393015 | MW-SD62A-04102023 | WG | 10-APR-23 13:15 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618393016 | MW-SD62A-04102023 | WG | 10-APR-23 13:15 | SW846 3005A/6020B<br>SW846 9060A Dissolved Inorganic Carbon<br>SW846 9060A Dissolved Organic Carbon<br>U-235, U-238 with Total U Calculation |
| 618393017<br>Field QC | EQ-BLANK-04102023 | WG | 10-APR-23 15:20 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618393018 | MW-BS14-04102023 | WG | 10-APR-23 14:35 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618393019 | MW-BS14-04102023 | WG | 10-APR-23 14:35 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618393020 | MW-SD61-04102023 | WG | 10-APR-23 15:10 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618393021 | MW-SD61-04102023 | WG | 10-APR-23 15:10 | SW846 3005A/6020B<br>SW846 9060A Dissolved Inorganic Carbon<br>SW846 9060A Dissolved Organic Carbon<br>U-235, U-238 with Total U Calculation |
| 618393022 | MW-BS15-04102023 | WG | 10-APR-23 15:50 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |
| 618393023 | MW-BS15-04102023 | WG | 10-APR-23 15:50 | SW846 3005A/6020B<br>U-235, U-238 with Total U Calculation |

Original

618393

Page: 1 of 3
Project # 3252E1
GEL Quote #: GELP18-1125

COC Number (1):
PO Number: 3252E1

GEL Laboratories LLC
gel.com | Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

# Chain of Custody and Analytical Request

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

**GEL Work Order Number:**

**GEL Project Manager: Zach Worsham**

Client Name: de maximis, inc. Phone # 978-875-0635

Project/Site Name: Nuclear Metals Fax #

Address: 200 Day Hill Road, Windsor CT

Collected By: Various Send Results To: tmajer@demaximis.com

**Sample Analysis Requested (5)** (Fill in the number of containers for each test)

| Sample ID<br>* For composites - indicate start and stop date/time | *Date Collected (mm-dd-yy) | *Time Collected (Military) (hhmm) | QC Code (2) | Field Filtered (3) | Sample Matrix (4) | Should this sample be considered: Radioactive (If yes, please supply isotopic info.) | Should this sample be considered: (7) Known or possible Hazards | Total number of containers | NI Total Metals (6020A ICP-MS) | NI Dissolved Metals (6020A ICP-MS) | NI U-235/U238 Plus Total U Clac | SA Dissolved Inorganic Carbon | SA Dissolved Organic Carbon | <-- Preservative Type (6) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-S24-04102023 | 4/10/2023 | 9:50 | N | N | GW | U238 | | 1 | X | | X | | | |
| MW-S24-04102023 | 4/10/2023 | 9:50 | N | Y | GW | U238 | | 3 | | X | X | X | X | |
| MW-S62A-04102023 | 4/10/2023 | 9:45 | N | N | GW | U238 | | 1 | X | | X | | | |
| MW-S62A-04102023 | 4/10/2023 | 9:45 | N | Y | GW | U238 | | 3 | | X | X | X | X | |
| MW-S62A-04102023 MS | 4/10/2023 | 9:45 | MS | N | GW | U238 | | 1 | X | | X | | | |
| MW-S62A-04102023 MS | 4/10/2023 | 9:45 | MS | Y | GW | U238 | | 3 | | X | X | X | X | |
| MW-S62A-04102023 MSD | 4/10/2023 | 9:45 | MSD | N | GW | U238 | | 1 | X | | X | | | |
| MW-S62A-04102023 MSD | 4/10/2023 | 9:45 | MSD | Y | GW | U238 | | 3 | | X | X | X | X | |
| BEW-5-04102023 | 4/10/2023 | 10:55 | N | N | GW | U238 | | 1 | X | | X | | | |
| BEW-5-04102023 | 4/10/2023 | 10:55 | N | Y | GW | U238 | | 1 | | X | X | | | |
| MW-SD01-04102023 | 4/10/2023 | 11:05 | N | N | GW | U238 | | 1 | X | | X | | | |
| MW-SD01-04102023 | 4/10/2023 | 11:05 | N | Y | GW | U238 | | 1 | | X | X | | | |

**Comments**
Note: extra sample is required for sample specific QC

Total and Dissolved Metals ICP-MS List: Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, U-235, U-238, Total U Calculation, Vandium, Zinc,

## Chain of Custody Signatures

| Relinquished By (Signed) | Date | Time | Received by (signed) | Date | Time |
|---|---|---|---|---|---|
| 1 | 04/10/23 | 1645 | 1 | 4/10/23 | 1645 |
| 2 | 4/13/23 | 1400 | 2 | 4/14/23 | 915 |
| 3 | | | 3 | | |

**TAT Requested: Normal: X Rush: ____ Specify: ____**

Fax Results: [ ] Yes [X] No

Select Deliverable: [ X ] C of A [ X ] QC Summary [X] Level 5

*Additional Remarks:*

***For Lab Receiving Use Only:*** *Custody Seal Intact?* [ ] *Yes* [ ] *No* ***Cooler Temp:*** ____ °C

> ***For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)***

***Sample Collection Time Zone*** : [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a **- Y -** for yes the sample was field filtered or **- N -** for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* **- 3**, *6010B/7470A* **- 1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

**RCRA Metals**
**As** = Arsenic **Hg**= Mercury
**Ba** = Barium **Se**= Selenium
**Cd** = Cadmium **Ag**= Silver
**Cr** = Chromium **MR**= Misc. RCRA metals
**Pb** = Lead

**Characteristic Hazards**
**FL** = Flammable/Ignitable
**CO** = Corrosive
**RE** = Reactive

**TSCA Regulated**
**PCB** = Polychlorinated biphenyls

**Listed Waste**
**LW**= Listed Waste
*(F,K,P and U-listed wastes.)*
***Waste code(s):***

**Other**
**OT**= Other / Unknown
*(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)*
***Description:*** Samples analyzed for Nat, nothing detected

***Please provide any additional details below regarding handling and/or disposal concerns.*** *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

Original

618393

Page: 2 of 3
Project # 3252E1
GEL Quote #: GELP18-1125

COC Number (1):
PO Number: 3252E1

GEL Laboratories LLC
gel.com | Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

## Chain of Custody and Analytical Request

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

**GEL Work Order Number:** **GEL Project Manager: Zach Worsham**

Client Name: de maximis, inc. Phone # 978-875-0635
Project/Site Name: Nuclear Metals Fax #
Address: 200 Day Hill Road, Windsor CT
Collected By: Various Send Results To: tmajer@demaximis.com

**Sample Analysis Requested (5)** (Fill in the number of containers for each test)

| Sample ID * For composites - indicate start and stop date/time | *Date Collected (mm-dd-yy) | *Time Collected (Military) (hhmm) | QC Code (2) | Field Filtered (3) | Sample Matrix (4) | Should this sample be considered: Radioactive (If yes, please supply isotopic info.) | Should this sample be considered: (7) Known or possible Hazards | Total number of containers | NI Total Metals (6020A ICP-MS) | NI Dissolved Metals (6020A ICP-MS) | NI U-235/U238 Plus Total U Clac | SA Dissolved Inorganic Carbon | SA Dissolved Organic Carbon | | | | | | | <-- Preservative Type (6) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-BS01-04102023 | 4/10/2023 | 11:00 | N | N | GW | U238 | | 1 | X | | X | | | | | | | | | |
| MW-BS01-04102023 | 4/10/2023 | 11:00 | N | Y | GW | U238 | | 1 | | X | X | | | | | | | | | |
| MW-BS01-04102023 MS | 4/10/2023 | 11:00 | MS | N | GW | U238 | | 1 | X | | X | | | | | | | | | |
| MW-BS01-04102023 MS | 4/10/2023 | 11:00 | MS | Y | GW | U238 | | 1 | | X | X | | | | | | | | | |
| MW-BS01-04102023 MSD | 4/10/2023 | 11:00 | MSD | N | GW | U238 | | 1 | X | | X | | | | | | | | | |
| MW-BS01-04102023 MSD | 4/10/2023 | 11:00 | MSD | Y | GW | U238 | | 1 | | X | X | | | | | | | | | |
| MW-SD24-04102023 | 4/10/2023 | 12:30 | N | N | GW | U238 | | 1 | X | | X | | | | | | | | | |
| MW-SD24-04102023 | 4/10/2023 | 12:30 | N | Y | GW | U238 | | 3 | | X | X | X | X | | | | | | | |
| MW-SD24-04102023 DUP | 4/10/2023 | 12:30 | FD | N | GW | U238 | | 1 | X | | X | | | | | | | | | |
| MW-SD24-04102023 DUP | 4/10/2023 | 12:30 | FD | Y | GW | U238 | | 3 | | X | X | X | X | | | | | | | |
| MW-SD62A-04102023 | 4/10/2023 | 13:15 | N | N | GW | U238 | | 1 | X | | X | | | | | | | | | |
| MW-SD62A-04102023 | 4/10/2023 | 13:15 | N | Y | GW | U238 | | 3 | | X | X | X | X | | | | | | | |

**Comments**
Note: extra sample is required for sample specific QC

Total and Dissolved Metals ICP-MS List: Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, U-235, U-238, Total U Calculation, Vandium, Zinc,

### Chain of Custody Signatures

| Relinquished By (Signed) | Date | Time | Received by (signed) | Date | Time |
|---|---|---|---|---|---|
| 1 [signature] | 04/10/23 | 1645 | 1 [signature] | 4/10/23 | 16:45 |
| 2 [signature] | 4/13/23 | 1400 | 2 [signature] | 4/14/23 | 915 |
| 3 | | | 3 | | |

**TAT Requested: Normal: X Rush: ____ Specify: ____**

Fax Results: [ ] Yes [X] No
Select Deliverable: [ X ] C of A [ X ] QC Summary [X] Level 5
*Additional Remarks:*
***For Lab Receiving Use Only:*** *Custody Seal Intact?* [ ] *Yes* [ ] *No* ***Cooler Temp:*** ____ °C
***Sample Collection Time Zone*** : [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

> ***For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)***

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a - **Y** - for yes the sample was field filtered or - **N** - for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, SS=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B**, **6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

**RCRA Metals**
**As** = Arsenic **Hg**= Mercury
**Ba** = Barium **Se**= Selenium
**Cd** = Cadmium **Ag**= Silver
**Cr** = Chromium **MR**= Misc. RCRA metals
**Pb** = Lead

**Characteristic Hazards**
**FL** = Flammable/Ignitable
**CO** = Corrosive
**RE** = Reactive

**TSCA Regulated**
**PCB** = Polychlorinated biphenyls

**Listed Waste**
**LW**= Listed Waste
*(F,K,P and U-listed wastes.)*
***Waste code(s):***

**Other**
**OT**= Other / Unknown
*(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)*
***Description:***
Samples analyzed via NAT, nothing detected
CW

***Please provide any additional details below regarding handling and/or disposal concerns.*** *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

Original

L018393

Page: 3 of 3
Project # 3252E1
GEL Quote #: GELP18-1125

COC Number [1]:
PO Number: 3252E1

# GEL Laboratories LLC

gel.com | Chemistry | Radiochemistry | Radiobioassay | Specialty Analytics

## Chain of Custody and Analytical Request


GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178


**GEL Work Order Number:** **GEL Project Manager: Zach Worsham**

Client Name: de maximis, inc. Phone # 978-875-0635
Project/Site Name: Nuclear Metals Fax #
Address: 200 Day Hill Road, Windsor CT
Collected By: Various Send Results To: tmajer@demaximis.com

**Sample Analysis Requested [5]** (Fill in the number of containers for each test)

| Sample ID<br>* For composites - indicate start and stop date/time | *Date Collected (mm-dd-yy) | *Time Collected (Military) (hhmm) | QC Code [2] | Field Filtered [3] | Sample Matrix [4] | Should this sample be considered: Radioactive (If yes, please supply isotopic info.) | Should this sample be considered: (7) Known or possible Hazards | Total number of containers | NI Total Metals (6020A ICP-MS) | NI Dissolved Metals (6020A ICP-MS) | NI U-235/U238 Plus Total U Clac | SA Dissolved Inorganic Carbon | SA Dissolved Organic Carbon | <-- Preservative Type (6) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EQ-BLANK-04102023 | 4/10/2023 | 15:20 | EB | N | GW | U238 | | 1 | X | | X | | | |
| MW-BS14-04102023 | 4/10/2023 | 14:35 | N | N | GW | U238 | | 1 | X | | X | | | |
| MW-BS14-04102023 | 4/10/2023 | 14:35 | N | Y | GW | U238 | | 1 | | X | X | | | |
| MW-SD61-04102023 | 4/10/2023 | 15:10 | N | N | GW | U238 | | 1 | X | | X | | | |
| MW-SD61-04102023 | 4/10/2023 | 15:10 | N | Y | GW | U238 | | 3 | | X | X | X | X | |
| MW-BS15-04102023 | 04/10/23 | 15:30 | N | N | GW | U238 | | 1 | X | | X | | | |
| MW-BS15-04102023 | 04/10/23 | 15:50 | N | Y | GW | U238 | | 1 | | X | X | | | |
| | | | | | GW | U238 | | | | | | | | |
| | | | | | GW | U238 | | | | | | | | |
| | | | | | GW | U238 | | | | | | | | |
| | | | | | GW | U238 | | | | | | | | |
| | | | | | GW | U238 | | | | | | | | |

**Comments**
Note: extra sample is required for sample specific QC

Total and Dissolved Metals ICP-MS List: Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Thorium, U-235, U-238, Total U Calculation, Vandium, Zinc,

### Chain of Custody Signatures

| | Relinquished By (Signed) | Date | Time | Received by (signed) | Date | Time |
|---|---|---|---|---|---|---|
| 1 | [illegible] DEL | 04/10/23 | 1645 | [illegible] | 4/10/23 | 1645 |
| 2 | [illegible] | 4/13/23 | 1400 | [illegible] | 4/14/23 | 915 |
| 3 | | | | | | |

**TAT Requested: Normal: X Rush: ____ Specify: ____**

Fax Results: [ ] Yes [X] No
Select Deliverable: [ X ] C of A [ X ] QC Summary [X] Level 5
*Additional Remarks:*
***For Lab Receiving Use Only:*** *Custody Seal Intact?* [ ] *Yes* [ ] *No* ***Cooler Temp:*** ____ °C

> ***For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)***

***Sample Collection Time Zone*** : [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

3.) Field Filtered: For liquid matrices, indicate with a - **Y** - for yes the sample was field filtered or - **N** - for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B* - **3**, *6010B/7470A* - **1**).

6.) Preservative Type: **HA** = Hydrochloric Acid, **NI** = Nitric Acid, **SH** = Sodium Hydroxide, **SA** = Sulfuric Acid, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

7.) **KNOWN OR POSSIBLE HAZARDS**

**RCRA Metals**
**As** = Arsenic **Hg**= Mercury
**Ba** = Barium **Se**= Selenium
**Cd** = Cadmium **Ag**= Silver
**Cr** = Chromium **MR**= Misc. RCRA metals
**Pb** = Lead

**Characteristic Hazards**
**FL** = Flammable/Ignitable
**CO** = Corrosive
**RE** = Reactive

**TSCA Regulated**
**PCB** = Polychlorinated biphenyls

**Listed Waste**
**LW**= Listed Waste
*(F,K,P and U-listed wastes.)*
***Waste code(s):***

**Other**
**OT**= Other / Unknown
*(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)*
***Description:***
Samples analyzed via NaI, nothing detected
EW

***Please provide any additional details below regarding handling and/or disposal concerns.*** *(i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)*

GEL | Laboratories LLC

# SAMPLE RECEIPT & REVIEW FORM

| | |
|---|---|
| Client: DMAX | SDG/AR/COC/Work Order: 618393 |
| Received By: Stacy Boone | Date Received: 4-15-23 |
| Carrier and Tracking Number | Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other<br>7718 4066 9761 4°c 7718 4066 9783 3°c |

| Suspected Hazard Information | Yes | No | *If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation. |
|---|---|---|---|
| A) Shipped as a DOT Hazardous? | | ✓ | Hazard Class Shipped: UN#:<br>If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___ |
| B) Did the client designate the samples are to be received as radioactive? | ✓ | | COC notation or radioactive stickers on containers equal client designation. |
| C) Did the RSO classify the samples as radioactive? | ✓ | | Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 CPM / mR/Hr<br>Classified as: Rad 1 Rad 2 Rad 3 |
| D) Did the client designate samples are hazardous? | | ✓ | COC notation or hazard labels on containers equal client designation. |
| E) Did the RSO identify possible hazards? | | ✓ | If D or E is yes, select Hazards below.<br>PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other: |

| | Sample Receipt Criteria | Yes | NA | No | Comments/Qualifiers (Required for Non-Conforming Items) |
|---|---|---|---|---|---|
| 1 | Shipping containers received intact and sealed? | ✓ | | | Circle Applicable: Seals broken Damaged container Leaking container Other (describe) |
| 2 | Chain of custody documents included with shipment? | ✓ | | | Circle Applicable: Client contacted and provided COC COC created upon receipt |
| 3 | Samples requiring cold preservation within (0 ≤ 6 deg. C)?* | | | | Preservation Method: Wet Ice Ice Packs Dry ice None Other:<br>*all temperatures are recorded in Celsius TEMP:___ |
| 4 | Daily check performed and passed on IR temperature gun? | ✓ | | | Temperature Device Serial #: IR3-22<br>Secondary Temperature Device Serial # (If Applicable): |
| 5 | Sample containers intact and sealed? | ✓ | | | Circle Applicable: Seals broken Damaged container Leaking container Other (describe) |
| 6 | Samples requiring chemical preservation at proper pH? | ✓ | | | Sample ID's and Containers Affected:<br>If Preservation added, Lot#: |
| 7 | Do any samples require Volatile Analysis? | | | ✓ | If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer)<br>Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No)<br>Are liquid VOA vials free of headspace? Yes___ No___ NA___<br>Sample ID's and containers affected: |
| 8 | Samples received within holding time? | ✓ | | | ID's and tests affected: |
| 9 | Sample ID's on COC match ID's on bottles? | ✓ | | | ID's and containers affected: |
| 10 | Date & time on COC match date & time on bottles? | ✓ | | | Circle Applicable: No dates on containers No times on containers COC missing info Other (describe) |
| 11 | Number of containers received match number indicated on COC? | ✓ | | | Circle Applicable: No container count on COC Other (describe) |
| 12 | Are sample containers identifiable as GEL provided by use of GEL labels? | ✓ | | | |
| 13 | COC form is properly signed in relinquished/received sections? | ✓ | | | Circle Applicable: Not relinquished Other (describe) |

Comments (Use Continuation Form if needed):

7718 4067 0916 1°c 7718 4066 9989 1°c 7718 4067 0835 4°c

PM (or PMA) review: Initials MK Date 4-17-23 Page 1 of 1

# CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 4/3/23

ALPHA Job #: L2317308

## Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 3252E1

Project Manager: Todd Majer

ALPHA Quote #:

## Client Information

Client: de maximis, inc

Address: 200 Day Hill Road, Suite 200

Windsor, CT

Phone: 978-875-0635

Fax:

Email: tmajer@demaximis.com

☐ These samples have been Previously analyzed by Alpha

## Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

## Report Information — Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

## Billing Information

☒ Same as Client info PO #: 3252E1

## Regulatory Requirements/Report Limits

State/Fed Program: Criteria:

## MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact tmajer@demaximis.com

Level IV Report
I.D = Isotope Dilution

## ANALYSIS

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler's Initials | NO3-/NO2-(SM4500NO3 353.2) | Total P (SM 4500P) | Dissolved P(SM4500P) | VOCS (8260C) | 1,4- Dioxane (8270 SIM w/I.D) | Alkalinity (Carb/Bicarb)(SM 2320) | Sample Specific Comments | TOTAL # BOTTLES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17308-01 | HA20-CMT-5(OW)-04032023 | 04/03/23 | 14:30 | GW | SRP | ☐ | ☒ | ☐ | ☒ | ☒ | ☒ | | 7 |
| -02 | EQ-BLANK-04032023 | 04/03/23 | 16:10 | GW | GD | ☐ | ☒ | ☐ | ☒ | ☒ | ☒ | | 7 |
| -03 | TRIP-BLANK | 03/22 | — | — | CM | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | | 2 |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| Container Type | | | | | | P | P | P | V | A | P | | |
| Preservative | | | | | | A | D | D | B | A | A | | |

SAMPLE HANDLING
*Filtration*
☐ Done
☐ Not Needed
☐ Lab to do
*Preservation*
☐ Lab to do
*(Please specify below)*

**PLEASE ANSWER QUESTIONS ABOVE!**

**IS YOUR PROJECT MA MCP or CT RCP?**

FORM NO: 01-01(I) (rev. 3-JAN-12)

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| Eric Woods AAL | 04/03/23 1640 | Eric Woods AAL | 4/3/23 1640 |
| | 4/3/23 1730 | Kylie | 4/3/23 1730 |

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

# CHAIN OF CUSTODY

PAGE 1 OF 3

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 4/4/23 | ALPHA Job #: L2317663

## Client Information

Client: de maximis, inc
Address: 200 Day Hill Road, Suite 200
Windsor, CT
Phone: 978-875-0635
Fax:
Email: tmajer@demaximis.com
☐ These samples have been Previously analyzed by Alpha

## Project Information

Project Name: Nuclear Metals
Project Location: Concord, MA
Project #: 3252E1
Project Manager: Todd Majer
ALPHA Quote #:

## Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)
Due Date: Time:

## Report Information — Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

## Billing Information

☒ Same as Client info PO #: 3252E1

## Regulatory Requirements/Report Limits

State/Fed Program | Criteria

## MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:
For sample issues or questions, please contact tmajer@demaximis.com

Level IV Report
I.D = Isotope Dilution

## ANALYSIS

SAMPLE HANDLING
*Filtration*
☐ Done ☐ Not Needed ☐ Lab to do
*Preservation*
☐ Lab to do
*(Please specify below)*

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler's Initials | NO3-/NO2-(SM4500NO3 353.2) | Total P (SM 4500P) | Dissolved P(SM4500P) | VOCs (8260C) | 1,4 Dioxane (8270 SIM w/ I.D.) | Alkalinity (Bicarb/Carb)(SIM 2320) | Total Organic Carbon (SM 5310) | Total Anions (SO4;CL-;F-)(300) | Total Suspended Solids (SM 2540D) | Hardness (6020B) | | | Sample Specific Comments | TOTAL # BOTTLES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17663-01 | ML-3-3-04042023 | 04/04/23 | 11:00 | GW | GKW | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 2 |
| -02 | HA20-CMT-6(OW)-04042023 | 04/04/23 | 11:30 | GW | SRP | ☐ | ☒ | ☐ | ☒ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 7 |
| -03 | MW-BS28-04042023 | 04/04/23 | 12:30 | GW | PB | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 2 |
| -04 | MW-SD34-04042023 | 04/04/23 | 10:00 | GW | SC | ☒ | ☐ | ☐ | ☒ | ☒ | ☐ | ☒ | ☒ | ☒ | ☒ | ☐ | ☐ | | 10 |
| ↓ | MW-SD34-04042023 MS | 04/04/23 | 10:00 | GW | SC | ☒ | ☐ | ☐ | ☒ | ☒ | ☐ | ☒ | ☒ | ☒ | ☒ | ☐ | ☐ | Matrix Spike | 10 |
| ↓ | MW-SD34-04042023 MSD | 04/04/23 | 10:00 | GW | SC | ☒ | ☐ | ☐ | ☒ | ☒ | ☐ | ☒ | ☒ | ☒ | ☒ | ☐ | ☐ | Matrix Spike Dup | 10 |
| -05 | GZW-8-2-04042023 | 04/04/23 | 13:35 | GW | GKW | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 2 |
| -06 | TRIP BLANK | 03/22 | -- | -- | CM | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 2 |
| -07 | MW-SD42A-04042023 | 04/04/23 | 11:35 | GW | DAP | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| -08 | MW-SD42A-04042023 DUP | 04/04/23 | 11:35 | GW | DAP | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | Duplicate | |
| | Container Type | P | P | P | V | A | P | V | P | P | P | - | - | | | | | | |
| | Preservative | A | D | D | B | A | A | B | A | A | C | - | - | | | | | | |

**PLEASE ANSWER QUESTIONS ABOVE!**

**IS YOUR PROJECT MA MCP or CT RCP?**

FORM NO: 01-01(I)

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| | 04/04/23 1700 | Phyllis | 4/4/23 1700 |
| | 4/4/23 1745 | | 4/4/23 1745 |

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# CHAIN OF CUSTODY

PAGE 2 OF 3

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 4/4/23

ALPHA Job #: L2317663

## Client Information

Client: de maximis, inc
Address: 200 Day Hill Road, Suite 200
Windsor, CT
Phone: 978-875-0635
Fax:
Email: tmajer@demaximis.com

☐ These samples have been Previously analyzed by Alpha

## Project Information

Project Name: Nuclear Metals
Project Location: Concord, MA
Project #: 3252E1
Project Manager: Todd Majer
ALPHA Quote #:

## Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

## Report Information Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

## Billing Information

☒ Same as Client info PO #: 3252E1

## Regulatory Requirements/Report Limits

State/Fed Program | Criteria

## MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:
For sample issues or questions, please contact tmajer@demaximis.com

Level IV Report
I.D = Isotope Dilution

## ANALYSIS

SAMPLE HANDLING
*Filtration*
☐ Done
☐ Not Needed
☐ Lab to do
*Preservation*
☐ Lab to do
*(Please specify below)*

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler's Initials | NO3-/NO2-(SM4500NO3 353.2) | Total P (SM 4500P) | Dissolved P(SM4500P) | VOCs (8260C) | 1,4 Dioxane (8270 SIM w/ I.D.) | Alkalinity (Bicarb/Carb)(SIM 2320) | Total Organic Carbon (SM 5310) | Total Anions (SO4;CL-;F-)(300) | Total Suspended Solids (SM 2540D) | Hardness (6020B) | | | Sample Specific Comments | TOTAL # BOTTLES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17663-09 | MW-SD44-04042023 | 04/04/23 | 13:20 | GW | DAP | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 2 |
| | MW-SD44-04042023 MS | 04/04/23 | 13:20 | GW | DAP | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 2 |
| ↓ | MW-SD44-04042023 MSD | 04/04/23 | 13:20 | GW | DAP | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 2 |
| -10 | Assabet-1A(PZ-1A)-040420 | 04/04/23 | 14:30 | GW | DAP | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 2 |
| -11 | Assabet-2A(PZ-2A)-040420 | 04/04/23 | 14:35 | GW | DAP | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 2 |
| -12 | EQ-BLANK-04042023 | 04/04/23 | 15:00 | GW | GD | ☒ | ☒ | ☐ | ☒ | ☒ | ☒ | ☒ | ☒ | ☒ | ☒ | ☐ | ☐ | Equip Blank | 13 |
| -13 | HA20-CMT-3T(OW)-04042023 | 04/04/23 | 15:00 | GW | SRP | ☐ | ☒ | ☐ | ☒ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 7 |
| -14 | SW-101-04042023 | 04/04/23 | 15:30 | SW | DAP | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 2 |
| -15 | EW-1-04042023 | 04/04/23 | 15:15 | GW | DAP | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 2 |
| -16 | ML-1-3-04042023 | 04/04/23 | 15:30 | GW | GKW | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 2 |
| | Container Type | P | P | P | V | A | P | V | P | P | P | - | - | | | | | | |
| | Preservative | A | D | D | B | A | A | B | A | A | C | - | - | | | | | | |

PLEASE ANSWER QUESTIONS ABOVE!

**IS YOUR PROJECT MA MCP *or* CT RCP?**

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| | 04/04/23 1700 | | 4/4/23 1700 |
| | 4/4/23 1745 | | 4/4/23 1745 |

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FORM NO: 01-01(I)
(rev. 5-JAN-12)

# CHAIN OF CUSTODY

PAGE 3 OF 3

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 4/4/23

ALPHA Job #: L2317663

## Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 3252E1

Project Manager: Todd Majer

ALPHA Quote #:

## Client Information

Client: de maximis, inc

Address: 200 Day Hill Road, Suite 200

Windsor, CT

Phone: 978-875-0635

Fax:

Email: tmajer@demaximis.com

☐ These samples have been Previously analyzed by Alpha

## Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

## Report Information — Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

## Billing Information

☒ Same as Client info PO #: 3252E1

## Regulatory Requirements/Report Limits

State/Fed Program | Criteria

## MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact tmajer@demaximis.com

Level IV Report
I.D = Isotope Dilution

## ANALYSIS

SAMPLE HANDLING
*Filtration*
☐ Done
☐ Not Needed
☐ Lab to do
*Preservation*
☐ Lab to do
*(Please specify below)*

TOTAL # BOTTLES

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler's Initials | NO3-/NO2-(SM4500NO3 353.2) | Total P (SM 4500P) | Dissolved P(SM4500P) | VOCs (8260C) | 1,4 Dioxane (8270 SIM w/ I.D.) | Alkalinity (Bicarb/Carb)(SIM 2320) | Total Organic Carbon (SM 5310) | Total Anions (SO4;CL-;F-)(300) | Total Suspended Solids (SM 2540D) | Hardness (6020B) | | | Sample Specific Comments | TOTAL # BOTTLES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17663-18 | MW-SD52-04042023 | 04/04/23 | 14:50 | GW | SC | ☐ | ☐ | ☐ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 5 |
| -17 | ~~MW-B1D28-04042023~~ | ~~04/04/23~~ | | ~~GW~~ | ~~PB~~ | ☐ | ☒ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 3 |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |

| Container Type | P | P | P | V | A | P | V | P | P | P | - | - |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Preservative | A | D | D | B | A | A | B | A | A | C | - | - |

PLEASE ANSWER QUESTIONS ABOVE!

**IS YOUR PROJECT MA MCP *or* CT RCP?**

FORM NO: 01-01(I) (rev. 3-JAN-12)

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| | 04/04/23 1700 | | 4/4/23 1700 |
| | 4/4/23 1745 | | 4/4/23 1745 |

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# CHAIN OF CUSTODY

PAGE 1 OF 3

Date Rec'd In Lab: 4/5/23

ALPHA Job #: L2317983


Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288


## Client Information

Client: de maximis, inc

Address: 200 Day Hill Road, Suite 200

Windsor, CT

Phone: 978-875-0635

Fax:

Email: tmajer@demaximis.com

☐ These samples have been Previously analyzed by Alpha

## Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 3252E1

Project Manager: Todd Majer

ALPHA Quote #:

## Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

## Report Information — Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

## Billing Information

☒ Same as Client info PO #: 3252E1

## Regulatory Requirements/Report Limits

State/Fed Program: Criteria

## MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact tmajer@demaximis.com

Level IV Report
I.D = Isotope Dilution

## ANALYSIS

SAMPLE HANDLING
*Filtration*
☐ Done
☐ Not Needed
☐ Lab to do
*Preservation*
☐ Lab to do
*(Please specify below)*

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler's Initials | NO3-/NO2-(SM4500NO3 353.2) | Total P (SM 4500P) | Dissolved P(SM4500P) | VOCs (8260C) | 1,4 Dioxane (8270 SIM w/ I.D.) | Alkalinity (Bicarb/Carb)(SIM 2320) | Total Organic Carbon (SM 5310) | Total Anions (SO4;CL-;F-)(300) | Total Suspended Solids (SM 2540D) | Hardness (6020B) | | | Sample Specific Comments | TOTAL # BOTTLES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17983-01 | MW-SD17-04052023 | 04/05/23 | 09:25 | GW | WPB | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 2 |
| -02 | MW-B1D28-04042023 | 04/04/23 | 16:55 | GW | PB | ☐ | ☒ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 3 |
| -03 | MW-S02-04052023 | 04/05/23 | 09:35 | GW | EB | ☒ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 3 |
| -04 | BEW-3-04052023 | 04/05/23 | 09:55 | GW | KR | ☐ | ☐ | ☐ | ☒ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 6 |
| ↓ | BEW-3-04052023 MS | 04/05/23 | 09:55 | GW | KR | ☐ | ☐ | ☐ | ☒ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | Matrix Spike | 6 |
| ↓ | BEW-3-04052023 MSD | 04/05/23 | 09:55 | GW | KR | ☐ | ☐ | ☐ | ☒ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | Matrix Spike Dup | 6 |
| -05 | BEW-2-04052023 | 04/05/23 | 09:30 | GW | KR | ☐ | ☐ | ☐ | ☒ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 7 |
| -06 | BEW-4-04052023 | 04/05/23 | 10:20 | GW | KW | ☐ | ☒ | ☐ | ☒ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 8 |
| -07 | MW-SD46-04052023 | 04/05/23 | 11:10 | GW | DAP | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 2 |
| -08 | MW-S46-04052023 | 04/05/23 | 10:05 | GW | DAP | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 2 |
| | Container Type | | | | | P | P | P | V | A | P | V | P | P | P | - | - | | |
| | Preservative | | | | | A | D | D | B | A | A | B | A | A | C | - | - | | |

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| | 4/5/23 16:15 | | 4/5/23 16:15 |
| | 4/5/23 17 | | 4/5/23 17:00 |

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# CHAIN OF CUSTODY

PAGE 2 OF 3

Date Rec'd in Lab: 4/5/23 | ALPHA Job #: L2317983


Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288


**Project Information**

Project Name: Nuclear Metals
Project Location: Concord, MA
Project #: 3252E1
Project Manager: Todd Majer
ALPHA Quote #:

**Client Information**

Client: de maximis, inc
Address: 200 Day Hill Road, Suite 200
Windsor, CT
Phone: 978-875-0635
Fax:
Email: tmajer@demaximis.com

☐ These samples have been Previously analyzed by Alpha

**Turn-Around Time**

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

**Report Information Data Deliverables**

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

**Billing Information**

☒ Same as Client info PO #: 3252E1

**Regulatory Requirements/Report Limits**

State/Fed Program | Criteria

**MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS**

☒ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:
For sample issues or questions, please contact tmajer@demaximis.com

Level IV Report
I.D = Isotope Dilution

**ANALYSIS**

SAMPLE HANDLING
*Filtration*
☐ Done ☐ Not Needed ☐ Lab to do
*Preservation*
☐ Lab to do
*(Please specify below)*

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler's Initials | NO3-/NO2-(SM4500NO3 353.2) | Total P (SM 4500P) | Dissolved P(SM4500P) | VOCs (8260C) | 1,4 Dioxane (6270 SIM w/ I.D.) | Alkalinity (Bicarb/Carb)(SIM 2320) | Total Organic Carbon (SM 5310) | Total Anions (SO4;CL-;F-)(300) | Total Suspended Solids (SM 2540D) | Hardness (6020B) | | | Sample Specific Comments | TOTAL # BOTTLES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17983-09 | MW-BS02-04052023 | 04/05/23 | 11:20 | GW | PB | ☐ | ☐ | ☐ | ☐ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 3 |
| -10 | MW-BS52-04052023 | 04/05/23 | 09:53 | GW | SC | ☒ | ☐ | ☐ | ☒ | ☒ | ☒ | ☒ | ☒ | ☒ | ☒ | ☐ | ☐ | | 11 |
| -11 | MW-BS52-04052023 DUP | 04/05/23 | 09:53 | GW | SC | ☒ | ☐ | ☐ | ☒ | ☒ | ☒ | ☒ | ☒ | ☒ | ☒ | ☐ | ☐ | Duplicate | 11 |
| -12 | MW-S64-04052023 | 04/05/23 | 11:45 | GW | EB | ☒ | ☒ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 6 |
| -13 | MW-S64-04052023 DUP | 04/05/23 | 11:45 | GW | EB | ☒ | ☒ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | Duplicate | 6 |
| -14 | HA20-CMT-3B(OW)-04052023 | 04/05/23 | 12:20 | GW | SP | ☐ | ☒ | ☐ | ☒ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 7 |
| -15 | MW-S16-04052023 | 04/05/23 | 13:50 | GW | EB | ☒ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 7 |
| -16 | TRIP BLANK | 3/22 | -- | -- | CM | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 6 |
| -17 | MW-SD38-04052023 | 04/05/23 | 14:20 | GW | DAP | ☐ | ☐ | ☐ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 6 |
| -18 | EQ-BLANK-04052023 | 04/05/23 | 15:15 | GW | GD | ☒ | ☒ | ☐ | ☒ | ☒ | ☒ | ☒ | ☒ | ☒ | ☒ | ☐ | ☐ | | 12 |
| | | | | | | | | | | | | | | | | | | | |
| | Container Type | | | | | P | P | P | V | A | P | V | P | P | P | - | - | | |
| | Preservative | | | | | A | D | D | B | A | A | B | A | A | C | - | - | | |

**PLEASE ANSWER QUESTIONS ABOVE!**

**IS YOUR PROJECT MA MCP *or* CT RCP?**

FORM NO: 01-01(I)
(rev. 5-JAN-12)

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| Kelly Dees / Kelly Smith | 04/05/23 1615 / 4/5/23 17- | | 4/5/23 1700 / 4/5/23 17:00 |

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

# CHAIN OF CUSTODY

PAGE 3 OF 2

Date Rec'd in Lab: 4/5/23

ALPHA Job #: L2317983


Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288


## Client Information

Client: de maximis, inc

Address: 200 Day Hill Road, Suite 200

Windsor, CT

Phone: 978-875-0635

Fax:

Email: tmajer@demaximis.com

☐ These samples have been Previously analyzed by Alpha

## Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 3252E1

Project Manager: Todd Majer

ALPHA Quote #:

## Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

## Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

## Billing Information

☒ Same as Client Info PO #: 3252E1

## Regulatory Requirements/Report Limits

State/Fed Program | Criteria

## MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact tmajer@demaximis.com

Level IV Report
I.D = Isotope Dilution

## ANALYSIS

SAMPLE HANDLING
*Filtration*
☐ Done
☐ Not Needed
☐ Lab to do
*Preservation*
☐ Lab to do
*(Please specify below)*

Sample Specific Comments

TOTAL # BOTTLES

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler's Initials | NO3-/NO2-(SM4500/NO3 353.2) | Total P (SM 4500P) | Dissolved P(SM4500P) | VOCs (8260C) | 1,4 Dioxane (8270 SIM w/ I.D.) | Alkalinity (Bicarb/Carb)(SIM 2320) | Total Organic Carbon (SM 5310) | Total Anions (SO4;Cl-;F-)(300) | Total Suspended Solids (SM 2540D) | Hardness (6020B) | | | TOTAL # BOTTLES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17983-19 | MW-BS53-04052023 | 04/05/23 | 1510 | GW | SC | ☐ | ☐ | ☐ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | 5 |
| -20 | MW-BM03-04052023 | 04/05/23 | 1540 | GW | PB | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | 2 |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Container Type | P | P | P | V | A | P | V | P | P | P | - | - | | |
| Preservative | A | D | D | B | A | A | B | A | A | C | - | - | | |

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

FORM NO: 01-01(I) rev. 5-JAN-12)

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| | 4/5/23 1615 | | 4/5/23 1605 |
| | 4/5/23 17 | | 4/5/23 1700 |

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# CHAIN OF CUSTODY

PAGE 1 OF 2

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 4/6/23

ALPHA Job #: L2318377

## Client Information

Client: de maximis, inc
Address: 200 Day Hill Road, Suite 200
Windsor, CT
Phone: 978-875-0635
Fax:
Email: tmajer@demaximis.com

☐ These samples have been Previously analyzed by Alpha

## Project Information

Project Name: Nuclear Metals
Project Location: Concord, MA
Project #: 3252E1
Project Manager: Todd Majer
ALPHA Quote #:

## Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

## Report Information

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

## Data Deliverables

## Billing Information

☒ Same as Client info PO #: 3252E1

## Regulatory Requirements/Report Limits

State/Fed Program | Criteria

## MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:
For sample issues or questions, please contact tmajer@demaximis.com

Level IV Report
I.D = Isotope Dilution

## ANALYSIS

SAMPLE HANDLING
*Filtration*
☐ Done
☐ Not Needed
☐ Lab to do
*Preservation*
☐ Lab to do
*(Please specify below)*

Sample Specific Comments

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler's Initials | NO3-/NO2-(SM4500NO3 353.2) | Total P (SM 4500P) | Dissolved P(SM4500P) | VOCs (8260C) | 1,4 Dioxane (8270 SIM w/ I.D.) | Alkalinity (Bicarb/Carb)(SIM 2320) | Total Organic Carbon (SM 5310) | Total Anions (SO4;CL-;F-)(300) | Total Suspended Solids (SM 2540D) | Hardness (6020B) | | | Sample Specific Comments | TOTAL # BOTTLES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18377-01 | MW-SD15-04062023 | 04/06/23 | 09:52 | GW | SC | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 2 |
| 02 | TRIP BLANK | 03/22 | – | – | CM | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 2 |
| 03 | MW-B3D13-04062023 | 04/06/23 | 10:23 | GW | EG | ☐ | ☒ | ☐ | ☐ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 4 |
| 04 | MW-BS10-04062023 | 04/06/23 | 10:45 | GW | PB | ☐ | ☐ | ☐ | ☐ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 3 |
| 05 | MW-SD40-04062023 | 04/06/23 | 11:50 | GW | DAP | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 2 |
| 06 | MW-S32-04062023 | 04/06/23 | 12:15 | GW | SC | ☐ | ☐ | ☐ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 5 |
| 07 | SW-102-04062023 | 04/06/23 | 14:10 | SW | DP | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 2 |
| 08 | SW-103-04062023 | 04/06/23 | 14:00 | SW | DP | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 2 |
| 09 | MW-BS03-04062023 | 04/06/23 | 14:25 | GW | PB | ☐ | ☐ | ☐ | ☐ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 3 |
| 10 | MW-BS03-04062023 DUP | 04/06/23 | 14:25 | GW | PB | ☐ | ☐ | ☐ | ☐ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 3 |
| | Container Type | P | P | P | V | A | P | V | P | P | P | - | - | | | | | | |
| | Preservative | A | D | D | B | A | A | B | A | A | C | - | - | | | | | | |

PLEASE ANSWER QUESTIONS ABOVE!

S YOUR PROJECT
MA MCP or CT RCP?

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| | 4/6/23 1630 | | 4/6/23 16:30 |
| | 4-6-23 17:20 | | 4/6/23 1720 |

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# CHAIN OF CUSTODY

PAGE 2 OF 2

Date Rec'd in Lab: 4/6/23

ALPHA Job #: L2318377


Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288


## Client Information

Client: de maximis, inc

Address: 200 Day Hill Road, Suite 200

Windsor, CT

Phone: 978-875-0635

Fax:

Email: tmajer@demaximis.com

☐ These samples have been Previously analyzed by Alpha

## Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 3252E1

Project Manager: Todd Majer

ALPHA Quote #:

## Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

## Report Information — Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

## Billing Information

☒ Same as Client info PO #: 3252E1

## Regulatory Requirements/Report Limits

State/Fed Program Criteria

## MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact tmajer@demaximis.com

Level IV Report
I.D = Isotope Dilution

## ANALYSIS

SAMPLE HANDLING
*Filtration*
☐ Done
☐ Not Needed
☐ Lab to do
*Preservation*
☐ Lab to do
*(Please specify below)*

Sample Specific Comments

TOTAL # BOTTLES

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler's Initials | NO3-/NO2-(SM4500NO3 353.2) | Total P (SM 4500P) | Dissolved P(SM4500P) | VOCs (8260C) | 1,4 Dioxane (8270 SIM w/ I.D.) | Alkalinity (Bicarb/Carb)(SIM 2320) | Total Organic Carbon (SM 5310) | Total Anions (SO4;CL;-F-)(300) | Total Suspended Solids (SM 2540D) | Hardness (6020B) | | | Sample Specific Comments | TOTAL # BOTTLES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8377 - 11 | MW-B2D13-04062023 | 04/06/23 | 13:55 | GW | SM | ☐ | ☒ | ☐ | ☐ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 4 |
| 12 | MW-SD32-04062023 | 04/06/23 | 14:55 | GW | SC | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 2 |
| 13 | EQ-BLANK-04062023 | 04/06/23 | 16:00 | GW | GD | ☐ | ☒ | ☐ | ☒ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 7 |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Container Type | P | P | P | V | A | P | V | P | P | P | - | - | | | | | | |
| Preservative | A | D | D | B | A | A | B | A | A | C | - | - | | | | | | |

PLEASE ANSWER QUESTIONS ABOVE!

S YOUR PROJECT
MA MCP or CT RCP?

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| | 4/6/23 1630 | | 4/6/23 1720 |
| | 4.6.23 17:20 | | 4/6/23 1720 |

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# CHAIN OF CUSTODY

PAGE 1 OF 2

Date Rec'd in Lab: 4/7/23 | ALPHA Job #: L2318701


Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288


## Client Information

Client: de maximis, inc
Address: 200 Day Hill Road, Suite 200
Windsor, CT
Phone: 978-875-0635
Fax:
Email: tmajer@demaximis.com

☐ These samples have been Previously analyzed by Alpha

## Project Information

Project Name: Nuclear Metals
Project Location: Concord, MA
Project #: 3252E1
Project Manager: Todd Majer
ALPHA Quote #:

## Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Other Project Specific Requirements/Comments/Detection Limits:
For sample issues or questions, please contact tmajer@demaximis.com

Level IV Report
I.D = Isotope Dilution

## Report Information – Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

## Billing Information

☒ Same as Client info PO #: 3252E1

## Regulatory Requirements/Report Limits

State/Fed Program | Criteria

## MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

## ANALYSIS

SAMPLE HANDLING
*Filtration*
☐ Done
☐ Not Needed
☐ Lab to do
*Preservation*
☐ Lab to do
*(Please specify below)*

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler's Initials | NO3-/NO2-(SM4500NO3 353.2) | Total P (SM 4500P) | Dissolved P(SM4500P) | VOCs (8260C) | 1,4 Dioxane (8270 SIM w/ I.D.) | Ammonia (SM4500 NH3-BH) | Total Metals Molybdenum,Boron (6020A ICP) | Total Anions (SO4,CL-)(300) | Cations (Na,Mg, K) (EPA 200.7) | Alkalinity (Bicarb/Carb)(SIM 2320) | | | Sample Specific Comments | TOTAL # BOTTLES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18701-01 | MW-SD26-04072023 | 04/07/23 | 08:42 | GW | SC | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 3 |
| -02 | MW-BS54-04072023 | 04/07/23 | 09:30 | GW | EG | ☐ | ☐ | ☐ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 5 |
| -03 | MW-BS50-04072023 | 04/07/23 | 09:35 | GW | PB | ☐ | ☐ | ☐ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 5 |
| | MW-BS50-04072023 MS | 04/07/23 | 09:35 | GW | PB | ☐ | ☐ | ☐ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | Matrix Spike | 5 |
| ↓ | MW-BS50-04072023 MSD | 04/07/23 | 09:35 | GW | PB | ☐ | ☐ | ☐ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | Matrix Spike Dup | 5 |
| -04 | TRIP BLANK | 03/22 | – | – | CM | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 2 |
| -05 | MW-BM15-04072023 | 04/07/23 | 10:10 | GW | DAP | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 2 |
| -06 | MW-BS13-04072023 | 04/07/23 | 11:21 | GW | EG | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | | 3 |
| -07 | MW-BS32-04072023 | 04/07/23 | 13:30 | GW | DAP | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 2 |
| -08 | MW-S60-04072023 | 04/07/23 | 11:35 | GW | SC | ☒ | ☒ | ☒ | ☒ | ☐ | ☒ | ☒ | ☒ | ☒ | ☐ | ☐ | ☐ | | |

| Container Type | P | P | P | V | A | P | P | P | P | P | - | - |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Preservative | A | D | D | B | A | D | C | A | C | C | - | - |

PLEASE ANSWER QUESTIONS ABOVE!

**IS YOUR PROJECT MA MCP *or* CT RCP?**

FORM NO: 01-01(I) (rev. 5-JAN-12)

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| [signature] | 4/07/23 1530 | [signature] | 4-7-25 15:30 |
| [signature] DAVSAAL | 4-7-25 17:00 | [signature] | 4/7/23 1700 |

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# CHAIN OF CUSTODY

PAGE 1 OF 2

Date Rec'd in Lab: 4/7/23

ALPHA Job #: L2318701


Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288


## Client Information

Client: de maximis, inc

Address: 200 Day Hill Road, Suite 200

Windsor, CT

Phone: 978-875-0635

Fax:

Email: tmajer@demaximis.com

☐ These samples have been Previously analyzed by Alpha

## Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 3252E1

Project Manager: Todd Majer

ALPHA Quote #:

## Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact tmajer@demaximis.com

Level IV Report
I,D = Isotope Dilution

## Report Information — Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

## Billing Information

☒ Same as Client info PO #: 3252E1

## Regulatory Requirements/Report Limits

State/Fed Program: Criteria

## MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

## ANALYSIS

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler's Initials | NO3-/NO2-(SM4500NO3 353.2) | Total P (SM 4500P) | Dissolved P(SM4500P) | VOCs (8260C) | 1,4 Dioxane (8270 SIM w/ I.D.) | Ammonia (SM4500 NH3-BH) | Total Metals: Molybdenum, Boron (6020A ICP) | Total Anions (SO4,CL-)(300) | Cations (Na,Mg, K) (EPA 200.7) | Alkalinity (Bicarb/Carb)(SIM 2320) | | | Sample Specific Comments | TOTAL # BOTTLES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18701-09 | MW-8A-04072023 | 04/07/23 | 13:20 | GW | PB | ☒ | ☒ | ☒ | ☐ | ☒ | ☒ | ☒ | ☒ | ☒ | ☐ | ☐ | ☐ | | 7 |
| -10 | EQ-BLANK-04072023 | 04/07/23 | 14:40 | GW | GD | ☒ | ☒ | ☐ | ☒ | ☒ | ☒ | ☒ | ☒ | ☒ | ☒ | ☐ | ☐ | | 9 |
| -11 | MW-SD60-04072023 | 04/07/23 | 14:00 | GW | SC | ☒ | ☒ | ☒ | ☒ | ☐ | ☒ | ☒ | ☒ | ☒ | ☐ | ☐ | ☐ | | 7 |
| -12 | MW-B1D13-04072023 | 04/07/23 | 14:11 | GW | EG | ☐ | ☒ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | | 4 |
| -13 | MW-B1D13-04072023-DUP | 04/07/23 | 14:11 | GW | EG | ☐ | ☒ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | | 4 |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |

SAMPLE HANDLING
*Filtration*
☐ Done
☐ Not Needed
☐ Lab to do
*Preservation*
☐ Lab to do
*(Please specify below)*

| Container Type | P | P | P | V | A | P | P | P | P | P | - | - |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Preservative | A | D | D | B | A | D | C | A | C | C | - | - |

PLEASE ANSWER QUESTIONS ABOVE!

**IS YOUR PROJECT MA MCP *or* CT RCP?**

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| [illegible] | 04/07/23 15:30 | [illegible] DAUS | 4-7-23 15:30 |
| Daus | 4/7/23 17:00 | [illegible] | 4/7/23 1700 |

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

FORM NO: 01-01(I)
(rev. 5-JAN-12)

# CHAIN OF CUSTODY

PAGE 1 OF 2

Date Rec'd in Lab: 4/10/23

ALPHA Job #: L2318972


Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288


## Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 3252E1

Project Manager: Todd Majer

ALPHA Quote #:

## Client Information

Client: de maximis, inc

Address: 200 Day Hill Road, Suite 200

Windsor, CT

Phone: 978-875-0635

Fax:

Email: tmajer@demaximis.com

☐ These samples have been Previously analyzed by Alpha

## Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

## Report Information — Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

## Billing Information

☒ Same as Client info PO #: 3252E1

## Regulatory Requirements/Report Limits

State/Fed Program | Criteria

## MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact tmajer@demaximis.com

Level IV Report
I.D = Isotope Dilution

## ANALYSIS

SAMPLE HANDLING
*Filtration*
☐ Done
☐ Not Needed
☐ Lab to do
*Preservation*
☐ Lab to do
*(Please specify below)*

Sample Specific Comments

TOTAL # BOTTLES

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler's Initials | NO3-/NO2-(SM4500NO3 353.2) | Total P (SM 4500P) | Dissolved P(SM4500P) | VOCs (8260C) | 1,4 Dioxane (8270 SIM w/ I.D.) | Ammonia (SM4500 NH3-BH) | Boron (6010) | Total Anions (SO4;CL-, F-)(300) | Cations (Na,Mg, K) (6010) | Total Suspended Solids (SM 2540D) | Hardness (6020B) | Total Organic Carbon (SM 5310) | Sample Specific Comments | TOTAL # BOTTLES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18972-01 | MW-S24-04102023 | 04/10/23 | 09:50 | GW | PB | ☒ | ☒ | ☒ | ☐ | ☒ | ☒ | ☒ | ☒ | ☒ | ☐ | ☐ | ☐ | | 8 |
| -02 | MW-S62A-04102023 | 04/10/23 | 09:45 | GW | SM | ☒ | ☒ | ☒ | ☒ | ☒ | ☒ | ☒ | ☒ | ☒ | ☐ | ☐ | ☐ | | 8 |
| -02 | MW-S62A-04102023 MS | 04/10/23 | 09:45 | GW | SM | ☒ | ☒ | ☒ | ☒ | ☒ | ☒ | ☒ | ☒ | ☒ | ☐ | ☐ | ☐ | Matrix Spike | 8 |
| -02 | MW-S62A-04102023 MSD | 04/10/23 | 09:45 | GW | SM | ☒ | ☒ | ☒ | ☒ | ☒ | ☒ | ☒ | ☒ | ☒ | ☐ | ☐ | ☐ | Matrix Spike Dup | 8 |
| -03 | BEW-5-04102023 | 04/10/23 | 10:55 | GW | DAP | ☒ | ☐ | ☐ | ☒ | ☒ | ☐ | ☐ | ☒ | ☐ | ☒ | ☒ | ☒ | | 9 |
| -04 | MW-SD01-04102023 | 04/10/23 | 11:05 | GW | KG | ☐ | ☒ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 3 |
| -05 | MW-BS01-04102023 | 04/10/23 | 11:00 | GW | EG | ☐ | ☒ | ☐ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 6 |
| -05 | MW-BS01-04102023 MS | 04/10/23 | 11:00 | GW | EG | ☐ | ☒ | ☐ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | Matrix Spike | 6 |
| -05 | MW-BS01-04102023 MSD | 04/10/23 | 11:00 | GW | EG | ☐ | ☒ | ☐ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | Matrix Spike Dup | 6 |
| -06 | TRIP BLANK | 03/22 | – | – | CM | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 2 |
| | Container Type | P | P | P | V | A | P | P | P | P | P | - | - | | |
| | Preservative | A | D | D | B | A | D | C | A | C | C | - | - | | |

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| Natalie Debus | 04/10/23 1650 | | 4/10/23 1650 |
| | 4/10/23 1730 | | 4/10/23 1730 |

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

FORM NO: 01-01(I)
(rev. 5-JAN-12)

# CHAIN OF CUSTODY

PAGE 2 OF 2

ALPHA ANALYTICAL — Westborough Division

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 4/10/23

ALPHA Job #: L2318972

## Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 3252E1

Project Manager: Todd Majer

ALPHA Quote #:

## Client Information

Client: de maximis, inc

Address: 200 Day Hill Road, Suite 200

Windsor, CT

Phone: 978-875-0635

Fax:

Email: tmajer@demaximis.com

☐ These samples have been Previously analyzed by Alpha

## Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

## Report Information — Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

## Billing Information

☒ Same as Client info PO #: 3252E1

## Regulatory Requirements/Report Limits

State/Fed Program: Criteria:

## MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact tmajer@demaximis.com

Level IV Report
I.D = Isotope Dilution

## ANALYSIS

SAMPLE HANDLING
*Filtration*
☐ Done ☐ Not Needed ☐ Lab to do
*Preservation*
☐ Lab to do
*(Please specify below)*

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler's Initials | NO3-/NO2-(SM4500NO3 353.2) | Total P (SM 4500P) | Dissolved P(SM4500P) | VOCs (8260C) | 1,4 Dioxane (8270 SIM w/ I.D.) | Ammonia (SM4500 NH3-BH) | Boron (6010) | Total Anions (SO4;CL-, F-)(300) | Cations (Na,Mg, K) (6010) | Total Suspended Solids (SM 2540D) | Hardness (6020B) | Total Organic Carbon (SM 5310) | Sample Specific Comments | TOTAL # BOTTLES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18972-07 | MW-SD24-04102023 | 04/10/23 | 12:30 | GW | PB | ☒ | ☒ | ☒ | ☐ | ☒ | ☒ | ☒ | ☒ | ☒ | ☐ | ☐ | ☐ | | 5 |
| -08 | MW-SD24-04102023 DUP | 04/10/23 | 12:30 | GW | PB | ☒ | ☒ | ☒ | ☐ | ☒ | ☒ | ☒ | ☒ | ☒ | ☐ | ☐ | ☐ | Field Dup | 6 |
| -09 | MW-SD62A-04102023 | 04/10/23 | 13:15 | GW | EB | ☒ | ☒ | ☒ | ☒ | ☐ | ☒ | ☒ | ☒ | ☒ | ☐ | ☐ | ☐ | | 7 |
| -10 | EQ-BLANK-04102023 | 04/10/23 | 15:20 | GW | GD | ☒ | ☒ | ☐ | ☒ | ☒ | ☒ | ☒ | ☒ | ☒ | ☒ | ☒ | ☒ | | 12 |
| -11 | MW-BS14-04102023 | 04/10/23 | 14:35 | GW | KG | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 2 |
| -12 | MW-SD61-04102023 | 04/10/23 | 15:10 | GW | EB | ☒ | ☒ | ☒ | ☒ | ☐ | ☒ | ☒ | ☒ | ☒ | ☐ | ☐ | ☐ | | 7 |
| -13 | MW-BS15-04102023 | 04/10/23 | 15:50 | GW | DAP | ☐ | ☐ | ☐ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 5 |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| | | | | | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Container Type | P | P | P | V | A | P | P | P | P | P | - | - | | |
| Preservative | A | D | D | B | A | D | C | A | C | C | - | - | | |

PLEASE ANSWER QUESTIONS ABOVE!

**IS YOUR PROJECT MA MCP or CT RCP?**

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| [signature] | 04/10/23 1605 | [signature] | 4/10/23 1605 |
| [signature] | 4/10/23 1700 | [signature] | 4/10/23 1730 |

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

FORM NO. 01-01(I) (rev. 9-JAN-13)

# CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 4/11/23

ALPHA Job #: L2319253


Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193

Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288


## Client Information

Client: de maximis, inc

Address: 200 Day Hill Road, Suite 200

Windsor, CT

Phone: 978-875-0635

Fax:

Email: tmajer@demaximis.com

☐ These samples have been Previously analyzed by Alpha

## Project Information

Project Name: Nuclear Metals

Project Location: Concord, MA

Project #: 3252E1

Project Manager: Todd Majer

ALPHA Quote #:

## Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Other Project Specific Requirements/Comments/Detection Limits:

For sample issues or questions, please contact tmajer@demaximis.com

Level IV Report
I.D = Isotope Dilution

## Report Information – Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

## Billing Information

☒ Same as Client info PO #: 3252E1

## Regulatory Requirements/Report Limits

State/Fed Program | Criteria

## MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

## ANALYSIS

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler's Initials | NO3-/NO2-(SM4500NO3 353.2) | Total P (SM 4500P) | Dissolved P(SM4500P) | VOCs (8260C) | 1,4 Dioxane (8270 SIM w/ I.D.) | Ammonia (SM4500 NH3-BH) | Boron (6010) | Total Anions (SO4;CL-, F-)(300) | Cations (Na,Mg, K) (6010) | Alkalinity (Bicarb/Carb)(SIM 2320) | | | Sample Specific Comments | TOTAL # BOTTLES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19253 01 | HB-13-04112023 | 04/11/23 | 09:00 | GW | EB | ☒ | ☒ | ☒ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 8 |
| 02 | HB-13-04112023 DUP | 04/11/23 | 09:00 | GW | EB | ☒ | ☒ | ☒ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | Field Duplicate | 8 |
| 03 | TRIP BLANK | 03/22 | -- | -- | CM | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 2 |
| 04 | MW-BS51-04112023 | 04/11/23 | 09:35 | GW | DAP | ☐ | ☐ | ☐ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 5 |
| 1 | MW-BS51-04112023 MS | 04/11/23 | 09:35 | GW | DAP | ☐ | ☐ | ☐ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | Matrix Spike | |
| 1 | MW-BS51-04112023 MSD | 04/11/23 | 09:35 | GW | DAP | ☐ | ☐ | ☐ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | Matrix Spike Dup | 5 |
| 05 | HBPZ-2R-04112023 | 04/11/23 | 11:30 | GW | EB | ☒ | ☒ | ☒ | ☐ | ☐ | ☒ | ☒ | ☒ | ☒ | ☐ | ☐ | ☐ | | 4 |
| 06 | MW-BS7-2-04112023 | 04/11/23 | 12:00 | GW | PB | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | ☐ | ☐ | ☒ | ☐ | ☐ | | 3 |
| 07 | GZW-10-2-04112023 | 04/11/23 | 12:25 | GW | EG | ☐ | ☐ | ☐ | ☒ | ☒ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | | 5 |
| 08 | EQ-BLANK-04112023 | 04/11/23 | 14:00 | GW | GD | ☒ | ☒ | ☐ | ☒ | ☒ | ☒ | ☒ | ☒ | ☒ | ☒ | ☐ | ☐ | | 8 |
| | | | | | Container Type | P | P | P | V | A | P | P | P | P | P | - | - | | |
| | | | | | Preservative | A | D | D | B | A | D | C | A | C | C | - | - | | |

SAMPLE HANDLING

*Filtration*
☐ Done
☐ Not Needed
☐ Lab to do

*Preservation*
☐ Lab to do

*(Please specify below)*

PLEASE ANSWER QUESTIONS ABOVE!

**IS YOUR PROJECT MA MCP or CT RCP?**

FORM NO: 01-01R (rev. 5-JAN-12)

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| Todd Majer | 4/11/23 1625 | Eric Woods AAL | 4/11/23 1625 |
| Eric Woods / AAL | 4/11/23 1730 | | 4/11/23 1730 |

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

Geosyntec consultants
289 Great Road, Suite 202
Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: MW-B1D13
Project Name: NM1
Project Number: BR00900
Date: 4/7/2023
Recorded By: E. Grimes
Sample ID: MW-B1D13-04072023
Duplicate ID: MW-B1D13-04072023-DUP
Weather: Sunny, 50s

Well Diameter: 2" Intake Depth: ~190'
Total Depth of Well: 194'
Initial Depth to Water: 47.26' Time: 1242
Casing Volume:
Depth to Water after Purging: 48.30 Time: 1440
Method of Purging: Bladder pump
Method of Sampling: Low Flow
Multi-meter ID: 22H103077 Turbid ID: 22074265

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume (L) or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1246 | Begin purge @ | 200 mLpm | | | | | | | | |
| 1251 | 47.62 | 200 | 1 | 12.2 | 8.21 | 630 | 8.39 | 9.0 | 8.68 | |
| 1301 | 47.73 | 200 | 5 | 11.6 | 7.83 | 680 | 0.95 | -78.6 | 5.13 | |
| 1316 | 47.72 | 200 | 6 | 11.4 | 7.81 | 681 | 0.60 | -91.0 | 1.50 | |
| 1321 | 47.76 | 200 | 7 | 11.2 | 7.79 | 678 | 0.37 | -101.0 | 0.68 | |
| 1326 | 47.81 | 200 | 8 | 11.1 | 7.79 | 680 | 0.18 | -107.1 | 1.08 | |
| 1331 | 47.92 | 200 | 9 | 11.1 | 7.77 | 678 | 0.15 | -111.2 | 1.26 | |
| 1336 | 47.99 | 200 | 10 | 11.0 | 7.78 | 683 | 0.12 | -116.4 | 2.10 | |
| 1341 | 48.03 | 200 | 11 | 10.9 | 7.77 | 699 | 0.10 | -126.4 | 1.90 | |
| 1346 | 48.03 | 200 | 12 | 10.9 | 7.76 | 712 | 0.10 | -128.0 | 0.30 | change tank |
| 1356 | 47.73 | 200 | 13 | 11.9 | 7.74 | 715 | 0.09 | -117.2 | 1.56 | |
| 1401 | 47.80 | 200 | 14 | 11.1 | 7.74 | 720 | 0.17 | -115.0 | 1.30 | |
| 1406 | 47.82 | 200 | 15 | 11.1 | 7.74 | 724 | 0.18 | -111.5 | 0.60 | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4-dioxane | 1411 | amber | 2x 250 mL | None |
| tot + diss metals | 1411 | plastic | 2x 500 mL | $HNO_3$ |
| tot. phos | 1411 | plastic | 250 mL | $H_2SO_4$ |
| alkalinity | 1411 | plastic | 250 mL | None |
| + Duplicate | | | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

- used ~ 2500 psi of nitrogen
- need to pump at min ~80 psi to produce flow
- collect duplicate

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

Geosyntec consultants
289 Great Road, Suite 202
Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: MW-SD60
Project Name: NMI
Project Number: B0090C
Date: 04/07/23
Recorded By: S. Conway
Sample ID: MW-SD60-04072023
Duplicate ID: —
Weather: 50s, sunny, very windy

Well Diameter: 2" Intake Depth: —
Total Depth of Well: 79'
Initial Depth to Water: 50.63' Time: 1302
Casing Volume: —
Depth to Water after Purging: 50.64' Time: 1417
Method of Purging: Bladder pump
Method of Sampling: Low flow
Multi-meter ID: 17E101955 Turbid ID: 21073394

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume ① or gals | Temp °F or ② | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1315 | Begin purging @ | | | | | | | | | |
| 1325 | 50.75 | 250 | | 250 mLpm | | | | | | |
| 1330 | 50.76 | ↓ | | 10.2 | 6.11 | 368.1 | 8.57 | 126.0 | 1.90 | |
| 1335 | 50.77 | | | 10.1 | 5.98 | 368.7 | 8.12 | 145.6 | 1.66 | |
| 1340 | 50.75 | | | 10.1 | 5.95 | 368.8 | 7.92 | 159.7 | 3.14 | |
| 1345 | 50.76 | | | 10.1 | 5.93 | 368.6 | 7.83 | 166.3 | 2.65 | |
| 1350 | 50.75 | ↓ | ~8.75 | 10.0 | 5.92 | 368.7 | 7.76 | 170.5 | 2.28 | |
| 1400 | Collect samples | | | 10.1 | 5.92 | 368.2 | 7.71 | 172.8 | 1.59 | |
| | | | | | | (SC) | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| Tot. + Diss. Metals | 1400 | Plastic | 2 x 500 mL | $HNO_3$ |
| Diss. Organic/Inorg. Carbon | ↓ | Amber jar | 2 x 250 mL | $H_2SO_4$ |
| VOCs | | Amber vial | 3 x 40 mL | HCl |
| $NH_3$ / TPHOS | | Plastic | 500 mL | $H_2SO_4$ |
| SPHOS | | Plastic | 250 mL | $H_2SO_4$ |
| Total Metals | | Plastic | 250 mL | $HNO_3$ |
| $SO_4$/Cl/$NO_3$/$NO_2$ | | Plastic | 250 mL | None |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

Faulty water level meter (± 0.15 ft)

(SC)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

Page 1 of 2

Geosyntec consultants
289 Great Road, Suite 202
Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: MW-560
Project Name: NMI
Project Number: BR0090C
Date: 4/7/23
Recorded By: S. Conway
Sample ID: MW-560-04072023
Duplicate ID: —
Weather: 50s, sunny, windy

Well Diameter: 2" Intake Depth: —
Total Depth of Well: 63'
Initial Depth to Water: 50.86' Time: 1004
Casing Volume: —
Depth to Water after Purging: 50.87' Time: 1202
Method of Purging: Bladder pump
Method of Sampling: Low flow
Multi-meter ID: 17E101955 Turbid ID: 21073394

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume (L) or gals | Temp °F or (°C) | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1015 | Begin | purging @ | | 200 | mLpm | | | | | |
| 1025 | 50.93 | 200 | | 10.7 | 5.90 | 333.2 | 7.58 | 101.9 | 156 | |
| 1030 | 50.93 | | | 10.6 | 5.85 | 332.7 | 7.11 | 106.9 | 119 | |
| 1035 | 50.94 | | | 10.5 | 5.87 | 332.5 | 6.44 | 97.1 | 67.2 | |
| 1040 | 50.93 | | | 10.5 | 5.87 | 333.2 | 6.15 | 96.4 | 43.7 | |
| 1045 | 50.94 | | | 10.5 | 5.88 | 334.1 | 5.95 | 93.4 | 41.0 | |
| 1050 | 50.93 | | | 10.5 | 5.89 | 335.8 | 5.84 | 92.1 | 25.2 | |
| 1055 | 50.94 | | | 10.5 | 5.89 | 337.3 | 5.82 | 92.1 | 19.0 | |
| 1100 | 50.94 | | | 10.5 | 5.89 | 339.1 | 5.71 | 92.6 | 14.9 | |
| 1105 | 50.93 | | | 10.5 | 5.90 | 342.1 | 5.50 | 91.1 | 11.1 | |
| 1110 | 50.92 | | | 10.4 | 5.91 | 343.9 | 5.47 | 90.8 | 10.0 | |
| 1115 | 50.94 | ↓ | | 10.4 | 5.91 | 344.6 | 5.50 | 90.0 | 7.36 | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| $SO_4$/Cl/$NO_3$/$NO_2$ | 1135 | Plastic | 250mL | None |
| Total Metals | ↓ | Plastic | 250 mL | $HNO_3$ |
| Tot+Soluble Phosphorus | | Plastic | 500/250 mL | $H_2SO_4$ |
| VOCs | | Amber vial | 3x40mL | HCl |
| Tot.+Diss. Metals | | Plastic | 2x500mL | $HNO_3$ |
| Diss. Organic/Inorganic Carbon | | Amber Jar | 2x250mL | $H_2SO_4$ |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

Faulty water level meter (± 0.15 ft)
Purge water orange

SC

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

Page 2 of 2

Geosyntec consultants
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Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: MW-S60
Project Name:
Project Number:
Date: 4/7/23
Recorded By:
Sample ID:
Duplicate ID:
Weather:

Well Diameter: Intake Depth:
Total Depth of Well:
Initial Depth to Water: Time:
Casing Volume:
Depth to Water after Purging: Time:
Method of Purging:
Method of Sampling:
Multi-meter ID: Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume (L) or gals | Temp °F or (C) | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1120 | 50.93 | 200 | | 10.5 | 5.92 | 346.5 | 5.20 | 88.3 | 7.01 | |
| 1125 | 50.92 | ↓ | ~14 | 10.4 | 5.93 | 347.9 | 5.23 | 89.5 | 7.32 | |
| 1135 | Collect samples | | | | | | | | | |
| | | | | (8) | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Well ID: MW BS32
Project Name: NM1 RDRA
Project Number: 2521t
Date: 4/7/23
Recorded By: DAP
Sample ID: MW-BS32-04072023
Duplicate ID: —
Weather: 50, windy sunny

Well Diameter: 2"
Total Depth of Well: 102
Initial Depth to Water: 5.45
Casing Volume:
Depth to Water after Purging: 5.75
Method of Purging: Low Flow
Method of Sampling: Bladder
Multi-meter ID: 503907

Intake Depth: 95
Time: 12:25
Time: 13:35
Turbid ID: —

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 12:30 | 5.72 | 50 | 0 | 20.23 | 6.78 | 0.06 | 9.28 | 83.2 | 60.35 | |
| 12:35 | 5.72 | 50 | .25 | 14.00 | 7.29 | 412.96 | 6.61 | -21.2 | 2.20 | |
| 12:40 | 5.72 | 50 | .50 | 12.45 | 7.14 | 410.24 | 2.98 | -71.7 | 60.74 | |
| 12:45 | 5.72 | 50 | .75 | 12.56 | 7.13 | 414.74 | 2.38 | -69.7 | 42.27 | |
| 12:50 | 5.72 | 50 | 1.00 | 12.55 | 7.14 | 415.25 | 1.78 | -72.2 | 64.0 | |
| 12:55 | 5.72 | 50 | 1.25 | 12.36 | 7.15 | 417.95 | 1.18 | -74.4 | 37.92 | |
| 13:00 | 5.72 | 50 | 1.50 | 12.18 | 7.17 | 417.69 | 1.23 | -76.2 | 24.81 | |
| 13:05 | 5.72 | 50 | 1.75 | 11.62 | 7.18 | 417.19 | 1.05 | -77.2 | 35.41 | |
| 13:10 | 5.72 | 50 | 2.00 | 11.50 | 7.18 | 417.14 | 0.95 | -77.9 | 15.4 | |
| 13:15 | 5.72 | 50 | 2.25 | 11.38 | 7.18 | 415.98 | 0.84 | -78.8 | 14.7 | |
| 13:20 | 5.72 | 50 | 2.50 | 11.17 | 7.19 | 416.03 | 0.79 | -79.4 | 14.9 | |
| 13:25 | 5.72 | 50 | 2.75 | 11.84 | 7.19 | 415.02 | 0.72 | -80.0 | 14.6 | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4 Dioxane | 13:30 | Glass Amber | .25 | NONE |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

page 1 of 1

Geosyntec
consultants
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Acton, Massachusetts, 01720
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Well ID: MW-8A
Project Name: NMI
Project Number:
Date: 4.7.23
Recorded By: P Burton
Sample ID: MW-8A-04072023
Duplicate ID:
Weather: 40°F Extreme Wind

Well Diameter: 2
Total Depth of Well: 20
Initial Depth to Water: 57.11
Casing Volume:
Depth to Water after Purging:
Method of Purging: bladder pump
Method of Sampling: low flow
Multi-meter ID:

Intake Depth: 65
Time: 11:47
Time:
Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1220 | 57.38 | 150 | | 12.9 | 6.30 | 211.8 | 3.23 | 100.9 | 15.9 | |
| 1225 | 57.38 | | | 12.7 | 6.21 | 227.4 | 1.60 | 105.4 | 15.9 | |
| 1230 | 57.38 | | | 12.2 | 6.21 | 220.0 | 1.48 | 107.1 | 8.73 | |
| 1235 | 57.38 | | | 12.0 | 6.19 | 207.5 | 2.09 | 110.1 | 12.1 | |
| 1240 | 57.38 | | | 12.0 | 6.20 | 208.0 | 2.55 | 111.5 | 8.00 | |
| 1245 | 57.38 | | | 11.8 | 6.21 | 215.3 | 2.90 | 112.5 | 6.08 | |
| 1250 | 57.38 | | | 11.9 | 6.22 | 219.3 | 3.36 | 112.4 | 5.18 | |
| 1255 | 57.38 | | | 12.7 | 6.24 | 222.5 | 3.71 | 111.0 | 4.95 | |
| 1300 | 57.38 | | | 11.6 | 6.26 | 226.8 | 3.91 | 107.6 | 4.57 | |
| 1305 | 57.38 | | | 11.5 | 6.29 | 231.8 | 3.89 | 101.0 | 3.66 | |
| 1310 | 57.38 | | | 11.4 | 6.32 | 234.3 | 4.23 | 93.3 | 2.93 | |
| 1315 | 57.38 | | | 11.3 | 6.33 | 238.4 | 4.13 | 87.8 | 2.76 | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4 Dioxane | 1320 | Amber | 2x250mL | None |
| Tot/Diss Metals | | plastic | 2x500mL | Nitric |
| Tot/Diss phos, Ammonia | | plastic | 1x250, 1x500 | ~~H2SO4~~ Sulfuric |
| DIC / DOC | | Amber | 2x250 | Sulfuric |
| Anions / Nitrite / Nitrate | | plastic | 1x250 | None |
| Cations | | plastic | 1x250 | Nitric |
| Boron, Molybdenum | | plastic | 1x250 | Nitric |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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(978)263-9588 Fax(978)263-9594

Well ID: MW-BS13
Project Name: NMI
Project Number: BR0090D
Date: 4/7/2023
Recorded By: E. Grimes
Sample ID: MW-BS13-04072023
Duplicate ID:
Weather: Sunny, 50s

Well Diameter: 2" Intake Depth: ~124
Total Depth of Well: 127.2'
Initial Depth to Water: 47.05 Time: 1030
Casing Volume:
Depth to Water after Purging: 59.98 Time: 1135
Method of Purging: Bladder Pump
Method of Sampling: Low Flow
Multi-meter ID: 22H103077 Turbid ID: 22074265

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume (L) or gals | Temp °F or (°C) | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1031 | Begin purge | | | | | | | | | |
| 1036 | 48.90 | 150 | | 11.8 | 7.95 | 890 | 4.01 | -71.9 | 8.64 | |
| 1041 | 49.80 | 150 | | 11.6 | 7.87 | 894 | 2.51 | -93.8 | 6.46 | |
| 1046 | 51.18 | 150 | | 11.4 | 7.84 | 892 | 1.27 | -117.7 | 4.79 | |
| 1049 | change tank (~400 psi) | | | | | | | | | |
| 1056 | 52.32 | 150 | | 11.4 | 7.84 | 885 | 0.34 | -131.9 | 4.19 | |
| 1101 | 53.75 | 150 | | 11.2 | 7.85 | 877 | 0.29 | -140.8 | 0.54 | |
| 1106 | 55.52 | 150 | | 11.1 | 7.91 | 865 | 0.22 | -151.0 | 2.23 | |
| 1111 | 57.12 | 150 | | 11.0 | 7.88 | 863 | 0.20 | -156.8 | 1.50 | |
| 1116 | 58.84 | 150 | | 11.1 | 7.89 | 863 | 0.17 | -160.0 | 1.30 | |
| 1121 | Collect sample | | | | | | | | | |
| | | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4-dioxane | 1121 | amber | 2x250 mL | None |
| tot. + dis. metals | 1121 | plastic | 2x500 mL | $HNO_3$ |
| alkalinity | 1121 | plastic | 250 mL | None |
| | | | | |
| | | | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

use 400 psi from small tank + 500 psi from big tank (1/2 tank)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: MW BM15
Project Name: NMI KORA
Project Number: 25214
Date: 4/7/23
Recorded By: DAP
Sample ID: MW-BM15-04072023
Duplicate ID: —
Weather: 50 sunny

Well Diameter: 2"
Total Depth of Well: 157'
Initial Depth to Water: ~~5.66~~ 8.54 Time: 905
Casing Volume:
Depth to Water after Purging: 8.65 Time: 10:10
Method of Purging: Low Flow
Method of Sampling: Bladder
Multi-meter ID: 503907 Turbid ID: —
Intake Depth: 142'

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 9:25 | 8.50 | 50 | .25 | 11.72 | 9.14 | 461.21 | 9.69 | -5.9 | 3.41 | |
| 9:30 | 8.60 | 50 | .50 | 10.57 | 8.02 | 430.65 | 3.31 | -15.6 | 2.17 | |
| 9:35 | 8.60 | 50 | .75 | 10.38 | 7.69 | 408.14 | 2.10 | -47.7 | 5.70 | |
| 9:40 | 8.60 | 50 | 1.00 | 10.57 | 7.50 | 395.67 | 1.49 | -58.0 | 6.24 | |
| 9:45 | 8.60 | 50 | 1.25 | 10.74 | 7.43 | 391.07 | 1.01 | -64.4 | 6.28 | |
| 9:50 | 8.60 | 50 | 1.50 | 10.51 | 7.39 | 389.46 | 1.09 | -63.8 | 4.91 | |
| 9:55 | 8.60 | 50 | 1.75 | 10.49 | 7.36 | 387.68 | 1.03 | -68.5 | 4.28 | |
| 10:00 | 8.60 | 50 | 2.00 | 10.50 | 7.34 | 387.31 | 1.00 | -72.0 | 3.98 | |
| 10:05 | 8.60 | 50 | 2.25 | 10.70 | 7.33 | 386.77 | 0.97 | -73.5 | 3.61 | |
| 10:10 | SAMPLED | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4 Dioxane | 10:10 | Glass Amber | .25 | NONE |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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(978)263-9588 Fax(978)263-9594

Well ID: SW 102
Project Name: NMI RDRM
Project Number: 2524
Date: 4/6/23
Recorded By: DAP
Sample ID: ~~MW~~ SW102-04062023
Duplicate ID: —
Weather: 70 overcast

Well Diameter: —
Total Depth of Well: —
Initial Depth to Water: — Time: —
Casing Volume: —
Depth to Water after Purging: — Time: —
Method of Purging: —
Method of Sampling: —
Multi-meter ID: — Turbid ID: —
Intake Depth: —

| Time | Depth to water | Pumping rate | Cumulative volume | Temp | pH | Specific conductance | D.O | ORP | Turbidity | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| | (ft btoc) | mLpm | L or gals | °F or °C | (units) | (µS / cm) | (mg / L) | (mV) | (NTU) | odor, color, sediment load, well condition, presence of product |
| | | | | | | | | | | |
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| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4 Dioxane | 14:10 | Glass Amber | .25 | None |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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(978)263-9588 Fax(978)263-9594

Well ID: SW 103
Project Name: NM RORA
Project Number: 252 H
Date: 4/6/2023
Recorded By: DAP
Sample ID: SW 103 - 04062023
Duplicate ID: —
Weather: 70 overcast

Well Diameter: — Intake Depth: —
Total Depth of Well: —
Initial Depth to Water: — Time: —
Casing Volume: —
Depth to Water after Purging: — Time: —
Method of Purging: —
Method of Sampling: —
Multi-meter ID: — Turbid ID: —

| Time | Depth to water | Pumping rate | Cumulative volume | Temp | pH | Specific conductance | D.O | ORP | Turbidity | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| | (ft btoc) | mLpm | L or gals | °F or °C | (units) | (µS / cm) | (mg / L) | (mV) | (NTU) | odor, color, sediment load, well condition, presence of product |
| | | | | | | | | | | |
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| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4 Dioxane | 14:00 | Glass Amber | .25 | NONE |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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(978)263-9588 Fax(978)263-9594

Well ID: MW-SD26 | Well Diameter: 2" | Intake Depth: —
Project Name: NMI | Total Depth of Well: 90'
Project Number: BR0090C | Initial Depth to Water: 5.10' | Time: 0748
Date: 4/7/23 | Casing Volume: ~
Recorded By: S Conway | Depth to Water after Purging: 5.15' | Time: 0854
Sample ID: MW-SD26-04072023 | Method of Purging: Bladder pump
Duplicate ID: — | Method of Sampling: Low flow
Weather: 56°, sunny | Multi-meter ID: 17E101955 | Turbid ID: 21073394

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume (L) or gals | Temp °F or (C) | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 0807 | Begin purging @ | 125 | | 125 mLpm | | | | | | |
| 0817 | 5.20 | | | 8.9 | 6.14 | 344.2 | 8.56 | 105.6 | 13.1 | |
| 0822 | 5.23 | | | 9.0 | 6.05 | 342.9 | 8.48 | 124.5 | 10.6 | |
| 0827 | 5.23 | | | 9.0 | 6.01 | 343.2 | 8.40 | 137.4 | 3.99 | |
| 0832 | 5.23 | | | 9.2 | 6.01 | 348.7 | 8.34 | 140.4 | 3.15 | |
| 0837 | 5.24 | | | 9.8 | 6.00 | 344.3 | 8.37 | 144.1 | 2.30 | |
| 0842 | Collect samples | | | | | | | | | |
| | | | | | (SC) | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4-Dioxane | 0842 | Amber Jar | 2x250mL | None |
| | | | | |
| | | | | |
| | | (SC) | | |
| | | | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

Faulty water level meter (± 0.1 ft)

(SC)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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(978)263-9588 Fax(978)263-9594

Well ID: MW-BS54
Project Name: NMI
Project Number: BR00900
Date: 4/7/2023
Recorded By: E. Grimes
Sample ID: MW-BS54-04072023
Duplicate ID: —
Weather: clear, 50s

Well Diameter: 2" Intake Depth: ~183
Total Depth of Well: 186'
Initial Depth to Water: 38.37 Time: 755
Casing Volume: —
Depth to Water after Purging: 38.52 Time: 947
Method of Purging: Bladder Pump
Method of Sampling: Low Flow
Multi-meter ID: 22H103077 Turbid ID: 22074265

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume (L) or gals | Temp °F or (°C) | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 800 | start pumping | | | | | | | | | |
| 805 | — | 250 | produce water | | | | | | | |
| 810 | 38.67 | 250 | 1.25 | 9.5 | 8.49 | 447.5 | 3.47 | -37.2 | 15.8 | |
| 815 | 38.85 | 250 | 2.50 | 9.5 | 8.58 | 461.7 | 1.33 | -73.5 | 10.2 | |
| 825 | 38.40 | 250 | 5.00 | 9.0 | 8.77 | 467 | 0.79 | -100.0 | 9.62 | change tank → ~1/2 full when start |
| 830 | 38.40 | 250 | 6.25 | 9.2 | 8.75 | 464 | 0.59 | -100.0 | 9.47 | |
| 835 | 38.42 | 250 | 7.50 | 9.3 | 8.71 | 468 | 0.53 | -97.3 | 9.89 | |
| 840 | 38.50 | 250 | 8.75 | 9.3 | 8.52 | 470 | 0.49 | -113.7 | 7.87 | |
| 850 | 38.72 | 250 | 11.25 | 9.4 | 8.35 | 470 | 0.31 | -165.5 | 5.07 | |
| 855 | 38.70 | 250 | 12.50 | 9.3 | 8.35 | 471 | 0.28 | -167.4 | 5.08 | |
| 900 | 38.60 | 250 | 13.75 | 9.3 | 8.33 | 471 | 0.27 | -168.3 | 5.53 | |
| 905 | 38.57 | 250 | 15.00 | 9.4 | 8.28 | 471 | 0.27 | -165.4 | 5.42 | change tank |
| 910 | 38.50 | 250 | 16.25 | 9.4 | 8.22 | 472 | 0.25 | -161.1 | 5.53 | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| VOCs | 930 | vial | 3 x 40mL | HCl |
| 1,4-dioxane | 930 | amber | 2 x 250 mL | None |
| tot. + diss. metals | 930 | plastic | 2x500 mL | $HNO_3$ |
| | | | | |
| | | | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

- used ~2 60 CY tanks (small tanks)
- pump at min 80 psi to produce water

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

Geosyntec consultants
289 Great Road, Suite 202
Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: MW-B554
Project Name:
Project Number:
Date:
Recorded By: see page 1
Sample ID:
Duplicate ID:
Weather:

Well Diameter:
Total Depth of Well:
Initial Depth to Water:
Casing Volume:
Depth to Water after Purging:
Method of Purging:
Method of Sampling:
Multi-meter ID:

Intake Depth:
Time:
Time:
Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume (L) or gals | Temp °F or (°C) | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 915 | 38.50 | 250 | 17.50 | 9.1 | 8.21 | 472 | 0.26 | -159.7 | 4.72 | |
| 920 | 38.40 | 250 | 18.75 | 9.3 | 8.19 | 469 | 0.27 | -157.0 | 4.83 | |
| 925 | 38.43 | 250 | 20.00 | 9.4 | 8.19 | 468 | 0.31 | -157.9 | 4.72 | |
| 930 | collect sample | | | | | | | | | |
| | | | | | (pH) | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | see page 1 | | | |
| | | | | |
| | | (VOC) | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Acton, Massachusetts, 01720
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Well ID: MW-B550 | Well Diameter: 2 | Intake Depth: 68
Project Name: NM1 | Total Depth of Well: 73.5
Project Number: | Initial Depth to Water: 25.04 | Time: 0820
Date: 4-7-23 | Casing Volume:
Recorded By: PBurton | Depth to Water after Purging: | Time:
Sample ID: MW-B550-04072023 | Method of Purging:
Duplicate ID: | Method of Sampling:
Weather: Clear 47° | Multi-meter ID: | Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 0850 | 25.10 | | | 10.4 | 8.13 | 166.4 | 4.45 | 450 | 40.9 | |
| 0855 | 25.10 | | | 10.2 | 8.01 | 159.4 | 2.10 | 475 | 50.3 | |
| 0900 | 25.10 | | | 10.0 | 8.00 | 159.3 | 1.96 | 48.2 | 51.5 | |
| 0905 | 25.10 | | | 9.9 | 8.06 | 159.3 | 1.30 | 47.1 | 41.6 | |
| 0910 | 25.10 | | | 9.9 | 8.07 | 159.1 | 1.19 | 46.8 | 40.4 | |
| 0915 | 25.1 | | | 10.0 | 8.05 | 159.0 | 1.09 | 46.8 | 37.3 | |
| 0920 | 25.1 | | | 10.1 | 8.04 | 159.5 | 0.99 | 46.6 | 35.5 | |
| 0925 | 25.1 | | | 10.0 | 8.03 | 159.5 | 0.92 | 46.4 | 33.9 | |
| 0930 | 25.1 | | | 10.1 | 8.04 | 159.5 | 0.90 | 46.0 | 35.9 | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| | | 0935 | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Well ID: MW BS 15
Project Name: NMIRDRA
Project Number: 2524
Date: 4/10/23
Recorded By: DAP
Sample ID: MW-BS15-04102023
Duplicate ID: —
Weather: Warm

Well Diameter: 2"
Total Depth of Well: 110
Initial Depth to Water: 6.24 Time: 13:45
Casing Volume: —
Depth to Water after Purging: 10.75 Time: 16:35
Method of Purging: Low Flow
Method of Sampling: Bladder
Multi-meter ID: 503907 Turbid ID: —
Intake Depth: 105

| Time | Depth to water | Pumping rate | Cumulative volume | Temp | pH | Specific conductance | D.O | ORP | Turbidity | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| | (ft btoc) | mLpm | L or gals | °F or °C | (units) | (µS / cm) | (mg / L) | (mV) | (NTU) | odor, color, sediment load, well condition, presence of product |
| 13:50 | 6.58 | 50 | 0 | 16.03 | 6.83 | 0.05 | 8.04 | 34.0 | 10.03 | |
| 13:55 | 7.05 | | .25 | 15.89 | 7.70 | 785.22 | 7.85 | 18.2 | 2.11 | |
| 14:00 | 7.51 | | .50 | 14.75 | 7.66 | 809.22 | 4.49 | 34.9 | 4.02 | |
| 14:05 | 7.94 | | .75 | 15.15 | 7.63 | 804.64 | 3.81 | 39.6 | 5.78 | |
| 14:10 | 8.36 | | 1.0 | 14.89 | 7.63 | 798.40 | 3.36 | 42.3 | 4.93 | |
| 14:15 | 8.64 | | 1.25 | 15.04 | 7.64 | 783.33 | 3.09 | 42.9 | 4.85 | |
| 14:20 | 8.85 | | 1.50 | 14.96 | 7.65 | 776.71 | 2.94 | 43.7 | 5.79 | |
| 14:25 | 9.05 | | 1.75 | 15.34 | 7.67 | 775.22 | 2.81 | 43.9 | 7.49 | |
| 14:30 | 9.24 | | 2.00 | 15.53 | 7.70 | 763.82 | 2.71 | 43.3 | 5.59 | |
| 14:35 | 9.32 | | 2.25 | 15.21 | 7.73 | 759.75 | 2.69 | 42.8 | 6.94 | |
| 14:40 | 9.42 | | 2.50 | 14.75 | 7.76 | 739.58 | 2.66 | 43.4 | 8.68 | |
| 14:45 | 9.55 | V | 2.75 | 14.67 | 7.78 | 747.09 | 2.62 | 44.3 | 7.21 | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4 dioxane | 15:50 | | | |
| total metals | 15:50 | | | |
| dissolved metals | 15:50 | | | |
| VOCs | 15:50 | | | |
| | | | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Well ID: BS 15
Project Name: NMI RDRA
Project Number: 2521
Date: 4/10/2023
Recorded By: DAP
Sample ID: MW-BS15-04102023
Duplicate ID: —
Weather: 50s sunny

Well Diameter: 2" Intake Depth:
Total Depth of Well:
Initial Depth to Water: 6.23 Time: 13:45
Casing Volume:
Depth to Water after Purging: 10.75 Time: 16:35
Method of Purging:
Method of Sampling:
Multi-meter ID: 503907 Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 14:50 | 9.64 | 50 | 3.0 | 14.34 | 7.79 | 745.30 | 2.60 | 45.7 | 5.49 | |
| 14:55 | 9.76 | 50 | 3.25 | 14.40 | 7.80 | 737.73 | 2.56 | 46.7 | 5.17 | |
| 15:00 | 9.84 | 50 | 3.50 | 14.32 | 7.81 | 712.74 | 2.49 | 47.0 | 5.62 | |
| 15:05 | 9.95 | 50 | 3.75 | 14.23 | 7.83 | 723.21 | 2.40 | 46.6 | 5.13 | |
| 15:10 | 10.04 | 50 | 4.00 | 14.09 | 7.84 | 720.46 | 2.30 | 46.2 | 4.84 | |
| 15:15 | 10.10 | 50 | 4.25 | 14.45 | 7.85 | 701.54 | 2.13 | 44.6 | 4.76 | |
| 15:20 | 10.13 | 50 | 4.50 | 14.29 | 7.87 | 679.05 | 2.00 | 42.6 | 4.15 | |
| 15:25 | 10.20 | 50 | 4.75 | 14.57 | 7.89 | 672.61 | 1.85 | 40.1 | 4.72 | |
| 15:30 | 10.28 | 50 | 5.00 | 14.79 | 7.91 | 657.40 | 1.71 | 37.1 | 4.27 | |
| 15:35 | 10.30 | 50 | 5.25 | 14.81 | 7.92 | 691.16 | 1.59 | 34.1 | 3.97 | |
| 15:40 | 10.34 | 50 | 4.50 | 14.88 | 7.94 | 767.05 | 1.49 | 31.0 | 4.02 | |
| 15:45 | 10.34 | 50 | 5.75 | 14.87 | 7.94 | 861.75 | 1.43 | 27.6 | 4.71 | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

page 1 of 1

Geosyntec consultants
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Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: MW-SD24 | Well Diameter: 2 | Intake Depth: 71
Project Name: NM1 | Total Depth of Well: 74
Project Number: | Initial Depth to Water: 48.83 | Time: 1136
Date: 4-10-23 | Casing Volume:
Recorded By: PBurton | Depth to Water after Purging: | Time:
Sample ID: MW-SD24-04102023 | Method of Purging: ~~TP~~ (SP) Bladder Pump
Duplicate ID: MW-SD24-04102023DUP | Method of Sampling: LF
Weather: Clear 57° | Multi-meter ID: 3383 | Turbid ID: 2113

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1155 | 48.80 | 100 | | 15.7 | 7.51 | 265.5 | 10.75 | 73.7 | 26.7 | |
| 1200 | 48.8 | | | 12.8 | 6.25 | 256.9 | 9.35 | 116.0 | 28.2 | |
| 1205 | 48.8 | | | 12.1 | 6.11 | 258.5 | 8.68 | 136.0 | 25.7 | |
| 1210 | 48.8 | | | 11.9 | 6.10 | 255.7 | 8.52 | 145.7 | 22.6 | |
| 1215 | 48.8 | | | 12.0 | 6.10 | 254.0 | 8.40 | 150.4 | 15.6 | |
| 1220 | 48.8 | | | 11.7 | 6.11 | 255.2 | 8.24 | 153.8 | 14.5 | |
| 1225 | 48.8 | | | 11.7 | 6.11 | 258.8 | 8.14 | 156.7 | 15.1 | |
| 1230 | Collect sample | | | | | | | | | |
| | | | | | | (SD) | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| TOC/DOC | 1230 | Amber | 2x250mL | Sulfuric |
| TPhos, NH3, SPhos | ↓ | Plastic | 1x250, 1x500 mL | Sulfuric |
| Na, Mg, K, B, Mo | | Plastic | 250mL | Nitric |
| NO2, NO3, Cl, SO4 | | Plastic | 250mL | None |
| Total/Diss Metals | | Plastic | 2x500mL | Nitric |
| 1,4 Dioxane | | Amber | 2x250mL | None |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS



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(978)263-9588 Fax(978)263-9594

Well ID: MW-S24 | Well Diameter: 2 | Intake Depth: 58.8
Project Name: NM1 | Total Depth of Well: 65
Project Number: | Initial Depth to Water: 48.98 | Time: 0852
Date: 4-10-23 | Casing Volume:
Recorded By: PBurton | Depth to Water after Purging: | Time:
Sample ID: MW-S24-04102023 | Method of Purging: Bladder Pump
Duplicate ID: — | Method of Sampling: LF
Weather: Clear 45° | Multi-meter ID: 3383 | Turbid ID: 2113

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 0915 | 49.0 | 100 | | 11.2 | 6.35 | 228.4 | 4.76 | 66.1 | 4.56 | |
| 0920 | 49.0 | 125 | | 10.8 | 6.00 | 219.1 | 1.80 | 79.4 | 2.21 | |
| 0925 | 49.0 | | | 10.8 | 5.98 | 221.0 | 2.07 | 87.3 | 1.96 | |
| 0930 | 49.0 | | | 10.8 | 5.98 | 223.4 | 2.32 | 91.5 | 2.01 | |
| 0935 | 49.0 | | | 10.7 | 5.98 | 226.9 | 2.52 | 99.2 | 1.56 | |
| 0940 | 49.0 | | | 10.7 | 5.98 | 228.0 | 2.67 | 95.8 | 1.13 | |
| 0945 | 49.0 | | | 10.8 | 5.98 | 228.4 | 2.75 | 96.2 | 1.47 | |
| 0950 | collect sample | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4-Dioxane | Amber ↔ 0950 | | 2x250mL | None |
| TOT/Diss. Metals | 0950 | Plastic | 2x500 mL | Nitric |
| TOT/Diss Phos, Ammonia | ↓ | Plastic | 1x250 mL, 1x 50mL | Sulfuric |
| DIC / DOC | | Amber | 2x250 mL | Sulfuric |
| NO2, NO3, Cl, SO4 | | Plastic | 1x250 mL | None |
| Na, Mg, K, Boron, Molybdenum | ↓ | Plastic | 1x250 mL | Nitric |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: MW-BS01 | Well Diameter: 2" | Intake Depth: ~131.
Project Name: NMI | Total Depth of Well: 134.5'
Project Number: BR00900 | Initial Depth to Water: 61.43' | Time: 932
Date: 4/10/2023 | Casing Volume:
Recorded By: E Grimes | Depth to Water after Purging: 93.40' | Time: 1150
Sample ID: MW-BS01-04102023 | Method of Purging: Bladder Pump
Duplicate ID: | Method of Sampling: Low Flow
Weather: Clear, 50-60s | Multi-meter ID: 22H103077 | Turbid ID: 22074265

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume 0 or gals | Temp °F or ℃ | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 936 | Begin purge at 200 mLpm | | | | | | | | | |
| 941 | 63.31 | 200 | 1 | 10.9 | 8.52 | 356.2 | 1.74 | -9.7 | 24.8 | |
| 951 | 64.29 | 200 | 3 | 10.5 | 8.51 | 346.9 | 0.86 | -1.5 | 10.2 | |
| 1001 | 65.38 | 200 | 5 | 10.6 | 8.65 | 341.9 | 0.75 | 1.0 | 8.30 | |
| 1011 | 66.80 | 200 | 7 | 10.7 | 8.61 | 340.7 | 0.58 | 0.0 | 8.89 | change tank (~500psi in tank) |
| 1021 | 67.40 | 200 | 9 | 11.2 | 8.60 | 340.8 | 0.50 | 0.2 | 6.18 | |
| 1031 | 68.95 | 200 | 11 | 10.9 | 8.66 | 337.4 | 0.47 | 2.8 | 5.94 | |
| 1036 | 69.85 | 200 | 12 | 10.9 | 8.70 | 336.6 | 0.43 | 2.5 | 4.83 | |
| 1041 | 71.70 | 200 | 13 | 10.9 | 8.68 | 336.0 | 0.43 | -1.6 | 5.29 | |
| 1046 | 73.25 | 200 | 14 | 10.9 | 8.68 | 335.9 | 0.34 | -2.4 | 4.72 | |
| 1051 | 75.38 | 200 | 15 | 10.9 | 8.67 | 335.2 | 0.28 | -4.1 | 3.92 | |
| 1056 | 77.05 | 200 | 16 | 10.9 | 8.69 | 335.1 | 0.25 | -5.1 | 4.29 | |

1100 collect sample

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| VOCs | 1100 | Vial | 3x 40mL | HCl |
| 1,4-dioxane | 1100 | amber | 2x 250mL | ~~$HNO_3$~~ none |
| tot. + diss metals | 1100 | plastic | 2x 500mL | $HNO_3$ |
| total phos. | 1100 | plastic | 250mL | $H_2SO_4$ |
| ~~alkalinity~~ | | ~~plastic~~ | ~~250mL~~ | none (EG) |

x3 for MS/MSD

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

Used ~ 4000 psi
pump at minimum 60 psi to produce water

Collect MS/MSD

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

Geosyntec consultants
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Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: MW-SD-01
Project Name: NMI
Project Number: BR0090D
Date: 4/10/2023
Recorded By: K Gombos
Sample ID: MW-SD01-04102023
Duplicate ID:
Weather: Sunny, 50s

Well Diameter: 2" Intake Depth: ~95'
Total Depth of Well: 100'
Initial Depth to Water: 63.95 Time: 956
Casing Volume:
Depth to Water after Purging: Time:
Method of Purging: Bladder Pump
Method of Sampling: LOW FLOW
Multi-meter ID: 226103244 Turbid ID: 19092242

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or (gals) | Temp °F or (°C) | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 900 | Begin Purge @ 200 mLpm | | | | | | | | | |
| 905 | 64.92 | 200 | | 10.4 | 5.64 | 233.6 | 7.74 | 94.6 | 202 | |
| 910 | 63.95 | | | 10.4 | 5.42 | 227.0 | 7.51 | 123.8 | 307 | |
| 915 | 63.95 | | | 10.5 | 5.43 | 224.2 | 7.48 | 130.0 | 321 | |
| 928 | 63.95 | | | 10.4 | 5.51 | 232.0 | 7.48 | 143.8 | 77.7 | |
| 934 | 63.94 | | | 10.4 | 5.51 | 246.7 | 7.32 | 148.5 | 46.6 | |
| 943 | 63.94 | | | 10.6 | 5.56 | 248.4 | 7.28 | 152.3 | 47.7 | (KG) |
| 948 | 63.95 | | | 10.7 | 5.60 | 246.4 | 7.28 | 154.5 | 52.1 | |
| 953 | 63.95 | | | 10.7 | 5.63 | 243.1 | 7.27 | 157.3 | 45.0 | |
| 958 | 63.98 | | | 10.6 | 5.66 | 242.0 | 7.31 | 159.8 | 26.2 | |
| 1003 | 63.94 | | | 10.6 | 5.66 | 240.6 | 7.38 | 162.5 | 16.4 | |
| 1008 | 63.95 | ↓ | | 10.8 | 5.67 | 238.6 | 7.20 | 165.8 | 24.2 | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| Dissolved Metals | SEE | Plastic | 1x500 mL | Nitric |
| Total Metals | PAGE | Plastic | 1x500 mL | Nitric |
| 1,4-Dioxane | | Amber Glass | 2x250 mL | None |
| TPHOS | 2 | Plastic | 1x250 mL | Sulfuric |
| | | (KG) | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

(KG)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

Geosyntec consultants
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Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: MW-SD-01 | Well Diameter: 2" | Intake Depth: ~95'
Project Name: NMA | Total Depth of Well: 100'
Project Number: B2004OD | Initial Depth to Water: 63.95 | Time: 08:56
Date: 04/10/2023 | Casing Volume:
Recorded By: K Gombos | Depth to Water after Purging: 63.94 | Time: 11:33
Sample ID: MW-SD01-04102023 | Method of Purging: Bladder Pump
Duplicate ID: | Method of Sampling: Low-Flow
Weather: Sunny, 50s | Multi-meter ID: 22G103244 | Turbid ID: 19092242

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or (gals) | ' Temp °F or (°C) | ' pH (units) | ' Specific conductance (µS / cm) | ' D.O (mg / L) | ' ORP (mV) | ' Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1013 | 63.95 | 200 | | 10.8 | 5.69 | 238.0 | 7.17 | 167.8 | 17.6 | |
| 1018 | 63.94 | | | 10.7 | 5.69 | 237.5 | 7.22 | 169.6 | 22.6 | |
| 1023 | 63.95 | | | 10.8 | 5.68 | 236.0 | 7.27 | 172.5 | 15.4 | |
| 1028 | 63.98 | | | 10.8 | 5.66 | 234.8 | 7.14 | 174.9 | 12.8 | |
| 1034 | 63.94 | | | 10.8 | 5.69 | 233.2 | 7.10 | 177.2 | 16.2 | |
| 1040 | 63.96 | | | 10.9 | 5.69 | 232.7 | 7.16 | 179.6 | 8.94 | KG |
| 1045 | 63.95 | | | 10.8 | 5.70 | 234.1 | 7.25 | 181.2 | 5.92 | |
| 1050 | 63.94 | | | 10.8 | 5.69 | 238.8 | 7.16 | 183.2 | 4.71 | |
| 1055 | 63.94 | | | 10.8 | 5.70 | 233.4 | 7.16 | 184.8 | 3.67 | |
| 1100 | 63.95 | ↓ | 4.25 | 11.0 | 5.70 | 232.5 | 7.21 | 185.1 | 3.45 | |
| 1105 | Collected Samples | | | | | | | | | |
| | | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| Dissolved Metals | 1105 | Plastic | 1x500 mL | Nitric |
| Total Metals | | Plastic | 1x500 mL | Nitric |
| 1-4 Dioxane | | Amber glass | 2x250 mL | None |
| TPHOS | ↓ | Plastic | 1x250 mL | $H_2SO_4$ |
| | | | | |
| | | KG | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

KG

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

Geosyntec consultants
289 Great Road, Suite 202
Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: BEW-5 | Well Diameter: 6" | Intake Depth: 120'
Project Name: NMI RCRA | Total Depth of Well:
Project Number: 252H | Initial Depth to Water: 5.40 | Time: 8:50
Date: 4/10/23 | Casing Volume:
Recorded By: DAP | Depth to Water after Purging: 5.56 | Time: 11:55
Sample ID: BEW5-04102023 | Method of Purging: Low Flow
Duplicate ID: — | Method of Sampling: Bladder
Weather: 40s sunny | Multi-meter ID: 503907 | Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 8:55 | 5.48 | 100 | 0 | 15.09 | 7.94 | 2.36 | 10.24 | -11.9 | 1.73 | |
| 9:00 | 5.48 | 100 | .50 | 9.23 | 8.16 | 1000.4 | 1.24 | 37.1 | 6.57 | |
| 9:05 | 5.52 | 100 | 1.00 | 9.15 | 7.80 | 940.27 | 0.66 | -84.7 | 9.67 | |
| 9:10 | 5.52 | 100 | 1.50 | 9.32 | 7.74 | 892.74 | 0.41 | -98.4 | 6.43 | |
| 9:15 | 5.52 | 100 | 2.00 | 9.41 | 7.71 | 714.76 | 0.33 | -103.0 | 7.91 | |
| 9:20 | 5.55 | 100 | 2.50 | 9.75 | 7.69 | 623.04 | 0.26 | -107.1 | 22.2 | |
| 9:25 | 5.55 | 100 | 3.00 | 10.08 | 7.69 | 653.96 | 0.19 | -98.3 | 12.5 | |
| 9:30 | 5.55 | 100 | 3.50 | 9.99 | 7.69 | 434.02 | 0.25 | -95.7 | 7.83 | |
| 9:35 | 5.55 | 100 | 4.00 | 10.16 | 7.68 | 584.09 | 0.22 | -110.1 | 6.88 | |
| 9:40 | 5.55 | 100 | 4.50 | 10.23 | 7.67 | 912.33 | 0.21 | -116.6 | 7.88 | |
| 9:45 | 5.55 | 100 | 5.00 | 10.62 | 7.66 | 413.46 | 0.21 | -116.7 | 7.19 | |
| 9:50 | 5.55 | 100 | 5.50 | 10.95 | 7.65 | 289.13 | 0.19 | -117.9 | 6.33 | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4 Dioxane | 10:55 | Glass Amber | .25 | None |
| Total Metals | | Plastic | .25 | Nitric Acid |
| F-300S04 Cl NO3 NO4 | | Plastic | .25 | None |
| TSS-2440 | | Plastic | 1 | None |
| 8260 | | Glass Amber | | HCL |
| TOC | | Glass | | $H_2SO_4$ |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Well ID: BEW 5
Project Name: NMI RORA
Project Number: 2524
Date: 4/10/23
Recorded By: DAP
Sample ID: BEW5-04102023
Duplicate ID: ~
Weather: 40s sunny

Well Diameter: _____ Intake Depth: _____
Total Depth of Well: _____
Initial Depth to Water: _____ Time: _____
Casing Volume: _____
Depth to Water after Purging: _____ Time: _____
Method of Purging: _____
Method of Sampling: _____
Multi-meter ID: _____ Turbid ID: _____

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 9:55 | 5.55 | 100 | 6.0 | 10.89 | 7.64 | 577.86 | 0.17 | -121.0 | 6.94 | |
| 10:00 | 5.55 | 100 | 6.5 | 10.78 | 7.64 | 854.79 | 0.16 | -127.7 | 7.94 | |
| 10:05 | 5.55 | 100 | 7.0 | 10.35 | 7.64 | 549.34 | 0.12 | -132.4 | 8.85 | |
| 10:10 | 5.55 | 100 | 7.5 | 10.41 | 7.63 | 20.44 | 0.09 | -135.1 | 5.46 | |
| 10:15 | 5.55 | 100 | 8.0 | 10.37 | 7.62 | 307.56 | 6.07 | -136.9 | 6.26 | |
| 10:20 | 5.55 | 100 | 8.5 | 16.44 | 7.61 | 214.64 | 6.07 | -135.1 | 4.39 | |
| 10:25 | 5.55 | 100 | 9.0 | 10.31 | 7.60 | 111.38 | 6.06 | -139.9 | 7.35 | |
| 10:30 | 5.55 | 100 | 10.0 | 10.42 | 7.58 | 2.34 | 0.06 | -142.0 | 4.41 | |
| 10:35 | 5.55 | 100 | 10.5 | 10.49 | 7.56 | 628.04 | 0.05 | -142.5 | 11.8 | |
| 10:40 | 5.55 | 100 | 11.0 | 10.86 | 7.54 | 529.41 | 0.04 | -142.1 | 6.79 | |
| 10:45 | 5.55 | 100 | 11.5 | 11.17 | 7.51 | 457.74 | 0.04 | -141.5 | 5.76 | |
| 10:50 | 5.55 | 100 | 12.0 | 11.06 | 7.47 | 91.21 | 0.04 | -140.2 | 7.15 | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| Metals | 10:55 | Plastic | .5 | Nitric Acid |
| Dissolved Metals | " | Plastic | .5 | Nitric Acid |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Well ID: MW-SD(e)1 | Well Diameter: 2" | Intake Depth: ~76'
Project Name: NM1 | Total Depth of Well: 82'
Project Number: BR00902 | Initial Depth to Water: 60.06' | Time: 1415
Date: 4/10/23 | Casing Volume: —
Recorded By: EB | Depth to Water after Purging: 60.11' | Time: 1527
Sample ID: MW-SD(e)1-04102023 | Method of Purging: bladder
Duplicate ID: — | Method of Sampling: low flow
Weather: sunny, 60s | Multi-meter ID: 17E101955 | Turbid ID: 22074237

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1420 | Begin purging @ 200 mLpm | | | | | | | | | |
| 1430 | 60.34 | 200 | ~.5 | 11.7 | 6.84 | 411.3 | 1.26 | -107.6 | 5.25 | |
| 1440 | 60.31 | | | 11.4 | 6.88 | 415.0 | 0.93 | -119.4 | 5.20 | |
| 1445 | 60.31 | | ~1 | 11.4 | 6.89 | 416.0 | 0.85 | -122.7 | 3.82 | |
| 1450 | 60.30 | | | 11.3 | 6.90 | 417.6 | 0.78 | -125.6 | 3.51 | |
| 1455 | 60.30 | | ~2 | 11.5 | 6.91 | 422.2 | 0.74 | -127.3 | 4.85 | |
| 1500 | 60.29 | | | 11.5 | 6.91 | 426.7 | 0.79 | -127.3 | 4.59 | |
| 1510 | collect samples | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| VOCs | 1510 | vial | 3x40 mL | HCl |
| DIC + DOC | ↓ | amber plastic | 2x250 mL | $H_2SO_4$ |
| TPhos+$NH_3$ / FF Phos | | ↓ | 2x500/250 mL | ↓ |
| total/diss metals | | | 2x500 mL | $HNO_3$ |
| total metals (a) | | | 250 mL | ↓ |
| $SO_4$ Cl $NO_3NO_2$ | ↓ | ↓ | 250 mL | none |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

- purge water slightly pink

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Well ID: MW-SD62A
Well Diameter: 2" Intake Depth: ~80'
Project Name: NM1
Total Depth of Well: 83'
Project Number: BR00900
Initial Depth to Water: 58.91' Time: 1117
Date: 4/10/23
Casing Volume: —
Recorded By: EB/SM
Depth to Water after Purging: 58.90' Time: 1346
Sample ID: MW-SD62A-04102023
Method of Purging: bladder
Duplicate ID: —
Method of Sampling: low flow
Weather: 60s, clear
Multi-meter ID: 17E101955 Turbid ID: 22074237

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or (gals) | Temp °F or (°C) | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1140 | Begin purging @ 200 mLpm | | | | | | | | | |
| 1150 | 58.91 | 200 | ~0.5 | 11.2 | 6.88 | 435.0 | 1.43 | -87.3 | 100 | |
| 1155 | 58.89 | | | 11.1 | 6.85 | 434.3 | 1.28 | -84.4 | 78.3 | |
| 1200 | 58.89 | | | 11.2 | 6.82 | 433.8 | 1.31 | -79.9 | 65.5 | |
| 1205 | 58.90 | | | 11.2 | 6.78 | 433.3 | 1.45 | -71.0 | 55.1 | |
| 1210 | 58.90 | | | 11.2 | 6.76 | 432.0 | 1.52 | -65.9 | 45.4 | |
| 1215 | 58.90 | | | 11.3 | 6.71 | 432.4 | 1.66 | -58.3 | 40.5 | |
| 1220 | 58.90 | | | 11.4 | 6.67 | 431.9 | 1.78 | -52.6 | 62.9 | |
| 1225 | 58.89 | | | 11.4 | 6.57 | 429.9 | 2.37 | -35.5 | 41.6 | |
| 1230 | 58.89 | | | 11.5 | 6.53 | 431.2 | 2.35 | -31.5 | 42.9 | |
| 1235 | 58.90 | | | 11.5 | 6.55 | 431.3 | 2.20 | -33.7 | 24.0 | |
| 1240 | 58.89 | ↓ | ~2.5 | 11.6 | 6.55 | 431.9 | 2.18 | -35.1 | 20.3 | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| VOCs | 1315 | vial | 3x 40 mL | HCl |
| DIC + DOC | ↓ | amber | 2x 250 mL | $H_2SO_4$ |
| TPhos+$NH_3$ / Diss Phos | | plastic | 2x500/250 mL | ↓ |
| total+diss metals | | ↓ | 2x 500 mL | $HNO_3$ |
| total metals (alpha) | ↓ | | 250 mL | ↓ |
| Sol $ClNO_3NO_2$ | | | 250 mL | none |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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(978)263-9588 Fax(978)263-9594

Well ID: MW-SD02A
Project Name: NMI
Project Number: GR00900
Date: 4/10/23
Recorded By:
Sample ID:
Duplicate ID:
Weather:

Well Diameter:
Total Depth of Well:
Initial Depth to Water:
Casing Volume:
Depth to Water after Purging:
Method of Purging:
Method of Sampling:
Multi-meter ID:

Intake Depth:
Time:
Time:
Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| (SM) ~~1250~~ | 58.91 | 200 | | 11.8 | 6.55 | 432.1 | 2.22 | -31.6 | 17.5 | |
| (SM) ~~1255~~ | 58.89 | | | 11.7 | 6.55 | 432.2 | 2.24 | -34.5 | 15.2 | |
| 1300 | 58.89 | | | 11.8 | 6.54 | 432.0 | 2.27 | -33.4 | 12.9 | |
| 1305 | 58.91 | | | 11.7 | 6.53 | 432.2 | 2.28 | -32.9 | 12.5 | |
| 1310 | 56.90 | | ~4 | 12.0 | 6.57 | 431.6 | 2.30 | -32.7 | 12.9 | |
| 1315 | Collect samples | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

Geosyntec consultants
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Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: MW-562A
Project Name: NM1
Project Number: GR0090D
Date: 4/10/23
Recorded By: EB / SM
Sample ID: MW-562A-04102023
Duplicate ID: MW-562A-04102023MS/MSD
Weather: 50s, sunny

Well Diameter: 2" Intake Depth: ~64'
Total Depth of Well: 68'
Initial Depth to Water: 58.91' Time: 0830
Casing Volume: —
Depth to Water after Purging: 58.91' Time: 1045
Method of Purging: bladder
Method of Sampling: low flow
Multi-meter ID: 22074237 Turbid ID: 17E101455

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 0842 | Begin purging @ 250 mLpm | | | | | | | | | |
| 0852 | 59.03 | 250 | ~0.5 | 10.2 | 6.55 | 373.0 | 3.60 | -19.5 | 14.6 | |
| 0900 | 59.00 | | ~1 | 10.2 | 6.38 | 371.8 | 4.07 | -2.2 | 9.09 | |
| 0905 | 59.00 | | | 10.2 | 6.37 | 372.1 | 4.47 | 0.1 | 7.81 | |
| 0910 | 59.00 | | | 10.2 | 6.38 | 372.8 | 4.38 | 3.1 | 4.86 | |
| 0915 | 59.00 | | ~2 | 10.2 | 6.39 | 372.7 | 4.48 | 3.5 | 6.00 | |
| 0920 | 59.00 | | | 10.2 | 6.41 | 373.8 | 4.58 | 4.2 | 5.13 | |
| 0925 | 59.02 | | | 10.2 | 6.42 | 374.8 | 4.60 | 4.8 | 4.82 (24) | ! |
| 0930 | 59.02 | | ~3 | 10.2 | 6.42 | 374.9 | 4.72 | 5.4 | 4.83 | |
| 0935 | 59.00 | ↓ | | 10.2 | 6.43 | 375.2 | 4.70 | 6.2 | 4.83 | |
| 0945 | Collect samples | | | | | | | | | |
| | | | | | | | | (58) | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| total + diss metals | 0945 | plastic | 3x[2x500mL] | $HNO_3$ |
| DIC + DOC | | amber | 3x[2x250mL] | $H_2SO_4$ |
| VOCs | | vial | 3x[3x40mL] | HCl |
| 1,4-D | | amber | 3x[2x250mL] | none |
| TPhos / $NH_3$ | | plastic | 3x500mL | $H_2SO_4$ |
| $SO_4$ Cl $NO_3$ $NO_2$ | | | 3x250mL | none |
| total metals | | | 3x250mL | $HNO_3$ |
| diss phos | | | 3x250mL | $H_2SO_4$ |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

purge water slightly pink

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

Geosyntec consultants
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(978)263-9588 Fax(978)263-9594

Well ID: MW-BS14 | Well Diameter: 2" | Intake Depth: ~175'
Project Name: NM1 | Total Depth of Well: 180'
Project Number: B120090D | Initial Depth to Water: 65.04 | Time: 1327
Date: 4/10/2023 | Casing Volume:
Recorded By: K Gonbosi | Depth to Water after Purging: 65.05 | Time: 1448
Sample ID: MW-BS14-04102023 | Method of Purging: Bladder Pump
Duplicate ID: | Method of Sampling: Low-Flow
Weather: Sunny, 60s | Multi-meter ID: 22G103244 | Turbid ID: 19092242

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1328 | Began | pursing | @, changed | to new | nitrogen | tank | | | | tank p: 200 psi, gauge p=60, changed tank |
| 1341 | Began | pursing | @ 100 | mLpm | | | | | | |
| 1346 | 65.05 | 100 | | 11.8 | 7.07 | 472 | 8.71 | -115.0 | 3.01 | |
| 1351 | 65.07 | | | 11.6 | 6.63 | 516 | 1.23 | -75.5 | 2.55 | |
| 1356 | 65.04 | | | 11.5 | 6.54 | 533 | 0.61 | -45.9 | 3.27 | |
| 1401 | 65.04 | | | 11.2 | 6.50 | 536 | 0.36 | -20.8 | 1.47 | |
| 1406 | 65.04 | | | 11.0 | 6.48 | 545 | 0.29 | -15.5 | 2.39 | |
| 1411 | 65.07 | | | 11.0 | 6.48 | 534 | 0.24 | -7.1 | 0.02 | |
| 1416 | changed nitrogen tank | | | | | | | | | KG |
| 1421 | 65.09 | | | 11.0 | 6.51 | 538 | 0.28 | -0.5 | 3.31 | |
| 1426 | 65.08 | | | 11.0 | 6.54 | 536 | 0.26 | 1.1 | 2.20 | |
| 1431 | 65.04 | ↓ | 2.75 | 10.9 | 6.55 | 537 | 0.24 | 1.9 | | |

1435 collected samples

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| Dissolved Metals | 1435 | Plastic | 1x500 mL | Nitric |
| Total Metals | ↓ | Plastic | 1x500 mL | Nitric |
| 1,4-Dioxane | | Amber Glass | 2x250 mL | None |
| | | | | |
| | | KG | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

Pump @ minimum 80 psi to produce flow
End tank pressure = ~1250 psi

KG

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Well ID: MW-SD32
Project Name: NMI
Project Number: BR0090C
Date: 4/6/23
Recorded By: S. Conway
Sample ID: MW-SD32-04062023
Duplicate ID: —
Weather: 60s, sunny

Well Diameter: 2" Intake Depth: —
Total Depth of Well: 75'
Initial Depth to Water: 5.82' Time: 1331
Casing Volume: —
Depth to Water after Purging: 5.85' Time: 1500
Method of Purging: Bladder pump
Method of Sampling: Low flow
Multi-meter ID: 17E101955 Turbid ID: 21073394

| Time | Depth to water | Pumping rate | Cumulative volume | Temp | pH | Specific conductance | D.O | ORP | Turbidity | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| | (ft btoc) | mLpm | (L) or gals | °F or (C) | (units) | (µS / cm) | (mg / L) | (mV) | (NTU) | odor, color, sediment load, well condition, presence of product |
| 1345 | Begin | purging @ | 125 mLpm | | | | | | | |
| 1355 | 5.91 | 125 | | 10.3 | 6.32 | 398.0 | 7.52 | 114.8 | 1000 | |
| 1400 | 5.85 | | | 10.2 | 6.24 | 398.3 | 7.81 | 135.2 | 420 | |
| 1405 | 5.90 | | | 10.4 | 6.21 | 398.5 | 7.24 | 143.1 | 259 | |
| 1410 | 5.90 | | | 10.3 | 6.20 | 397.8 | 7.23 | 145.8 | 178 | |
| 1415 | 5.90 | | | 10.3 | 6.20 | 396.1 | 7.20 | 147.3 | 132 | |
| 1420 | 5.90 | | | 10.4 | 6.21 | 393.5 | 7.16 | 147.4 | 103 | |
| 1425 | 5.90 | | | 10.2 | 6.23 | 389.6 | 7.13 | 146.5 | 74.9 | |
| 1430 | 5.90 | | | 10.5 | 6.23 | 386.9 | 7.07 | 146.0 | 58.1 | |
| 1435 | 5.88 | | | 10.3 | 6.24 | 384.5 | 7.05 | 146.3 | 61.8 | |
| 1440 | 5.92 | | | 10.3 | 6.23 | 384.2 | 7.00 | 146.6 | 42.4 | |
| 1445 | 5.88 | | | 10.3 | 6.21 | 385.7 | 6.94 | 148.1 | 44.3 | |
| 1450 | 5.88 | ↓ | ~8.125 | 10.2 | 6.20 | 387.2 | 6.91 | 149.0 | 44.9 | |
| 1455 | Collect samples | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4-Dioxane | 1455 | Amber jar | 2x250mL | None |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

Purge water muddy/cloudy
Faulty water level meter

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

page 1 of 2

Geosyntec consultants
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Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: MW-BS03
Project Name: NMI
Project Number:
Date: 4-6-23
Recorded By: PBurton
Sample ID: MW-BS03-04062023
Duplicate ID:
Weather: Cloudy 57°

Well Diameter: 2 Intake Depth: 135.8
Total Depth of Well: 142.5
Initial Depth to Water: 56.40 Time: 1222
Casing Volume:
Depth to Water after Purging: Time:
Method of Purging: bladder pump
Method of Sampling: low flow
Multi-meter ID: Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume (L or gals) | Temp (°F) (°C) | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1240 | 56.28 | 100 | — | 11.9 | 8.22 | 366.2 | 12.23 | 80.5 | 18.3 | |
| 1245 | 57.00 | | — | 11.5 | 7.21 | 2135 | 4.66 | -75.1 | 19.5 | |
| 1250 | 57.00 | | — | 11.3 | 6.96 | 136.0 | 1.49 | -81.9 | 18.9 | |
| 1255 | 58.05 | | — | 11.3 | 6.93 | 121.2 | 0.81 | -87.1 | 17.4 | |
| 1300 | 58.46 | | — | 11.6 | 6.94 | 131.0 | 0.55 | -90.7 | 13.3 | |
| 1305 | 58.80 | | — | 11.9 | 6.96 | 153.3 | 0.38 | -94.0 | 13.2 | |
| 1310 | 59.03 | | 3.0 | 11.8 | 7.00 | 179.2 | 0.24 | -97.3 | 12.9 | |
| 1315 | 59.23 | | — | 11.5 | 7.03 | 198.7 | 0.16 | -100.3 | 12.7 | |
| 1320 | 59.30 | | — | 11.8 | 7.04 | 216.5 | 0.09 | -103.0 | 12.4 | |
| 1325 | 59.40 | | — | 11.9 | 7.06 | 231.9 | 0.06 | -105.1 | 7.93 | |
| 1330 | 59.40 | | — | 12.2 | 7.08 | 250.0 | 0.04 | -106.9 | 7.69 | |
| 1335 | 59.46 | | — | 11.8 | 7.09 | 277.7 | 0.00 | -108.4 | 6.94 | |
| 1340 | 59.46 | ↓ | 0.00 | 11.8 | 7.10 | 298.9 | 0.00 | -109.5 | 6.09 | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| Tot/Diss Metals | 1425 | plastic | 2x500mL | Nitric |
| Alkalinity | 1425 | plastic | 250mL | None |
| " | See | page | one | |
| | | (60) | | |
| 1,4-Dioxane | 1425 | Amber | 2x250mL | None |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS



Geosyntec consultants
289 Great Road, Suite 202
Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: MW-BS03
Project Name:
Project Number:
Date:
Recorded By:
Sample ID:
Duplicate ID:
Weather:

Well Diameter: Intake Depth:
Total Depth of Well:
Initial Depth to Water: Time:
Casing Volume:
Depth to Water after Purging: Time:
Method of Purging:
Method of Sampling:
Multi-meter ID: Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1345 | 9.55 | 100 | — | 12.2 | 7.10 | 346 | 0.00 | -110.5 | 6.51 | |
| 1350 | 9.55 | | — | 12.0 | 7.11 | 333.8 | 0.00 | -111.3 | 5.32 | |
| 1355 | 9.55 | | — | 11.7 | 7.12 | 340.8 | 0.00 | -111.6 | 5.82 | |
| 1400 | 9.55 | | — | 11.8 | 7.12 | 352.4 | 0.00 | -111.8 | 4.32 | |
| 1405 | 9.55 | | — | 11.9 | 7.12 | 362.6 | 0.00 | -111.9 | 4.90 | |
| 1410 | 9.55 | | 9.00 | 12.2 | 7.12 | 368.4 | 0.00 | -111.8 | 4.50 | |
| 1415 | 9.55 | | — | 12.7 | 7.12 | 373.2 | 0.00 | -111.4 | 4.67 | |
| 1420 | 9.55 | ↓ | 10.00 | 12.3 | 7.12 | 378.5 | 0.00 | -111.1 | 3.56 | |
| | | | | | | | | | | |
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| | | | | | | | | | | |
| | | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| | 14.25 | | | |
| | | see page one | | |
| | | | | |
| | | | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

DUP Collected
MW-BS03-04062023DUP
4-6-23 @ 1425

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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(978)263-9588 Fax(978)263-9594

Well ID: MW-BRD13
Project Name: NMI
Project Number: BR0090D
Date: 4/6/2023
Recorded By: E. Grimes / S Marshall
Sample ID: MW-BRD13-04062023
Duplicate ID: —
Weather: Overcast, 50s

Well Diameter: 2" Intake Depth: ~220
Total Depth of Well: 224'
Initial Depth to Water: 47.05' Time: 1148
Casing Volume:
Depth to Water after Purging: 48.35' Time: 1441
Method of Purging: Bladder Pump
Method of Sampling: Low Flow
Multi-meter ID: 22H103077 Turbid ID: 22074265

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume @ or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1151 | Start purge / produce Water | | | | | | | | | |
| 1200 | 48.3 | 160 | 1.44 | 11.2 | 8.11 | 691 | 12.14 | 79.8 | 21.9 | |
| 1205 | 42.4 | 100 | 1.94 | 10.8 | 7.99 | 763 | 5.34 | -24.5 | 39.4 | |
| 1210 | 48.45 | 100 | – | 11.1 | 7.89 | 783 | 2.56 | -46.1 | 30.7 | |
| 1215 | 48.6 | 100 | – | 10.9 | 7.86 | 788 | 1.66 | -64.7 | 38.9 | |
| 1220 | 48.7 | 100 | – | 11.0 | 7.84 | 788 | 0.85 | -87.2 | 36.3 | |
| 1225 | 48.80 | 100 | – | 10.9 | 7.83 | 788 | 0.53 | -113.4 | 23.3 | |
| 1230 | 49.01 | 100 | – | 10.8 | 7.82 | 784 | 0.32 | -128.6 | 18.5 | |
| 1235 | 49.14 | 100 | – | 10.9 | 7.82 | 776 | 0.25 | -143.3 | 15.8 | |
| 1240 | 49.32 | 100 | | 10.9 | 7.82 | 767 | 0.18 | -155.6 | 18.0 | |
| 1245 | 49.56 | 100 | 5.94 | 10.9 | 7.82 | 761 | 0.15 | -169.7 | 12.3 | |
| 1250 | 49.62 | 100 | – | 10.8 | 7.83 | 761 | 0.09 | -176.4 | 12.1 | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4-dioxane | 1355 | amber | 2x 250mL | None |
| U-Total | 1355 | plastic | 2x 500mL | Nitric Acid |
| Tot + Dis. Metals | 1355 | plastic | 2x500mL | Nitric Acid |
| tot phos. | 1355 | plastic | 250 mL | Sulfuric Acid |
| alkalinity | 1355 | plastic | 250 mL | None |
| | 1355 | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

Used 2.5 80-GY tanks.

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: MW-B2D13
Project Name:
Project Number:
Date:
Recorded By:
Sample ID:
Duplicate ID:
Weather:

Well Diameter: Intake Depth:
Total Depth of Well:
Initial Depth to Water: Time:
Casing Volume:
Depth to Water after Purging: Time:
Method of Purging:
Method of Sampling:
Multi-meter ID: Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume (L or gals) | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1255 | | | | | | | | | | → change tank |
| 1300 | 48.60 | 100 | | 13.9 | 7.83 | 750 | 0.20 | -179.8 | 16.3 | |
| 1305 | 48.45 | 100 | 7.44 | 14.5 | 7.80 | 757 | 0.15 | -179.7 | 24.4 | |
| 1310 | 48.45 | 50 | – | 13.7 | 7.81 | 762 | 0.17 | -177.8 | 29.6 | |
| 1320 | 48.15 | ↓ | ↓ | 15.8 | 7.79 | 753 | 0.18 | -172.3 | 18.8 | |
| 1325 | 48.20 | | | 15.3 | 7.80 | 756 | 0.20 | -169.6 | 28.3 | |
| 1330 | 48.30 | | | 15.0 | 7.82 | 759 | 0.23 | -164.3 | 25.3 | |
| 1335 | 48.35 | | | 14.0 | 7.83 | 761 | 0.23 | -164.1 | 33.1 | |
| 1340 | 48.35 | | | 13.8 | 7.83 | 764 | 0.20 | -164.5 | 42.3 | |
| 1345 | 48.35 | | ↓ | 14.7 | 7.83 | 769 | 0.18 | -166.7 | 36.0 | |
| 1350 | 48.35 | ↓ | 9.19 | 13.5 | 7.85 | 775 | 0.17 | -168.4 | 30.2 | |
| 1355 | collect sample | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| | | | | |
| | see page 1 | | | |
| | | | | |
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| | | | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Well ID: MW-532
Project Name: NMI
Project Number: BR0080C
Date: 04/06/23
Recorded By: S. Conway
Sample ID: MW-532-04062023
Duplicate ID: —
Weather: 50s, overcast

Well Diameter: 2" Intake Depth: —
Total Depth of Well: 45'
Initial Depth to Water: 5.82' Time: 1100
Casing Volume: —
Depth to Water after Purging: 5.85' Time: 1225
Method of Purging: Bladder pump
Method of Sampling: Low flow
Multi-meter ID: 17E101955 Turbid ID: Z1073394

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume (L or gals) | Temp °F or (C) | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1110 | Begin | Purging @ | 250 | mLpm | | | | | | |
| 1120 | 6.08 | 250 | 250 | 9.9 | 6.57 | 344.7 | 7.39 | 119.0 | 34.1 | |
| 1125 | 6.03 | | — | 9.9 | 6.53 | 344.5 | 7.36 | 118.9 | 22.4 | |
| 1130 | 6.02 | | — | 9.9 | 6.51 | 347.4 | 7.51 | 119.7 | 21.7 | |
| 1135 | 6.04 | | — | 9.9 | 6.50 | 349.7 | 7.41 | 119.9 | 20.2 | |
| 1140 | 6.03 | | — | 9.9 | 6.50 | 351.2 | 7.34 | 120.4 | 15.4 | |
| 1145 | 6.03 | | — | 9.9 | 6.49 | 352.0 | 7.35 | 120.5 | 11.5 | |
| 1150 | 6.04 | | — | 9.9 | 6.50 | 353.1 | 7.30 | 120.7 | 10.6 | |
| 1155 | 6.03 | | — | 10.0 | 6.49 | 354.0 | 7.28 | 120.9 | 6.68 | |
| 1200 | 6.02 | | — | 9.9 | 6.49 | 354.7 | 7.26 | 121.3 | 4.97 | |
| 1205 | 6.03 | | — | 9.9 | 6.47 | 360.1 | 7.27 | 121.6 | 4.98 | |
| 1210 | 6.03 | ↓ | ~15 | 10.0 | 6.47 | 356.0 | 7.28 | 121.9 | 4.34 | |

1215 Collect samples

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| VOCs | 1215 | Amber vial | 2x250 mL | None |
| 1,4-Dioxane | 1215 | Amber jar | 3x40mL | HCl |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

SC

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

SC

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Well ID: MW-B3D13
Project Name: NM1
Project Number: BR0090
Date: 4/6/2023
Recorded By: E. Grimes
Sample ID: MW-B3D13-040620223
Duplicate ID:
Weather: Overcast, 50s

Well Diameter: 2" Intake Depth: ~ 257
Total Depth of Well: 260'
Initial Depth to Water: 48.54' Time: 837
Casing Volume:
Depth to Water after Purging: ~~48.54'~~ 50.60' Time: 1100
Method of Purging: Bladder Pump
Method of Sampling: Low Flow
Multi-meter ID: 22H103077 Turbid ID: 22074265

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume ① or gals | Temp °F or °C | ± .1 pH (units) | 3% Specific conductance (µS / cm) | 10% or < 0.5 D.O (mg / L) | ± 10 ORP (mV) | 10% < 5 Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 905 | Start pump | | | | | | | | | |
| 916 | Produce water | | | | | | | | | |
| 923 | 47.34 | 175 | 1.225 | 9.9 | 8.23 | 562 | 11.80 | 9.6 | 6.86 | |
| 928 | 48.40 | 175 | 2.1 | 9.7 | 7.85 | 598 | 5.58 | -35.1 | 5.91 | |
| 933 | 48.98 | 175 | 2.975 | 9.9 | 7.73 | 606 | 3.62 | -45.9 | 10.30 | |
| 938 | 49.70 | 175 | 3.85 | 10.0 | 7.66 | 608 | 2.27 | -61.0 | 6.33 | |
| 943 | 50.25 | 175 | 4.725 | 10.0 | 7.64 | 608 | 1.77 | -73.3 | 6.05 | |
| 948 | 50.85 | 175 | 5.6 | 10.1 | 7.62 | 605 | 1.27 | -84.1 | 5.64 | |
| 953 | 51.38 | 175 | 6.475 | 10.1 | 7.62 | 605 | 0.99 | -95.1 | 6.20 | |
| 958 | 51.70 | 175 | 7.35 | 10.2 | 7.60 | 608 | 0.58 | -102.6 | 4.94 | |
| 1003 | — | 175 | | | | | | | | change nitrogen tank |
| 1008 | 50.72 | 175 | 8.225 | 8.8 | 7.59 | 609 | 0.51 | -109.3 | 4.61 | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4-dioxane | 1023 | amber | 2x | |
| total/diss. metals | 1023 | plastic | 500 mL x2 | Nitric acid |
| U-Total | 1023 | " | " | Nitric acid |
| total phos. | 1023 | plastic | | |
| alkalinity | 1023 | plastic | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

Used ~2 tanks of 80 CY

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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(978)263-9588 Fax(978)263-9594

Well ID: MW-B3D13
Project Name:
Project Number:
Date:
Recorded By: see page 1
Sample ID:
Duplicate ID:
Weather:

Well Diameter:
Total Depth of Well:
Initial Depth to Water:
Casing Volume:
Depth to Water after Purging:
Method of Purging:
Method of Sampling:
Multi-meter ID:

Intake Depth:
Time:
Time:
Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume (L or gals) | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1013 | 50.65 | 175 | 9.1 | 9.7 | 7.59 | 607 | 0.53 | -111.6 | 4.29 | |
| 1018 | 50.55 | 175 | 9.975 | 9.9 | 7.59 | 608 | 0.54 | -112.2 | 4.30 | |
| 1023 | collect samples | | | | | | | | | |
| | | | | | (see) | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| | | see page 1 | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Well ID: SD 40
Project Name: NMI RDRA
Project Number: 2572H
Date: 4/6/2023
Recorded By: DAP
Sample ID: MW-SD46-04062023
Duplicate ID:
Weather: overcast

Well Diameter: 2" Intake Depth: 92'
Total Depth of Well: 97'
Initial Depth to Water: 14.57 Time: 9:10
Casing Volume:
Depth to Water after Purging: 14.60 Time: 11:55
Method of Purging: Low Flow
Method of Sampling: Bladder
Multi-meter ID: 503907 Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 9:45 | 14.60 | 100 | 0 | 9.55 | 8.54 | 443.96 | 4.67 | -100.2 | 2.94 | |
| 9:50 | 14.60 | 100 | .500 | 11.01 | 7.43 | 458.11 | 1.23 | -55.0 | 19.84 | |
| 9:55 | 14.60 | 100 | 1.00 | 11.18 | 7.06 | 402.00 | 0.42 | -20.7 | 12.0 | |
| 10:00 | 14.60 | 100 | 1.50 | 11.23 | 6.96 | 276.69 | 0.29 | -16.6 | 11.4 | |
| 10:05 | 14.60 | 100 | 2.00 | 11.45 | 6.87 | 5.71 | 0.24 | -12.7 | 12.0 | |
| 10:10 | 14.60 | 100 | 2.50 | 11.53 | 6.80 | 5.36 | 0.20 | -0.8 | 10.5 | |
| 10:15 | 14.60 | 100 | 3.00 | 11.58 | 6.76 | 0.07 | 0.17 | -2.1 | 11.9 | |
| 10:20 | 14.60 | 100 | 3.50 | 11.66 | 6.74 | 537.01 | 0.16 | 6.8 | 8.95 | |
| 10:25 | 14.60 | 100 | 4.00 | 11.69 | 6.72 | 14.33 | 0.17 | 16.2 | 48.5 | |
| 10:30 | 14.60 | 100 | 4.50 | 11.67 | 6.71 | 38.44 | 0.15 | 10.6 | 7.85 | |
| 10:30 | 14.60 | 100 | 5.0 | 11.57 | 6.71 | 0.07 | 0.14 | 3.1 | 7.21 | |
| 10:45 | 14.60 | 100 | 5.5 | 11.71 | 6.71 | 343.72 | 0.14 | 9.2 | 4.22 | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4 Dioxane | 11:50 | Glass Amber | .25 | NONE |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

Geosyntec consultants
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(978)263-9588 Fax(978)263-9594

Well ID: SD40
Project Name: NMI RDRA
Project Number: 2521H
Date: 4/6/2023
Recorded By: DAP
Sample ID: MW-SD46-04062023
Duplicate ID:
Weather: overcast

Well Diameter: 2" Intake Depth: 92'
Total Depth of Well: 97'
Initial Depth to Water: 14.57 Time: 9:10
Casing Volume:
Depth to Water after Purging: 14.60 Time: 11:55
Method of Purging: Low Flow
Method of Sampling: Bladder
Multi-meter ID: 503907 Turbid ID:

| Time | Depth to water | Pumping rate | Cumulative volume | Temp | pH | Specific conductance | D.O | ORP | Turbidity | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| | (ft btoc) | mLpm | L or gals | °F or °C | (units) | (µS / cm) | (mg / L) | (mV) | (NTU) | odor, color, sediment load, well condition, presence of product |
| 9:45 | 14.60 | 100 | 0 | 9.55 | 8.54 | 443.96 | 4.67 | -100.2 | 2.94 | |
| 9:50 | 14.60 | 100 | .500 | 11.01 | 7.43 | 458.11 | 1.23 | -55.0 | 19.84 | |
| 9:55 | 14.60 | 100 | 1.00 | 11.18 | 7.06 | 402.00 | 0.42 | -20.7 | 12.0 | |
| 10:00 | 14.60 | 100 | 1.50 | 11.23 | 6.96 | 276.69 | 0.29 | -16.6 | 11.4 | |
| 10:05 | 14.60 | 100 | 2.00 | 11.45 | 6.87 | 5.71 | 0.24 | -12.7 | 12.0 | |
| 10:10 | 14.60 | 100 | 2.50 | 11.53 | 6.80 | 5.36 | 0.20 | -0.8 | 10.5 | |
| 10:15 | 14.60 | 100 | 3.00 | 11.58 | 6.76 | 0.07 | 0.17 | -2.1 | 11.9 | |
| 10:20 | 14.60 | 100 | 3.50 | 11.66 | 6.74 | 537.01 | 0.16 | 6.8 | 8.95 | |
| 10:25 | 14.60 | 100 | 4.00 | 11.69 | 6.72 | 14.33 | 0.17 | 16.2 | 48.5 | |
| 10:30 | 14.60 | 100 | 4.50 | 11.67 | 6.71 | 38.44 | 0.15 | 10.6 | 7.85 | |
| 10:30 | 14.60 | 100 | 5.0 | 11.57 | 6.71 | 0.07 | 0.14 | 3.1 | 7.21 | |
| 10:45 | 14.60 | 100 | 5.5 | 11.71 | 6.71 | 343.72 | 0.14 | 9.2 | 4.22 | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4 Dioxane | 11:50 | Glass Amber | .25 | NONE |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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(978)263-9588 Fax(978)263-9594

Well ID: MW 5040
Project Name: NM1 RORA
Project Number: 2521
Date: 04/06/23
Recorded By:
Sample ID:
Duplicate ID:
Weather:

Well Diameter: Intake Depth:
Total Depth of Well:
Initial Depth to Water: Time:
Casing Volume:
Depth to Water after Purging: Time:
Method of Purging:
Method of Sampling:
Multi-meter ID: Turbid ID:

| Time | Depth to water | Pumping rate | Cumulative volume | Temp | pH | Specific conductance | D.O | ORP | Turbidity | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| | (ft btoc) | mLpm | L or gals | °F or °C | (units) | (µS / cm) | (mg / L) | (mV) | (NTU) | odor, color, sediment load, well condition, presence of product |
| 10:50 | 14.60 | 100 | 6.0 | 11.63 | 6.73 | 411.12 | 0.13 | 11.6 | 4.57 | |
| 10:55 | 14.60 | 100 | 6.5 | 11.68 | 6.73 | 0.07 | 0.18 | 9.3 | 4.58 | |
| 11:00 | 14.60 | 100 | 7.0 | 11.75 | 6.73 | 0.96 | 0.08 | 4.0 | 5.41 | |
| 11:05 | 14.60 | 100 | 7.5 | 11.74 | 6.73 | 38.27 | 0.07 | 11.3 | 4.79 | |
| 11:10 | 14.60 | 100 | 8.0 | 11.84 | 6.74 | 353.34 | 0.08 | 12.2 | 3.16 | |
| 11:15 | 14.60 | 100 | 8.5 | 11.81 | 6.74 | 263.45 | 0.07 | 10.6 | 2.57 | |
| 11:20 | 14.60 | 100 | 9.0 | 11.87 | 6.74 | 534.46 | 0.06 | 9.4 | 1.94 | |
| 11:25 | 14.60 | 100 | 9.5 | 11.83 | 6.73 | 598.52 | 0.05 | 10.9 | 4.29 | |
| 11:30 | 14.60 | 100 | 10.0 | 11.94 | 6.74 | 216.42 | 0.05 | 11.3 | 4.70 | |
| 11:35 | 14.60 | 100 | 10.5 | 11.81 | 6.75 | 171.76 | 0.05 | 15.5 | 1.62 | |
| 11:40 | 14.60 | 100 | 11.0 | 11.95 | 6.74 | 362.90 | 0.05 | 13.6 | 9.49 | |
| 11:45 | 14.60 | 100 | 11.5 | 12.13 | 6.74 | 0.10 | 0.05 | 14.9 | 1.38 | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4 Dioxane | 11:50 | Glass Amber | .25 | NONE |
| | | | | |
| | | | | |
| | | | | |
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| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

page 1 of 2

Geosyntec consultants
289 Great Road, Suite 202
Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: MW-BS10
Project Name: NM1
Project Number:
Date: 4-6-23
Recorded By: PBurton
Sample ID: MW-BS10-04062023
Duplicate ID: —
Weather: Cloudy 46°

Well Diameter: 2
Total Depth of Well: 109'
Initial Depth to Water: 52.52
Casing Volume:
Depth to Water after Purging: Time:
Method of Purging: ~~GP~~ ~~SP~~ bladder pump
Method of Sampling: ~~GP~~ ~~SP~~ low flow
Multi-meter ID: Turbid ID:
Intake Depth: 81'
Time: 0830

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume (L) or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 0900 | 52.A | 100 | — | 8.2 | 7.45 | 198.1 | 4.38 | -25.7 | 2.89 | |
| 0905 | 54.15 | | — | 8.0 | 7.39 | 166.2 | 0.98 | -64.9 | 4.59 | |
| 0910 | 54.79 | | — | 8.1 | 7.39 | 160.7 | 0.52 | -77.2 | 3.85 | |
| 0915 | 55.39 | | — | 8.4 | 7.39 | 160.5 | 0.32 | -82.2 | 3.86 | |
| 0920 | 55.87 | | — | 8.4 | 7.39 | 160.1 | 0.23 | -83.5 | 4.49 | |
| 0925 | 56.53 | | — | 8.5 | 7.40 | 160.1 | 0.17 | -84.8 | 3.48 | |
| 0930 | 56.95 | | 3.00 | 8.6 | 7.40 | 160.3 | 0.13 | -84.9 | 3.86 | |
| 0935 | 57.54 | | — | 8.6 | 7.39 | 160.5 | 0.10 | -84.8 | 3.88 | |
| 0940 | 57.84 | | — | 8.6 | 7.40 | 160.8 | 0.08 | -84.3 | 3.81 | |
| 0945 | 58.18 | | — | 8.6 | 7.40 | 160.5 | 0.07 | -83.8 | 3.13 | |
| 0950 | 58.45 | | — | 8.7 | 7.40 | 160.3 | 0.06 | -83.5 | 3.12 | |
| 0955 | 58.73 | | — | 8.8 | 7.40 | 160.3 | 0.05 | -84.0 | 2.61 | |
| 1000 | 58.94 | ↓ | 10.00 | 8.7 | 7.40 | 166.4 | 10.04 | -84.6 | 3.74 | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4-Dioxane | 1045 | Amber | 2x 250mL | None |
| Tot/Diss Metals | ↓ | Plastic | 2x 500mL | Nitric |
| Alkalinity | ↓ | Plastic | 1x 250mL | None |
| | | | | |
| | | | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

page 2 of 2

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(978)263-9588 Fax(978)263-9594

Well ID: MW-BS10
Project Name: NMI
Project Number:
Date: 4-6-23
Recorded By: PBurton
Sample ID:
Duplicate ID:
Weather: cloudy 46°

Well Diameter: 2
Total Depth of Well: 109'
Initial Depth to Water: 52.52
Casing Volume:
Depth to Water after Purging:
Method of Purging: LF
Method of Sampling: LF
Multi-meter ID:

Intake Depth: 81'
Time: 0830
Time:
Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume (1) or gals | Temp (F) or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1005 | 59.80 | 100 | — | 89 | 7.40 | 160.1 | 0.02 | -84.9 | 2.73 | |
| 1010 | 59.42 | | — | 8.9 | 7.40 | 160.4 | 0.01 | -85.0 | 3.21 | |
| 1015 | 59.63 | | — | 9.2 | 7.40 | 160.2 | 0.00 | -85.0 | 3.41 | |
| 1020 | 59.79 | | — | 9.2 | 9.40 | 160.3 | 0.00 | -85.5 | 2.60 | |
| 1025 | 59.96 | | — | 9.2 | 7.40 | 160.2 | 0.00 | -85.7 | 2.83 | |
| 1030 | 60.13 | | 9.00 | 9.2 | 7.41 | 160.1 | 0.00 | -85.9 | 2.77 | |
| 1035 | 60.28 | | — | 9.3 | 7.41 | 159.8 | 0.00 | -86.3 | 2.87 | |
| 1040 | 6.43 | ↓ | 10.00 | 9.4 | 7.41 | 160.1 | 0.00 | -87.3 | 3.39 | |
| 1045 | Collect sample | | — | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| | 1045 | | | |
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| | | | | |

Sell page one

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS



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Well ID: MW-SD15
Project Name: NMI
Project Number: BR0090C
Date: 4/6/23
Recorded By: S. Conway
Sample ID: MW-SD15-04062023
Duplicate ID: —
Weather: 50s, overcast

Well Diameter: 2" Intake Depth: —
Total Depth of Well: 9.1'
Initial Depth to Water: 9.39' Time: 0747
Casing Volume: —
Depth to Water after Purging: 9.39' Time: 1007
Method of Purging: Bladder pump
Method of Sampling: Low flow
Multi-meter ID: 17E101955 Turbid ID: 21073394

| Time | Depth to water | Pumping rate | Cumulative volume | Temp | pH | Specific conductance | D.O | ORP | Turbidity | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| (SC) | (ft btoc) | mLpm | 0 or gals | °F or (C) | (units) | (µS / cm) | (mg / L) | (mV) | (NTU) | odor, color, sediment load, well condition, presence of product |
| 0836 ~~0803~~ | Begin purging @ 100 mLpm | | | | | | | | | |
| 0847 | 9.48 | 100 | — | 8.9 | 6.52 | 390.4 | 2.35 | 59.2 | 157 | |
| 0852 | 9.40 | | — | 9.2 | 6.48 | 389.6 | 2.25 | 67.8 | 116 | |
| 0857 | 9.38 | | — | 9.1 | 6.45 | 389.0 | 2.27 | 74.7 | 63.4 | |
| 0902 | 9.37 | | — | 8.8 | 6.42 | 389.2 | 2.35 | 79.1 | 53.7 | |
| 0907 | 9.39 | | 3.0 | 9.0 | 6.39 | 387.4 | 2.51 | 83.4 | 38.3 | |
| 0912 | 9.38 | | — | 8.8 | 6.35 | 388.6 | 2.69 | 87.2 | 27.5 | |
| 0917 | 9.38 | | — | 8.8 | 6.35 | 391.0 | 2.71 | 88.5 | 26.1 | |
| 0922 | 9.44 | | — | 9.4 | 6.33 | 386.4 | 2.80 | 91.5 | 17.5 | |
| 0927 | 9.39 | | — | 9.5 | 6.22 | 383.3 | 3.14 | 104.4 | 12.6 | |
| 0932 | 9.45 | | — | 9.4 | 6.20 | 383.0 | 3.21 | 107.6 | 9.39 | |
| 0937 | 9.42 | ↓ | 6.0 | 9.4 | 6.21 | 382.6 | 3.19 | 108.3 | 11.1 | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4-Dioxane | 0952 | Amber jar | 2x250mL | None |
| | | | (SC) | |
| | | | | |
| | | | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

Purge water murky/cloudy initially
Water level meter seems faulty

(SC)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

page 2 of 2

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Well ID: MW-SD15
Project Name:
Project Number:
Date:
Recorded By:
Sample ID:
Duplicate ID:
Weather:

Well Diameter:
Total Depth of Well:
Initial Depth to Water:
Casing Volume:
Depth to Water after Purging:
Method of Purging:
Method of Sampling:
Multi-meter ID:

Intake Depth:
Time:
Time:
Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume (L) or gals | Temp °F or (°C) | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 0942 | 9.43 | 100 | — | 9.5 | 6.23 | 382.1 | 3.15 | 105.1 | 10.6 | |
| 0947 | 9.42 | ↓ | 7.0 | 9.4 | 6.23 | 382.0 | 3.15 | 104.1 | 11.0 | |
| 0952 | Collect samples | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| | | | | |

Notes: (well conditions, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Well ID: MW-SD34 | Well Diameter: 2" | Intake Depth: ~94'
Project Name: NM1 | Total Depth of Well: 97.1'
Project Number: BR0090D | Initial Depth to Water: 8.00' | Time: 0831
Date: 4/4/23 | Casing Volume: —
Recorded By: SC | Depth to Water after Purging: 7.97' | Time: 1235
Sample ID: MW-SD34-04042023 | Method of Purging: bladder
Duplicate ID: MW-SD34-04042023MS/MSD | Method of Sampling: lowflow
Weather: sunny, 50s | Multi-meter ID: 17E101955 | Turbid ID: 21073394

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 0846 | Begin purging @ 200 mLpm | | | | | | | | | |
| 0855 | 8.03 | 200 | | 10.0 | 6.25 | 1585 | 1.34 | -36.3 | 46.2 | |
| 0900 | 8.03 | | | 10.0 | 6.31 | 1556 | 1.06 | -38.9 | 41.9 | |
| 0905 | 8.03 | | | 10.0 | 6.35 | 1565 | 0.90 | -42.8 | 39.6 | |
| 0910 | 8.03 | | | 10.0 | 6.37 | 1563 | 0.84 | -44.0 | 35.8 | |
| 0915 | 8.03 | | | 10.0 | 6.39 | 1557 | 0.78 | -45.6 | 32.7 | |
| 0920 | 8.02 | | | 10.0 | 6.39 | 1524 | 0.75 | -46.5 | 25.3 | |
| 0925 | 8.00 | | | 10.1 | 6.41 | 1482 | 0.72 | -47.5 | 25.0 | |
| 0930 | 7.99 | | | 10.0 | 6.42 | 1465 | 0.71 | -47.8 | 23.4 | |
| 0935 | ~~0940~~ | 7.97 | | 10.1 | 6.43 | 1440 | 0.69 | -49.0 | 18.7 | |
| 0940 | 7.95 | | | 10.1 | 6.43 | 1438 | 0.68 | -48.0 | 23.3 | |
| 0945 | 7.92 | | | 10.1 | 6.43 | 1434 | 0.67 | -48.1 | 23.6 | |
| 0950 | 7.92 | ↓ | | 10.1 | 6.43 | 1431 | 0.67 | -47.8 | 22.1 | |

| Samples collected (1000 Collect samples) | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| VOCs | 1000 | vial | 3x[3x40mL] | HCl |
| total+diss metals | ↓ | plastic | 3x[2x500mL] | $HNO_3$ |
| 1,4-D | | amber | 3x[2x | none |
| TOC | | vial | 3x[2x40mL] | $H_2SO_4$ |
| hardness | | plastic | 3x[250mL] | $HNO_3$ |
| $NO_2$ & $NO_3$ | | ↓ | 3x[200mL] | none |
| TSS | ↓ | | 3x[1L] | none |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

Controller: ~110 psi Flow 105 4 cpm

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

page 1 of 2

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(978)263-9588 Fax(978)263-9594

Well ID: MW-BS28 | Well Diameter: 2 | Intake Depth: 161.4
Project Name: NM1 | Total Depth of Well: 168
Project Number: BR00901 | Initial Depth to Water: 68.65 | Time: 1027
Date: 4.4.23 | Casing Volume:
Recorded By: WPB | Depth to Water after Purging: | Time:
Sample ID: MW-BS28-04042023 | Method of Purging: LF
Duplicate ID: | Method of Sampling: Grab
Weather: Part Sun 50° | Multi-meter ID: | Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1115 | 69.1 | 100 | — | 11.5 | 8.01 | 836 | 12.94 | 1435 | 24.2 | |
| 1120 | 69.1 | ↓ | 0.5 | 10.5 | 7.09 | 871 | 6.10 | -82.3 | 31.3 | |
| 1125 | 69.1 | ↓ | — | 10.4 | 6.95 | 922 | 1.84 | -105.6 | 25.8 | |
| 1130 | 69.1 | ↓ | — | 10.4 | 6.92 | 937 | 1.01 | -101.6 | 26.7 | |
| 1135 | 69.1 | ↓ | — | 10.3 | 6.90 | 945 | 0.53 | -96.8 | 24.8 | |
| 1140 | 69.1 | ↓ | — | 10.4 | 6.89 | 949 | 0.31 | -93.7 | 23.9 | |
| 1145 | 69.1 | ↓ | — | 10.5 | 6.89 | 949 | 0.17 | -90.8 | 21.6 | |
| 1150 | 69.1 | ↓ | ~~3~~ | 10.6 | 6.89 | 945 | 0.11 | -89.0 | 23.2 | |
| 1155 | 69.1 | 150 | 3.5 | 10.6 | 6.89 | 943 | 0.05 | -86.8 | 20.8 | |
| 1200 | 69.1 | ↓ | — | 10.7 | 6.89 | 939 | 0.00 | -84.7 | 20.3 | |
| 1205 | 69.1 | ↓ | — | 10.8 | 6.88 | 937 | 0.00 | -82.3 | 15.8 | |
| 1210 | 69.1 | ↓ | — | 10.8 | 6.88 | 932 | 0.00 | -80.8 | 16.2 | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4 D | 1230 | Amber | 2 x 250 mL | None |
| Tot / Diss Metals | ↓ | Plastic | 2 x 500 mL | Nitric |
| | | | | |
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Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

page 2 of 2

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(978)263-9588 Fax(978)263-9594

Well ID: MW-B58 | Well Diameter: 2 | Intake Depth: 161.4
Project Name: | Total Depth of Well:
Project Number: | Initial Depth to Water: | Time:
Date: | Casing Volume:
Recorded By: | Depth to Water after Purging: | Time:
Sample ID: | Method of Purging:
Duplicate ID: | Method of Sampling:
Weather: | Multi-meter ID: | Turbid ID:

See recirculation

| Time | Depth to water (ft btoc) | Pumping rate mL/pm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1215 | 69 | | 0 | 10.7 | 6.87 | 926 | 0.00 | -78.7 | 13.4 | |
| 1220 | 68.1 | ↓ | — | 11.0 | 6.87 | 918 | 0.00 | -76.3 | 13.2 | |
| 1225 | 69.1 | | 8 | 11.0 | 6.87 | 9.11 | 0.00 | -74.2 | 12.8 | |
| 1230 | Collect sample | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Well ID: Assabet-1A (PZ-1A)
Project Name: NMI RDRA
Project Number: 2521H
Date: 04/04/23
Recorded By: DAP
Sample ID: Assabet-1A(PZ-1A)-04042023
Duplicate ID: N/A
Weather: 60 sunny

Well Diameter: 2
Total Depth of Well:
Initial Depth to Water:
Casing Volume:
Depth to Water after Purging:
Method of Purging: Sink Tap
Method of Sampling: Sink Tap
Multi-meter ID:

Intake Depth:
Time:
Time:
Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 14:30 | SAMPLED | | | | | | | | | |
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| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4 Dioxane | 14:30 | Glass Amber | .25 | None |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

Purged sink for 30 minutes before sample as designated in monthly SWMP sampling protocol

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

Geosyntec
consultants
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Acton, Massachusetts, 01720
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Well ID: Assabet-2A (PZ-2A)
Project Name: NMI RDRA
Project Number: 2521
Date: 04/04/23
Recorded By: DAP
Sample ID: Assabet-2A(PZ-2A)-04042023
Duplicate ID: N/A
Weather: 60 Sunny

Well Diameter: —
Total Depth of Well: —
Initial Depth to Water: —
Casing Volume: —
Depth to Water after Purging: —
Method of Purging: Sink Tap
Method of Sampling: Sink Tap
Multi-meter ID: —

Intake Depth: —
Time: —
Time: —
Turbid ID: —

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 14:35 | SAMPLED | | | | | | | | | |
| | | | | | | | | | | |
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| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4 Dioxane | 14:35 | Glass Amber | .25 | None |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

Purged sink for 30 minutes before sample as designated in monthly SWMP sampling protocol

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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(978)263-9588 Fax(978)263-9594

Well ID: MW-SD44
Project Name: NM1 RORA
Project Number: 2524
Date: 04/04/2023
Recorded By: DAP
Sample ID: MW-SD44-04042023
Duplicate ID: MS/MSD
Weather: 60 sunny

Well Diameter: 2"
Total Depth of Well: 9.6
Initial Depth to Water: 10.35 Time: 12:20
Casing Volume: 12.35 gallons
Depth to Water after Purging: 10.35 Time: 13:30
Method of Purging: Low Flow
Method of Sampling: Bladder
Multi-meter ID: 614106 Turbid ID: 22074237

Intake Depth: 8.1

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 12:30 | 10.36 | 100 | 0 | 15.75 | 8.06 | 216.60 | 10.32 | 81.5 | 26.1 | |
| 12:35 | 10.36 | 100 | .500 | 12.92 | 7.48 | 162.44 | 5.05 | 83.2 | 22.3 | |
| 12:40 | 10.36 | 100 | 1.50 | 12.80 | 7.01 | 160.81 | 3.73 | 36.8 | 13.3 | |
| 12:45 | 10.36 | 100 | 2.00 | 12.85 | 6.84 | 162.69 | 2.77 | 9.8 | 12.9 | |
| 12:50 | 10.36 | 100 | 2.50 | 12.79 | 6.74 | 164.46 | 1.98 | 4.1 | 13.9 | |
| 12:55 | 10.36 | 100 | 3.00 | 12.79 | 6.70 | 166.48 | 1.41 | 1.2 | 14.3 | |
| 13:00 | 10.36 | 100 | 3.50 | 12.88 | 6.67 | 167.87 | 1.01 | -0.7 | 13.5 | |
| 13:05 | 10.36 | 100 | 4.00 | 12.91 | 6.67 | 168.47 | 0.77 | -2.1 | [illegible] | 11.1 |
| 13:10 | 10.36 | 100 | 4.50 | 12.87 | 6.66 | 168.23 | 0.61 | -3.3 | 10.7 | |
| 13:15 | 10.36 | 100 | 5.00 | 12.89 | 6.65 | 167.94 | 0.52 | -4.0 | 10.8 | |
| 13:20 | SAMPLED | | | | | | | | | |
| | | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4 Dioxane | 13:20 | Glass Amber | .25 | None |
| MS/MSD | 13:20 | Glass Amber | .25 | None |
| | | | | |
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Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

Geosyntec
consultants
289 Great Road, Suite 202
Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: MW-5042A
Project Name: NMI RDRA
Project Number: 2521H
Date: 4/4/23
Recorded By: DAP
Sample ID: MW-5042A-04042023
Duplicate ID: MW-5042A-04042023DUP
Weather: 60 sunny

Well Diameter: 2"
Total Depth of Well: 90'
Initial Depth to Water: 10.90
Casing Volume: 12.90 gallons
Depth to Water after Purging: 10:85
Method of Purging: Low Flow Bladder
Method of Sampling:
Multi-meter ID: 614/016

Intake Depth: 85'
Time: 10:15
Time: 11:45
Turbid ID: 220742337

| Time | Depth to water (ft btoc) | Pumping rate (mLpm) | Cumulative volume (L or gals) | Temp (°F or °C) | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 10:40 | 10.85 | 100 | 0 | 12.42 | 7.54 | 384.07 | 10.78 | 9.3 | 29.4 | |
| 10:45 | 10.85 | 100 | .500 | 11.55 | 6.64 | 206.91 | 4.30 | 55.1 | 35.4 | |
| 10:50 | 10.85 | 100 | 1.00 | 11.59 | 6.43 | 189.52 | 1.73 | 75.1 | 28.6 | |
| 10:55 | 10.85 | 100 | 1.50 | 12.16 | 6.39 | 192.76 | 1.24 | 84.4 | 25.1 | |
| 11:00 | 10.85 | 100 | 2.00 | 12.08 | 6.40 | 205.58 | 0.96 | 57.2 | 16.6 | |
| 11:05 | 10.85 | 100 | 2.50 | 12.31 | 6.40 | 213.64 | 0.78 | 57.0 | 15.1 | |
| 11:10 | 10.85 | 100 | 3.00 | 12.61 | 6.40 | 216.71 | 0.61 | 61.5 | 14.2 | |
| 11:15 | 10.85 | 100 | 3.50 | 13.15 | 6.40 | 219.45 | 0.84 | 50.6 | 12.6 | |
| 11:20 | 10.85 | 100 | 4.00 | 12.9 | 6.39 | 218.73 | 0.59 | 50.7 | 10.7 | |
| 11:25 | 10.85 | 100 | 4.50 | 12.84 | 6.40 | 216.39 | 0.58 | 51.3 | 11.0 | |
| 11:30 | 10.85 | 100 | 5.00 | 12.83 | 6.40 | 219.97 | 0.58 | 51.1 | 10.7 | |
| 11:35 | SAMPLED | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| MW-5042A-04042023 | 11:35 | Glass Amber | .25 | NONE |
| MW-5042A-04042023DUP | 11:35 | Glass Amber | .25 | NONE |
| | | | | |
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Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: HA20-CMT-3T (ow) | Well Diameter: 2" | Intake Depth: 89.5
Project Name: NMI Concord | Total Depth of Well: 94.5
Project Number: | Initial Depth to Water: 47.85 | Time: 1245
Date: 4/4/23 | Casing Volume: 28.8 L (2") 113 L (4")
Recorded By: SRP | Depth to Water after Purging: | Time:
Sample ID: HA20-CMT-3T (ow)-04042023 | Method of Purging: Bladder Pump
Duplicate ID: | Method of Sampling: Low Flow
Weather: Sunny 50s | Multi-meter ID: YSI Rso DSS | Turbid ID: Geotech

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume (L or gals) | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1325 | 1.10 | | 2.5 | 14.6 | 7.49 | 2187 | 1.49 | 119 | 253 | |
| 1335 | 2.0 | 70 | 3.2 | 15.1 | 7.50 | 2181 | 1.09 | 107 | 400 | |
| 1345 | | 70 | 3.9 | 13.9 | 7.51 | 2181 | 0.94 | 101 | 137 | |
| 1355 | 3.75 | 70 | 4.6 | 13.3 | 7.52 | 2182 | 0.88 | 96.8 | 50.7 | |
| 1405 | 5.10 | 140 | 6.0 | 12.5 | 7.50 | 2178 | 0.80 | 92.9 | 49.5 | |
| 1420 | 6.70 | 133 | 8.0 | 13.3 | 7.49 | 2186 | 0.76 | 87.4 | 67.4 | |
| 1430 | 8.2 | 100 | 9.0 | 13.3 | 7.48 | 2188 | 0.75 | 85.8 | 72.1 | |
| 1440 | 8.9 | 100 | 10.0 | 13.3 | 7.48 | 2187 | 0.75 | 84.4 | 69.0 | |
| 1500 | collect | sample | | | | | | | | |
| | | | | | | | | | | |
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| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| Metal Diss Metals | 1500 | P | 500 ml | $HNO_3$ |
| T Phos | | P | 250 | $H_2SO_4$ |
| Alk | | P | 250 | none |
| VOCs | | V | 40 | HCl |
| 1,4 Dioxane | V | A | 250 | none |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

well has slow recharge. Drawdown > 0.3'

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Well ID: MW-SD52
Project Name: NMI
Project Number:
Date: 4/4/23
Recorded By: S. Conway
Sample ID: MW-SD52-04042023
Duplicate ID: —
Weather: 60s, sunny

Well Diameter: 2"
Total Depth of Well: 88'
Initial Depth to Water: 6.13'
Casing Volume: —
Depth to Water after Purging: 6.15'
Method of Purging: Bladder pump
Method of Sampling: Low flow
Multi-meter ID: 17E101955

Intake Depth: —
Time: 1348
Time: 1502
Turbid ID: 21073394

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume (L) or gals | Temp °F or (°C) | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1410 | Begin | purging @ | | 200 | mLpm | | | | | |
| 1420 | 6.22 | 200 | | 12.2 | 6.33 | 222.0 | 6.88 | 119.3 | 16.7 | |
| 1425 | 6.22 | | | 12.2 | 6.32 | 221.4 | 6.62 | 129.9 | 9.40 | |
| 1430 | 6.22 | | | 12.1 | 6.30 | 224.1 | 6.51 | 135.9 | 8.45 | |
| 1435 | 6.22 | | | 12.1 | 6.30 | 224.0 | 6.43 | 140.0 | 4.05 | |
| 1440 | 6.22 | | | 12.0 | 6.29 | 223.6 | 6.41 | 139.2 | 4.89 | |
| 1445 | 6.22 | ↓ | 3.5 | 12.0 | 6.29 | 224.5 | 6.37 | 140.6 | 4.68 | |
| 1450 | Collect samples | | | | | | | | | |
| | | | | | SC | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| VOCs | 1450 | Amber vial | 3x40mL | HCl |
| 1,4-Dioxane | 1450 | Amber jar | 2x250mL | None |
| | | | SC | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

SC

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Well ID: EW-1
Project Name: NM1 RDRA
Project Number: 252 H
Date: 04/04/2023
Recorded By: DAP
Sample ID: EW-1-04042023
Duplicate ID: —
Weather: CeO Sunny

Well Diameter: — Intake Depth: —
Total Depth of Well: —
Initial Depth to Water: — Time: —
Casing Volume: —
Depth to Water after Purging: — Time: —
Method of Purging: —
Method of Sampling: —
Multi-meter ID: — Turbid ID: —

| Time | Depth to water | Pumping rate | Cumulative volume | Temp | pH | Specific conductance | D.O | ORP | Turbidity | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| | (ft btoc) | mLpm | L or gals | °F or °C | (units) | (µS / cm) | (mg / L) | (mV) | (NTU) | odor, color, sediment load, well condition, presence of product |
| 15:15 | SAMPLE | | | | | | | | | |
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| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4, Dioxane | 15:15 | Glass Amber | .25 | NONE |
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Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

Sampled from sample port of influent in Knox Trail treatment plant

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Well ID: SW 101 | Well Diameter: — | Intake Depth: —
Project Name: NM1 RDRA | Total Depth of Well: —
Project Number: 252 H | Initial Depth to Water: — | Time: —
Date: 04/04/23 | Casing Volume: —
Recorded By: DAP | Depth to Water after Purging: — | Time: —
Sample ID: SW-101-04042023 | Method of Purging: —
Duplicate ID: — | Method of Sampling: —
Weather: 60 sunny | Multi-meter ID: — | Turbid ID: —

| Time | Depth to water | Pumping rate | Cumulative volume | Temp | pH | Specific conductance | D.O | ORP | Turbidity | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| | (ft btoc) | mLpm | L or gals | °F or °C | (units) | (µS / cm) | (mg / L) | (mV) | (NTU) | odor, color, sediment load, well condition, presence of product |
| 15:30 | SAMPLE | | | | | | | | | |
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| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4 Dioxane | 15:30 | Glass Amber | .25 | NONE |
| | | | | |
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Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

Surface water sample from Assabet river

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Well ID: HA20-CMT-L(ow) | Well Diameter: 2" | Intake Depth: 81.9
Project Name: NMI Concord | Total Depth of Well: 86.9
Project Number: | Initial Depth to Water: 35.83 | Time: 810
Date: 4/4/23 | Casing Volume: 31.5 L (2") 124 L (4")
Recorded By: SRP | Depth to Water after Purging: | Time:
Sample ID: HA20-CMT-L(ow)-04042023 | Method of Purging: Bladder Pump
Duplicate ID: — | Method of Sampling: Low Flow
Weather: Overcast 50s | Multi-meter ID: YSI Pro DSS | Turbid ID: Geotech

| Time | Depth to water | Pumping rate | Cumulative volume | Temp | pH | Specific conductance | D.O | ORP | Turbidity | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 815 | (ft btoc) | mLpm | (L or gals) | °F or °C | (units) | (µS / cm) | (mg / L) | (mV) | (NTU) | odor, color, sediment load, well condition, presence of product |
| 857 | 1.27 | | 2.5 | 9.5 | 9.85 | 433 | 1.50 | 148 | 10.4 | |
| 907 | 1.67 | 50 | 3.0 | 9.5 | 9.65 | 431 | 1.25 | 125 | 9.9 | |
| 917 | 2.09 | 50 | 3.5 | 9.5 | 9.46 | 432 | 1.11 | 109 | 9.2 | |
| 927 | 2.26 | 50 | 4.0 | 9.5 | 9.31 | 433 | 1.05 | 101 | 6.33 | |
| 937 | 2.42 | 50 | 4.5 | 9.6 | 9.06 | 434 | 0.96 | 95 | 4.25 | |
| 947 | 2.51 | 50 | 5.0 | 9.6 | 8.84 | 435 | 0.92 | 91.8 | 2.07 | |
| 957 | 2.57 | 50 | 5.5 | 9.7 | 8.72 | 435 | 0.89 | 90.0 | 1.12 | |
| 1007 | 2.63 | 50 | 6.0 | 9.8 | 8.52 | 436 | 0.87 | 88.3 | 3.00 | |
| 1017 | 2.65 | 50 | 6.5 | 9.8 | 8.27 | 435 | 0.84 | 87.5 | 2.98 | |
| 1027 | 2.65 | 50 | 7.0 | 9.8 | 8.06 | 435 | 0.82 | 85.8 | 2.97 | |
| 1037 | 2.65 | 50 | 7.5 | 9.9 | 7.93 | 435 | 0.79 | 85.0 | 2.96 | |
| 1047 | 2.65 | 50 | 8.0 | 9.9 | 7.83 | 434 | 0.78 | 84.0 | 1.36 | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| total / Diss metals | 1130 | P | 500 ml | $HNO_3$ |
| Alk | ↓ | P | 250 | — |
| 1,4 Dioxane | | A | 250 | — |
| VOCs | | AV | 40 | HCl |
| TPHos | ↓ | P | 250 | $H_2SO_4$ |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

well has slow recharge drawdown > 0.3'

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Well ID: HA20-CMT-6(ow) Well Diameter: Intake Depth:
Project Name: Total Depth of Well:
Project Number: Initial Depth to Water: Time:
Date: See pg 1 Casing Volume:
Recorded By: Depth to Water after Purging: Time:
Sample ID: Method of Purging:
Duplicate ID: Method of Sampling:
Weather: Multi-meter ID: Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1057 | 2.65 | 50 | 8.5 | 9.9 | 7.78 | 435 | 0.76 | 82.6 | 1.74 | |
| 1107 | 2.65 | 50 | 9.0 | 9.9 | 7.76 | 434 | 0.76 | 82.5 | 1.24 | |
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| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
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| | | see page one | | |
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Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

see page one

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

page 1 of 1

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(978)263-9588 Fax(978)263-9594

Well ID: HA20-CMT-5 (OW)
Project Name: NMI Concord
Project Number:
Date: 4/3/23
Recorded By: SRP
Sample ID: HA20-CMT-5 (OW)-04032023
Duplicate ID: —
Weather: Sunny 40-50 °F

Well Diameter: 2" Intake Depth: 97.6
Total Depth of Well: 102.6 (From PVC)
Initial Depth to Water: 31.42 Time: 11:30
Casing Volume: 43.9 L (2") 172 L (4")
Depth to Water after Purging: 33.35 Time: 1410
Method of Purging: Bladder Pump
Method of Sampling: Bladder Pump
Multi-meter ID: YSI Pro DSS Turbid ID: Geotech

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume (L or gals) | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1233 | 1.28 | 65 | 2.1 | 9.7 | 7.30 | 395 | 1.20 | -55.9 | 478 | no odor |
| 1243 | 1.53 | 70 | 2.8 | 10.1 | 7.16 | 392 | 1.47 | -31.3 | 210 | grey to colorless |
| 1253 | 1.70 | 70 | 3.5 | 10.4 | 7.11 | 389 | 1.37 | -14.0 | 129 | |
| 1303 | 1.84 | 70 | 4.2 | 10.7 | 7.07 | 387 | 1.26 | 1.9 | 76 | |
| 1313 | 1.88 | 70 | 4.9 | 10.7 | 7.06 | 386 | 1.19 | 5.1 | 60 | |
| 1323 | 1.91 | 70 | 5.6 | 10.7 | 7.05 | 385 | 1.14 | 2.8 | 54 | |
| 1333 | 1.92 | 70 | 6.3 | 10.8 | 7.05 | 385 | 1.10 | 2.0 | 47 | |
| 1343 | 1.93 | 70 | 7.0 | 10.8 | 7.05 | 384 | 1.07 | 1.4 | 43 | |
| 1353 | 1.93 | 70 | 7.7 | 11.0 | 7.04 | 384 | 1.03 | -0.1 | 39 | |
| 1403 | 1.93 | 70 | 8.4 | 11.2 | 7.04 | 383 | 1.00 | -4.1 | 38 | |
| 1413 | 1.93 | 70 | 9.1 | 11.2 | 7.04 | 383 | 1.00 | -4.5 | 38 | |
| | | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| TPHos 1,4 Diox VOCs | 1430 | various | 40 ml | HCl |
| MK Metals | ↓ | | 250 ml | $H_2SO_4$ |
| Diss Metals | ↓ | | 500 ml | $HNO_3$ |
| | | | | |
| | | | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

well has slow recharge.

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Well ID: GZW-10-2
Project Name: NM1
Project Number: BR0090D
Date: 4/11/2023
Recorded By: E. Grimes
Sample ID: GZW-10-2-04112023
Duplicate ID: —
Weather: Sunny, 70s

Well Diameter: 1.5" Intake Depth: ~145'
Total Depth of Well: ~150'
Initial Depth to Water: 52.19' Time: 1132
Casing Volume: —
Depth to Water after Purging: 59.10 Time: 1302
Method of Purging: 0.75" Bladder Pump
Method of Sampling: Low Flow
Multi-meter ID: 22H103077 Turbid ID: 22074265

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or (C) | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1140 | Begin purge at 100 mLpm | | | | | | | | | |
| 1200 | 57.34 | 100 | ~~1.02~~ | 13.8 | 7.27 | 792 | 0.76 | 122.4 | 1.97 | |
| 1205 | 57.75 | 100 | 2.5 | 13.8 | 7.29 | 788 | 0.53 | 119.6 | 1.06 | |
| 1210 | 57.94 | 100 | 3.0 | 13.8 | 7.36 | 788 | 0.44 | 117.4 | 0.73 | |
| 1215 | 58.13 | 100 | 3.5 | 13.7 | 7.39 | 787 | 0.37 | 116.5 | 0.34 | |
| 1220 | 58.42 | 100 | 4.0 | 13.9 | 7.41 | 782 | 0.33 | 115.3 | 0.60 | |
| 1225 | collect samples | | | | | | | | | |
| | | | | BD | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| VOCs | 1225 | vial | 3x 40 mL | HCl |
| 1,4-dioxane | 1225 | amber | 2x 250 mL | None |
| total metals | 1225 | plastic | 500 mL | $HNO_3$ |
| diss. metals | 1225 | plastic | 500 mL | $HNO_3$ |
| | | | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

BD

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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(978)263-9588 Fax(978)263-9594

Well ID: HBP2-2R | Well Diameter: 2" | Intake Depth: ~44'
Project Name: NMI | Total Depth of Well: 52'
Project Number: BR00900 | Initial Depth to Water: 38.88' | Time: 1038
Date: 4/11/23 | Casing Volume:
Recorded By: EB | Depth to Water after Purging: 38.89' | Time: 1143
Sample ID: HBP2-2R-04112023 | Method of Purging: bladder
Duplicate ID: — | Method of Sampling: low flow
Weather: 70s, sunny | Multi-meter ID: 17E101955 | Turbid ID: 22074237

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1050 | Begin purging @ 250 mLpm | | | | | | | | | |
| 1100 | 38.90 | 250 | ~.5 | 11.7 | 5.89 | 277.1 | 9.32 | 158.1 | 20.3 | |
| 1105 | 38.90 | ↓ | ~.5 | 11.6 | 5.84 | 278.0 | 9.25 | 169.3 | 11.0 | |
| 1110 | 38.90 | ↓ | — | 11.6 | 5.84 | 278.7 | 9.26 | 173.3 | 4.28 | |
| 1115 | 38.90 | ↓ | ~1 | 11.5 | 5.82 | 275.9 | 9.24 | 176.8 | 3.66 | |
| 1120 | 38.90 | ↓ | — | 11.5 | 5.82 | 274.9 | 9.23 | 179.7 | 2.07 | |
| 1125 | 38.90 | ↓ | ~1.5 | 11.6 | 5.82 | 274.6 | 9.23 | 181.0 | 1.88 | |
| 1130 | collect samples | | | | | | | | | |
| | | | | | (EB) | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| total + diss metals | 1130 | plastic | 2x500 mL | $HNO_3$ |
| total metals (α) | ↓ | ↓ | 250 mL | ↓ |
| total + diss phos (+$NH_3$) | ↓ | ↓ | 500+250 mL | $H_2SO_4$ |
| $SO_4$ Cl $NO_3$ $NO_2$ | ↓ | ↓ | 200 mL | none |
| DOC + DIC | ↓ | amber | 2x250 mL | $H_2SO_4$ |
| | | | | (EB) |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

40 psi, 10/5 cycle

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

Geosyntec consultants
289 Great Road, Suite 202
Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: HB-13 | Well Diameter: 2" | Intake Depth: ~30'
Project Name: NM1 | Total Depth of Well: 38'
Project Number: BR0090D | Initial Depth to Water: 22.11' | Time: 0814
Date: 4/11/23 | Casing Volume: —
Recorded By: EB | Depth to Water after Purging: 22.13' | Time: 0940
Sample ID: HB-13-04112023 | Method of Purging: bladder
Duplicate ID: HB-13-04112023 DUP | Method of Sampling: low flow
Weather: 60s, clear | Multi-meter ID: 17E101955 | Turbid ID: 22074237

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or (gals) | Temp °F or (°C) | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 0822 | Begin purging @ 250 mLpm | | | | | | | | | |
| 0830 | 22.28 | 250 | ~.5 | 10.0 | 5.90 | 245.5 | 9.91 | 150.6 | 3.74 | |
| 0840 | 22.31 | ↓ | — | 9.9 | 5.77 | 247.1 | 9.88 | 176.6 | 3.26 | |
| 0845 | 22.30 | | ~1 | 10.0 | 5.76 | 249.1 | 9.88 | 182.0 | 2.15 | |
| 0850 | 22.30 | | ~1.5 | 10.0 | 5.76 | 249.1 | 9.86 | 185.7 | 1.96 | |
| 0855 | 22.28 | ↓ | ~2 | 10.0 | 5.76 | 249.0 | 9.86 | 188.8 | 1.79 | |
| 0900 | collect samples | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| VOCs | 0900 | vial | [3x 40mL] | HCl |
| 1,4-D | ↓ | amber | 2x250mL | none |
| total & diss metals | | plastic | 2x 2x500mL | $HNO_3$ |
| total & diss phos | | ↓ | 2x250mL | $H_2SO_4$ |
| $NO_3$ $NO_2$ | | | 120mL | none |
| DIC + DOC | | amber | 2x250mL | $H_2SO_4$ |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

~30 psi 10/5 cycle

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Well ID: MW BS 51
Project Name: NMI RDRA
Project Number: 2521
Date: 4/11/23
Recorded By: DAP
Sample ID: MW-BS51-0411202
Duplicate ID: MS / MSD
Weather: nice

Well Diameter: 2"
Total Depth of Well: 112
Initial Depth to Water: 11.24
Casing Volume:
Depth to Water after Purging: 17.55
Method of Purging: Low Flow
Method of Sampling: Bladder
Multi-meter ID: 503907

Intake Depth: 107
Time: 7:45
Time: 10:35
Turbid ID: —

| Time | Depth to water | Pumping rate | Cumulative volume | Temp | pH | Specific conductance | D.O | ORP | Turbidity | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| | (ft btoc) | mLpm | L or gals | °F or °C | (units) | (µS / cm) | (mg / L) | (mV) | (NTU) | odor, color, sediment load, well condition, presence of product |
| 7:55 | 11.70 | 50 | 0 | 11.13 | 10.82 | 3634.4 | 12.03 | -46.2 | 15.5 | |
| 8:00 | 12.25 | 50 | .25 | 10.61 | 11.90 | 2125.1 | 10.35 | -52.2 | 12.8 | |
| 8:05 | 12.50 | 50 | .50 | 10.71 | 11.89 | 2516.2 | 6.94 | -50.8 | 14.8 | |
| 8:10 | 12.87 | 50 | .75 | 10.45 | 11.93 | 3116.0 | 5.31 | -61.2 | 13.1 | |
| 8:15 | 13.31 | 50 | 1.00 | 10.41 | 11.97 | 3345.6 | 4.70 | -63.5 | 12.9 | |
| 8:20 | 13.65 | 50 | 1.25 | 10.45 | 12.00 | 3397.4 | 4.47 | -65.7 | 12.5 | |
| 8:25 | 14.00 | 50 | 1.50 | 10.46 | 12.02 | 3418.2 | 4.33 | -73.2 | 11.3 | |
| 8:30 | 14.25 | 50 | 1.75 | 10.54 | 12.03 | 3428.3 | 4.25 | -72.9 | 9.59 | |
| 8:35 | 14.42 | 50 | 2.00 | 10.71 | 12.04 | 3428.7 | 4.19 | -71.0 | 8.92 | |
| 8:40 | 14.70 | 50 | 2.25 | 10.85 | 12.04 | 3423.5 | 4.15 | -70.4 | 9.73 | |
| 8:45 | 14.94 | 50 | 2.50 | 11.11 | 12.04 | 3418.6 | 4.14 | -69.9 | 9.43 | |
| 8:50 | 15.19 | 50 | 2.75 | 11.47 | 12.04 | 3403.2 | 4.10 | -68.8 | 8.94 | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4 Dioxane | 9:35 | Glass Amber | .25 | NONE |
| VOCs | 9:35 | Glass Amber | ~~.04~~ | HCL |
| | | | | |
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| | | | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

MS, MSD

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

page 2 of 2

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Well ID: MW B55I
Well Diameter: 2" Intake Depth: 107
Project Name: NMIRDRA
Total Depth of Well: 112
Project Number: 252H
Initial Depth to Water: 16.24 Time: 7:45
Date: 4/11/23
Casing Volume:
Recorded By: DAP
Depth to Water after Purging: 17.55 Time: 10:35
Sample ID: MWB55I-04112023
Method of Purging: Low flow
Duplicate ID: MS MSD
Method of Sampling: Bladder
Weather: nice
Multi-meter ID: 503907 Turbid ID: —

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 8:55 | 15.35 | 50 | 3.00 | 11.62 | 12.04 | 3394.0 | 4.06 | -68.2 | 8.76 | |
| 9:00 | 15.55 | 50 | 3.25 | 11.77 | 12.04 | 3386.6 | 4.03 | -68.0 | 6.98 | |
| 9:05 | 15.68 | 50 | 3.50 | 11.81 | 12.04 | 3369.9 | 3.96 | -70.4 | 6.57 | |
| 9:10 | 15.84 | 50 | 3.75 | 11.88 | 12.04 | 3370.7 | 3.87 | -76.4 | 5.84 | |
| 9:15 | 15.95 | 50 | 4.0 | 11.99 | 12.03 | 3376.1 | 3.76 | -77.7 | 5.69 | |
| 9:20 | 16.04 | 50 | 4.25 | 12.07 | 12.03 | 3376.8 | 3.64 | -76.7 | 4.89 | |
| 9:25 | 16.17 | 50 | 4.50 | 12.17 | 12.02 | 3389.9 | 3.51 | -75.5 | 4.62 | |
| 9:30 | 16.24 | 50 | 4.75 | 12.38 | 12.01 | 3417.5 | 3.39 | -73.1 | 4.60 | |
| 9:35 | SAMPLED | | | | | | | | | |
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| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
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Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Well ID: GZW-7-1
Project Name: NMI
Project Number: BR0090D
Date: 4/11/2023
Recorded By: E. Grimes
Sample ID: GZW-7-1-04112023
Duplicate ID: —
Weather: Clear, 50s

Well Diameter: 1.5" Intake Depth: ~75'
Total Depth of Well: 122'
Initial Depth to Water: 58.90' Time: 845
Casing Volume: —
Depth to Water after Purging: 58.90 Time: 1030
Method of Purging: 0.75" Bladder pump
Method of Sampling: Low Flow
Multi-meter ID: 22H103077 Turbid ID: 22074265

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume (L) or gals | Temp °F or (C) | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 856 | Start purge at | 100 | mLpm | | | | | | | |
| 901 | 58.90 | 100 | 0.5 | 11.7 | 6.88 | 431.8 | 8.23 | 120.6 | 3.23 | |
| 906 | 58.90 | 100 | 1.0 | 11.6 | 6.52 | 428.4 | 7.51 | 131.4 | 3.00 | |
| 911 | 58.91 | 100 | 1.5 | 11.6 | 6.32 | 427.0 | 8.07 | 139.0 | 1.74 | |
| 916 | 58.91 | 100 | 2.0 | 11.9 | 6.19 | 426.5 | 7.26 | 144.5 | 1.20 | |
| 921 | 58.90 | 100 | 2.5 | 11.8 | 6.12 | 427.7 | 7.56 | 149.4 | 1.07 | |
| 926 | 58.92 | 100 | 3.0 | 12.2 | 6.04 | 424.6 | 7.32 | 153.1 | 0.32 | |
| 931 | 58.90 | 100 | 3.5 | 12.0 | 5.98 | 426.8 | 7.42 | 157.4 | 0.54 | |
| 936 | 58.90 | 100 | 4.0 | 12.5 | 5.95 | 423.1 | 7.33 | 160.0 | 0.02 | |
| 941 | 58.90 | 100 | 4.5 | 12.2 | 5.92 | 426.5 | 7.38 | 162.4 | 0.02 | |
| 946 | collect sample | | | | | | | | | |
| | | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| total metals | 946 | plastic | 500 mL | $HNO_3$ |
| diss. metals | 946 | plastic | 500 mL | $HNO_3$ |
| | | | | |
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| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Well ID: HB-12 | Well Diameter: 2 | Intake Depth: 50
Project Name: NM1 | Total Depth of Well: 51
Project Number: | Initial Depth to Water: 45.67 | Time: 08.12
Date: 4-11-23 | Casing Volume:
Recorded By: PBurton | Depth to Water after Purging: | Time:
Sample ID: HB-12-04112023 | Method of Purging: ~~LF~~ Bladder pump
Duplicate ID: | Method of Sampling: LF
Weather: Clear 42 | Multi-meter ID: 3383 | Turbid ID: 2113

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 0830 | 45.67 | 100 | | 14.9 | 8.18 | 186.9 | 9.96 | 45.2 | 6.20 | |
| 0835 | 45.67 | | | 13.1 | 8.18 | 186.8 | 10.26 | 62.6 | 5.97 | |
| 0840 | 45.67 | | | 12.7 | 7.82 | 182.9 | 10.39 | 98.7 | 3.60 | |
| 0845 | 45.67 | | | 12.8 | 7.63 | 183.2 | 10.38 | 115.8 | 2.91 | |
| 0850 | 45.67 | | | 12.6 | 7.48 | 183.1 | 10.38 | 129.7 | 2.55 | |
| 0855 | 45.67 | | | 12.4 | 7.37 | 184.1 | 10.33 | 139.7 | 1.41 | |
| 0900 | 45.67 | | | 12.4 | 6.47 | 183.3 | 10.18 | 145.4 | 1.69 | |
| 0905 | 45.67 | | | 12.2 | 5.83 | 185.1 | 9.22 | 153.4 | 2.32 | |
| 0910 | 45.67 | | | 11.8 | 5.85 | 183.1 | 8.84 | 156.2 | 0.96 | |
| 0915 | 45.67 | ↓ | | 11.9 | 5.85 | 183.0 | 8.80 | 158.1 | 1.40 | |
| 0920 | Collect Sample | | | | | | | | | |
| | | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| TOT/DISS Metals | 0920 | Plastic | 2x500mL | Nitric |
| | | | | |
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Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS



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Well ID: MW-BS7-2 | Well Diameter: 2 | Intake Depth: 109.5
Project Name: NM1 | Total Depth of Well: 114.5
Project Number: | Initial Depth to Water: 51.81 | Time: 10:03
Date: 4-11-23 | Casing Volume:
Recorded By: PBurton | Depth to Water after Purging: | Time:
Sample ID: MW-BS7-2-04112023 | Method of Purging: LF
Duplicate ID: | Method of Sampling: LF
Weather: Clear 50° | Multi-meter ID: 5383 | Turbid ID: 2113

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1020 | 50.5 | 100 | | 12.8 | 7.67 | 609 | 11.75 | 123.9 | 5.74 | |
| 1025 | 51.26 | | | 14.8 | 7.96 | 580 | 7.85 | 107.7 | 2.54 | |
| 1030 | 51.59 | | | 15.2 | 7.94 | 579 | 3.20 | 100.1 | 2.55 | |
| 1035 | 52.08 | | | 15.2 | 7.92 | 591 | 1.47 | 92.3 | 2.83 | |
| 1040 | 52.42 | | | 15.5 | 7.91 | 595 | 1.03 | 86.4 | 1.48 | |
| 1045 | 52.82 | | | 15.5 | 7.91 | 601 | 0.77 | 80.6 | 1.86 | |
| 1050 | 53.13 | | | 15.6 | 7.91 | 602 | 0.58 | 76.2 | 2.01 | |
| 1055 | 53.55 | | | 15.7 | 7.92 | 602 | 0.46 | 71.9 | 2.06 | |
| 1100 | 53.90 | | | 15.8 | 7.92 | 601 | 0.36 | 68.7 | 2.24 | |
| 1105 | 54.21 | | | 15.9 | 7.92 | 602 | 0.31 | 65.6 | 2.41 | |
| 1110 | 54.57 | | | 15.4 | 7.93 | 604 | 0.27 | 63.2 | 2.56 | |
| 1115 | 54.89 | | | 15.5 | 7.92 | 604 | 0.21 | 61.0 | 2.62 | |
| 1120 | 55.19 | | | 15.3 | 7.92 | 605 | 0.17 | 59.1 | 2.59 | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| | | | See page 2 | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS



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Well ID: MW-BS7-2 | Well Diameter: | Intake Depth:
Project Name: NMI | Total Depth of Well:
Project Number: BR00906 | Initial Depth to Water: | Time:
Date: 04/11/23 | Casing Volume:
Recorded By: PB | Depth to Water after Purging: | Time:
Sample ID: MW-BS7-2-04112023 | Method of Purging: low-flow bladder pump
Duplicate ID: — | Method of Sampling:
Weather: — | Multi-meter ID: | Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1125 | 55.65 | 100 | | 15.1 | 7.93 | 607 | 0.12 | 56.7 | 2.51 | |
| 1130 | 55.77 | | | 15.1 | 7.93 | 610 | 0.09 | 55.6 | 1.81 | |
| 1135 | 56.00 | | | 14.9 | 7.94 | 610 | 0.06 | 54.2 | 2.04 | |
| 1140 | 56.22 | | | 15.0 | 7.94 | 609 | 0.04 | 52.6 | 1.92 | change tank |
| 1145 | 56.20 | | | 16.2 | 7.93 | 609 | 0.08 | 50.4 | 2.00 | |
| 1150 | 56.20 | | | 16.5 | 7.93 | 613 | 0.09 | 49.4 | 1.70 | |
| 1155 | 56.78 | ↓ | | 16.5 | 7.93 | 613 | 0.09 | 48.4 | 1.90 | |
| 1200 | collect sample | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| Alkalinity | 12.00 | plastic | 1x250mL | None |
| Tot/Diss Metals | ↓ | plastic | 2x500mL | Nitric |
| 1,4-Dioxane | | Amber | 2x250mL | None |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Well ID: ML-1-3 | Well Diameter: 1.5" | Intake Depth: 92.5'
Project Name: NMI | Total Depth of Well: 91.1'
Project Number: BR0090D | Initial Depth to Water: — | Time: —
Date: 04/04/23 | Casing Volume:
Recorded By: G. Wanjiru | Depth to Water after Purging: — | Time: —
Sample ID: ML-1-3-04042023 | Method of Purging: BarCad
Duplicate ID: N.A | Method of Sampling: Barcad
Weather: 40s-50s, Mostly Cloudy | Multi-meter ID: 22H103077 | Turbid ID: 22074265

| Time | Depth to water | Pumping rate | Cumulative volume | Temp | pH | Specific conductance | D.O | ORP | Turbidity | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| | (ft btoc) | mLpm | L or gals | °F or °C | (units) | (µS / cm) | (mg / L) | (mV) | (NTU) | odor, color, sediment load, well condition, presence of product |
| 14:25 | Purge 1 | [illegible] volume | | 17.2 | 7.02 | 363.8 | 3.34 | 68.8 | 190 | |
| 15:10 | Purge 2 | [illegible] volume | | 15.0 | 7.62 | 330.0 | 1.18 | 70.8 | 984 | Cloudy |
| | | | | | | | | | | |
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| | | | | | | GLW | | | | |
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| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4 - Dioxane | 15:30 | Amber | 250mL x 2 | None |
| | | | | |
| | | GLW | | |
| | | | | |
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| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

GLW

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Well ID: ML-3-3
Project Name: NM1
Project Number: BR0090D
Date: 4/4/23
Recorded By: CnW / ER
Sample ID: ML-3-3-04042023
Duplicate ID: —
Weather: 50s, overcast

Well Diameter: 1.5" Intake Depth: 52
Total Depth of Well: 53.5'
Initial Depth to Water: — Time: —
Casing Volume:
Depth to Water after Purging: — Time: —
Method of Purging: BARCAD
Method of Sampling: BARCAD
Multi-meter ID: 22H103077 Turbid ID: 22074265

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 0935 | purge one well casing volume | | | | | | | | | |
| 1100 | collect samples | | | | | | | | | |
| 1105 | — | — | — | 11.1 | 7.36 | 409.4 | 0.98 | -70.1 | 58.9 | |
| 1108 | purged one well casing volume (ran dry) | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4-D | | amber | 2x250mL | none |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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consultants
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Well ID: GZW-8-2 | Well Diameter: 1.5" | Intake Depth: 114.5'
Project Name: NMI | Total Depth of Well: 116'
Project Number: BR0090D | Initial Depth to Water: | Time:
Date: 04/04/23 | Casing Volume:
Recorded By: | Depth to Water after Purging: | Time:
Sample ID: GZW-8-2-04042023 | Method of Purging: Bar Coad
Duplicate ID: N.A | Method of Sampling: Bar Coad
Weather: 40s, -50s, Clear | Multi-meter ID: 22H103077 | Turbid ID: 22074265

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 11:52 | Purge 1st casing volume | | | 15.1 | 10.68 | 364.2 | 1.30 | -20.10 | 27.1 | |
| 13:40 | Purge 2nd casing volume | | GKM | ~~20.3~~ 20.4 | ~~6.69~~ 6.61 | ~~374.5~~ 374.5 | ~~1.62~~ 1.33 | ~~-32.5~~ -33.0 | 7.57 | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4-Dioxane | 13:35 | Amber | 250mL x 2 | None |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

page 1 of 1

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Well ID: MW-BS02
Project Name: NM1
Project Number:
Date: 4-5-23
Recorded By: PBurton
Sample ID: MW-BS02-04052023
Duplicate ID: —
Weather: Cloudy 46

Well Diameter: 2
Total Depth of Well: 127.5
Initial Depth to Water: 58.43
Casing Volume:
Depth to Water after Purging:
Method of Purging: ~~LF~~ bladder pump low flow
Method of Sampling: ~~GRAB~~
Multi-meter ID:

Intake Depth: 122
Time: 0958
Time:
Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1025 | 58.64 | 75 | → | 10.9 | 7.95 | 432.4 | 11.60 | -9.8 | 54.4 | |
| 1030 | 58.64 | ↓ | — | 10.8 | 7.43 | 462.9 | 6.00 | -58.9 | 60.0 | |
| 1035 | 58.64 | | — | 10.8 | 7.35 | 489.1 | 1.72 | -53.4 | 42.5 | |
| 1040 | 58.64 | | — | 11.0 | 7.34 | 493.1 | 1.19 | -48.1 | 32.5 | |
| 1045 | 58.64 | | — | 10.9 | 7.34 | 491.9 | 0.85 | -40.8 | 18.8 | |
| 1050 | 58.64 | | — | 11.0 | 7.33 | 490.9 | 0.72 | -35.9 | 10.0 | |
| 1055 | 58.64 | | — | 11.0 | 7.34 | 491.3 | 0.54 | -29.1 | 5.23 | |
| 1100 | 58.64 | | — | 11.0 | 7.34 | 493.7 | 0.43 | -27.4 | 5.46 | |
| 1105 | 58.64 | | — | 10.9 | 7.35 | 495.5 | 0.35 | -18.5 | 3.58 | |
| 1110 | 58.64 | | — | 10.9 | 7.35 | 496.0 | 0.32 | -16.1 | 4.13 | |
| 1115 | 58.64 | ↓ | ~3.75 | 10.9 | 7.35 | 496.9 | 0.28 | -13.3 | 3.89 | |
| 1120 | collect | sample | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| Alkalinity | 1120 | Plastic | 1 x 250mL | None |
| TOT/Diss Metals | ↓ | Plastic | 2 x 500mL | Nitric |
| 1,4 Dioxane | ↓ | Amber | 2 x 250mL | None |
| | | | | |
| | | | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

page 1 of 1

Geosyntec consultants
289 Great Road, Suite 202
Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: MW-B552 | Well Diameter: 2" | Intake Depth: —
Project Name: NMI | Total Depth of Well: 110'
Project Number: B0090C | Initial Depth to Water: 6.37' | Time: 0802
Date: 4/5/23 | Casing Volume: —
Recorded By: S. Conway | Depth to Water after Purging: 6.76' | Time: 1110
Sample ID: MW-B552-04052023 | Method of Purging: Bladder pump
Duplicate ID: MW-B552-04052023 DUP | Method of Sampling: Low flow
Weather: 40s, overcast | Multi-meter ID: 17E101955 | Turbid ID: 2107 3394

| Time | Depth to water | Pumping rate | Cumulative volume | Temp | pH | Specific conductance | D.O | ORP | Turbidity | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| | (ft btoc) | mLpm | ℓ or gals | °F or ℃ | (units) | (µS / cm) | (mg / L) | (mV) | (NTU) | odor, color, sediment load, well condition, presence of product |
| 0829 | Begin purging @ | | | 100 | mLpm | | | | | 0850: First water |
| 0858 | 6.55' | 100 | | 10.6 | 7.08 | 577 | 3.49 | -19.4 | 55.4 | |
| 0903 | 6.68' | | | 10.9 | 7.06 | 494.5 | 2.07 | -82.0 | 59.8 | |
| 0908 | 6.77' | | | 11.0 | 7.08 | 478.2 | 1.31 | -94.2 | 45.4 | |
| 0913 | 6.81 | | | 11.0 | 7.09 | 477.5 | 1.10 | -98.0 | 28.8 | |
| 0918 | 6.82 | | | 11.0 | 7.10 | 478.4 | 0.98 | -100.1 | 15.8 | |
| 0923 | 6.82 | | | 11.0 | 7.11 | 478.6 | 0.93 | -100.9 | 10.0 | |
| 0928 | 6.82 | | | 11.1 | 7.11 | 477.8 | 0.86 | -104.4 | 10.2 | |
| 0933 | 6.82 | | | 11.1 | 7.11 | 477.0 | 0.82 | -106.9 | 8.93 | |
| 0938 | 6.82 | | | 11.0 | 7.12 | 476.2 | 0.80 | -108.1 | 8.67 | |
| 0943 | 6.82 | ↓ | ~5.5 | 11.1 | 7.12 | 475.2 | 0.78 | -107.9 | 8.97 | |
| 0953 | Collect samples | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| Tot + Diss. Metals | 0953 | Plastic | 2x [2x500mL] | $HNO_3$ |
| 1,4-Dioxane | | Amber Jar | 2x [2x250mL] | None |
| VOCs | | Amber Vial | 2x [3x40mL] | HCl |
| TOC | | Glass Vial | 2x [2x40mL] | $H_2SO_4$ |
| TSS | | Plastic | 2x [1000mL] | None |
| $SO_4$/Cl/$NO_3$/$NO_2$ | | Plastic | 2x [250mL] | None |
| Hardness | ↓ | Plastic | 2x [250mL] | $HNO_3$ |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

Black specks in purge water

60

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Well ID: MW-546
Project Name: NMI RDRA
Project Number: 2524
Date: 04/05/2023
Recorded By: DAP
Sample ID: MW-546-04052023
Duplicate ID: N/A
Weather: 40s Cloudy

Well Diameter: 2"
Total Depth of Well: 109
Initial Depth to Water: 12.84 Time: 9:20
Casing Volume: 15.67 gallons
Depth to Water after Purging: 12.85 Time: 10:15
Method of Purging: Low Flow
Method of Sampling: Bladder
Multi-meter ID: 503907 Turbid ID: 22074237
Intake Depth: 58'

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 9:30 | 12.85 | 125 | 0 | 16.35 | 7.92 | 3.03 | 10.58 | -0.4 | 7.88 | |
| 9:35 | 12.85 | 125 | .625 | 10.95 | 7.07 | 947.03 | 1.63 | -75.6 | 6.99 | |
| 9:40 | 12.85 | 125 | 1.25 | 10.87 | 6.70 | 966.54 | 0.81 | -81.3 | 2.15 | |
| 9:45 | 12.85 | 125 | 1.875 | 10.86 | 6.55 | 967.83 | 0.60 | -78.6 | 3.68 | |
| 9:50 | 12.85 | 125 | 2.50 | 10.92 | 6.49 | 964.81 | 0.48 | -73.8 | 3.49 | |
| 9:55 | 12.85 | 125 | 3.125 | 10.91 | 6.46 | 964.39 | 0.41 | -67.5 | 3.65 | |
| 10:00 | 12.85 | 125 | 3.75 | 10.87 | 6.45 | 957.36 | 0.38 | -65.6 | 2.90 | |
| 10:05 | SAMPLED | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4 Dioxane | 10:05 | Glass Amber | .25 | NONE |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

page 1 of 1

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Well ID: MW-SD46
Project Name: NMI RDRA
Project Number: 2524
Date: 4/5/23
Recorded By: DAP
Sample ID: MW-SD46-04052023
Duplicate ID: —
Weather: 45 overcast

Well Diameter: 2" Intake Depth: 82.5'
Total Depth of Well: 87.5'
Initial Depth to Water: 12.85 Time: 10:25
Casing Volume: 12.17 gallons
Depth to Water after Purging: 12.85 Time: 11:15
Method of Purging: Low Flow
Method of Sampling: Bladder
Multi-meter ID: 503907 Turbid ID: 22074237

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 10:30 | 12.83 | 100 | 0 | 10.14 | 7.49 | 418.60 | 9.63 | -64.9 | 6.33 | |
| 10:35 | 12.83 | 100 | .50 | 10.12 | 6.92 | 731.96 | 2.57 | -57.1 | 4.66 | |
| 10:40 | 12.83 | 100 | 1.0 | 10.21 | 6.70 | 765.19 | 1.47 | -55.1 | 4.43 | |
| 10:45 | 12.83 | 100 | 1.5 | 10.15 | 6.62 | 769.92 | 1.23 | -56.3 | 3.92 | |
| 10:50 | 12.83 | 100 | 2.0 | 10.10 | 6.60 | 774.13 | 1.02 | -60.1 | 4.65 | |
| 10:55 | 12.83 | 100 | 2.5 | 10.13 | 6.62 | 777.49 | 0.87 | -65.9 | 4.64 | |
| 11:00 | 12.83 | 100 | 3.0 | 10.11 | 6.64 | 779.00 | 0.78 | -68.9 | 4.72 | |
| 11:05 | 12.83 | 100 | 3.5 | 10.15 | 6.64 | 778.08 | 0.72 | -69.6 | 4.96 | |
| 11:10 | SAMPLED | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4 Dioxane | 11:10 | Glass Amber | .25 | NONE |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS



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Well ID: MW SD17
Well Diameter: 2
Intake Depth: 81'
Project Name: NMI
Total Depth of Well: 89'
Project Number: BR00900
Initial Depth to Water: 55.64
Time: 0816
Date: 4-5-23
Casing Volume:
Recorded By: PBurden
Depth to Water after Purging:
Time:
Sample ID: MW-SD17-04052023
Method of Purging: low flow
Duplicate ID:
Method of Sampling: Bladder Pump
Weather: cloudy 46°
Multi-meter ID:
Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume (L) or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 0845 | 55.7 | 100 | - | 11.3 | 5.97 | 387.8 | 7.19 | 47.7 | 42.2 | |
| 0850 | 55.7 | | - | 11.0 | 5.80 | 310.0 | 4.64 | 81.6 | 35.6 | |
| 0855 | 55.7 | | - | 11.0 | 5.78 | 309.8 | 3.87 | 102.2 | 24.5 | |
| 0900 | 55.7 | | - | 11.0 | 5.77 | 308.4 | 3.81 | 110.2 | 17.8 | |
| 0905 | 55.7 | | - | 10.9 | 5.76 | 313.2 | 3.90 | 116.6 | 9.23 | |
| 0910 | 55.7 | | - | 10.9 | 5.77 | 313.7 | 3.86 | 120.6 | 4.13 | |
| 0915 | 55.7 | | - | 11.0 | 5.76 | 315.9 | 3.95 | 124.5 | 4.06 | |
| 0920 | 55.7 | ↓ | 3.5 | 10.9 | 5.76 | 316.0 | 3.91 | 126.2 | 3.88 | |
| 0925 | collect sample | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4-Dioxane | 0925 | Amber | 2 x 250 mL | None |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Well ID: MW-B1D2R | Well Diameter: 2 | Intake Depth: 205'
Project Name: NM1 | Total Depth of Well: 210'
Project Number: BR0890D | Initial Depth to Water: 68.00 | Time: 1417
Date: 4-4-2023 | Casing Volume:
Recorded By: WPB | Depth to Water after Purging: | Time:
Sample ID: MW-B1D2R-04042023 | Method of Purging: ~~LF~~ GD bladder pump
Duplicate ID: | Method of Sampling: ~~GRAB~~ GD low-flow
Weather: — | Multi-meter ID: | Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1450 | 66.45 | 75 | — | 12.8 | 8.24 | 295.1 | 2.64 | ~~29.5~~ | 54.4 | |
| 1455 | 67.70 | ↓ | — | 12.0 | 8.26 | 291.5 | 1.48 | 23.3 | 31.2 | |
| 1500 | 68.00 | | — | 11.2 | 8.25 | 291.0 | 0.96 | 22.7 | 26.9 | |
| 1505 | 68.55 | | — | 11.1 | 8.24 | 291.0 | 0.76 | 22.8 | 23.9 | |
| 1510 | 69.24 | | — | 10.9 | 8.23 | 291.1 | 0.62 | 23.0 | 21.3 | |
| 1515 | 70.00 | ↓ | — | 10.9 | 8.23 | 291.3 | 0.55 | 23.0 | 16.6 | |
| 1520 | 70.81 | 100 | 2.25 | 11.3 | 8.20 | 296.5 | 0.55 | 23.8 | 8.99 | |
| 1525 | 71.36 | ↓ | — | 11.2 | 8.18 | 291.0 | 0.55 | 25.1 | 7.49 | |
| 1530 | 72.07 | | — | 11.4 | 8.16 | 291.2 | 0.56 | 26.2 | 5.04 | |
| 1535 | 72.56 | | — | 11.5 | 8.15 | 291.1 | 0.56 | 27.3 | 4.42 | |
| 1540 | 73.00 | | — | 11.6 | 8.15 | 289.5 | 0.66 | 28.7 | 3.77 | Change Tank |
| 1545 | 73.40 | ↓ | 4.75 | 11.7 | 8.15 | 292.7 | 0.68 | 29.5 | 4.31 | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4 Dioxane | 1650 | Amber | 2 x 250mL | None |
| Tot/Diss Metals | ↓ | Plastic | 2 x 500mL | Nitric |
| Tot Phos | ↓ | Plastic | 1 x 250mL | Sulfuric |
| | | GD | | |
| | | | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS



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Well ID: MW-B1D28
Project Name: NM1
Project Number: BR0090
Date: 4-4-2023
Recorded By: WPB
Sample ID: mbar B1D28-04042023
Duplicate ID: —
Weather: —

Well Diameter: 2
Total Depth of Well: 210
Initial Depth to Water: 68.60
Casing Volume:
Depth to Water after Purging:
Method of Purging: ~~LF~~ (GD) bladder pump
Method of Sampling: ~~GRAB~~ (GD) low-flow
Multi-meter ID:

Intake Depth: 205'
Time: 1417
Time:
Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1550 | 73.89 | 75 | — | 10.9 | 8.15 | 291.8 | 0.63 | 310 | 3.72 | |
| 1555 | 74.58 | | — | 10.9 | 8.15 | 291.3 | 0.55 | 31.9 | 3.35 | |
| 1600 | 75.29 | | — | 10.8 | 8.15 | 291.3 | 0.46 | 321 | 3.71 | |
| 1605 | 76.15 | | — | 10.7 | 8.15 | 291.2 | 0.40 | 333 | 2.85 | |
| 1610 | 77.05 | | — | 10.5 | 8.15 | 291.0 | 0.35 | 338 | 3.03 | |
| 1615 | 78.03 | | — | 10.5 | 8.15 | 291.0 | 0.32 | 343 | 3.52 | |
| 1620 | 78.65 | | — | 10.5 | 8.15 | 290.7 | 0.30 | 347 | 3.04 | |
| 1625 | 79.41 | | — | 10.5 | 8.15 | 291.1 | 0.28 | 35.1 | 3.30 | |
| 1630 | 79.80 | | — | 10.4 | 8.15 | 291.3 | 0.27 | 355 | 4.01 | |
| 1635 | 80.89 | | — | 10.4 | 8.15 | 291.1 | 0.26 | 359 | 3.37 | |
| 1640 | 81.30 | | — | 10.3 | 8.15 | 291.0 | 0.25 | 36.2 | 3.91 | |
| 1645 | 82.31 | | — | 10.3 | 8.15 | 290.8 | 0.30 | 36.6 | 3.17 | |
| 1650 | 82.70 | ↓ | ~9.35 | 10.2 | 8.15 | 290.8 | 0.28 | 36.8 | 3.89 | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| | 1655 | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

page 1 of 2

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Well ID: MW-BM03 | Well Diameter: 2 | Intake Depth: 162
Project Name: NMI | Total Depth of Well: 200
Project Number: | Initial Depth to Water: 57.50 | Time: 1307
Date: 4-5-23 | Casing Volume:
Recorded By: PBurton | Depth to Water after Purging: | Time:
Sample ID: MW-BM03-040523 | Method of Purging: ~~LF~~ ~~GRAB~~ bladder Pump low-flow
Duplicate ID: | Method of Sampling:
Weather: Cloudy 44° | Multi-meter ID: | Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume (L) or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1335 | 57.01 | 100 | – | 9.3 | 8.04 | 181.6 | 12.10 | 466 | 55.1 | |
| 1340 | 57.68 | | – | 9.9 | 8.82 | 226.4 | 2.57 | 14.9 | 55.7 | |
| 1345 | 58.51 | | – | 9.7 | 9.08 | 193.4 | 1.10 | -2.5 | 62.4 | |
| 1350 | 58.83 | | – | 9.7 | 9.32 | 147.9 | 0.87 | -12.8 | 58.4 | |
| 1355 | 59.13 | | – | 9.4 | 9.30 | 171.9 | 0.73 | -14.2 | 44.0 | |
| 1400 | 59.18 | | – | 9.5 | 9.06 | 210.7 | 0.59 | -10.3 | 35.6 | Tank change |
| 1405 | 59.10 | | 3.00 | 9.2 | 8.96 | 227.5 | 0.51 | -11.9 | 35.3 | |
| 1410 | 59.01 | | – | 9.7 | 8.87 | 238.9 | 0.54 | -13.4 | 20.8 | |
| 1415 | 59.56 | | – | 9.9 | 8.44 | 307.5 | 0.39 | -14.1 | 26.8 | |
| 1420 | 59.75 | | – | 9.8 | 8.81 | 264.7 | 0.25 | -36.9 | 27.2 | |
| 1425 | 59.79 | | – | 9.7 | 8.85 | 257.9 | 0.26 | -37.3 | 23.4 | |
| 1430 | 59.90 | ↓ | 5.5 | 9.8 | 8.48 | 312.0 | 0.20 | -37.5 | 15.1 | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| Tot/Diss Metals | 1540 | plastic | 2x500mL | Nitric |
| 1,4-Dioxane | ↓ | Amber | 2x250mL | None |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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(978)263-9588 Fax(978)263-9594

Well ID: MW-BM03 | Well Diameter: 2 | Intake Depth: 162
Project Name: NM1 | Total Depth of Well: 200
Project Number: | Initial Depth to Water: 52.50 | Time: 1307
Date: 4-5-23 | Casing Volume:
Recorded By: PBeton | Depth to Water after Purging: | Time:
Sample ID: MW-BM03-040523 | Method of Purging: LF
Duplicate ID: | Method of Sampling: GRAB
Weather: Cloudy 44° | Multi-meter ID: | Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1435 | 60.09 | 100 | — | 9.9 | 8.35 | 320.0 | 0.14 | -73.9 | 18.0 | |
| 1440 | 60.19 | | — | 9.9 | 8.30 | 322.0 | 0.10 | -107.2 | 14.7 | |
| 1445 | 60.42 | | — | 9.8 | 8.21 | 328.0 | 0.04 | -134.1 | 14.9 | |
| 1450 | 60.40 | | — | 10.0 | 8.16 | 327.6 | 0.00 | -149.9 | 15.4 | |
| 1455 | 60.40 | | — | 9.7 | 8.10 | 331.9 | 0.00 | -153.8 | 11.7 | |
| 1500 | 60.40 | | — | 9.7 | 7.69 | 396.6 | 0.00 | -140.3 | 14.8 | |
| 1505 | 60.40 | | 6.5 | 9.8 | 7.75 | 378.6 | 0.00 | -138.8 | 11.1 | |
| 1510 | 60.40 | | — | 9.9 | 7.66 | 386.1 | 0.00 | -135.0 | 9.86 | |
| 1515 | 60.40 | | — | 9.7 | 7.66 | 390.1 | 0.00 | -132.3 | 11.6 | |
| 1520 | 60.40 | | — | 9.8 | 7.62 | 399.9 | 0.00 | -129.4 | 8.62 | Tank Change |
| 1525 | 59.59 | | — | 9.5 | 7.55 | 422.9 | 0.00 | -121.2 | 14.0 | |
| 1530 | 59.59 | | — | 9.4 | 7.56 | 407.8 | 0.00 | -121.2 | 8.05 | |
| 1535 | 59.59 | ↓ | 11.5 | 9.6 | 7.58 | 414.9 | 0.00 | -119.4 | 4.85 | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| | 1540 | | | |

See page one

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

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# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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(978)263-9588 Fax(978)263-9594

Well ID: MW-502 | Well Diameter: 2" | Intake Depth: ~64'
Project Name: NM1 | Total Depth of Well: 67'
Project Number: BR00900 | Initial Depth to Water: 58.43 | Time: 0745
Date: 4/5/23 | Casing Volume: —
Recorded By: EB | Depth to Water after Purging: 58.45 | Time: 0954
Sample ID: MW-502-04052023 | Method of Purging: bladder
Duplicate ID: — | Method of Sampling: low flow
Weather: 40s, overcast | Multi-meter ID: 22H103077 | Turbid ID: 22074265

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or (gals) | Temp °F or (°C) | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 0808 | Begin purging @ 200 mLpm | | | | | | | | | |
| 0818 | 58.46 | 200 | 0 | 12.0 | 6.80 | 156.1 | 7.80 | 47.0 | 32.5 | |
| 0830 | 58.45 | | ~0.5 | 12.6 | 6.18 | 155.4 | 7.30 | 60.0 | 16.7 | |
| 0835 | 58.45 | | | 12.6 | 6.03 | 158.8 | 7.23 | 67.7 | 8.73 | |
| 0840 | 58.45 | | ~1 | 12.4 | 5.98 | 158.5 | 7.09 | 72.5 | 5.83 | |
| 0845 | 58.45 | | | 12.7 | 5.94 | 156.9 | 7.09 | 78.2 | 4.76 | |
| 0850 | 58.46 | | ~1.5 | 12.4 | 5.90 | 156.1 | 7.19 | 84.0 | 4.79 | |
| 0855 | 58.46 | | | 12.5 | 5.88 | 156.7 | 7.30 | 88.3 | 3.89 | |
| 0900 | 58.45 | | ~2 | 12.5 | 5.86 | 156.8 | 7.07 | 94.5 | 2.77 | |
| 0905 | 58.45 | | | 12.5 | 5.83 | 156.4 | 7.27 | 100.9 | 2.38 | |
| 0910 | 58.45 | ↓ | ~2.5 | 12.7 | 5.81 | 156.2 | 7.00 | 108.3 | 1.73 | |
| 0920 | 58.45 | ↓ | ~3 | 12.1 | 5.84 | 158.4 | 7.03 | 116.8 | 1.16 | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| total + diss metals | 0935 | plastic | 2x 500mL | $HNO_3$ |
| total + diss phos | ↓ | ↓ | 2x 250mL | $H_2SO_4$ |
| DIC + DOC | ↓ | amber | 2x 250mL | ↓ |
| NO3 NO2 | ↓ | plastic | 120mL | none |
| | | | | |
| | | EDS | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

PSI: 40 10s/5s discharge cycle

page 2 of 2

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

Geosyntec consultants
289 Great Road, Suite 202
Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: MW-302
Project Name: NM1
Project Number: GR00900
Date: 4/5/23
Recorded By:
Sample ID:
Duplicate ID: see page
Weather:

Well Diameter:
Total Depth of Well:
Initial Depth to Water:
Casing Volume:
Depth to Water after Purging:
Method of Purging:
Method of Sampling:
Multi-meter ID:

Intake Depth:
Time:
Time:
Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 0925 | 58.45 | 200 | — | 12.6 | 5.78 | 157.6 | 7.13 | 121.4 | 1.03 | |
| 0930 | 58.45 | ↓ | ~35 | 12.6 | 5.77 | 157.8 | 7.25 | 125.2 | 0.90 | |
| 0935 | collect samples | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| see page | | | | 1 |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

see page 1

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

Geosyntec
consultants
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Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: MW-S64
Project Name: NM1
Project Number: BR00902
Date: 4/5/23
Recorded By: EB
Sample ID: MW-S64-04052023
Duplicate ID: MW-S64-040520230UP
Weather: 40s, overcast

Well Diameter: 2"
Total Depth of Well: 75'
Initial Depth to Water: 61.69' 69'
Casing Volume:
Depth to Water after Purging: 61.67'
Method of Purging: bladder
Method of Sampling: low flow
Multi-meter ID: 22H103077

Intake Depth: ~72'
Time: 1032
Time: 1213
Turbid ID: 22074265

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1045 | Begin purging @ 250 mL/pm | | | | | | | | | |
| 1055 | 61.68 | 250 | 0 | 12.2 | 5.54 | 105.1 | 8.29 | 159.2 | 36.0 | |
| 1105 | 61.68 | ↓ | ~1 | 12.2 | 5.48 | 105.2 | 8.25 | 165.2 | 32.8 | |
| 1115 | 61.69 | | ~2 | 12.2 | 5.46 | 104.9 | 8.33 | 168.1 | 18.6 | |
| 1125 | 61.68 | | ~2.5 | 12.3 | 5.45 | 104.9 | 8.27 | 169.2 | 9.45 | |
| 1130 | 61.69 | | ~3 | 12.3 | 5.44 | 104.8 | 8.27 | 170.6 | 4.91 | |
| 1135 | 61.69 | | ~3.5 | 12.2 | 5.49 | 104.8 | 8.27 | 164.2 | 3.64 | |
| 1140 | 61.68 | ↓ | ~4 | 12.2 | 5.45 | 104.7 | 8.21 | 168.4 | 2.68 | |
| 1145 | collect samples | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| total+diss metals | 1145 | plastic | 2x[2x500mL] | $HNO_3$ |
| total+diss phos | ↓ | ↓ | 2x[2x250mL] | $H_2SO_4$ |
| $NO_2NO_3$ | | | 2x[120mL] | none |
| DIC + DOC | | amber | 2x[2x250mL] | $H_2SO_4$ |
| VOCs | | vial | 2x[3x40mL] | HCl |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

~50 psi, 10s/5s discharge (103)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

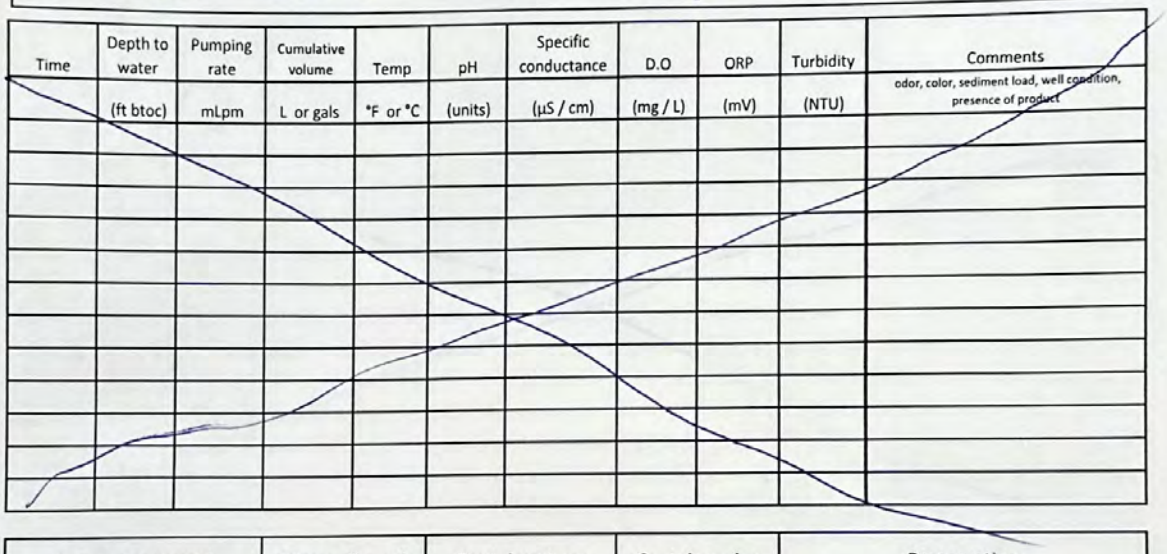
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Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: BEW-4
Project Name: NMI
Project Number: 3252
Date: 04/05/23
Recorded By: Keith Robinson
Sample ID: BEW-4-04052023
Duplicate ID: N/A
Weather: 40's Cloudy

Well Diameter: 4 in
Total Depth of Well: NM
Initial Depth to Water: NM
Casing Volume: NM
Depth to Water after Purging: NM
Method of Purging: dedicated pump for system
Method of Sampling: electric pump / grab
Multi-meter ID: NM

Intake Depth: NM
Time:
Time: NM
Turbid ID: NM

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
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| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| BEW-4-04052023 | 10:20 | | | |
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Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

Purged 175 gallons prior to samplings

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

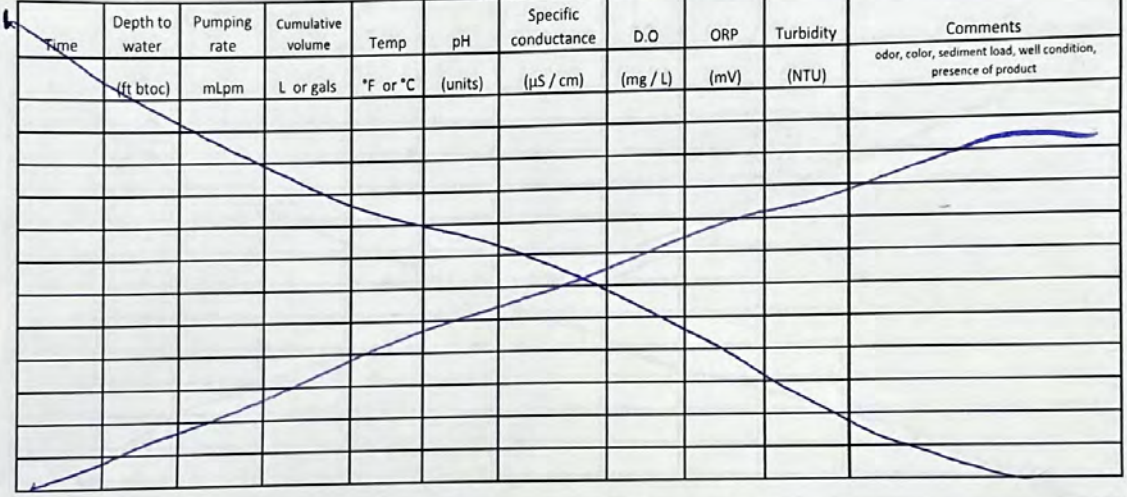
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(978)263-9588 Fax(978)263-9594

Well ID: BEW-2
Project Name: NMI
Project Number: 3252
Date: 04/05/23
Recorded By: KC
Sample ID: BEW-2-04052023
Duplicate ID:
Weather: 40's cloudy

Well Diameter: 4in
Total Depth of Well: NM
Initial Depth to Water: NM
Casing Volume: NM
Depth to Water after Purging: NM
Method of Purging: dedicated pump for gw treatment
Method of Sampling: electric pump / grab
Multi-meter ID: N/A

Intake Depth: NM
Time:
Time:
Turbid ID: NA

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
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| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| BEW-2-04052023 | 0930 | | | |
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Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

Pumped 266 gallons using system pump

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

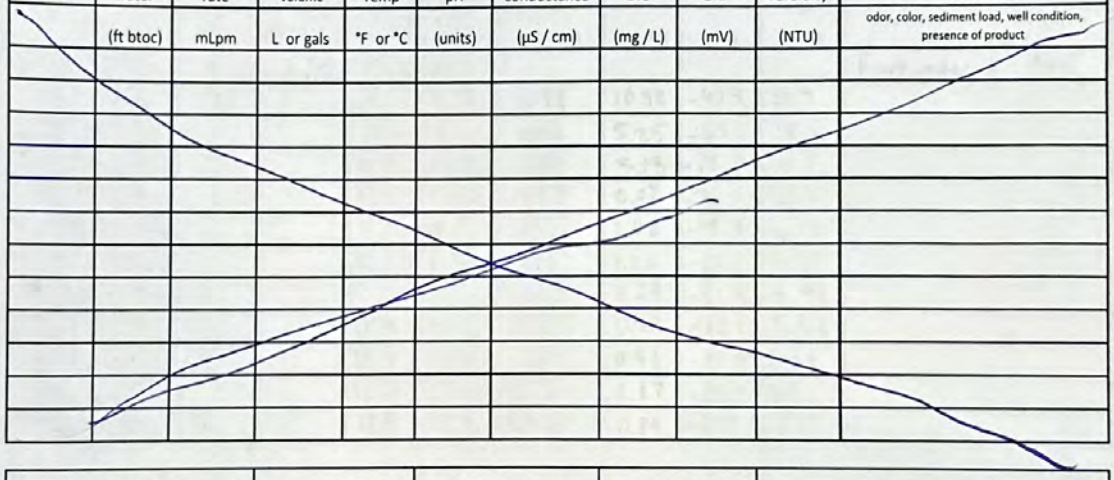
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(978)263-9588 Fax(978)263-9594

Well ID: BEW-3
Project Name: NMI
Project Number: 3252
Date: 04/05/2023
Recorded By: Kathy Dobson
Sample ID: BEW-3-040320223
Duplicate ID: MS/MSD
Weather: 40's cloudy

Well Diameter: 4in
Total Depth of Well: NM
Initial Depth to Water: NM
Casing Volume: NM
Depth to Water after Purging: NM
Method of Purging: dedicated pump for gw treatment
Method of Sampling: Electric pump / grab
Multi-meter ID: NM

Intake Depth: NM
Time:
Time: NM
Turbid ID: NM

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
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| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| BEW-3-040520223 | 0955 | | | |
| BEW-3-040520223 MS | 0955 | | | |
| BEW-3-040320223 MSD | 0955 | | | |
| | | | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

pumped 325 gallons using system pump

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS



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Well ID: MW-BS53
Well Diameter: 2" Intake Depth: –
Project Name: NMI
Total Depth of Well: 139'
Project Number: BR0090C
Initial Depth to Water: 12.30' Time: 1220
Date: 04/05/2023
Casing Volume: –
Recorded By: S. Comeau
Depth to Water after Purging: 32.98' Time: 1520
Sample ID: MW-BS53-04052023
Method of Purging: Bladder pump
Duplicate ID: —
Method of Sampling: Low flow
Weather: 40s, overcast, windy
Multi-meter ID: 17E101955 Turbid ID: 21073394

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume (1) or gals | Temp °F or (2) | pH (units) | Specific conductance (µS/cm) | D.O (mg/L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1241 | Begin | purging | (2) | 100 m-pm | | | | | | First water @ 1305 |
| 1310 | 9.48' | 100 | | 11.0 | 9.89 | 1098 | 10.92 | -47.9 | 10.7 | |
| 1315 | 10.62 | | | 11.0 | 10.65 | 1056 | 5.25 | -64.5 | 12.5 | |
| 1320 | 10.67 | | | 11.0 | 10.93 | 1038 | 3.13 | -72.0 | 11.5 | |
| 1325 | 11.36 | | | 11.1 | 11.04 | 1047 | 2.08 | -76.2 | 10.1 | |
| 1330 | 12.43 | | | 11.1 | 11.09 | 1055 | 1.42 | -79.2 | 6.72 | |
| 1335 | 13.21 | | | 11.1 | 11.10 | 1058 | 1.20 | -80.2 | 4.75 | |
| 1340 | 14.36 | | | 11.0 | 11.12 | 1061 | 1.04 | -81.4 | 3.98 | |
| 1345 | 15.52 | | | 10.9 | 11.12 | 1063 | 0.97 | -82.1 | 4.98 | |
| 1350 | 16.76 | | | 10.9 | 11.13 | 1063 | 0.91 | -83.0 | 3.78 | |
| 1355 | 18.25 | | | 10.8 | 11.13 | 1064 | 0.87 | -83.7 | 3.71 | |
| 1400 | 19.44 | V | | 10.9 | 11.13 | 1065 | 0.84 | -84.3 | 3.68 | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| VOCs | 1510 | Amber vial | 3x40mL | HCl |
| 1,4-Dioxane | 1510 | Amber Jar | 2x250mL | None |
| | | | | |
| | | (SC) | | |
| | | | | |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

(SC)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS



Geosyntec consultants
289 Great Road, Suite 202
Acton, Massachusetts, 01720
(978)263-9588 Fax(978)263-9594

Well ID: MW-B553
Project Name:
Project Number:
Date: 04/05/2026
Recorded By:
Sample ID:
Duplicate ID:
Weather:

Well Diameter:
Total Depth of Well:
Initial Depth to Water:
Casing Volume:
Depth to Water after Purging:
Method of Purging:
Method of Sampling:
Multi-meter ID:

Intake Depth:
Time:
Time:
Turbid ID:

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume (L or gals) | Temp °F or (C) | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1405 | 20.35 | 100 | | 10.9 | ~~10.4~~ 11.14 | 1065 | 0.85 | -84.8 | 3.29 | |
| 1410 | 21.16 | | | 10.9 | 11.14 | 1065 | 0.86 | -85.3 | 3.77 | |
| 1415 | 22.07 | | | 10.9 | 11.14 | 1066 | 0.85 | -85.3 | 3.39 | |
| 1420 | 22.96 | | | 10.9 | 11.14 | 1066 | 0.83 | -85.8 | 3.95 | |
| 1425 | 24.02 | | | 10.9 | 11.14 | 1067 | 0.81 | -86.0 | 3.96 | |
| 1430 | 24.93 | | | 10.8 | 11.14 | 1067 | 0.81 | -85.9 | 3.62 | |
| 1435 | 25.92 | | | 10.8 | 11.14 | 1067 | 0.79 | -86.1 | 3.64 | |
| 1440 | 27.04 | | | 10.8 | 11.14 | 1067 | 0.79 | -86.3 | 3.35 | |
| 1445 | 27.92 | | | 10.8 | 11.15 | 1068 | 0.80 | -86.4 | 3.94 | |
| 1450 | 28.90 | | | 10.8 | 11.15 | 1068 | 0.80 | -86.7 | 4.25 | |
| 1455 | 29.72 | | | 10.7 | 11.15 | 1068 | 0.81 | -86.9 | 4.30 | |
| 1500 | 30.14 | | | 10.7 | 11.15 | 1068 | 0.83 | -86.9 | 3.87 | |
| 1505 | 30.61 | | ~12 | 10.7 | 11.15 | 1068 | 0.84 | -87.1 | 3.73 | Nitrogen tank changed prior to sampling |
| 1510 | Collect samples (2 hour limit) | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| | | | | |
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Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Well ID: HA20-CMT-3B(ow) | Well Diameter: 2" | Intake Depth: 106
Project Name: NMI Concord | Total Depth of Well: 110.65
Project Number: | Initial Depth to Water: 45.75 | Time: 900
Date: 4/5/23 | Casing Volume: 40 L (2") 157 L (4")
Recorded By: SRP | Depth to Water after Purging: | Time:
Sample ID: HA20-CMT-3B(ow)-04052023 | Method of Purging: Bladder Pump
Duplicate ID: | Method of Sampling: Low Flow
Weather: Overcast 40s | Multi-meter ID: YSI Pro DSS | Turbid ID: Geotech

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume (D)or gals | Temp °F or (C) | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1001 | D.95 | | 2.8 | 10 | 7.87 | 447 | 1.68 | 17.5 | 117 | Dark Gray sulfurous odor |
| 1015 | 1.1 | 86 | 4.0 | 9.8 | 7.87 | 443 | 1.49 | -24.7 | 43.3 | |
| 1029 | 1.17 | 71 | 5.0 | 9.7 | 7.87 | 441 | 1.35 | -50.3 | 33.3 | |
| 1041 | 1.23 | 70 | 5.8 | 9.7 | 7.87 | 440 | 1.24 | -58.8 | 26.1 | |
| 1100 | 1.27 | 70 | 7.0 | 9.6 | 7.87 | 440 | 1.09 | -73.1 | 18.0 | |
| 1110 | 1.28 | 70 | 7.7 | 9.6 | 7.87 | 441 | 1.03 | -79.4 | 17.1 | |
| 1120 | 1.28 | 70 | 8.4 | 9.6 | 7.87 | 440 | 0.99 | -82.9 | 12.6 | |
| 1130 | 1.28 | 70 | 9.1 | 9.6 | 7.87 | 441 | 0.95 | -87 | 10.8 | |
| 1140 | 1.28 | 70 | 9.8 | 9.5 | 7.87 | 440 | 0.91 | -91.6 | 10.1 | |
| 1150 | 1.28 | 70 | 10.5 | 9.5 | 7.88 | 441 | 0.88 | -92.3 | 10.3 | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| Metals Diss metals | 1220 | P | 500 ml | HNO3 |
| T Alk | | P | 250 | None |
| T Phos | | P | 250 | H2SO4 |
| VOCs | | V | 40 | HCl |
| 1,4 Dioxane | | A | 250 | None |
| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Well ID: MW SD 38 | Well Diameter: 2" | Intake Depth: 65
Project Name: NM1 RDRA | Total Depth of Well: 70
Project Number: 2521 | Initial Depth to Water: 9.50 | Time: 13:45
Date: 04/05/2021 | Casing Volume: 9.86
Recorded By: DAP | Depth to Water after Purging: 9.55 | Time: 14:35
Sample ID: MW-SD38-04052023 | Method of Purging: Low Flow
Duplicate ID: — | Method of Sampling: Bladder
Weather: 40 overcast | Multi-meter ID: 503907 | Turbid ID: 22

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 13:50 | 9.50 | 100 | 0 | 9.78 | 6.76 | 284.30 | 7.54 | 88.6 | 8.82 | |
| 13:55 | 9.55 | 100 | .500 | 9.76 | 6.42 | 297.25 | 0.99 | 59.0 | 41.26 | |
| 14:00 | 9.55 | 100 | 1.00 | 9.53 | 6.35 | 301.48 | 0.74 | 56.9 | 22.46 | |
| 14:05 | 9.55 | 100 | 1.50 | 9.55 | 6.31 | 302.20 | 0.59 | 55.4 | 7.32 | |
| 14:10 | 9.55 | 100 | 2.00 | 9.53 | 6.30 | 300.24 | 0.50 | 55.3 | 4.79 | |
| 14:15 | 9.55 | 100 | 2.50 | 9.39 | 6.29 | 301.13 | 0.47 | 54.6 | 3.46 | |
| 14:20 | 9.55 | 100 | 3.00 | 9.46 | 6.28 | 301.70 | 0.44 | 53.6 | 3.44 | |
| 14:25 | 9.55 | 100 | 3.5 | 9.46 | 6.28 | 301.54 | 0.42 | 52.6 | 2.19 | |
| 14:30 | SAMPLE | | | | | | | | | |
| | | | | | | | | | | |
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| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| 1,4 Dioxane | 14:30 | Glass Amber | .25 | NONE |
| VOC | 14:30 | Vial Amber | .04 | HCL |
| | | | | |
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| | | | | |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

# MONITORING WELL DEVELOPMENT PURGING & SAMPLING RECORDS

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Well ID: MW-S1L | Well Diameter: 2" | Intake Depth: ~75'
Project Name: NMI | Total Depth of Well: 79'
Project Number: BR0090D | Initial Depth to Water: 52.77' | Time: 1302
Date: 4/5/23 | Casing Volume:
Recorded By: EB | Depth to Water after Purging: 51.86' | Time: 1405
Sample ID: MW-S1L-04052023 | Method of Purging: bladder
Duplicate ID: — | Method of Sampling: low flow
Weather: 40s, overcast | Multi-meter ID: 22H103077 | Turbid ID: 22074265

| Time | Depth to water (ft btoc) | Pumping rate mLpm | Cumulative volume L or gals | Temp °F or °C | pH (units) | Specific conductance (µS / cm) | D.O (mg / L) | ORP (mV) | Turbidity (NTU) | Comments: odor, color, sediment load, well condition, presence of product |
|---|---|---|---|---|---|---|---|---|---|---|
| 1310 | Begin purging | | | 200 | mLpm | | | | | |
| 1320 | 51.87 | 200 | ~1 | 10.1 | 5.88 | 383.7 | 6.98 | 165.6 | 1.42 | |
| 1330 | 51.87 | | — | 10.1 | 5.87 | 391.3 | 6.87 | 165.5 | 0.98 | |
| 1335 | 51.85 | | ~1 | 10.0 | 5.87 | 400.1 | 7.67 | 165.9 | 1.38 | |
| 1340 | 51.86 | | — | 9.9 | 5.88 | 404.8 | 8.13 | 165.6 | 1.66 | |
| 1345 | 51.85 | ↓ | ~2 | 10.0 | 5.88 | 405.7 | 8.17 | 164.3 | 2.49 | |
| 1350 | collect samples | | | | | | | | | |

| Samples collected | Time collected | Container type | Container size | Preservative |
|---|---|---|---|---|
| total+diss metals | 1350 | plastic | 2x500mL | $HNO_3$ |
| total+diss phos | ↓ | ↓ | 2x250mL | $H_2SO_4$ |
| DIC + DOC | ↓ | amber | 2x40mL | ↓ |
| $NO_3NO_2$ | ↓ | plastic | 120mL | none |

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

40 psi ; 10s/5s recharge

# APPENDIX C
# DATA VALIDATION MEMOS

July 11, 2023

Ms. Jessie McCusker
de maximis, Inc.
200 Day Hill Road, Suite 200
Windsor, CT 06095

Re: SDG No. 617322
GEL Laboratories
NMI Groundwater
Data Validation

6/Water

| | |
|---|---|
| HA20-CMT-5(OW)-04032023 | HA20-CMT-6(OW)-04042023 |
| MW-BS28-04042023 | MW-SD34-04042023 |
| HA20-CMT-3T(OW)-04042023 | MW-B1D28-04042023 |

2/Equipment Blank

| | |
|---|---|
| EQ-BLANK-04032023 | EQ-BLANK-04042023 |

Dear Ms. McCusker:

A Tier I Plus data validation was performed on 6 water samples and 2 equipment blanks from the Nuclear Metals Superfund site. The data validation was performed using the Region 1 - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures dated June 2018, to the extent possible, Massachusetts Compendium of Analytical Methods (CAM) protocols, the site-specific QAPP, and ddms' Standard Operating Procedures (SOPs). Professional judgment was applied as necessary and appropriate.

Analyses were performed in accordance with the following method:

| **Parameter** | **Method** |
|---|---|
| Total and Dissolved Metals | SW846 6020A |

The data were evaluated based on the parameters summarized in the table below, where applicable:

| | | |
|---|---|---|
| | • | Overall Evaluation of Data and Potential Usability Issues |
| * | • | Data Completeness |
| * | • | Preservation and Technical Holding Times |
| | • | Interference Check Sample |
| | • | Initial and Continuing Calibrations |

| | | |
|---|---|---|
| | • | Blanks |
| * | • | Internal Standards |
| * | • | Laboratory Control Sample/ Laboratory Control Sample Duplicates |
| | • | Matrix Spike/Matrix Spike Duplicate |
| * | • | Field and Laboratory Duplicates |
| | • | Serial Dilutions |
| * | • | Target Analyte Identification |
| | • | Analyte Quantitation and Reported Quantitation Limits |
| | • | Dissolved v. Total |
| * | • | System Performance |

*All criteria were met for this quality element

The Data Validation Report includes the following attachments:

Attachment A: Data Summary Table – summarized validated results

Attachment B: Validation Qualifier Definitions

**Overall Evaluation of Data**

Based on the review effort, qualifiers were applied to the reported results as follows:

- The results for total and dissolved uranium-235 and uranium-238 in HA20-CMT-5(OW)-04032023, HA20-CMT-6(OW)-04042023, and MW-BS28-04042023 and for total uranium-235 and uranium-238 in EQ-BLANK-04032023 and MW-SD34-04042023 were qualified as estimated (J, UJ) due to elevated percent relative standard deviation (%RSD) in the continuing calibration verification (CCV) replicates.

- The results for total cobalt HA20-CMT-3T(OW)-04042023 and for total and dissolved cobalt in HA20-CMT-5(OW)-04032023, HA20-CMT-6(OW)-04042023, and MW-BS28-04042023 were qualified as estimated (J+) with high bias because this analyte was detected in the interference check sample solution A (ICSA) at more than twice the method detection limit (MDL).

- The results for total copper in MW-BS28-04042023 and MW-SD34-04042023, for dissolved copper in MW-B1D28-04042023 and HA20-CMT-3T(OW)-04042023, and for total and dissolved copper in HA20-CMT-6(OW)-04042023 were qualified as estimated (J+) with high bias because this analyte was detected in the ICSA at more than twice the MDL.

- The results for dissolved nickel in HA20-CMT-3T(OW)-04042023 and for total and dissolved nickel in HA20-CMT-5(OW)-04032023 were qualified as estimated (J+) with high bias because this analyte was detected in the ICSA at more than twice the MDL.

- The results for total and dissolved potassium in all field samples were qualified as estimated (J) due to elevated percent difference in the serial dilution result.

- The results for total and dissolved antimony in HA20-CMT-3T(OW)-04042023 were qualified as estimated (J) because the dissolved concentration exceeded the total concentration by more than ten percent.

- The results for total and dissolved copper in MW-B1D28-04042023 were qualified as estimated (J, UJ) because the low-level dissolved concentration exceeded the not detected total concentration, indicating imprecision around the MDL.

The remaining results were determined to be usable as reported by the laboratory.

The following sections of this report detail the reasons qualifiers were applied to the sample results. Each parameter section discusses the quality control (QC) excursions that impacted sample results. Where a quality indicator was deemed acceptable after thorough review, no further discussion is included in this report. Detailed findings are included for each quality element that impacted the usability of the reported results. Additional information or explanation is included as needed, to provide support for decisions made, based on the validator's best professional judgment.

Where a result was qualified J+ and J, or J- and J, the J qualifier takes precedence. Where a result was qualified biased high and low for differing data quality excursions, the final qualifier is J, with indeterminate bias.

## Metals (SW846 6020B)

### Calibration

Initial and continuing calibration verification (ICV/CCV) standards were analyzed at appropriate frequencies. Recoveries of the target analytes in all ICV/CCV standards were within the acceptance limits of 90-110%. The %RSDs of uranium-235 (6.3%) and uranium-238 (6.1%) in the CCV associated with samples HA20-CMT-5(OW)-04032023, EQ-BLANK-04032023, HA20-CMT-6(OW)-04042023, and MW-BS28-04042023 were outside acceptance criteria (>5%RSD). Results for total and dissolved uranium-235 and uranium-238 in HA20-CMT-5(OW)-04032023, HA20-CMT-6(OW)-04042023, and MW-BS28-04042023 and for total uranium-235 and uranium-238 in EQ-BLANK-04032023 and MW-SD34-04042023 were qualified as estimated (J, UJ) due to elevated %RSD in the CCV replicates.

Low-level standards (identified as CRDL standards) were analyzed at the beginning of each analytical sequence. All recoveries were acceptable (QC 80-120%), except for calcium (130.4%). Concentrations of calcium in the site samples were above action level; therefore, no action was necessary based on the high CRDL standard recovery.

Blanks

A single method blank and two equipment blanks (EQ-BLANK-04032023 and EQ-BLANK-04042023) were prepared and analyzed in support of sample analysis. All results for the reported analytes were not detected with the exception of vanadium (3.85 ug/L) in EQ-BLANK-04042023. All associated samples were either not detected or greater than action level and did not warrant qualification.

Interference Check Sample

An ICSA/ICSAB pair was analyzed in each analytical sequence. All spiked analytes recovered within acceptance limits (80-120%R), and all non-spiked analytes were less than twice the method detection limit with the exceptions:

| Analyte | ICSA Conc. (ug/L) | MDL (ug/L) | RL (ug/L) | Affected Samples |
|---|---|---|---|---|
| *ICSA01 4/30/23 @ 20:38* | | | | |
| Cadmium | 2.31 | 0.3 | 1.0 | None |
| Cobalt | 0.893 | 0.3 | 1.0 | HA20-CMT-5(OW)-04032023<br>HA20-CMT-6(OW)-04042023<br>MW-BS28-04042023<br>HA20-CMT-3T(OW)-04042023 |
| Copper | 0.829 | 0.3 | 1.0 | HA20-CMT-5(OW)-04032023<br>HA20-CMT-6(OW)-04042023<br>MW-BS28-04042023<br>MW-SD34-04042023<br>HA20-CMT-3T(OW)-04042023<br>MW-B1D28-04042023 |
| Nickel | 1.6 | 0.6 | 2.0 | HA20-CMT-5(OW)-04032023<br>HA20-CMT-3T(OW)-04042023 |
| Selenium | 1.6 | 0.6 | 2.0 | None |

The results for total cobalt HA20-CMT-3T(OW)-04042023, for total and dissolved cobalt in HA20-CMT-5(OW)-04032023, HA20-CMT-6(OW)-04042023, and MW-BS28-04042023, for total copper in MW-BS28-04042023 and MW-SD34-04042023, for dissolved copper in MW-B1D28-04042023 and HA20-CMT-3T(OW)-04042023, for total and dissolved copper in HA20-CMT-6(OW)-04042023, for dissolved nickel in HA20-CMT-3T(OW)-04042023, and for total and dissolved nickel in HA20-CMT-5(OW)-04032023 were qualified as estimated (J+) with high bias because these analytes were detected in the ICSA at more than twice the MDL.

The results for total and dissolved cadmium and selenium in all samples were not detected; therefore, qualifications due to elevated ICSA were not warranted.

Matrix Spike (MS)/Matrix Spike Duplicate (MSD)

One MS/MSD was performed on sample MW-SD34-04042023. Recoveries and MS/MSD precision were within acceptance criteria (80-120%R; RPD<20), with the exceptions noted below:

| Parent Sample | Analyte | MS %R | MSD %R | RPD |
|---|---|---|---|---|
| MW-SD34-04042023 | Calcium, Total | 556 | 77.6 | a |
| | Magnesium, Total | 205 | a | a |
| | Manganese, Total | 227 | a | a |
| | Sodium, Total | 285 | -86.1 | a |
| | Calcium, Dissolved | 283 | a | a |
| | Magnesium, Dissolved | 207 | 135 | a |
| | Manganese, Dissolved | 143 | a | a |
| | Potassium, Dissolved | 131 | 139 | a |
| | Sodium, Dissolved | 159 | a | a |

In all above instances, the original sample concentrations were more than 4x the spike concentrations. There was no expectation of acceptable recovery, and qualification was not warranted.

Serial Dilution

A serial dilution was performed on MW-SD34-04042023 in support of sample analysis. Where the parent sample concentration exceeded 50 times the MDL, the percent difference was less than the maximum acceptance limit of 10%, with the following exception:

| Parent Sample | Analyte | Original | Dilution | %D |
|---|---|---|---|---|
| MW-SD34-04042023 | Potassium, Total | 15800 | 13500 | 14.6 |

The results for total and dissolved potassium in all field samples were qualified as estimated (J) due to elevated percent difference in the serial dilution result.

Quantitation

Samples HA20-CMT-6(OW)-04042023, MW-BS28-04042023, MW-SD34-04042023, HA20-CMT-3T(OW)-04042023, and MW-B1D28-04042023 were analyzed at dilutions to obtain analyte concentrations within the linear range of the instrument. MDLs and practical quantitation limits (PQLs) were appropriately adjusted for the dilution factor.

The instrument detection limit summary provides MDLs “effective” on 10/8/21 and verified on 5/3/23 (ICPMS15).

Linear ranges, according to the summary provided in the data package, were determined on 8/1/17 (ICPMS15). There is no indication in the data package that the linear ranges have been reproduced or verified for uranium-235 or uranium-238 between the date

established and the date of field sample analyses, five years later. However, all analyte concentrations in the samples were within the established instrument calibration range for each analyte; therefore, there is no adverse impact on the sample results.

Since the total uranium results are a calculation based upon the summation of uranium-235 and uranium-238 concentrations, any qualifications applied to uranium-235 or uranium-238 were additionally applied to total uranium.

Total vs. Dissolved

The total concentration exceeded the dissolved concentration for detected analytes, with the exceptions noted below:

| Sample | Analyte | Total Conc (ug/L) | Dissolved Conc (ug/L) | %D |
|---|---|---|---|---|
| HA20-CMT-5(OW)-04032023 | Calcium | 45400 | 47200 | <10 |
| | Molybdenum | 2.98 | 3.07 | <10 |
| | Sodium | 11800 | 12000 | <10 |
| HA20-CMT-6(OW)-04042023 | Calcium | 52200 | 53400 | <10 |
| | Copper | 0.321 J | 0.433 J | 34.9 |
| | Molybdenum | 3.36 | 3.44 | <10 |
| MW-BS28-04042023 | Arsenic | 2.70 | 2.79 | <10 |
| | Calcium | 115000 | 119000 | <10 |
| | Sodium | 44100 | 47200 | <10 |
| MW-SD34-04042023 | Barium | 39.2 | 40.6 | <10 |
| HA20-CMT-3T(OW)-04042023 | Antimony | 7.27 | 8.77 | **20.6** |
| | Sodium | 116000 | 117000 | <10 |
| MW-B1D28-04042023 | Copper | ND | 0.906 J | N/C |
| | Vanadium | 4.74 | 4.99 | <10 |

ND – Not detected
N/C – Not calculated

The results for total and dissolved antimony in HA20-CMT-3T(OW)-04042023 were qualified as estimated (J) because the dissolved concentration exceeded the total concentration by more than ten percent. The results for total and dissolved copper in MW-B1D28-04042023 were qualified as estimated (J, UJ) because the low-level dissolved concentration exceeded the not detected total concentration, indicating imprecision around the MDL.

When the %D is 10% or less, experimental error is assumed, and no qualification of sample results is made. Where the percent difference is greater than 10% and total and dissolved concentrations were less than the PQL (and flagged with a J on this basis by the laboratory), no qualification of sample results is made. No additional action was necessary for the results detailed above.

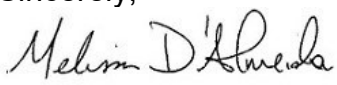
## Documentation

The following documentation issues were observed during the validation effort:

- Results for the MS and MSD in the metals analyses are also presented as “Duplicate Sample” results for assessment of precision. It should be noted that the comparison is made with results for the MS and MSD, not unspiked sample results.

Please feel free to contact me (mdalmeida@ddmsinc.com or 862-668-3355) with any questions you may have regarding this information.

Sincerely,



Melissa M. D’Almeida
Environmental Chemist

Attachments

**Attachment A**
**DATA SUMMARY TABLE**
**SDG 617322**

Data Summary Form for Groundwater Samples
Job No. 617322
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/3/2023 - 4/4/2023

| | | Field Sample ID | EQ-BLANK-04032023 | | | EQ-BLANK-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 617322003 | | | 617322012 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| CALC | Uranium | ug/l | 0.0670 | UJ | CCV %RSD high | 0.0670 | U | |
| SW6020B | Aluminum | ug/l | 19.3 | U | | 19.3 | U | |
| SW6020B | Aluminum (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Antimony (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Antimony | ug/l | 1.00 | U | | 1.00 | U | |
| SW6020B | Arsenic | ug/l | 2.00 | U | | 2.00 | U | |
| SW6020B | Arsenic (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Barium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Barium | ug/l | 0.670 | U | | 0.670 | U | |
| SW6020B | Beryllium | ug/l | 0.200 | U | | 0.200 | U | |
| SW6020B | Beryllium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Cadmium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Cadmium | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Calcium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Calcium | ug/l | 80.0 | U | | 80.0 | U | |
| SW6020B | Chromium | ug/l | 3.00 | U | | 3.00 | U | |
| SW6020B | Chromium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Cobalt (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Cobalt | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Copper | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Copper (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Iron | ug/l | 33.0 | U | | 33.0 | U | |
| SW6020B | Iron (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Lead | ug/l | 0.500 | U | | 0.500 | U | |
| SW6020B | Lead (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Magnesium | ug/l | 10.0 | U | | 10.0 | U | |
| SW6020B | Magnesium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Manganese (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Manganese | ug/l | 1.00 | U | | 1.00 | U | |
| SW6020B | Molybdenum | ug/l | 0.200 | U | | 0.200 | U | |
| SW6020B | Molybdenum (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Nickel (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Nickel | ug/l | 0.600 | U | | 0.600 | U | |
| SW6020B | Potassium | ug/l | 80.0 | U | | 80.0 | U | |

Data Summary Form for Groundwater Samples
Job No. 617322
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/3/2023 - 4/4/2023

| | | Field Sample ID | EQ-BLANK-04032023 | | | EQ-BLANK-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 617322003 | | | 617322012 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Potassium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Selenium | ug/l | 1.50 | U | | 1.50 | U | |
| SW6020B | Selenium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Silver (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Silver | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Sodium | ug/l | 80.0 | U | | 80.0 | U | |
| SW6020B | Sodium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Thallium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Thallium | ug/l | 0.600 | U | | 0.600 | U | |
| SW6020B | Thorium | ug/l | 0.700 | U | | 0.700 | U | |
| SW6020B | Thorium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Uranium-235 | ug/l | 0.0100 | UJ | CCV %RSD high | 0.0100 | U | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Uranium-238 | ug/l | 0.0670 | UJ | CCV %RSD high | 0.0670 | U | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Vanadium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Vanadium | ug/l | 3.30 | U | | 3.85 | J | |
| SW6020B | Zinc | ug/l | 3.30 | U | | 3.30 | U | |
| SW6020B | Zinc (Dissolved) | ug/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 617322
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/3/2023 - 4/4/2023

| | | Field Sample ID | HA20-CMT-3T(OW)-04042023 | | | HA20-CMT-3T(OW)-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 617322010 | | | 617322011 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium (Dissolved) | ug/l | 6.99 | | | -- | -- | |
| CALC | Uranium | ug/l | 7.65 | | | -- | -- | |
| SW6020B | Aluminum | ug/l | 3680 | | | -- | -- | |
| SW6020B | Aluminum (Dissolved) | ug/l | 19.3 | U | | -- | -- | |
| SW6020B | Antimony (Dissolved) | ug/l | 8.77 | J | Diss>Total | -- | -- | |
| SW6020B | Antimony | ug/l | 7.27 | J | Diss>Total | -- | -- | |
| SW6020B | Arsenic | ug/l | 3.87 | J | | -- | -- | |
| SW6020B | Arsenic (Dissolved) | ug/l | 3.47 | J | | -- | -- | |
| SW6020B | Barium (Dissolved) | ug/l | 183 | | | -- | -- | |
| SW6020B | Barium | ug/l | 201 | | | -- | -- | |
| SW6020B | Beryllium | ug/l | 0.204 | J | | -- | -- | |
| SW6020B | Beryllium (Dissolved) | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Cadmium (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Cadmium | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Calcium (Dissolved) | ug/l | -- | -- | | 227000 | | |
| SW6020B | Calcium | ug/l | -- | -- | | 231000 | | |
| SW6020B | Chromium | ug/l | 4.99 | J | | -- | -- | |
| SW6020B | Chromium (Dissolved) | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Cobalt (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Cobalt | ug/l | 1.55 | J+ | ICSA high | -- | -- | |
| SW6020B | Copper | ug/l | 2.95 | | | -- | -- | |
| SW6020B | Copper (Dissolved) | ug/l | 0.553 | J+ | ICSA high | -- | -- | |
| SW6020B | Iron | ug/l | 3480 | | | -- | -- | |
| SW6020B | Iron (Dissolved) | ug/l | 102 | | | -- | -- | |
| SW6020B | Lead | ug/l | 1.27 | J | | -- | -- | |
| SW6020B | Lead (Dissolved) | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Magnesium | ug/l | -- | -- | | 65200 | | |
| SW6020B | Magnesium (Dissolved) | ug/l | -- | -- | | 63600 | | |
| SW6020B | Manganese (Dissolved) | ug/l | -- | -- | | 1100 | | |
| SW6020B | Manganese | ug/l | -- | -- | | 1140 | | |
| SW6020B | Molybdenum | ug/l | 19.7 | | | -- | -- | |
| SW6020B | Molybdenum (Dissolved) | ug/l | 19.6 | | | -- | -- | |
| SW6020B | Nickel (Dissolved) | ug/l | 0.877 | J+ | ICSA high | -- | -- | |
| SW6020B | Nickel | ug/l | 3.45 | | | -- | -- | |
| SW6020B | Potassium | ug/l | 17700 | J | SD %D high | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 617322
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/3/2023 - 4/4/2023

| | | Field Sample ID | HA20-CMT-3T(OW)-04042023 | | | HA20-CMT-3T(OW)-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 617322010 | | | 617322011 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Potassium (Dissolved) | ug/l | 17600 | J | SD %D high | -- | -- | |
| SW6020B | Selenium | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Selenium (Dissolved) | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Silver (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Silver | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Sodium | ug/l | -- | -- | | 116000 | | |
| SW6020B | Sodium (Dissolved) | ug/l | -- | -- | | 117000 | | |
| SW6020B | Thallium (Dissolved) | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thallium | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thorium | ug/l | 1.04 | J | | -- | -- | |
| SW6020B | Thorium (Dissolved) | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Uranium-235 | ug/l | 0.0513 | J | | -- | -- | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | 0.0472 | J | | -- | -- | |
| SW6020B | Uranium-238 | ug/l | 7.6 | | | -- | -- | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | 6.94 | | | -- | -- | |
| SW6020B | Vanadium (Dissolved) | ug/l | 4.94 | J | | -- | -- | |
| SW6020B | Vanadium | ug/l | 9.34 | J | | -- | -- | |
| SW6020B | Zinc | ug/l | 12 | J | | -- | -- | |
| SW6020B | Zinc (Dissolved) | ug/l | 5.48 | J | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 617322
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/3/2023 - 4/4/2023

| | | Field Sample ID | HA20-CMT-5(OW)-04032023 | | | HA20-CMT-6(OW)-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 617322001 | | | 617322004 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium (Dissolved) | ug/l | 4.19 | J | CCV %RSD high | 9.08 | J | CCV %RSD high |
| CALC | Uranium | ug/l | 4.48 | J | CCV %RSD high | 9.77 | J | CCV %RSD high |
| SW6020B | Aluminum | ug/l | 1670 | | | 21.8 | J | |
| SW6020B | Aluminum (Dissolved) | ug/l | 37.4 | J | | 19.3 | U | |
| SW6020B | Antimony (Dissolved) | ug/l | 1.00 | U | | 1.00 | U | |
| SW6020B | Antimony | ug/l | 1.00 | U | | 1.00 | U | |
| SW6020B | Arsenic | ug/l | 2.00 | U | | 2.00 | U | |
| SW6020B | Arsenic (Dissolved) | ug/l | 2.00 | U | | 2.00 | U | |
| SW6020B | Barium (Dissolved) | ug/l | 35.6 | | | 18.2 | | |
| SW6020B | Barium | ug/l | 43.4 | | | 19.2 | | |
| SW6020B | Beryllium | ug/l | 0.200 | U | | 0.200 | U | |
| SW6020B | Beryllium (Dissolved) | ug/l | 0.200 | U | | 0.200 | U | |
| SW6020B | Cadmium (Dissolved) | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Cadmium | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Calcium (Dissolved) | ug/l | 47200 | | | -- | -- | |
| SW6020B | Calcium | ug/l | 45400 | | | -- | -- | |
| SW6020B | Chromium | ug/l | 3.48 | J | | 3.00 | U | |
| SW6020B | Chromium (Dissolved) | ug/l | 3.00 | U | | 3.00 | U | |
| SW6020B | Cobalt (Dissolved) | ug/l | 0.411 | J+ | ICSA high | 0.337 | J+ | ICSA high |
| SW6020B | Cobalt | ug/l | 1.42 | J+ | ICSA high | 0.371 | J+ | ICSA high |
| SW6020B | Copper | ug/l | 2.37 | | | 0.321 | J+ | ICSA high |
| SW6020B | Copper (Dissolved) | ug/l | 0.300 | U | | 0.433 | J+ | ICSA high |
| SW6020B | Iron | ug/l | 1840 | | | 49.3 | J | |
| SW6020B | Iron (Dissolved) | ug/l | 187 | | | 33.0 | U | |
| SW6020B | Lead | ug/l | 1.26 | J | | 0.500 | U | |
| SW6020B | Lead (Dissolved) | ug/l | 0.500 | U | | 0.500 | U | |
| SW6020B | Magnesium | ug/l | 9470 | | | -- | -- | |
| SW6020B | Magnesium (Dissolved) | ug/l | 9280 | | | -- | -- | |
| SW6020B | Manganese (Dissolved) | ug/l | 482 | | | 285 | | |
| SW6020B | Manganese | ug/l | 558 | | | 288 | | |
| SW6020B | Molybdenum | ug/l | 2.98 | | | 3.36 | | |
| SW6020B | Molybdenum (Dissolved) | ug/l | 3.07 | | | 3.44 | | |
| SW6020B | Nickel (Dissolved) | ug/l | 0.855 | J+ | ICSA high | 0.600 | U | |
| SW6020B | Nickel | ug/l | 2.37 | J+ | ICSA high | 0.600 | U | |
| SW6020B | Potassium | ug/l | 7310 | J | SD %D high | 9290 | J | SD %D high |

Data Summary Form for Groundwater Samples
Job No. 617322
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/3/2023 - 4/4/2023

| | | Field Sample ID | HA20-CMT-5(OW)-04032023 | | | HA20-CMT-6(OW)-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 617322001 | | | 617322004 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Potassium (Dissolved) | ug/l | 7250 | J | SD %D high | 8900 | J | SD %D high |
| SW6020B | Selenium | ug/l | 1.50 | U | | 1.50 | U | |
| SW6020B | Selenium (Dissolved) | ug/l | 1.50 | U | | 1.50 | U | |
| SW6020B | Silver (Dissolved) | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Silver | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Sodium | ug/l | 11800 | | | 13600 | | |
| SW6020B | Sodium (Dissolved) | ug/l | 12000 | | | 13300 | | |
| SW6020B | Thallium (Dissolved) | ug/l | 0.600 | U | | 0.600 | U | |
| SW6020B | Thallium | ug/l | 0.600 | U | | 0.600 | U | |
| SW6020B | Thorium | ug/l | 0.700 | U | | 0.700 | U | |
| SW6020B | Thorium (Dissolved) | ug/l | 0.700 | U | | 0.700 | U | |
| SW6020B | Uranium-235 | ug/l | 0.0339 | J | CCV %RSD high | 0.0689 | J | CCV %RSD high |
| SW6020B | Uranium-235 (Dissolved) | ug/l | 0.0296 | J | CCV %RSD high | 0.0659 | J | CCV %RSD high |
| SW6020B | Uranium-238 | ug/l | 4.45 | J | CCV %RSD high | 9.7 | J | CCV %RSD high |
| SW6020B | Uranium-238 (Dissolved) | ug/l | 4.16 | J | CCV %RSD high | 9.01 | J | CCV %RSD high |
| SW6020B | Vanadium (Dissolved) | ug/l | 3.30 | U | | 7.07 | J | |
| SW6020B | Vanadium | ug/l | 6.88 | J | | 7.52 | J | |
| SW6020B | Zinc | ug/l | 7.62 | J | | 3.30 | U | |
| SW6020B | Zinc (Dissolved) | ug/l | 3.30 | U | | 3.30 | U | |

Data Summary Form for Groundwater Samples
Job No. 617322
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/3/2023 - 4/4/2023

| | | Field Sample ID | HA20-CMT-6(OW)-04042023 | | | MW-B1D28-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 617322004 | | | 617322013 | | |
| | | Dilution Factor | 10 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium (Dissolved) | ug/l | -- | -- | | 1.03 | | |
| CALC | Uranium | ug/l | -- | -- | | 1.06 | | |
| SW6020B | Aluminum | ug/l | -- | -- | | 126 | | |
| SW6020B | Aluminum (Dissolved) | ug/l | -- | -- | | 69.2 | | |
| SW6020B | Antimony (Dissolved) | ug/l | -- | -- | | 1.00 | U | |
| SW6020B | Antimony | ug/l | -- | -- | | 1.00 | U | |
| SW6020B | Arsenic | ug/l | -- | -- | | 10.7 | | |
| SW6020B | Arsenic (Dissolved) | ug/l | -- | -- | | 10.4 | | |
| SW6020B | Barium (Dissolved) | ug/l | -- | -- | | 19.6 | | |
| SW6020B | Barium | ug/l | -- | -- | | 20.9 | | |
| SW6020B | Beryllium | ug/l | -- | -- | | 0.200 | U | |
| SW6020B | Beryllium (Dissolved) | ug/l | -- | -- | | 0.200 | U | |
| SW6020B | Cadmium (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Cadmium | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Calcium (Dissolved) | ug/l | 53400 | | | 24400 | | |
| SW6020B | Calcium | ug/l | 52200 | | | 24800 | | |
| SW6020B | Chromium | ug/l | -- | -- | | 3.00 | U | |
| SW6020B | Chromium (Dissolved) | ug/l | -- | -- | | 3.00 | U | |
| SW6020B | Cobalt (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Cobalt | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Copper | ug/l | -- | -- | | 0.300 | UJ | Diss>Total |
| SW6020B | Copper (Dissolved) | ug/l | -- | -- | | 0.906 | J | ICSA high; Diss>Total |
| SW6020B | Iron | ug/l | -- | -- | | 81 | J | |
| SW6020B | Iron (Dissolved) | ug/l | -- | -- | | 33.0 | U | |
| SW6020B | Lead | ug/l | -- | -- | | 0.500 | U | |
| SW6020B | Lead (Dissolved) | ug/l | -- | -- | | 0.500 | U | |
| SW6020B | Magnesium | ug/l | 10300 | | | -- | -- | |
| SW6020B | Magnesium (Dissolved) | ug/l | 10200 | | | -- | -- | |
| SW6020B | Manganese (Dissolved) | ug/l | -- | -- | | 1.38 | J | |
| SW6020B | Manganese | ug/l | -- | -- | | 2.93 | J | |
| SW6020B | Molybdenum | ug/l | -- | -- | | 14.7 | | |
| SW6020B | Molybdenum (Dissolved) | ug/l | -- | -- | | 14 | | |
| SW6020B | Nickel (Dissolved) | ug/l | -- | -- | | 0.600 | U | |
| SW6020B | Nickel | ug/l | -- | -- | | 0.600 | U | |
| SW6020B | Potassium | ug/l | -- | -- | | 7990 | J | SD %D high |

Data Summary Form for Groundwater Samples
Job No. 617322
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/3/2023 - 4/4/2023

| | | Field Sample ID | HA20-CMT-6(OW)-04042023 | | | MW-B1D28-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 617322004 | | | 617322013 | | |
| | | Dilution Factor | 10 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Potassium (Dissolved) | ug/l | -- | -- | | 7850 | J | SD %D high |
| SW6020B | Selenium | ug/l | -- | -- | | 1.50 | U | |
| SW6020B | Selenium (Dissolved) | ug/l | -- | -- | | 1.50 | U | |
| SW6020B | Silver (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Silver | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Sodium | ug/l | -- | -- | | 23700 | | |
| SW6020B | Sodium (Dissolved) | ug/l | -- | -- | | 23200 | | |
| SW6020B | Thallium (Dissolved) | ug/l | -- | -- | | 0.600 | U | |
| SW6020B | Thallium | ug/l | -- | -- | | 0.600 | U | |
| SW6020B | Thorium | ug/l | -- | -- | | 0.700 | U | |
| SW6020B | Thorium (Dissolved) | ug/l | -- | -- | | 0.700 | U | |
| SW6020B | Uranium-235 | ug/l | -- | -- | | 0.0100 | U | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | -- | -- | | 0.0100 | U | |
| SW6020B | Uranium-238 | ug/l | -- | -- | | 1.06 | | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | -- | -- | | 1.03 | | |
| SW6020B | Vanadium (Dissolved) | ug/l | -- | -- | | 4.99 | J | |
| SW6020B | Vanadium | ug/l | -- | -- | | 4.74 | J | |
| SW6020B | Zinc | ug/l | -- | -- | | 14 | J | |
| SW6020B | Zinc (Dissolved) | ug/l | -- | -- | | 6.33 | J | |

Data Summary Form for Groundwater Samples
Job No. 617322
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/3/2023 - 4/4/2023

| | | Field Sample ID | MW-B1D28-04042023 | | | MW-BS28-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 617322013 | | | 617322006 | | |
| | | Dilution Factor | 10 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium (Dissolved) | ug/l | -- | -- | | 19 | J | CCV %RSD high |
| CALC | Uranium | ug/l | -- | -- | | 20.1 | J | CCV %RSD high |
| SW6020B | Aluminum | ug/l | -- | -- | | 147 | | |
| SW6020B | Aluminum (Dissolved) | ug/l | -- | -- | | 19.3 | U | |
| SW6020B | Antimony (Dissolved) | ug/l | -- | -- | | 1.00 | U | |
| SW6020B | Antimony | ug/l | -- | -- | | 1.00 | U | |
| SW6020B | Arsenic | ug/l | -- | -- | | 2.7 | J | |
| SW6020B | Arsenic (Dissolved) | ug/l | -- | -- | | 2.79 | J | |
| SW6020B | Barium (Dissolved) | ug/l | -- | -- | | 23.8 | | |
| SW6020B | Barium | ug/l | -- | -- | | 25.6 | | |
| SW6020B | Beryllium | ug/l | -- | -- | | 0.200 | U | |
| SW6020B | Beryllium (Dissolved) | ug/l | -- | -- | | 0.200 | U | |
| SW6020B | Cadmium (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Cadmium | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Calcium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Calcium | ug/l | -- | -- | | -- | -- | |
| SW6020B | Chromium | ug/l | -- | -- | | 3.00 | U | |
| SW6020B | Chromium (Dissolved) | ug/l | -- | -- | | 3.00 | U | |
| SW6020B | Cobalt (Dissolved) | ug/l | -- | -- | | 1.27 | J+ | ICSA high |
| SW6020B | Cobalt | ug/l | -- | -- | | 1.44 | J+ | ICSA high |
| SW6020B | Copper | ug/l | -- | -- | | 0.512 | J+ | ICSA high |
| SW6020B | Copper (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Iron | ug/l | -- | -- | | 601 | | |
| SW6020B | Iron (Dissolved) | ug/l | -- | -- | | 321 | | |
| SW6020B | Lead | ug/l | -- | -- | | 0.500 | U | |
| SW6020B | Lead (Dissolved) | ug/l | -- | -- | | 0.500 | U | |
| SW6020B | Magnesium | ug/l | 10800 | | | -- | -- | |
| SW6020B | Magnesium (Dissolved) | ug/l | 10400 | | | -- | -- | |
| SW6020B | Manganese (Dissolved) | ug/l | -- | -- | | 985 | | |
| SW6020B | Manganese | ug/l | -- | -- | | -- | -- | |
| SW6020B | Molybdenum | ug/l | -- | -- | | 2.24 | | |
| SW6020B | Molybdenum (Dissolved) | ug/l | -- | -- | | 1.93 | | |
| SW6020B | Nickel (Dissolved) | ug/l | -- | -- | | 3.75 | | |
| SW6020B | Nickel | ug/l | -- | -- | | 4.35 | | |
| SW6020B | Potassium | ug/l | -- | -- | | 13900 | J | SD %D high |

Data Summary Form for Groundwater Samples
Job No. 617322
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/3/2023 - 4/4/2023

| | | Field Sample ID | MW-B1D28-04042023 | | | MW-BS28-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 617322013 | | | 617322006 | | |
| | | Dilution Factor | 10 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Potassium (Dissolved) | ug/l | -- | -- | | 13600 | J | SD %D high |
| SW6020B | Selenium | ug/l | -- | -- | | 1.50 | U | |
| SW6020B | Selenium (Dissolved) | ug/l | -- | -- | | 1.50 | U | |
| SW6020B | Silver (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Silver | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Sodium | ug/l | -- | -- | | -- | -- | |
| SW6020B | Sodium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Thallium (Dissolved) | ug/l | -- | -- | | 0.600 | U | |
| SW6020B | Thallium | ug/l | -- | -- | | 0.600 | U | |
| SW6020B | Thorium | ug/l | -- | -- | | 0.700 | U | |
| SW6020B | Thorium (Dissolved) | ug/l | -- | -- | | 0.700 | U | |
| SW6020B | Uranium-235 | ug/l | -- | -- | | 0.141 | J | CCV %RSD high |
| SW6020B | Uranium-235 (Dissolved) | ug/l | -- | -- | | 0.137 | J | CCV %RSD high |
| SW6020B | Uranium-238 | ug/l | -- | -- | | 19.9 | J | CCV %RSD high |
| SW6020B | Uranium-238 (Dissolved) | ug/l | -- | -- | | 18.9 | J | CCV %RSD high |
| SW6020B | Vanadium (Dissolved) | ug/l | -- | -- | | 4.97 | J | |
| SW6020B | Vanadium | ug/l | -- | -- | | 5.1 | J | |
| SW6020B | Zinc | ug/l | -- | -- | | 3.3 | J | |
| SW6020B | Zinc (Dissolved) | ug/l | -- | -- | | 3.30 | U | |

Data Summary Form for Groundwater Samples
Job No. 617322
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/3/2023 - 4/4/2023

| | | Field Sample ID | MW-BS28-04042023 | | | MW-SD34-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 617322007 | | | 617322008 | | |
| | | Dilution Factor | 10 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium (Dissolved) | ug/l | -- | -- | | 6.61 | | |
| CALC | Uranium | ug/l | -- | -- | | 6.77 | J | CCV %RSD high |
| SW6020B | Aluminum | ug/l | -- | -- | | 82.2 | | |
| SW6020B | Aluminum (Dissolved) | ug/l | -- | -- | | 19.3 | U | |
| SW6020B | Antimony (Dissolved) | ug/l | -- | -- | | 1.00 | U | |
| SW6020B | Antimony | ug/l | -- | -- | | 1.00 | U | |
| SW6020B | Arsenic | ug/l | -- | -- | | 4.28 | J | |
| SW6020B | Arsenic (Dissolved) | ug/l | -- | -- | | 3.76 | J | |
| SW6020B | Barium (Dissolved) | ug/l | -- | -- | | 40.6 | | |
| SW6020B | Barium | ug/l | -- | -- | | 39.2 | | |
| SW6020B | Beryllium | ug/l | -- | -- | | 0.200 | U | |
| SW6020B | Beryllium (Dissolved) | ug/l | -- | -- | | 0.200 | U | |
| SW6020B | Cadmium (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Cadmium | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Calcium (Dissolved) | ug/l | 119000 | | | -- | -- | |
| SW6020B | Calcium | ug/l | 115000 | | | -- | -- | |
| SW6020B | Chromium | ug/l | -- | -- | | 3.00 | U | |
| SW6020B | Chromium (Dissolved) | ug/l | -- | -- | | 3.00 | U | |
| SW6020B | Cobalt (Dissolved) | ug/l | -- | -- | | 5.49 | | |
| SW6020B | Cobalt | ug/l | -- | -- | | 5.85 | | |
| SW6020B | Copper | ug/l | -- | -- | | 0.692 | J+ | ICSA high |
| SW6020B | Copper (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Iron | ug/l | -- | -- | | 10400 | | |
| SW6020B | Iron (Dissolved) | ug/l | -- | -- | | 9360 | | |
| SW6020B | Lead | ug/l | -- | -- | | 0.500 | U | |
| SW6020B | Lead (Dissolved) | ug/l | -- | -- | | 0.500 | U | |
| SW6020B | Magnesium | ug/l | 38200 | | | -- | -- | |
| SW6020B | Magnesium (Dissolved) | ug/l | 39000 | | | -- | -- | |
| SW6020B | Manganese (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Manganese | ug/l | 1010 | | | -- | -- | |
| SW6020B | Molybdenum | ug/l | -- | -- | | 0.358 | J | |
| SW6020B | Molybdenum (Dissolved) | ug/l | -- | -- | | 0.3 | J | |
| SW6020B | Nickel (Dissolved) | ug/l | -- | -- | | 11.9 | | |
| SW6020B | Nickel | ug/l | -- | -- | | 12.7 | | |
| SW6020B | Potassium | ug/l | -- | -- | | 15800 | J | SD %D high |

Data Summary Form for Groundwater Samples
Job No. 617322
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/3/2023 - 4/4/2023

| | | Field Sample ID | MW-BS28-04042023 | | | MW-SD34-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 617322007 | | | 617322008 | | |
| | | Dilution Factor | 10 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Potassium (Dissolved) | ug/l | -- | -- | | 15100 | J | SD %D high |
| SW6020B | Selenium | ug/l | -- | -- | | 1.50 | U | |
| SW6020B | Selenium (Dissolved) | ug/l | -- | -- | | 1.50 | U | |
| SW6020B | Silver (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Silver | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Sodium | ug/l | 44100 | | | -- | -- | |
| SW6020B | Sodium (Dissolved) | ug/l | 47200 | | | -- | -- | |
| SW6020B | Thallium (Dissolved) | ug/l | -- | -- | | 0.600 | U | |
| SW6020B | Thallium | ug/l | -- | -- | | 0.600 | U | |
| SW6020B | Thorium | ug/l | -- | -- | | 0.700 | U | |
| SW6020B | Thorium (Dissolved) | ug/l | -- | -- | | 0.700 | U | |
| SW6020B | Uranium-235 | ug/l | -- | -- | | 0.0502 | J | CCV %RSD high |
| SW6020B | Uranium-235 (Dissolved) | ug/l | -- | -- | | 0.0497 | J | |
| SW6020B | Uranium-238 | ug/l | -- | -- | | 6.72 | J | CCV %RSD high |
| SW6020B | Uranium-238 (Dissolved) | ug/l | -- | -- | | 6.56 | | |
| SW6020B | Vanadium (Dissolved) | ug/l | -- | -- | | 3.30 | U | |
| SW6020B | Vanadium | ug/l | -- | -- | | 3.30 | U | |
| SW6020B | Zinc | ug/l | -- | -- | | 4.2 | J | |
| SW6020B | Zinc (Dissolved) | ug/l | -- | -- | | 3.30 | U | |

Data Summary Form for Groundwater Samples
Job No. 617322
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/3/2023 - 4/4/2023

| | | Field Sample ID | MW-SD34-04042023 | | |
|---|---|---|---|---|---|
| | | Lab Sample ID | 617322008 | | |
| | | Dilution Factor | 10 | | |
| Analytical Method | Parameter | Unit | | | |
| CALC | Uranium (Dissolved) | ug/l | -- | -- | |
| CALC | Uranium | ug/l | -- | -- | |
| SW6020B | Aluminum | ug/l | -- | -- | |
| SW6020B | Aluminum (Dissolved) | ug/l | -- | -- | |
| SW6020B | Antimony (Dissolved) | ug/l | -- | -- | |
| SW6020B | Antimony | ug/l | -- | -- | |
| SW6020B | Arsenic | ug/l | -- | -- | |
| SW6020B | Arsenic (Dissolved) | ug/l | -- | -- | |
| SW6020B | Barium (Dissolved) | ug/l | -- | -- | |
| SW6020B | Barium | ug/l | -- | -- | |
| SW6020B | Beryllium | ug/l | -- | -- | |
| SW6020B | Beryllium (Dissolved) | ug/l | -- | -- | |
| SW6020B | Cadmium (Dissolved) | ug/l | -- | -- | |
| SW6020B | Cadmium | ug/l | -- | -- | |
| SW6020B | Calcium (Dissolved) | ug/l | 159000 | | |
| SW6020B | Calcium | ug/l | 163000 | | |
| SW6020B | Chromium | ug/l | -- | -- | |
| SW6020B | Chromium (Dissolved) | ug/l | -- | -- | |
| SW6020B | Cobalt (Dissolved) | ug/l | -- | -- | |
| SW6020B | Cobalt | ug/l | -- | -- | |
| SW6020B | Copper | ug/l | -- | -- | |
| SW6020B | Copper (Dissolved) | ug/l | -- | -- | |
| SW6020B | Iron | ug/l | -- | -- | |
| SW6020B | Iron (Dissolved) | ug/l | -- | -- | |
| SW6020B | Lead | ug/l | -- | -- | |
| SW6020B | Lead (Dissolved) | ug/l | -- | -- | |
| SW6020B | Magnesium | ug/l | 51200 | | |
| SW6020B | Magnesium (Dissolved) | ug/l | 48300 | | |
| SW6020B | Manganese (Dissolved) | ug/l | 1070 | | |
| SW6020B | Manganese | ug/l | 1110 | | |
| SW6020B | Molybdenum | ug/l | -- | -- | |
| SW6020B | Molybdenum (Dissolved) | ug/l | -- | -- | |
| SW6020B | Nickel (Dissolved) | ug/l | -- | -- | |
| SW6020B | Nickel | ug/l | -- | -- | |
| SW6020B | Potassium | ug/l | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 617322
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/3/2023 - 4/4/2023

| | | Field Sample ID | MW-SD34-04042023 | | |
|---|---|---|---|---|---|
| | | Lab Sample ID | 617322008 | | |
| | | Dilution Factor | 10 | | |
| Analytical Method | Parameter | Unit | | | |
| SW6020B | Potassium (Dissolved) | ug/l | -- | -- | |
| SW6020B | Selenium | ug/l | -- | -- | |
| SW6020B | Selenium (Dissolved) | ug/l | -- | -- | |
| SW6020B | Silver (Dissolved) | ug/l | -- | -- | |
| SW6020B | Silver | ug/l | -- | -- | |
| SW6020B | Sodium | ug/l | 52000 | | |
| SW6020B | Sodium (Dissolved) | ug/l | 47100 | | |
| SW6020B | Thallium (Dissolved) | ug/l | -- | -- | |
| SW6020B | Thallium | ug/l | -- | -- | |
| SW6020B | Thorium | ug/l | -- | -- | |
| SW6020B | Thorium (Dissolved) | ug/l | -- | -- | |
| SW6020B | Uranium-235 | ug/l | -- | -- | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | -- | -- | |
| SW6020B | Uranium-238 | ug/l | -- | -- | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | -- | -- | |
| SW6020B | Vanadium (Dissolved) | ug/l | -- | -- | |
| SW6020B | Vanadium | ug/l | -- | -- | |
| SW6020B | Zinc | ug/l | -- | -- | |
| SW6020B | Zinc (Dissolved) | ug/l | -- | -- | |

# Attachment B
# VALIDATION QUALIFIER DEFINITIONS
# SDG 617322

## Validation Qualifier Definitions

Final validated results are annotated with the following codes:

**U** The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

**J** The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

**J+** The result is an estimated quantity, but the result may be biased high.

**J-** The result is an estimated quantity, but the result may be biased low.

**NJ** The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.

**UJ** The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

**R** The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

July 11, 2023

Ms. Jessie McCusker
de maximis, Inc.
200 Day Hill Road, Suite 200
Windsor, CT 06095

Re: SDG No. 617335
GEL Laboratories
NMI Groundwater
Data Validation

12/Water

| | |
|---|---|
| MW-S02-04052023 | BEW-3-04052023 |
| BEW-4-04052023 | BEW-2-04052023 |
| MW-BS02-04052023 | MW-BS52-04052023 |
| MW-BS52-04052023 DUP | MW-S64-04052023 |
| MW-S64-04052023 DUP | HA20-CMT-3B(OW)-04052023 |
| MW-S16-04052023 | MW-BM03-04052023 |

1/Equipment Blank
EQ-BLANK-04052023

Dear Ms. McCusker:

A Tier I Plus data validation was performed on twelve water samples and one equipment blank from the Nuclear Metals Superfund site. The data validation was performed using the Region 1 - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures dated June 2018, to the extent possible, Massachusetts Compendium of Analytical Methods (CAM) protocols, the site-specific QAPP, and ddms' Standard Operating Procedures (SOPs). Professional judgment was applied as necessary and appropriate.

Analyses were performed in accordance with the following methods:

| **Parameter** | **Method** |
|---|---|
| Total and Dissolved Metals | SW846 6020A |
| Dissolved Inorganic Carbon | SW846 9060A |
| Dissolved Organic Carbon | SW846 9060A |

The data were evaluated based on the parameters summarized in the table below, where applicable:

| | | |
|---|---|---|
| | • | Overall Evaluation of Data and Potential Usability Issues |
| * | • | Data Completeness |
| * | • | Preservation and Technical Holding Times |
| | • | Interference Check Sample |
| | • | Initial and Continuing Calibrations |
| * | • | Blanks |
| * | • | Internal Standards |
| * | • | Laboratory Control Sample/ Laboratory Control Sample Duplicates |
| | • | Matrix Spike/Matrix Spike Duplicate |
| * | • | Field and Laboratory Duplicates |
| * | • | Serial Dilutions |
| * | • | Target Analyte Identification |
| | • | Analyte Quantitation and Reported Quantitation Limits |
| | • | Dissolved v. Total |
| * | • | System Performance |

*All criteria were met for this quality element

The Data Validation Report includes the following attachments:

Attachment A: Data Summary Table – summarized validated results
Attachment B: Validation Qualifier Definitions

## Overall Evaluation of Data

Based on the review effort, qualifiers were applied to the reported results as follows:

- The results for total uranium-235 and total uranium-238 in EQ-BLANK-04052023 were qualified as estimated (J, UJ) due to elevated percent relative standard deviations (%RSDs) in the continuing calibration verification (CCV) replicates.

- The results for dissolved uranium-235 and dissolved uranium-238 in BEW-3-04052023 were qualified as estimated (J, UJ) due to elevated %RSDs in the CCV replicates.

- The results for total and dissolved uranium-235 and uranium-238 in BEW-2-04052023, BEW-4-04052023, HA20-CMT-3B(OW)-04052023, MW-S16-04052023, MW-BM03-04052023, and MW-BS02-04052023 were qualified as estimated (J, UJ) due to elevated %RSDs in the CCV replicates.

- The results for total uranium-235 and total uranium-238 in BEW-4-04052023, BEW-2-04052023, and MW-BS02-04052023, EQ-BLANK-04052023 and dissolved uranium-235 and dissolved uranium-238 in BEW-3-04052023, BEW-4-04052023, BEW-2-04052023, and MW-BS02-04052023 were qualified as estimated (J, UJ) due to elevated %RSDs in the CCV replicates.

- The results for total and dissolved uranium-235 and uranium-238 in HA20-CMT-3B(OW)-04052023, MW-S16-04052023, and MW-BM03-04052023 were qualified as estimated (J, UJ) due to elevated %RSDs in the CCV replicates.

- The result for total cadmium in MW-BS02-04052023 was qualified as estimated (J+) with high bias because this unspiked analyte was detected in the interference check sample solution A (ICSA) at more than twice the method detection limit (MDL).

- The results for total cobalt in HA20-CMT-3B(OW)-04052023 and MW-S16-04052023 and for total and dissolved cobalt in MW-S02-04052023, BEW-2-04052023, MW-BS02-04052023, MW-S64-04052023, MW-S64-04052023 DUP, and MW-BM03-04052023 were qualified as estimated (J+) with high bias because this analyte was detected in the ICSA at more than twice the MDL.

- The results for total copper in BEW-2-04052023, MW-BS52-04052023, MW-BS52-04052023 DUP, HA20-CMT-3B(OW)-04052023, and MW-BM03-04052023, MW-BS02-04052023 and for total and dissolved copper in MW-S02-04052023, BEW-4-04052023 were qualified as estimated (J+) with high bias because this analyte was detected in the ICSA at more than twice the MDL.

- The results for dissolved potassium in all field samples and for total potassium in all field samples except MW-BS52-04052023 and MW-BS52-04052023 DUP were qualified as estimated (J+) due to elevated matrix spike (MS) recoveries.

- The results for total and dissolved molybdenum in MW-BS52-04052023, MW-BS52-04052023 DUP, and MW-BM03-04052023 and for total and dissolved copper in MW-BS02-04052023 were qualified as estimated (J) because the dissolved concentration exceeded the total concentration by more than ten percent.

- The results for total and dissolved zinc in MW-S64-04052023 and for total and dissolved arsenic in MW-BS52-04052023 and MW-BS52-04052023 DUP were qualified as estimated (J, UJ) because the because the low-level dissolved concentration exceeded the not detected total concentration, indicating imprecision around the MDL.

The remaining results were determined to be usable as reported by the laboratory.

The following sections of this report detail the reasons qualifiers were applied to the sample results. Each parameter section discusses the quality control (QC) excursions that impacted sample results. Where a quality indicator was deemed acceptable after thorough review, no further discussion is included in this report. Detailed findings are included for each quality element that impacted the usability of the reported results. Additional information or explanation is included as needed, to provide support for decisions made, based on the validator's best professional judgment.

Where a result was qualified J+ and J, or J- and J, the J qualifier takes precedence. Where a result was qualified biased high and low for differing data quality excursions, the final qualifier is J, with indeterminate bias.

## Metals (SW846 6020B)

### Initial and Continuing Calibrations

Three initial calibrations (ICs) were performed on ICPMS15 on April 30, 2023. All initial and continuing calibration verification standards were within acceptance criteria (90-110%R; <5%RSD), with the following exceptions:

| Analyte | %R | %RSD | Associated Samples |
|---|---|---|---|
| CCV03 4/30/23 @ 18:38 | | | |
| Uranium-235 | a | 7.4 | BEW-3-04052023<br>BEW-4-04052023<br>BEW-2-04052023<br>MW-BS02-04052023 |
| Uranium-238 | a | 7.1 | |
| CCV07 4/30/23 @ 19:46 | | | |
| Uranium-235 | a | 5.3 | HA20-CMT-3B(OW)-04052023<br>MW-S16-04052023<br>EQ-BLANK-04052023<br>MW-BM03-04052023 |
| Uranium-238 | a | 5.5 | |

a-acceptable

The results for total uranium-235 and total uranium-238 in EQ-BLANK-04052023, for dissolved uranium-235 and dissolved uranium-238 in BEW-3-04052023, and for total and dissolved uranium-235 and uranium-238 in BEW-2-04052023, BEW-4-04052023, HA20-CMT-3B(OW)-04052023, MW-S16-04052023, MW-BM03-04052023, and MW-BS02-04052023 were qualified as estimated (J, UJ) due to elevated %RSDs in the CCV replicates.

A Contract Required Detection Limit (CRDL) standard was analyzed with each analytical sequence and reported at or below the reporting limit for all reported analytes. All recoveries were within the 20% limit, with the exception of calcium (125.4%R) in one of the analytical sequences. The calcium concentrations in all associated samples were above actionable levels, and qualifications were not warranted.

### Interference Check Sample

An ICSA/ICSAB pair was analyzed in each analytical sequence. All spiked analytes recovered within acceptance limits (80-120%R), and all non-spiked analytes were less than twice the method detection limit with the exceptions:

| Analyte | ICSA Conc. (ug/L) | MDL (ug/L) | RL (ug/L) | Affected samples |
|---|---|---|---|---|
| ICSA01 4/30/23 @ 20:38 | | | | |

| Analyte | ICSA Conc. (ug/L) | MDL (ug/L) | RL (ug/L) | Affected samples |
|---|---|---|---|---|
| Cadmium | 1.95 | 0.3 | 1.0 | MW-BS02-04052023 |
| Cobalt | 0.913 | 0.3 | 1.0 | HA20-CMT-3B(OW)-04052023<br>MW-S16-04052023<br>MW-S02-04052023<br>BEW-2-04052023<br>MW-BS02-04052023<br>MW-S64-04052023<br>MW-S64-04052023 DUP<br>MW-BM03-04052023 |
| Copper | 0.88 | 0.3 | 2.0 | BEW-2-04052023<br>MW-BS52-04052023<br>MW-BS52-04052023 DUP<br>HA20-CMT-3B(OW)-04052023<br>MW-BM03-04052023<br>MW-S02-04052023<br>BEW-4-04052023<br>MW-BS02-04052023 |

The results for total cadmium in MW-BS02-04052023, for total cobalt in HA20-CMT-3B(OW)-04052023 and MW-S16-04052023, for total and dissolved cobalt in MW-S02-04052023, BEW-2-04052023, MW-BS02-04052023, MW-S64-04052023, MW-S64-04052023 DUP, and MW-BM03-04052023, for total copper in BEW-2-04052023, MW-BS52-04052023, MW-BS52-04052023 DUP, HA20-CMT-3B(OW)-04052023, and MW-BM03-04052023, MW-BS02-04052023, and for total and dissolved copper in MW-S02-04052023, BEW-4-04052023 were qualified as estimated (J+) with high bias because the ICSA was detected at more than twice the MDL.

Matrix Spike (MS)/Matrix Spike Duplicate (MSD)

Two MS/MSDs were performed on samples BEW-3-04052023 and MW-BS52-04052023. Recoveries and precision between them were within acceptance criteria (80-120%R; RPD<20), with exceptions notes below:

| Parent Sample | Analyte | MS %R | MSD %R | RPD |
|---|---|---|---|---|
| BEW-3-04052023 | Calcium, Total | 124 | a | a |
| | Magnesium, Total | 77.5 | 76.2 | a |
| | Potassium, Total | 122 | a | a |
| | Sodium, Total | 79.4 | 61.4 | a |
| | Calcium, Dissolved | 226 | 264 | a |
| | Magnesium, Dissolved | a | 67.6 | a |
| | Potassium, Dissolved | 127 | a | a |

| Parent Sample | Analyte | MS %R | MSD %R | RPD |
|---|---|---|---|---|
| | Sodium, Dissolved | a | 35.1 | a |
| MW-BS52-04052023 | Magnesium, Total | 126 | 138 | a |
| | Sodium, Total | a | 128 | a |

A post spike for dissolved potassium was performed on BEW-3-04052023 with an elevated recovery (126%R). The results for dissolved potassium in all field samples and total potassium in all field samples except MW-BS52-04052023 and MW-BS52-04052023 DUP were qualified as estimated (J+), due to elevated MS recoveries.

For all other analytes reported above, the original sample concentrations were more than four times the spike concentrations. Therefore, there were no expectations of acceptable recoveries, and qualifications were not warranted.

Quantitation

The results for total calcium in MW-BM03-04052023 and total and dissolved calcium in BEW-3-04052023 and MW-BS02-04052023 were analyzed at 10x dilutions to obtain analyte concentrations within the linear range of the instrument. MDLs and practical quantitation limits (PQLs) were appropriately adjusted for the dilution factor.

Since the total uranium results are a calculation based upon the summation of uranium-235 and uranium-238 concentrations, any qualifications applied to uranium-235 or uranium-238 were additionally applied to total uranium.

The instrument detection limit summary provides MDLs “effective” on 10/8/21 and verified on 3/7/23 (ICPMS15).

Linear ranges, according to the summary provided in the data package, were determined on 8/1/17 (ICPMS15). There is no indication in the data package that the linear ranges have been reproduced or verified, for uranium-235 and uranium-238, between the date established and the date of field sample analyses, five years later. However, all analyte concentrations in the samples were within the established instrument calibration range for each analyte; therefore, there is no adverse impact on the sample results.

Total vs. Dissolved

The total concentration exceeded the dissolved concentration for detected analytes, with exceptions noted below:

| Sample | Analyte | Total Conc (ug/L) | Dissolved Conc (ug/L) | %D |
|---|---|---|---|---|
| MW-S02-04052023 | Barium | 5.79 | 6.29 | <10 |
| | Calcium | 8410 | 9110 | <10 |
| | Copper | 1.20 J | 1.69 J | 40 |
| | Magnesium | 925 | 988 | <10 |

| Sample | Analyte | Total Conc (ug/L) | Dissolved Conc (ug/L) | %D |
|---|---|---|---|---|
| | Potassium | 1860 | 2020 | <10 |
| | Sodium | 21200 | 22700 | <10 |
| BEW-3-04052023 | Arsenic | 2.12 | 2.16 | <10 |
| | Barium | 31.1 | 32.4 | <10 |
| | Magnesium | 32600 | 33400 | <10 |
| | Molybdenum | 11.9 | 12.4 | <10 |
| | Potassium | 7190 | 7320 | <10 |
| | Sodium | 41300 | 41700 | <10 |
| | Total Uranium | 28.9 | 30.1 | <10 |
| | Uranium-235 | 0.213 | 0.220 | <10 |
| | Uranium-238 | 28.7 | 29.9 | <10 |
| BEW-4-04052023 | Calcium | 28700 | 29400 | <10 |
| | Magnesium | 8260 | 8620 | <10 |
| | Molybdenum | 3.25 | 3.36 | <10 |
| | Potassium | 3690 | 3760 | <10 |
| | Sodium | 24100 | 24600 | <10 |
| BEW-2-04052023 | Magnesium | 15500 | 15600 | <10 |
| | Potassium | 3740 | 3770 | <10 |
| | Sodium | 29400 | 29600 | <10 |
| MW-BS02-04052023 | Calcium | 53100 | 53900 | <10 |
| | Copper | 0.508 J | 4.51 | **790** |
| | Lead | 0.5 | 0.501 | <10 |
| | Potassium | 4420 | 4400 | <10 |
| | Zinc | 11.1 J | 15.1 J | 36 |
| MW-BS52-04052023 | Arsenic | 2.0 U | 2.91 | N/C |
| | Iron | 2090 | 2120 | <10 |
| | Manganese | 395 | 428 | <10 |
| | Molybdenum | 1.66 | 2.09 | **26** |
| MW-BS52-04052023 DUP | Arsenic | 2.0 U | 2.95 | N/C |
| | Manganese | 395 | 419 | <10 |
| | Molybdenum | 1.58 | 2.14 | **35** |
| MW-S64-04052023 | Calcium | 6740 | 6790 | <10 |
| | Copper | 62.0 | 62.8 | <10 |
| | Molybdenum | 0.242 | 0.242 | <10 |
| | Nickel | 2.41 | 2.50 | <10 |
| | Sodium | 8490 | 8550 | <10 |
| | Zinc | 3.30 U | 3.58 | N/C |
| MW-S64-04052023 DUP | Copper | 59.6 | 64.2 | <10 |
| | Molybdenum | 0.228 J | 0.283 J | 24 |
| | Total Uranium | 12.1 | 13.3 | <10 |
| | Uranium-235 | 0.0268 | 0.0276 | <10 |
| | Uranium-238 | 12.1 | 13.3 | <10 |
| MW-S16-04052023 | Calcium | 25600 | 26300 | <10 |
| | Magnesium | 5850 | 6000 | <10 |
| | Molybdenum | 2.58 | 2.69 | <10 |

| Sample | Analyte | Total Conc (ug/L) | Dissolved Conc (ug/L) | %D |
|---|---|---|---|---|
| | Nickel | 1.26 J | 1.39 J | 10.3 |
| | Potassium | 3840 | 3910 | <10 |
| | Sodium | 35600 | 37200 | <10 |
| MW-BM03-04052023 | Molybdenum | 12.4 | 14.0 | 13 |

N/C – Not calculated

The results for total and dissolved molybdenum in MW-BS52-04052023, MW-BS52-04052023 DUP, and MW-BM03-04052023 and for total and dissolved copper in MW-BS02-04052023 were qualified as estimated (J) because the dissolved concentration exceeded the total concentration by more than ten percent. The results for total and dissolved zinc in MW-S64-04052023 and for total and dissolved arsenic in MW-BS52-04052023 and MW-BS52-04052023 DUP were qualified as estimated (J, UJ) because the because the low-level dissolved concentration exceeded the not detected total concentration, indicating imprecision around the MDL.

When the %D is 10% or less, experimental error is assumed, and no qualification of sample results is made. Where the percent difference is greater than 10% and total and dissolved concentrations were less than the PQL (and flagged with a J on this basis by the laboratory), no qualification of sample results is made. No additional action was necessary for the results detailed above.

**Dissolved Inorganic Carbon and Dissolved Organic Carbon (SW846 9060A)**

All results were acceptable and did not warrant qualification based upon the level of review performed.

**Documentation**

The following documentation issues were observed during the validation effort:

- Results for the matrix spike (MS) and MS duplicate (MSD) in the metals analyses are also presented as “Duplicate Sample” results for assessment of precision. It should be noted that the comparison is made with results for the MS and MSD, not unspiked sample results.

Please feel free to contact me (mdalmeida@ddmsinc.com or 862-668-3355) with any questions you may have regarding this information.

Sincerely,

Melissa M. D’Almeida
Environmental Chemist

Attachments

**Attachment A**
**DATA SUMMARY TABLE**
**SDG 617335**

Data Summary Form for Groundwater Samples
Job No. 617335
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/5/2023 - 4/5/2023

| | | Field Sample ID | BEW-2-04052023 | | | BEW-3-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 617335007 | | | 617335003 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium (Dissolved) | ug/l | 66.1 | J | Calc estimated | 30.1 | J | Calc estimated |
| CALC | Uranium | ug/l | 70.8 | J | Calc estimated | 28.9 | | |
| SW6020B | Aluminum | ug/l | 30.6 | J | | 19.3 | U | |
| SW6020B | Aluminum (Dissolved) | ug/l | 19.3 | U | | 19.3 | U | |
| SW6020B | Antimony | ug/l | 13.4 | | | 1.00 | U | |
| SW6020B | Antimony (Dissolved) | ug/l | 10.2 | | | 1.00 | U | |
| SW6020B | Arsenic (Dissolved) | ug/l | 11.1 | | | 2.16 | J | |
| SW6020B | Arsenic | ug/l | 11.1 | | | 2.12 | J | |
| SW6020B | Barium | ug/l | 31.1 | | | 31.1 | | |
| SW6020B | Barium (Dissolved) | ug/l | 31 | | | 32.4 | | |
| SW6020B | Beryllium (Dissolved) | ug/l | 0.200 | U | | 0.200 | U | |
| SW6020B | Beryllium | ug/l | 0.200 | U | | 0.200 | U | |
| SW6020B | Cadmium | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Cadmium (Dissolved) | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Calcium | ug/l | 43500 | | | -- | -- | |
| SW6020B | Calcium (Dissolved) | ug/l | 43500 | | | -- | -- | |
| SW6020B | Chromium (Dissolved) | ug/l | 3.00 | U | | 3.00 | U | |
| SW6020B | Chromium | ug/l | 3.00 | U | | 3.00 | U | |
| SW6020B | Cobalt | ug/l | 2.08 | J+ | ICSA high | 0.300 | U | |
| SW6020B | Cobalt (Dissolved) | ug/l | 1.52 | J+ | ICSA high | 0.300 | U | |
| SW6020B | Copper (Dissolved) | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Copper | ug/l | 1.26 | J+ | ICSA high | 0.300 | U | |
| SW6020B | Iron (Dissolved) | ug/l | 1410 | | | 5750 | | |
| SW6020B | Iron | ug/l | 1780 | | | 6430 | | |
| SW6020B | Lead | ug/l | 2.6 | | | 0.500 | U | |
| SW6020B | Lead (Dissolved) | ug/l | 0.500 | U | | 0.500 | U | |
| SW6020B | Magnesium (Dissolved) | ug/l | 15600 | | | 33400 | | |
| SW6020B | Magnesium | ug/l | 15500 | | | 32600 | | |
| SW6020B | Manganese | ug/l | 269 | | | 316 | | |
| SW6020B | Manganese (Dissolved) | ug/l | 268 | | | 313 | | |
| SW6020B | Molybdenum (Dissolved) | ug/l | 23.2 | | | 12.4 | | |
| SW6020B | Molybdenum | ug/l | 23.2 | | | 11.9 | | |
| SW6020B | Nickel | ug/l | 5.4 | | | 1.37 | J | |
| SW6020B | Nickel (Dissolved) | ug/l | 2.96 | | | 1.32 | J | |
| SW6020B | Potassium (Dissolved) | ug/l | 3770 | J+ | MS high | 7320 | J+ | MS high |

Data Summary Form for Groundwater Samples
Job No. 617335
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/5/2023 - 4/5/2023

| | | Field Sample ID | BEW-2-04052023 | | | BEW-3-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 617335007 | | | 617335003 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Potassium | ug/l | 3740 | J+ | MS and PS high | 7190 | J+ | MS and PS high |
| SW6020B | Selenium (Dissolved) | ug/l | 1.50 | U | | 1.50 | U | |
| SW6020B | Selenium | ug/l | 1.50 | U | | 1.50 | U | |
| SW6020B | Silver | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Silver (Dissolved) | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Sodium (Dissolved) | ug/l | 29600 | | | 41700 | | |
| SW6020B | Sodium | ug/l | 29400 | | | 41300 | | |
| SW6020B | Thallium | ug/l | 0.600 | U | | 0.600 | U | |
| SW6020B | Thallium (Dissolved) | ug/l | 0.600 | U | | 0.600 | U | |
| SW6020B | Thorium (Dissolved) | ug/l | 0.700 | U | | 0.700 | U | |
| SW6020B | Thorium | ug/l | 0.700 | U | | 0.700 | U | |
| SW6020B | Uranium-235 | ug/l | 0.51 | J | CCV %RSD high | 0.213 | | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | 0.482 | J | CCV %RSD high | 0.22 | J | CCV %RSD high |
| SW6020B | Uranium-238 | ug/l | 70.3 | J | CCV %RSD high | 28.7 | | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | 65.7 | J | CCV %RSD high | 29.9 | J | CCV %RSD high |
| SW6020B | Vanadium | ug/l | 3.30 | U | | 3.30 | U | |
| SW6020B | Vanadium (Dissolved) | ug/l | 3.30 | U | | 3.30 | U | |
| SW6020B | Zinc (Dissolved) | ug/l | 3.30 | U | | 3.44 | J | |
| SW6020B | Zinc | ug/l | 133 | | | 8.05 | J | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 617335
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/5/2023 - 4/5/2023

| | | Field Sample ID | BEW-3-04052023 | | | BEW-4-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 617335003 | | | 617335005 | | |
| | | Dilution Factor | 10 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium (Dissolved) | ug/l | -- | -- | | 0.292 | J | Calc estimated |
| CALC | Uranium | ug/l | -- | -- | | 0.494 | J | Calc estimated |
| SW6020B | Aluminum | ug/l | -- | -- | | 132 | | |
| SW6020B | Aluminum (Dissolved) | ug/l | -- | -- | | 30.5 | J | |
| SW6020B | Antimony | ug/l | -- | -- | | 1.00 | U | |
| SW6020B | Antimony (Dissolved) | ug/l | -- | -- | | 1.00 | U | |
| SW6020B | Arsenic (Dissolved) | ug/l | -- | -- | | 2.00 | U | |
| SW6020B | Arsenic | ug/l | -- | -- | | 2.00 | U | |
| SW6020B | Barium | ug/l | -- | -- | | 16.6 | | |
| SW6020B | Barium (Dissolved) | ug/l | -- | -- | | 16.1 | | |
| SW6020B | Beryllium (Dissolved) | ug/l | -- | -- | | 0.200 | U | |
| SW6020B | Beryllium | ug/l | -- | -- | | 0.200 | U | |
| SW6020B | Cadmium | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Cadmium (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Calcium | ug/l | 72000 | | | 28700 | | |
| SW6020B | Calcium (Dissolved) | ug/l | 70500 | | | 29400 | | |
| SW6020B | Chromium (Dissolved) | ug/l | -- | -- | | 3.00 | U | |
| SW6020B | Chromium | ug/l | -- | -- | | 3.00 | U | |
| SW6020B | Cobalt | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Cobalt (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Copper (Dissolved) | ug/l | -- | -- | | 0.403 | J+ | ICSA high |
| SW6020B | Copper | ug/l | -- | -- | | 1.58 | J+ | ICSA high |
| SW6020B | Iron (Dissolved) | ug/l | -- | -- | | 256 | | |
| SW6020B | Iron | ug/l | -- | -- | | 761 | | |
| SW6020B | Lead | ug/l | -- | -- | | 1.82 | J | |
| SW6020B | Lead (Dissolved) | ug/l | -- | -- | | 0.500 | U | |
| SW6020B | Magnesium (Dissolved) | ug/l | -- | -- | | 8620 | | |
| SW6020B | Magnesium | ug/l | -- | -- | | 8260 | | |
| SW6020B | Manganese | ug/l | -- | -- | | 58.2 | | |
| SW6020B | Manganese (Dissolved) | ug/l | -- | -- | | 50.3 | | |
| SW6020B | Molybdenum (Dissolved) | ug/l | -- | -- | | 3.36 | | |
| SW6020B | Molybdenum | ug/l | -- | -- | | 3.25 | | |
| SW6020B | Nickel | ug/l | -- | -- | | 1.74 | J | |
| SW6020B | Nickel (Dissolved) | ug/l | -- | -- | | 1 | J | |
| SW6020B | Potassium (Dissolved) | ug/l | -- | -- | | 3760 | J+ | MS high |

Data Summary Form for Groundwater Samples
Job No. 617335
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/5/2023 - 4/5/2023

| | | Field Sample ID | BEW-3-04052023 | | | BEW-4-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 617335003 | | | 617335005 | | |
| | | Dilution Factor | 10 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Potassium | ug/l | -- | -- | | 3690 | J+ | MS and PS high |
| SW6020B | Selenium (Dissolved) | ug/l | -- | -- | | 1.50 | U | |
| SW6020B | Selenium | ug/l | -- | -- | | 1.50 | U | |
| SW6020B | Silver | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Silver (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Sodium (Dissolved) | ug/l | -- | -- | | 24600 | | |
| SW6020B | Sodium | ug/l | -- | -- | | 24100 | | |
| SW6020B | Thallium | ug/l | -- | -- | | 0.600 | U | |
| SW6020B | Thallium (Dissolved) | ug/l | -- | -- | | 0.600 | U | |
| SW6020B | Thorium (Dissolved) | ug/l | -- | -- | | 0.700 | U | |
| SW6020B | Thorium | ug/l | -- | -- | | 0.700 | U | |
| SW6020B | Uranium-235 | ug/l | -- | -- | | 0.0100 | UJ | CCV %RSD high |
| SW6020B | Uranium-235 (Dissolved) | ug/l | -- | -- | | 0.0100 | UJ | CCV %RSD high |
| SW6020B | Uranium-238 | ug/l | -- | -- | | 0.494 | J | CCV %RSD high |
| SW6020B | Uranium-238 (Dissolved) | ug/l | -- | -- | | 0.292 | J | CCV %RSD high |
| SW6020B | Vanadium | ug/l | -- | -- | | 3.30 | U | |
| SW6020B | Vanadium (Dissolved) | ug/l | -- | -- | | 3.30 | U | |
| SW6020B | Zinc (Dissolved) | ug/l | -- | -- | | 7.5 | J | |
| SW6020B | Zinc | ug/l | -- | -- | | 8.01 | J | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 617335
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/5/2023 - 4/5/2023

| | | Field Sample ID | EQ-BLANK-04052023 | | | HA20-CMT-3B(OW)-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 617335023 | | | 617335019 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium (Dissolved) | ug/l | -- | -- | | 46.8 | J | Calc estimated |
| CALC | Uranium | ug/l | 0.0670 | UJ | Calc estimated | 48 | J | Calc estimated |
| SW6020B | Aluminum | ug/l | 19.3 | U | | 156 | | |
| SW6020B | Aluminum (Dissolved) | ug/l | -- | -- | | 19.3 | U | |
| SW6020B | Antimony | ug/l | 1.00 | U | | 1.00 | U | |
| SW6020B | Antimony (Dissolved) | ug/l | -- | -- | | 1.00 | U | |
| SW6020B | Arsenic (Dissolved) | ug/l | -- | -- | | 31.3 | | |
| SW6020B | Arsenic | ug/l | 2.00 | U | | 32.4 | | |
| SW6020B | Barium | ug/l | 0.670 | U | | 18.9 | | |
| SW6020B | Barium (Dissolved) | ug/l | -- | -- | | 17.9 | | |
| SW6020B | Beryllium (Dissolved) | ug/l | -- | -- | | 0.200 | U | |
| SW6020B | Beryllium | ug/l | 0.200 | U | | 0.200 | U | |
| SW6020B | Cadmium | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Cadmium (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Calcium | ug/l | 80.0 | U | | 35100 | | |
| SW6020B | Calcium (Dissolved) | ug/l | -- | -- | | 34200 | | |
| SW6020B | Chromium (Dissolved) | ug/l | -- | -- | | 3.00 | U | |
| SW6020B | Chromium | ug/l | 3.00 | U | | 3.00 | U | |
| SW6020B | Cobalt | ug/l | 0.300 | U | | 0.345 | J+ | ICSA high |
| SW6020B | Cobalt (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Copper (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Copper | ug/l | 0.300 | U | | 1.08 | J+ | ICSA high |
| SW6020B | Iron (Dissolved) | ug/l | -- | -- | | 33.0 | U | |
| SW6020B | Iron | ug/l | 33.0 | U | | 256 | | |
| SW6020B | Lead | ug/l | 0.500 | U | | 0.500 | U | |
| SW6020B | Lead (Dissolved) | ug/l | -- | -- | | 0.500 | U | |
| SW6020B | Magnesium (Dissolved) | ug/l | -- | -- | | 9210 | | |
| SW6020B | Magnesium | ug/l | 10.0 | U | | 9420 | | |
| SW6020B | Manganese | ug/l | 1.00 | U | | 371 | | |
| SW6020B | Manganese (Dissolved) | ug/l | -- | -- | | 352 | | |
| SW6020B | Molybdenum (Dissolved) | ug/l | -- | -- | | 38.7 | | |
| SW6020B | Molybdenum | ug/l | 0.200 | U | | 39.3 | | |
| SW6020B | Nickel | ug/l | 0.600 | U | | 1.11 | J | |
| SW6020B | Nickel (Dissolved) | ug/l | -- | -- | | 0.604 | J | |
| SW6020B | Potassium (Dissolved) | ug/l | -- | -- | | 4670 | J+ | MS high |

Data Summary Form for Groundwater Samples
Job No. 617335
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/5/2023 - 4/5/2023

| | | Field Sample ID | EQ-BLANK-04052023 | | | HA20-CMT-3B(OW)-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 617335023 | | | 617335019 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Potassium | ug/l | 80.0 | U | | 4830 | J+ | MS and PS high |
| SW6020B | Selenium (Dissolved) | ug/l | -- | -- | | 1.50 | U | |
| SW6020B | Selenium | ug/l | 1.50 | U | | 1.50 | U | |
| SW6020B | Silver | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Silver (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Sodium (Dissolved) | ug/l | -- | -- | | 48500 | | |
| SW6020B | Sodium | ug/l | 80.0 | U | | 49500 | | |
| SW6020B | Thallium | ug/l | 0.600 | U | | 0.600 | U | |
| SW6020B | Thallium (Dissolved) | ug/l | -- | -- | | 0.600 | U | |
| SW6020B | Thorium (Dissolved) | ug/l | -- | -- | | 0.700 | U | |
| SW6020B | Thorium | ug/l | 0.700 | U | | 0.700 | U | |
| SW6020B | Uranium-235 | ug/l | 0.0100 | UJ | CCV %RSD high | 0.35 | J | CCV %RSD high |
| SW6020B | Uranium-235 (Dissolved) | ug/l | -- | -- | | 0.342 | J | CCV %RSD high |
| SW6020B | Uranium-238 | ug/l | 0.0670 | UJ | CCV %RSD high | 47.6 | J | CCV %RSD high |
| SW6020B | Uranium-238 (Dissolved) | ug/l | -- | -- | | 46.5 | J | CCV %RSD high |
| SW6020B | Vanadium | ug/l | 3.30 | U | | 4.08 | J | |
| SW6020B | Vanadium (Dissolved) | ug/l | -- | -- | | 3.58 | J | |
| SW6020B | Zinc (Dissolved) | ug/l | -- | -- | | 3.30 | U | |
| SW6020B | Zinc | ug/l | 3.30 | U | | 3.30 | U | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 617335
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/5/2023 - 4/5/2023

| | | Field Sample ID | MW-BM03-04052023 | | | MW-BM03-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 617335024 | | | 617335024 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium (Dissolved) | ug/l | 14.6 | J | Calc estimated | -- | -- | |
| CALC | Uranium | ug/l | 15.3 | J | Calc estimated | -- | -- | |
| SW6020B | Aluminum | ug/l | 105 | | | -- | -- | |
| SW6020B | Aluminum (Dissolved) | ug/l | 19.3 | U | | -- | -- | |
| SW6020B | Antimony | ug/l | 4.11 | | | -- | -- | |
| SW6020B | Antimony (Dissolved) | ug/l | 3.51 | | | -- | -- | |
| SW6020B | Arsenic (Dissolved) | ug/l | 389 | | | -- | -- | |
| SW6020B | Arsenic | ug/l | 492 | | | -- | -- | |
| SW6020B | Barium | ug/l | 62.4 | | | -- | -- | |
| SW6020B | Barium (Dissolved) | ug/l | 54.8 | | | -- | -- | |
| SW6020B | Beryllium (Dissolved) | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Beryllium | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Cadmium | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Cadmium (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Calcium | ug/l | -- | -- | | 50000 | | |
| SW6020B | Calcium (Dissolved) | ug/l | 44100 | | | -- | -- | |
| SW6020B | Chromium (Dissolved) | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Chromium | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Cobalt | ug/l | 1.19 | J+ | ICSA high | -- | -- | |
| SW6020B | Cobalt (Dissolved) | ug/l | 0.955 | J+ | ICSA high | -- | -- | |
| SW6020B | Copper (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Copper | ug/l | 0.728 | J+ | ICSA high | -- | -- | |
| SW6020B | Iron (Dissolved) | ug/l | 377 | | | -- | -- | |
| SW6020B | Iron | ug/l | 800 | | | -- | -- | |
| SW6020B | Lead | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Lead (Dissolved) | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Magnesium (Dissolved) | ug/l | 14400 | | | -- | -- | |
| SW6020B | Magnesium | ug/l | 16800 | | | -- | -- | |
| SW6020B | Manganese | ug/l | 180 | | | -- | -- | |
| SW6020B | Manganese (Dissolved) | ug/l | 149 | | | -- | -- | |
| SW6020B | Molybdenum (Dissolved) | ug/l | 14 | J | Diss>Total | -- | -- | |
| SW6020B | Molybdenum | ug/l | 12.4 | J | Diss>Total | -- | -- | |
| SW6020B | Nickel | ug/l | 3.34 | | | -- | -- | |
| SW6020B | Nickel (Dissolved) | ug/l | 2.66 | | | -- | -- | |
| SW6020B | Potassium (Dissolved) | ug/l | 5470 | J+ | MS high | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 617335
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/5/2023 - 4/5/2023

| | | Field Sample ID | MW-BM03-04052023 | | | MW-BM03-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 617335024 | | | 617335024 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Potassium | ug/l | 5590 | J+ | MS and PS high | -- | -- | |
| SW6020B | Selenium (Dissolved) | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Selenium | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Silver | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Silver (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Sodium (Dissolved) | ug/l | 31100 | | | -- | -- | |
| SW6020B | Sodium | ug/l | 34300 | | | -- | -- | |
| SW6020B | Thallium | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thallium (Dissolved) | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thorium (Dissolved) | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Thorium | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Uranium-235 | ug/l | 0.111 | J | CCV %RSD high | -- | -- | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | 0.106 | J | CCV %RSD high | -- | -- | |
| SW6020B | Uranium-238 | ug/l | 15.2 | J | CCV %RSD high | -- | -- | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | 14.5 | J | CCV %RSD high | -- | -- | |
| SW6020B | Vanadium | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Vanadium (Dissolved) | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Zinc (Dissolved) | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Zinc | ug/l | 3.30 | U | | -- | -- | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 617335
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/5/2023 - 4/5/2023

| | | Field Sample ID | MW-BS02-04052023 | | | MW-BS02-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 617335009 | | | 617335009 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium (Dissolved) | ug/l | 90.4 | J | Calc estimated | -- | -- | |
| CALC | Uranium | ug/l | 90.9 | J | Calc estimated | -- | -- | |
| SW6020B | Aluminum | ug/l | 35.9 | J | | -- | -- | |
| SW6020B | Aluminum (Dissolved) | ug/l | 19.3 | U | | -- | -- | |
| SW6020B | Antimony | ug/l | 2.19 | J | | -- | -- | |
| SW6020B | Antimony (Dissolved) | ug/l | 2.08 | J | | -- | -- | |
| SW6020B | Arsenic (Dissolved) | ug/l | 32.7 | | | -- | -- | |
| SW6020B | Arsenic | ug/l | 34.1 | | | -- | -- | |
| SW6020B | Barium | ug/l | 5.69 | | | -- | -- | |
| SW6020B | Barium (Dissolved) | ug/l | 5.31 | | | -- | -- | |
| SW6020B | Beryllium (Dissolved) | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Beryllium | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Cadmium | ug/l | 0.334 | J+ | ICSA high | -- | -- | |
| SW6020B | Cadmium (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Calcium | ug/l | -- | -- | | 53100 | | |
| SW6020B | Calcium (Dissolved) | ug/l | -- | -- | | 53900 | | |
| SW6020B | Chromium (Dissolved) | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Chromium | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Cobalt | ug/l | 0.523 | J+ | ICSA high | -- | -- | |
| SW6020B | Cobalt (Dissolved) | ug/l | 0.427 | J+ | ICSA high | -- | -- | |
| SW6020B | Copper (Dissolved) | ug/l | 4.51 | J | Diss>Total | -- | -- | |
| SW6020B | Copper | ug/l | 0.508 | J | ICSA high; Diss>Total | -- | -- | |
| SW6020B | Iron (Dissolved) | ug/l | 33.0 | U | | -- | -- | |
| SW6020B | Iron | ug/l | 81.5 | J | | -- | -- | |
| SW6020B | Lead | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Lead (Dissolved) | ug/l | 0.501 | J | | -- | -- | |
| SW6020B | Magnesium (Dissolved) | ug/l | 16100 | | | -- | -- | |
| SW6020B | Magnesium | ug/l | 16300 | | | -- | -- | |
| SW6020B | Manganese | ug/l | 119 | | | -- | -- | |
| SW6020B | Manganese (Dissolved) | ug/l | 115 | | | -- | -- | |
| SW6020B | Molybdenum (Dissolved) | ug/l | 10.7 | | | -- | -- | |
| SW6020B | Molybdenum | ug/l | 10.8 | | | -- | -- | |
| SW6020B | Nickel | ug/l | 3.3 | | | -- | -- | |
| SW6020B | Nickel (Dissolved) | ug/l | 2.96 | | | -- | -- | |
| SW6020B | Potassium (Dissolved) | ug/l | 4400 | J+ | MS high | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 617335
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/5/2023 - 4/5/2023

| | | Field Sample ID | MW-BS02-04052023 | | | MW-BS02-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 617335009 | | | 617335009 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Potassium | ug/l | 4420 | J+ | MS and PS high | -- | -- | |
| SW6020B | Selenium (Dissolved) | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Selenium | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Silver | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Silver (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Sodium (Dissolved) | ug/l | 37600 | | | -- | -- | |
| SW6020B | Sodium | ug/l | 38300 | | | -- | -- | |
| SW6020B | Thallium | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thallium (Dissolved) | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thorium (Dissolved) | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Thorium | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Uranium-235 | ug/l | 0.66 | J | CCV %RSD high | -- | -- | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | 0.656 | J | CCV %RSD high | -- | -- | |
| SW6020B | Uranium-238 | ug/l | 90.2 | J | CCV %RSD high | -- | -- | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | 89.7 | J | CCV %RSD high | -- | -- | |
| SW6020B | Vanadium | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Vanadium (Dissolved) | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Zinc (Dissolved) | ug/l | 15.1 | J | | -- | -- | |
| SW6020B | Zinc | ug/l | 11.1 | J | | -- | -- | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 617335
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/5/2023 - 4/5/2023

| | | Field Sample ID | MW-BS52-04052023 | | | MW-BS52-04052023 DUP | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 617335011 | | | 617335013 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium (Dissolved) | ug/l | 0.288 | | | 0.275 | | |
| CALC | Uranium | ug/l | 0.481 | | | 0.495 | | |
| SW6020B | Aluminum | ug/l | 209 | | | 225 | | |
| SW6020B | Aluminum (Dissolved) | ug/l | 19.3 | U | | 19.3 | U | |
| SW6020B | Antimony | ug/l | 1.00 | U | | 1.00 | U | |
| SW6020B | Antimony (Dissolved) | ug/l | 1.00 | U | | 1.00 | U | |
| SW6020B | Arsenic (Dissolved) | ug/l | 2.91 | J | Diss>Total | 2.95 | J | Diss>Total |
| SW6020B | Arsenic | ug/l | 2.00 | UJ | Diss>Total | 2.00 | UJ | Diss>Total |
| SW6020B | Barium | ug/l | 21.5 | | | 20.9 | | |
| SW6020B | Barium (Dissolved) | ug/l | 18.5 | | | 18.1 | | |
| SW6020B | Beryllium (Dissolved) | ug/l | 0.200 | U | | 0.200 | U | |
| SW6020B | Beryllium | ug/l | 0.200 | U | | 0.200 | U | |
| SW6020B | Cadmium | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Cadmium (Dissolved) | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Calcium | ug/l | 33200 | | | 31700 | | |
| SW6020B | Calcium (Dissolved) | ug/l | 28600 | | | 28000 | | |
| SW6020B | Chromium (Dissolved) | ug/l | 3.00 | U | | 3.00 | U | |
| SW6020B | Chromium | ug/l | 3.00 | U | | 3.00 | U | |
| SW6020B | Cobalt | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Cobalt (Dissolved) | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Copper (Dissolved) | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Copper | ug/l | 0.361 | J+ | ICSA high | 0.436 | J+ | ICSA high |
| SW6020B | Iron (Dissolved) | ug/l | 2120 | | | 2170 | | |
| SW6020B | Iron | ug/l | 2090 | | | 2180 | | |
| SW6020B | Lead | ug/l | 0.500 | U | | 0.500 | U | |
| SW6020B | Lead (Dissolved) | ug/l | 0.500 | U | | 0.500 | U | |
| SW6020B | Magnesium (Dissolved) | ug/l | 8460 | | | 8300 | | |
| SW6020B | Magnesium | ug/l | 10400 | | | 9840 | | |
| SW6020B | Manganese | ug/l | 395 | | | 395 | | |
| SW6020B | Manganese (Dissolved) | ug/l | 428 | | | 419 | | |
| SW6020B | Molybdenum (Dissolved) | ug/l | 2.09 | J | Diss>Total | 2.14 | J | Diss>Total |
| SW6020B | Molybdenum | ug/l | 1.66 | J | Diss>Total | 1.58 | J | Diss>Total |
| SW6020B | Nickel | ug/l | 0.922 | J | | 0.912 | J | |
| SW6020B | Nickel (Dissolved) | ug/l | 0.600 | U | | 0.600 | U | |
| SW6020B | Potassium (Dissolved) | ug/l | 10700 | J+ | MS high | 10500 | J+ | MS high |

Data Summary Form for Groundwater Samples
Job No. 617335
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/5/2023 - 4/5/2023

| | | Field Sample ID | MW-BS52-04052023 | | | MW-BS52-04052023 DUP | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 617335011 | | | 617335013 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Potassium | ug/l | 12200 | | | 11600 | | |
| SW6020B | Selenium (Dissolved) | ug/l | 1.50 | U | | 1.50 | U | |
| SW6020B | Selenium | ug/l | 1.50 | U | | 1.50 | U | |
| SW6020B | Silver | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Silver (Dissolved) | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Sodium (Dissolved) | ug/l | 20700 | | | 20400 | | |
| SW6020B | Sodium | ug/l | 25000 | | | 23700 | | |
| SW6020B | Thallium | ug/l | 0.600 | U | | 0.600 | U | |
| SW6020B | Thallium (Dissolved) | ug/l | 0.600 | U | | 0.600 | U | |
| SW6020B | Thorium (Dissolved) | ug/l | 0.700 | U | | 0.700 | U | |
| SW6020B | Thorium | ug/l | 0.700 | U | | 0.700 | U | |
| SW6020B | Uranium-235 | ug/l | 0.0100 | U | | 0.0100 | U | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | 0.0100 | U | | 0.0100 | U | |
| SW6020B | Uranium-238 | ug/l | 0.481 | | | 0.495 | | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | 0.288 | | | 0.275 | | |
| SW6020B | Vanadium | ug/l | 3.30 | U | | 3.30 | U | |
| SW6020B | Vanadium (Dissolved) | ug/l | 3.30 | U | | 3.30 | U | |
| SW6020B | Zinc (Dissolved) | ug/l | 3.30 | U | | 3.30 | U | |
| SW6020B | Zinc | ug/l | 4.53 | J | | 4.37 | J | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 617335
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/5/2023 - 4/5/2023

| | | Field Sample ID | MW-S02-04052023 | | | MW-S16-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 617335001 | | | 617335021 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium (Dissolved) | ug/l | 0.0885 | J | | 75.6 | J | Calc estimated |
| CALC | Uranium | ug/l | 0.186 | J | | 93.8 | J | Calc estimated |
| SW6020B | Aluminum | ug/l | 23.6 | J | | 57 | | |
| SW6020B | Aluminum (Dissolved) | ug/l | 19.3 | U | | 19.3 | U | |
| SW6020B | Antimony | ug/l | 1.00 | U | | 1.00 | U | |
| SW6020B | Antimony (Dissolved) | ug/l | 1.00 | U | | 1.00 | U | |
| SW6020B | Arsenic (Dissolved) | ug/l | 2.00 | U | | 2.00 | U | |
| SW6020B | Arsenic | ug/l | 2.00 | U | | 2.00 | U | |
| SW6020B | Barium | ug/l | 5.79 | | | 6.83 | | |
| SW6020B | Barium (Dissolved) | ug/l | 6.29 | | | 6.63 | | |
| SW6020B | Beryllium (Dissolved) | ug/l | 0.200 | U | | 0.200 | U | |
| SW6020B | Beryllium | ug/l | 0.200 | U | | 0.200 | U | |
| SW6020B | Cadmium | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Cadmium (Dissolved) | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Calcium | ug/l | 8410 | | | 25600 | | |
| SW6020B | Calcium (Dissolved) | ug/l | 9110 | | | 26300 | | |
| SW6020B | Chromium (Dissolved) | ug/l | 3.00 | U | | 3.00 | U | |
| SW6020B | Chromium | ug/l | 3.00 | U | | 3.00 | U | |
| SW6020B | Cobalt | ug/l | 0.389 | J+ | ICSA high | 0.325 | J+ | ICSA high |
| SW6020B | Cobalt (Dissolved) | ug/l | 0.38 | J+ | ICSA high | 0.300 | U | |
| SW6020B | Copper (Dissolved) | ug/l | 1.69 | J+ | ICSA high | 21.2 | | |
| SW6020B | Copper | ug/l | 1.2 | J+ | ICSA high | 23.1 | | |
| SW6020B | Iron (Dissolved) | ug/l | 33.0 | U | | 33.0 | U | |
| SW6020B | Iron | ug/l | 33.0 | U | | 285 | | |
| SW6020B | Lead | ug/l | 1.49 | J | | 0.500 | U | |
| SW6020B | Lead (Dissolved) | ug/l | 0.716 | J | | 0.500 | U | |
| SW6020B | Magnesium (Dissolved) | ug/l | 988 | | | 6000 | | |
| SW6020B | Magnesium | ug/l | 925 | | | 5850 | | |
| SW6020B | Manganese | ug/l | 1.00 | U | | 10 | | |
| SW6020B | Manganese (Dissolved) | ug/l | 1.00 | U | | 8.61 | | |
| SW6020B | Molybdenum (Dissolved) | ug/l | 0.200 | U | | 2.69 | | |
| SW6020B | Molybdenum | ug/l | 0.200 | U | | 2.58 | | |
| SW6020B | Nickel | ug/l | 0.600 | U | | 1.26 | J | Diss>Total |
| SW6020B | Nickel (Dissolved) | ug/l | 0.600 | U | | 1.39 | J | Diss>Total |
| SW6020B | Potassium (Dissolved) | ug/l | 2020 | J+ | MS high | 3910 | J+ | MS high |

Data Summary Form for Groundwater Samples
Job No. 617335
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/5/2023 - 4/5/2023

| | | Field Sample ID | MW-S02-04052023 | | | MW-S16-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 617335001 | | | 617335021 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Potassium | ug/l | 1860 | J+ | MS and PS high | 3840 | J+ | MS and PS high |
| SW6020B | Selenium (Dissolved) | ug/l | 1.50 | U | | 1.50 | U | |
| SW6020B | Selenium | ug/l | 1.50 | U | | 1.50 | U | |
| SW6020B | Silver | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Silver (Dissolved) | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Sodium (Dissolved) | ug/l | 22700 | | | 37200 | | |
| SW6020B | Sodium | ug/l | 21200 | | | 35600 | | |
| SW6020B | Thallium | ug/l | 0.600 | U | | 0.600 | U | |
| SW6020B | Thallium (Dissolved) | ug/l | 0.600 | U | | 0.600 | U | |
| SW6020B | Thorium (Dissolved) | ug/l | 0.700 | U | | 0.700 | U | |
| SW6020B | Thorium | ug/l | 0.700 | U | | 0.700 | U | |
| SW6020B | Uranium-235 | ug/l | 0.0100 | U | | 0.193 | J | CCV %RSD high |
| SW6020B | Uranium-235 (Dissolved) | ug/l | 0.0100 | U | | 0.152 | J | CCV %RSD high |
| SW6020B | Uranium-238 | ug/l | 0.186 | J | | 93.6 | J | CCV %RSD high |
| SW6020B | Uranium-238 (Dissolved) | ug/l | 0.0885 | J | | 75.5 | J | CCV %RSD high |
| SW6020B | Vanadium | ug/l | 3.30 | U | | 3.30 | U | |
| SW6020B | Vanadium (Dissolved) | ug/l | 3.30 | U | | 3.30 | U | |
| SW6020B | Zinc (Dissolved) | ug/l | 3.30 | U | | 3.3 | J | |
| SW6020B | Zinc | ug/l | 3.30 | U | | 3.30 | U | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | 0.837 | J | | 0.504 | J | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | 15.0 | | | 8.20 | | |

Data Summary Form for Groundwater Samples
Job No. 617335
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/5/2023 - 4/5/2023

| | | Field Sample ID | MW-S64-04052023 | | | MW-S64-04052023 DUP | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 617335015 | | | 617335017 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium (Dissolved) | ug/l | 11.5 | | | 13.3 | | |
| CALC | Uranium | ug/l | 12.5 | | | 12.1 | | |
| SW6020B | Aluminum | ug/l | 55 | | | 98.6 | | |
| SW6020B | Aluminum (Dissolved) | ug/l | 19.3 | U | | 19.3 | U | |
| SW6020B | Antimony | ug/l | 1.00 | U | | 1.00 | U | |
| SW6020B | Antimony (Dissolved) | ug/l | 1.00 | U | | 1.00 | U | |
| SW6020B | Arsenic (Dissolved) | ug/l | 2.00 | U | | 2.00 | U | |
| SW6020B | Arsenic | ug/l | 2.00 | U | | 2.00 | U | |
| SW6020B | Barium | ug/l | 4.9 | | | 4.94 | | |
| SW6020B | Barium (Dissolved) | ug/l | 4.61 | | | 4.65 | | |
| SW6020B | Beryllium (Dissolved) | ug/l | 0.200 | U | | 0.200 | U | |
| SW6020B | Beryllium | ug/l | 0.200 | U | | 0.200 | U | |
| SW6020B | Cadmium | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Cadmium (Dissolved) | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Calcium | ug/l | 6740 | | | 6920 | | |
| SW6020B | Calcium (Dissolved) | ug/l | 6790 | | | 6850 | | |
| SW6020B | Chromium (Dissolved) | ug/l | 3.00 | U | | 3.00 | U | |
| SW6020B | Chromium | ug/l | 3.00 | U | | 3.00 | U | |
| SW6020B | Cobalt | ug/l | 0.583 | J+ | ICSA high | 0.594 | J+ | ICSA high |
| SW6020B | Cobalt (Dissolved) | ug/l | 0.583 | J+ | ICSA high | 0.588 | J+ | ICSA high |
| SW6020B | Copper (Dissolved) | ug/l | 62.8 | | | 64.2 | | |
| SW6020B | Copper | ug/l | 62 | | | 59.6 | | |
| SW6020B | Iron (Dissolved) | ug/l | 33.0 | U | | 33.0 | U | |
| SW6020B | Iron | ug/l | 55 | J | | 98.9 | J | |
| SW6020B | Lead | ug/l | 0.500 | U | | 0.500 | U | |
| SW6020B | Lead (Dissolved) | ug/l | 0.500 | U | | 0.500 | U | |
| SW6020B | Magnesium (Dissolved) | ug/l | 1520 | | | 1530 | | |
| SW6020B | Magnesium | ug/l | 1530 | | | 1560 | | |
| SW6020B | Manganese | ug/l | 8.64 | | | 9.09 | | |
| SW6020B | Manganese (Dissolved) | ug/l | 7.75 | | | 7.65 | | |
| SW6020B | Molybdenum (Dissolved) | ug/l | 0.242 | J | | 0.283 | J | Diss>Total |
| SW6020B | Molybdenum | ug/l | 0.24 | J | | 0.228 | J | Diss>Total |
| SW6020B | Nickel | ug/l | 2.41 | | | 2.52 | | |
| SW6020B | Nickel (Dissolved) | ug/l | 2.5 | | | 2.43 | | |
| SW6020B | Potassium (Dissolved) | ug/l | 1380 | J+ | MS high | 1430 | J+ | MS high |

Data Summary Form for Groundwater Samples
Job No. 617335
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/5/2023 - 4/5/2023

| | | Field Sample ID | MW-S64-04052023 | | | MW-S64-04052023 DUP | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 617335015 | | | 617335017 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Potassium | ug/l | 1400 | J+ | MS and PS high | 1430 | J+ | MS and PS high |
| SW6020B | Selenium (Dissolved) | ug/l | 1.50 | U | | 1.50 | U | |
| SW6020B | Selenium | ug/l | 1.50 | U | | 1.50 | U | |
| SW6020B | Silver | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Silver (Dissolved) | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Sodium (Dissolved) | ug/l | 8550 | | | 8610 | | |
| SW6020B | Sodium | ug/l | 8490 | | | 8850 | | |
| SW6020B | Thallium | ug/l | 0.600 | U | | 0.600 | U | |
| SW6020B | Thallium (Dissolved) | ug/l | 0.600 | U | | 0.600 | U | |
| SW6020B | Thorium (Dissolved) | ug/l | 0.700 | U | | 0.700 | U | |
| SW6020B | Thorium | ug/l | 0.700 | U | | 0.700 | U | |
| SW6020B | Uranium-235 | ug/l | 0.0284 | J | | 0.0268 | J | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | 0.0259 | J | | 0.0276 | J | |
| SW6020B | Uranium-238 | ug/l | 12.5 | | | 12.1 | | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | 11.5 | | | 13.3 | | |
| SW6020B | Vanadium | ug/l | 3.30 | U | | 3.30 | U | |
| SW6020B | Vanadium (Dissolved) | ug/l | 3.30 | U | | 3.30 | U | |
| SW6020B | Zinc (Dissolved) | ug/l | 3.58 | J | Diss>Total | 3.30 | U | |
| SW6020B | Zinc | ug/l | 3.30 | UJ | Diss>Total | 3.30 | U | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | 0.703 | J | | 0.660 | J | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | 9.78 | | | 9.81 | | |

# Attachment B
# VALIDATION QUALIFIER DEFINITIONS
# SDG 617335

## Validation Qualifier Definitions

Final validated results are annotated with the following codes:

**U** The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

**J** The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

**J+** The result is an estimated quantity, but the result may be biased high.

**J-** The result is an estimated quantity, but the result may be biased low.

**NJ** The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.

**UJ** The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

**R** The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

July 11, 2023

Ms. Jessie McCusker
de maximis, Inc.
200 Day Hill Road, Suite 200
Windsor, CT 06095

Re: SDG No. 618389
GEL Laboratories
NMI Groundwater
Data Validation

12/Water

| | |
|---|---|
| MW-B3D13-04062023 | MW-BS10-04062023 |
| MW-BS03-04062023 | MW-BS03-04062023 DUP |
| MW-B2D13-04062023 | MW-BS54-04072023 |
| MW-BS13-04072023 | MW-S60-04072023 |
| MW-8A-04072023 | MW-SD60-04072023 |
| MW-B1D13-04072023 | MW-B1D13-04072023 DUP |

2/Equipment Blank

| | |
|---|---|
| EQ-BLANK-04062023 | EQ-BLANK-04072023 |

Dear Ms. McCusker:

A Tier I Plus data validation was performed on twelve water samples and two equipment blanks from the Nuclear Metals Superfund site. The data validation was performed using the Region 1 - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures dated June 2018, to the extent possible, Massachusetts Compendium of Analytical Methods (CAM) protocols, the site-specific QAPP, and ddms' Standard Operating Procedures (SOPs). Professional judgment was applied as necessary and appropriate.

Analyses were performed in accordance with the following methods:

| **Parameter** | **Method** |
|---|---|
| Total and Dissolved Metals | SW846 6020A |
| Dissolved Inorganic Carbon | SW846 9060A |
| Dissolved Organic Carbon | SW846 9060A |

The data were evaluated based on the parameters summarized in the table below, where applicable:

| | | |
|---|---|---|
| | • | Overall Evaluation of Data and Potential Usability Issues |
| * | • | Data Completeness |
| * | • | Preservation and Technical Holding Times |
| | • | Interference Check Sample |
| | • | Initial and Continuing Calibrations |
| * | • | Blanks |
| * | • | Internal Standards |
| * | • | Laboratory Control Sample/ Laboratory Control Sample Duplicates |
| | • | Matrix Spike/Matrix Spike Duplicate |
| * | • | Field and Laboratory Duplicates |
| | • | Serial Dilutions |
| * | • | Target Analyte Identification |
| | • | Analyte Quantitation and Reported Quantitation Limits |
| | • | Dissolved v. Total |
| * | • | System Performance |

*All criteria were met for this quality element

The Data Validation Report includes the following attachments:

Attachment A: Data Summary Table – summarized validated results
Attachment B: Validation Qualifier Definitions

## Overall Evaluation of Data

Based on the review effort, qualifiers were applied to the reported results as follows:

- The results for dissolved uranium-235 in MW-SD60-04072023, total uranium-235 and total uranium-238 in MW-B3D13-04062023, and total and dissolved uranium-235 and uranium-238 in MW-B1D13-04072023, and MW-B1D13-04072023 DUP were qualified as estimated (J, UJ) due to elevated percent relative standard deviations (%RSDs) in the continuing calibration (CCV) replicates.

- The results for total and dissolved cobalt in MW-BS03-04062023, MW-BS03-04062023 DUP, and MW-BS54-04072023 were qualified as estimated (J+) with high bias because concentrations of these analytes in the interference check sample solution A (ICSA) were more than twice the method detection limit (MDL).

- The results for total copper in MW-B3D13-04062023, MW-BS03-04062023, MW-BS03-04062023 DUP, and MW-BS54-04072023 were qualified as estimated (J+) with high bias because concentrations of these analytes in the ICSA were more than twice the MDL.

- The results for dissolved nickel in MW-B2D13-04062023, for total nickel in MW-BS03-04062023 DUP, MW-B3D13-04062023, and MW-BS54-04072023, and for total and dissolved nickel in MW-BS13-04072023, MW-8A-04072023, MW-SD60-04072023, MW-B1D13-04072023, and MW-B1D13-04072023 DUP were qualified

as estimated (J+) with high bias because concentrations of these analytes in the ICSA were more than twice the MDL.

- The results for total molybdenum and total uranium-238 in MW-B3D13-04062023, MW-BS10-04062023, MW-BS03-04062023, MW-BS03-04062023 DUP, and MW-B2D13-04062023 and for total sodium in all field samples were qualified as estimated (J) due to elevated percent difference between the original and serial dilution results.

- The results for total and dissolved cobalt in MW-BS03-04062023 DUP and MW-S60-04072023, for total and dissolved potassium in MW-BS03-04062023 DUP, for total and dissolved nickel in MW-BS03-04062023, MW-BS03-04062023 DUP, and MW-S60-04072023, and for total and dissolved manganese in MW-S60-04072023 and MW-8A-04072023 were qualified as estimated (J) because the dissolved concentration exceeded the total concentration by more than ten percent.

The remaining results were determined to be usable as reported by the laboratory.

The following sections of this report detail the reasons qualifiers were applied to the sample results. Each parameter section discusses the quality control (QC) excursions that impacted sample results. Where a quality indicator was deemed acceptable after thorough review, no further discussion is included in this report. Detailed findings are included for each quality element that impacted the usability of the reported results. Additional information or explanation is included as needed, to provide support for decisions made, based on the validator's best professional judgment.

Where a result was qualified J+ and J, or J- and J, the J qualifier takes precedence. Where a result was qualified biased high and low for differing data quality excursions, the final qualifier is J, with indeterminate bias.

## Metals (SW846 6020B)

### Initial and Continuing Calibrations

Three initial calibrations (ICs) were performed on ICPMS15 on April 30, 2023. All initial and continuing calibration verification standards were within acceptance criteria (90-110%R; <5%RSD), with the following exceptions:

| Analyte | %R | %RSD | Associated samples |
|---|---|---|---|
| CCV03 5/6/23 13:53:33 | | | |
| Uranium-235 | a | 6.5 | MW-SD60-04072023<br>MW-B1D13-04072023<br>MW-B1D13-04072023 DUP<br>MW-B3D13-04062023 |
| Uranium-238 | a | 5.3 | MW-B1D13-04072023<br>MW-B1D13-04072023 DUP<br>MW-B3D13-04062023 |

a-acceptable

The results for dissolved uranium-235 in MW-SD60-04072023, total uranium-235 and total uranium-238 in MW-B3D13-04062023, and total and dissolved uranium-235 and uranium-238 in MW-B1D13-04072023 and MW-B1D13-04072023 DUP were qualified as estimated (J, UJ) due to elevated %RSDs in the CCV replicates.

A Contract Required Detection Limit (CRDL) standard was analyzed with each analytical sequence and reported at or below the reporting limit for all reported analytes. All recoveries were within the 20% limit, with the exception of calcium (126.4%R and 139.6%R) in both of the analytical sequences. The calcium concentrations in all associated samples were above actionable levels, and qualifications were not warranted.

Interference Check Sample

An ICSA/ICSAB pair was analyzed in each analytical sequence. All spiked analytes recovered within acceptance limits (80-120%R), and all non-spiked analytes were less than twice the method detection limit, with the following exceptions:

| Analyte | ICSA Conc. (ug/L) | MDL (ug/L) | RL (ug/L) | Affected Samples |
|---|---|---|---|---|
| ICSA01 5/6/23 @ 15:29:40 | | | | |
| Cobalt | 0.928 | 0.3 | 1.0 | MW-BS03-04062023<br>MW-BS03-04062023 DUP<br>MW-BS54-04072023 |
| Copper | 0.841 | 0.3 | 2.0 | MW-B3D13-04062023<br>MW-BS03-04062023<br>MW-BS03-04062023 DUP<br>MW-BS54-04072023 |
| Nickel | 1.73 | 0.6 | 2.0 | MW-B3D13-04062023<br>MW-BS03-04062023 DUP<br>MW-B2D13-04062023<br>MW-BS54-04072023<br>MW-BS13-04072023<br>MW-8A-04072023<br>MW-SD60-04072023<br>MW-B1D13-04072023<br>MW-B1D13-04072023 DUP |

The results for total and dissolved cobalt in MW-BS03-04062023, MW-BS03-04062023 DUP, and MW-BS54-04072023, for total copper in MW-B3D13-04062023, MW-BS03-04062023, MW-BS03-04062023 DUP, and MW-BS54-04072023, for dissolved nickel in MW-B2D13-04062023, for total nickel in MW-BS03-04062023 DUP, MW-B3D13-04062023, and MW-BS54-04072023, and for total and dissolved nickel in MW-BS13-04072023, MW-8A-04072023, MW-SD60-04072023, MW-B1D13-04072023, and MW-B1D13-04072023 DUP were qualified as estimated (J+) with high bias because concentrations of these analytes in the ICSA were more than twice the MDL.

Where associated sample results were not detected or the analyte concentration was more than twice the ICSA concentration, the high bias demonstrated in the ICSA had no bearing.

Matrix Spike (MS)/Matrix Spike Duplicate (MSD)

Two MS/MSDs were performed on samples MW-B3D13-04062023 and MW-SD60-04072023. Recoveries and precision between them were within acceptance criteria (80-120%R; RPD<20), with the exceptions notes below:

| Parent Sample | Analyte | MS %R | MSD %R | RPD |
|---|---|---|---|---|
| BEW-3-04052023 | Calcium, Total | 291 | 169 | a |
| | Magnesium, Total | 173 | 152 | a |
| | Sodium, Total | 170 | 155 | a |

The original sample concentrations for all analytes reported in the above table were more than 4x the spike concentrations, and there were no expectations of acceptable recoveries. Therefore, qualifications were not warranted.

Serial Dilution

Serial dilution analyses were performed on MW-B3D13-04062023 and MW-SD60-04072023 in support of sample analyses. Where the parent sample concentration exceeded 50 times the MDL, the percent difference was less than the maximum acceptance limit of 10%, with the following exceptions:

| Parent Sample | Analyte | Original | Dilution | %D |
|---|---|---|---|---|
| MW-B3D13-04062023 | Molybdenum, Total | 52.5 | 46.2 | 12.1 |
| | Sodium, Total | 37900 | 32900 | 13.2 |
| | Uranium-238, Total | 3.48 | 3.87 | 11.2 |
| MW-SD60-04072023 | Sodium, Total | 32700 | 27800 | 15.0 |

The results for total molybdenum and total uranium-238 in MW-B3D13-04062023, MW-BS10-04062023, MW-BS03-04062023, MW-BS03-04062023 DUP, and MW-B2D13-04062023 and for total sodium in all field samples were qualified as estimated (J) due to elevated percent difference between the original and serial dilution results.

Quantitation

Most samples were analyzed at 10x dilutions for calcium, magnesium, sodium or potassium to obtain analyte concentrations within the linear range of the instrument. MW-S60-04072023, MW-8A-04072023, and MW-SD60-04072023 were analyzed at 5x dilutions for total and dissolved uranium-238 to obtain analyte concentrations within the linear range of the instrument. Method detection limits (MDLs) and practical quantitation limits (PQLs) were appropriately adjusted for the dilution factor.

Since the total uranium results are a calculation based upon the summation of uranium-235 and uranium-238 concentrations, any qualifications applied to uranium-235 or uranium-238 were additionally applied to total uranium.

The instrument detection limit summary provides MDLs "effective" on 10/8/21 and verified on 5/3/23 (ICPMS15).

Linear ranges, according to the summary provided in the data package, were determined on 8/1/17 (ICPMS15). There is no indication in the data package that the linear ranges have been reproduced or verified, for uranium-235 and uranium-238, between the date established and the date of field sample analyses, five years later. However, all analyte concentrations in the samples were within the established instrument calibration range for each analyte; therefore, there is no adverse impact on the sample results.

Total vs. Dissolved

The total concentration exceeded the dissolved concentration for detected analytes, with exceptions noted below:

| Sample | Analyte | Total Conc (ug/L) | Dissolved Conc (ug/L) | %D |
|---|---|---|---|---|
| MW-B3D13-04062023 | Barium | 94.8 | 97.2 | <10 |
| | Calcium | 60900 | 64800 | <10 |
| | Magnesium | 21200 | 23100 | <10 |
| | Molybdenum | 52.5 | 52.8 | <10 |
| | Potassium | 4300 | 4460 | <10 |
| | Sodium | 37900 | 39100 | <10 |
| | Total Uranium | 3.51 | 3.71 | <10 |
| | Uranium-238 | 3.48 | 3.68 | <10 |
| MW-BS03-04062023 | Cobalt | 1.82 | 1.93 | <10 |
| | Nickel | 3.76 | 4.37 | **16.2** |
| | Potassium | 6410 | 6540 | <10 |
| MW-BS03-04062023 DUP | Cobalt | 1.63 | 1.88 | **15.3** |
| | Nickel | 3.30 | 4.18 | **26.7** |
| | Potassium | 6050 | 6700 | **10.7** |
| MW-B2D13-04062023 | Arsenic | 5.60 | 5.74 | <10 |
| | Potassium | 8020 | 8100 | <10 |
| | Sodium | 49700 | 50000 | <10 |
| | Total Uranium | 15.7 | 16.5 | <10 |
| | Uranium-235 | 0.117 | 0.118 | <10 |
| | Uranium-238 | 15.5 | 16.3 | <10 |
| | Vanadium | 3.52 | 3.87 | <10 |
| MW-BS54-04072023 | Magnesium | 16500 | 17500 | <10 |
| | Sodium | 29000 | 29300 | <10 |
| MW-S60-04072023 | Calcium | 23600 | 24100 | <10 |
| | Cobalt | 6.23 | 7.26 | **16.5** |
| | Magnesium | 5630 | 5740 | <10 |

| Sample | Analyte | Total Conc (ug/L) | Dissolved Conc (ug/L) | %D |
|---|---|---|---|---|
| | Manganese | 71.7 | 84.9 | **18.4** |
| | Nickel | 10.3 | 11.8 | **14.6** |
| MW-8A-04072023 | Arsenic | 2.72 J | 3.05 J | 12.1 |
| | Calcium | 220000 | 224000 | <10 |
| | Cobalt | 3.02 | 3.16 | <10 |
| | Magnesium | 4960 | 5110 | <10 |
| | Manganese | 585 | 699 | **19.4** |
| | Molybdenum | 60.0 | 64.3 | <10 |
| | Potassium | 3260 | 3400 | <10 |
| | Sodium | 26800 | 28500 | <10 |
| MW-SD60-04072023 | Calcium | 23300 | 23500 | <10 |
| | Molybdenum | 2.40 | 2.51 | <10 |
| MW-B1D13-04072023 | Arsenic | 3.02 | 3.28 | <10 |
| | Calcium | 83200 | 84900 | <10 |
| | Magnesium | 30300 | 30700 | <10 |
| | Manganese | 84.8 | 85.7 | <10 |
| | Vanadium | 4.01 | 4.06 | <10 |
| MW-B1D13-04072023 DUP | Arsenic | 3.11 | 3.21 | <10 |
| | Magnesium | 30600 | 30800 | <10 |
| | Manganese | 84.9 | 84.6 | <10 |
| | Molybdenum | 9.76 | 10.0 | <10 |
| | Nickel | 0.827 J | 0.936 J | 13.2 |
| | Potassium | 6220 | 6240 | <10 |
| | Total Uranium | 66.4 | 66.8 | <10 |
| | Uranium-235 | 0.480 | 0.481 | <10 |
| | Uranium-238 | 65.9 | 66.3 | <10 |

The results for total and dissolved cobalt in MW-BS03-04062023 DUP and MW-S60-04072023, for total and dissolved potassium in MW-BS03-04062023 DUP, for total and dissolved nickel in MW-BS03-04062023, MW-BS03-04062023 DUP, and MW-S60-04072023, and for total and dissolved manganese in MW-S60-04072023 and MW-8A-04072023 were qualified as estimated (J) because the dissolved concentration exceeded the total concentration by more than ten percent.

When the %D is 10% or less, experimental error is assumed, and no qualification of sample results is made. Where the percent difference is greater than 10% and total and dissolved concentrations were less than the PQL (and flagged with a J on this basis by the laboratory), no qualification of sample results is made. No additional action was necessary for the results detailed above.

**Dissolved Inorganic Carbon and Dissolved Organic Carbon (SW846 9060A)**

All results were acceptable and did not warrant qualification based upon the level of review performed.

**Documentation**

The following documentation issues were observed during the validation effort:

- Results for the MS and MSD in the metals analyses are also presented as "Duplicate Sample" results for assessment of precision. It should be noted that the comparison is made with results for the MS and MSD, not unspiked sample results.

Please feel free to contact me (mdalmeida@ddmsinc.com or 862-668-3355) with any questions you may have regarding this information.

Sincerely,

Melissa M. D'Almeida
Environmental Chemist

Attachments

**Attachment A**
**DATA SUMMARY TABLE**
**SDG 618389**

Data Summary Form for Groundwater Samples
Job No. 618389
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/7/2023

| | | Field Sample ID | EQ-BLANK-04062023 | | | EQ-BLANK-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618389011 | | | 618389020 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| CALC | Uranium | ug/l | 0.0670 | U | | 0.0670 | U | |
| SW6020B | Aluminum | ug/l | 19.3 | U | | 19.3 | U | |
| SW6020B | Aluminum (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Antimony (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Antimony | ug/l | 1.00 | U | | 1.00 | U | |
| SW6020B | Arsenic | ug/l | 2.00 | U | | 2.00 | U | |
| SW6020B | Arsenic (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Barium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Barium | ug/l | 0.670 | U | | 0.670 | U | |
| SW6020B | Beryllium | ug/l | 0.200 | U | | 0.200 | U | |
| SW6020B | Beryllium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Cadmium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Cadmium | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Calcium | ug/l | 80.0 | U | | 80.0 | U | |
| SW6020B | Calcium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Chromium | ug/l | 3.00 | U | | 3.00 | U | |
| SW6020B | Chromium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Cobalt (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Cobalt | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Copper | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Copper (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Iron (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Iron | ug/l | 33.0 | U | | 33.0 | U | |
| SW6020B | Lead | ug/l | 0.500 | U | | 0.500 | U | |
| SW6020B | Lead (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Magnesium | ug/l | 10.0 | U | | 10.0 | U | |
| SW6020B | Magnesium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Manganese | ug/l | 1.00 | U | | 1.00 | U | |
| SW6020B | Manganese (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Molybdenum | ug/l | 0.200 | U | | 0.200 | U | |
| SW6020B | Molybdenum (Dissolved) | ug/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618389
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/7/2023

| | | Field Sample ID | EQ-BLANK-04062023 | | | EQ-BLANK-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618389011 | | | 618389020 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Nickel | ug/l | 0.600 | U | | 0.600 | U | |
| SW6020B | Nickel (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Potassium | ug/l | 80.0 | U | | 80.0 | U | |
| SW6020B | Potassium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Selenium | ug/l | 1.50 | U | | 1.50 | U | |
| SW6020B | Selenium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Silver | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Silver (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Sodium | ug/l | 80.0 | U | | 80.0 | U | |
| SW6020B | Sodium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Thallium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Thallium | ug/l | 0.600 | U | | 0.600 | U | |
| SW6020B | Thorium | ug/l | 0.700 | U | | 0.700 | U | |
| SW6020B | Thorium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Uranium-235 | ug/l | 0.0100 | U | | 0.0100 | U | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Uranium-238 | ug/l | 0.0670 | U | | 0.0670 | U | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Vanadium | ug/l | 3.30 | U | | 3.30 | U | |
| SW6020B | Vanadium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Zinc | ug/l | 3.30 | U | | 3.30 | U | |
| SW6020B | Zinc (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618389
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/7/2023

| | | Field Sample ID | MW-8A-04072023 | | | MW-8A-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618389018 | | | 618389018 | | |
| | | Dilution Factor | 1 | | | 5 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium (Dissolved) | ug/l | 136 | | | -- | -- | |
| CALC | Uranium | ug/l | 205 | | | -- | -- | |
| SW6020B | Aluminum | ug/l | 79.8 | | | -- | -- | |
| SW6020B | Aluminum (Dissolved) | ug/l | 19.3 | U | | -- | -- | |
| SW6020B | Antimony (Dissolved) | ug/l | 1.00 | U | | -- | -- | |
| SW6020B | Antimony | ug/l | 1.00 | U | | -- | -- | |
| SW6020B | Arsenic | ug/l | 2.72 | J | | -- | -- | |
| SW6020B | Arsenic (Dissolved) | ug/l | 3.05 | J | | -- | -- | |
| SW6020B | Barium (Dissolved) | ug/l | 10 | | | -- | -- | |
| SW6020B | Barium | ug/l | 10.3 | | | -- | -- | |
| SW6020B | Beryllium | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Beryllium (Dissolved) | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Cadmium (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Cadmium | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Calcium | ug/l | 22000 | | | -- | -- | |
| SW6020B | Calcium (Dissolved) | ug/l | 22400 | | | -- | -- | |
| SW6020B | Chromium | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Chromium (Dissolved) | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Cobalt (Dissolved) | ug/l | 3.16 | | | -- | -- | |
| SW6020B | Cobalt | ug/l | 3.02 | | | -- | -- | |
| SW6020B | Copper | ug/l | 7.14 | | | -- | -- | |
| SW6020B | Copper (Dissolved) | ug/l | 2.52 | | | -- | -- | |
| SW6020B | Iron (Dissolved) | ug/l | 157 | | | -- | -- | |
| SW6020B | Iron | ug/l | 211 | | | -- | -- | |
| SW6020B | Lead | ug/l | 1.56 | J | | -- | -- | |
| SW6020B | Lead (Dissolved) | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Magnesium | ug/l | 4960 | | | -- | -- | |
| SW6020B | Magnesium (Dissolved) | ug/l | 5110 | | | -- | -- | |
| SW6020B | Manganese | ug/l | 585 | J | Diss>Total | -- | -- | |
| SW6020B | Manganese (Dissolved) | ug/l | 699 | J | Diss>Total | -- | -- | |
| SW6020B | Molybdenum | ug/l | 60 | | | -- | -- | |
| SW6020B | Molybdenum (Dissolved) | ug/l | 64.3 | | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618389
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/7/2023

| | | Field Sample ID | MW-8A-04072023 | | | MW-8A-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618389018 | | | 618389018 | | |
| | | Dilution Factor | 1 | | | 5 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Nickel | ug/l | 1.25 | J+ | ICSA high | -- | -- | |
| SW6020B | Nickel (Dissolved) | ug/l | 1.22 | J+ | ICSA high | -- | -- | |
| SW6020B | Potassium | ug/l | 3260 | | | -- | -- | |
| SW6020B | Potassium (Dissolved) | ug/l | 3400 | | | -- | -- | |
| SW6020B | Selenium | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Selenium (Dissolved) | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Silver | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Silver (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Sodium | ug/l | 26800 | J | SD %D high | -- | -- | |
| SW6020B | Sodium (Dissolved) | ug/l | 28500 | | | -- | -- | |
| SW6020B | Thallium (Dissolved) | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thallium | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thorium | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Thorium (Dissolved) | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Uranium-235 | ug/l | 0.388 | | | -- | -- | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | 0.279 | | | -- | -- | |
| SW6020B | Uranium-238 | ug/l | -- | -- | | 205 | | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | -- | -- | | 136 | | |
| SW6020B | Vanadium | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Vanadium (Dissolved) | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Zinc | ug/l | 5.34 | J | | -- | -- | |
| SW6020B | Zinc (Dissolved) | ug/l | 3.8 | J | | -- | -- | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | 0.648 | J | | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | 4.32 | | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618389
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/7/2023

| | | Field Sample ID | MW-B1D13-04072023 | | | MW-B1D13-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618389023 | | | 618389023 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium (Dissolved) | ug/l | 68 | J | CCV %RSD high | -- | -- | |
| CALC | Uranium | ug/l | 68.2 | J | CCV %RSD high | -- | -- | |
| SW6020B | Aluminum | ug/l | 19.3 | U | | -- | -- | |
| SW6020B | Aluminum (Dissolved) | ug/l | 19.3 | U | | -- | -- | |
| SW6020B | Antimony (Dissolved) | ug/l | 1.00 | U | | -- | -- | |
| SW6020B | Antimony | ug/l | 1.00 | U | | -- | -- | |
| SW6020B | Arsenic | ug/l | 3.02 | J | | -- | -- | |
| SW6020B | Arsenic (Dissolved) | ug/l | 3.28 | J | | -- | -- | |
| SW6020B | Barium (Dissolved) | ug/l | 34.2 | | | -- | -- | |
| SW6020B | Barium | ug/l | 35.8 | | | -- | -- | |
| SW6020B | Beryllium | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Beryllium (Dissolved) | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Cadmium (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Cadmium | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Calcium | ug/l | -- | -- | | 83200 | | |
| SW6020B | Calcium (Dissolved) | ug/l | -- | -- | | 84900 | | |
| SW6020B | Chromium | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Chromium (Dissolved) | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Cobalt (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Cobalt | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Copper | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Copper (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Iron (Dissolved) | ug/l | 208 | | | -- | -- | |
| SW6020B | Iron | ug/l | 213 | | | -- | -- | |
| SW6020B | Lead | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Lead (Dissolved) | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Magnesium | ug/l | -- | -- | | 30300 | | |
| SW6020B | Magnesium (Dissolved) | ug/l | -- | -- | | 30700 | | |
| SW6020B | Manganese | ug/l | 84.8 | | | -- | -- | |
| SW6020B | Manganese (Dissolved) | ug/l | 85.7 | | | -- | -- | |
| SW6020B | Molybdenum | ug/l | 10.1 | | | -- | -- | |
| SW6020B | Molybdenum (Dissolved) | ug/l | 10.1 | | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618389
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/7/2023

| | | Field Sample ID | MW-B1D13-04072023 | | | MW-B1D13-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618389023 | | | 618389023 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Nickel | ug/l | 0.808 | J+ | ICSA high | -- | -- | |
| SW6020B | Nickel (Dissolved) | ug/l | 0.773 | J+ | ICSA high | -- | -- | |
| SW6020B | Potassium | ug/l | 6300 | | | -- | -- | |
| SW6020B | Potassium (Dissolved) | ug/l | 6210 | | | -- | -- | |
| SW6020B | Selenium | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Selenium (Dissolved) | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Silver | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Silver (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Sodium | ug/l | 37700 | J | SD %D high | -- | -- | |
| SW6020B | Sodium (Dissolved) | ug/l | 37200 | | | -- | -- | |
| SW6020B | Thallium (Dissolved) | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thallium | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thorium | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Thorium (Dissolved) | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Uranium-235 | ug/l | 0.5 | J | CCV %RSD high | -- | -- | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | 0.489 | J | CCV %RSD high | -- | -- | |
| SW6020B | Uranium-238 | ug/l | 67.7 | J | CCV %RSD high | -- | -- | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | 67.5 | J | CCV %RSD high | -- | -- | |
| SW6020B | Vanadium | ug/l | 4.01 | J | | -- | -- | |
| SW6020B | Vanadium (Dissolved) | ug/l | 4.06 | J | | -- | -- | |
| SW6020B | Zinc | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Zinc (Dissolved) | ug/l | 3.30 | U | | -- | -- | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618389
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/7/2023

| | | Field Sample ID | MW-B1D13-04072023 DUP | | | MW-B1D13-04072023 DUP | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618389025 | | | 618389025 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium (Dissolved) | ug/l | 66.8 | J | CCV %RSD high | -- | -- | |
| CALC | Uranium | ug/l | 66.4 | J | CCV %RSD high | -- | -- | |
| SW6020B | Aluminum | ug/l | 19.3 | U | | -- | -- | |
| SW6020B | Aluminum (Dissolved) | ug/l | 19.3 | U | | -- | -- | |
| SW6020B | Antimony (Dissolved) | ug/l | 1.00 | U | | -- | -- | |
| SW6020B | Antimony | ug/l | 1.00 | U | | -- | -- | |
| SW6020B | Arsenic | ug/l | 3.11 | J | | -- | -- | |
| SW6020B | Arsenic (Dissolved) | ug/l | 3.21 | J | | -- | -- | |
| SW6020B | Barium (Dissolved) | ug/l | 33.6 | | | -- | -- | |
| SW6020B | Barium | ug/l | 34.6 | | | -- | -- | |
| SW6020B | Beryllium | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Beryllium (Dissolved) | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Cadmium (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Cadmium | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Calcium | ug/l | -- | -- | | 82900 | | |
| SW6020B | Calcium (Dissolved) | ug/l | -- | -- | | 81800 | | |
| SW6020B | Chromium | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Chromium (Dissolved) | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Cobalt (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Cobalt | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Copper | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Copper (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Iron (Dissolved) | ug/l | 208 | | | -- | -- | |
| SW6020B | Iron | ug/l | 216 | | | -- | -- | |
| SW6020B | Lead | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Lead (Dissolved) | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Magnesium | ug/l | -- | -- | | 30600 | | |
| SW6020B | Magnesium (Dissolved) | ug/l | -- | -- | | 30800 | | |
| SW6020B | Manganese | ug/l | 84.9 | | | -- | -- | |
| SW6020B | Manganese (Dissolved) | ug/l | 84.6 | | | -- | -- | |
| SW6020B | Molybdenum | ug/l | 9.76 | | | -- | -- | |
| SW6020B | Molybdenum (Dissolved) | ug/l | 10 | | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618389
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/7/2023

| | | Field Sample ID | MW-B1D13-04072023 DUP | | | MW-B1D13-04072023 DUP | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618389025 | | | 618389025 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Nickel | ug/l | 0.827 | J+ | ICSA high | -- | -- | |
| SW6020B | Nickel (Dissolved) | ug/l | 0.936 | J+ | ICSA high | -- | -- | |
| SW6020B | Potassium | ug/l | 6220 | | | -- | -- | |
| SW6020B | Potassium (Dissolved) | ug/l | 6240 | | | -- | -- | |
| SW6020B | Selenium | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Selenium (Dissolved) | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Silver | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Silver (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Sodium | ug/l | 37300 | J | SD %D high | -- | -- | |
| SW6020B | Sodium (Dissolved) | ug/l | 37200 | | | -- | -- | |
| SW6020B | Thallium (Dissolved) | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thallium | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thorium | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Thorium (Dissolved) | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Uranium-235 | ug/l | 0.48 | J | CCV %RSD high | -- | -- | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | 0.481 | J | CCV %RSD high | -- | -- | |
| SW6020B | Uranium-238 | ug/l | 65.9 | J | CCV %RSD high | -- | -- | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | 66.3 | J | CCV %RSD high | -- | -- | |
| SW6020B | Vanadium | ug/l | 4.25 | J | | -- | -- | |
| SW6020B | Vanadium (Dissolved) | ug/l | 4.25 | J | | -- | -- | |
| SW6020B | Zinc | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Zinc (Dissolved) | ug/l | 3.30 | U | | -- | -- | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618389
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/7/2023

| | | Field Sample ID | MW-B2D13-04062023 | | | MW-B2D13-04062023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618389009 | | | 618389010 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium (Dissolved) | ug/l | 16.5 | | | -- | -- | |
| CALC | Uranium | ug/l | 15.7 | J | SD %D high | -- | -- | |
| SW6020B | Aluminum | ug/l | 25.5 | J | | -- | -- | |
| SW6020B | Aluminum (Dissolved) | ug/l | 19.3 | U | | -- | -- | |
| SW6020B | Antimony (Dissolved) | ug/l | 1.00 | U | | -- | -- | |
| SW6020B | Antimony | ug/l | 1.00 | U | | -- | -- | |
| SW6020B | Arsenic | ug/l | 5.6 | | | -- | -- | |
| SW6020B | Arsenic (Dissolved) | ug/l | 5.74 | | | -- | -- | |
| SW6020B | Barium (Dissolved) | ug/l | 51.2 | | | -- | -- | |
| SW6020B | Barium | ug/l | 51.9 | | | -- | -- | |
| SW6020B | Beryllium | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Beryllium (Dissolved) | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Cadmium (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Cadmium | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Calcium | ug/l | -- | -- | | 75400 | | |
| SW6020B | Calcium (Dissolved) | ug/l | -- | -- | | 73400 | | |
| SW6020B | Chromium | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Chromium (Dissolved) | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Cobalt (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Cobalt | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Copper | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Copper (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Iron (Dissolved) | ug/l | 472 | | | -- | -- | |
| SW6020B | Iron | ug/l | 559 | | | -- | -- | |
| SW6020B | Lead | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Lead (Dissolved) | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Magnesium | ug/l | -- | -- | | 27000 | | |
| SW6020B | Magnesium (Dissolved) | ug/l | -- | -- | | 26400 | | |
| SW6020B | Manganese | ug/l | 113 | | | -- | -- | |
| SW6020B | Manganese (Dissolved) | ug/l | 112 | | | -- | -- | |
| SW6020B | Molybdenum | ug/l | 21 | J | SD %D high | -- | -- | |
| SW6020B | Molybdenum (Dissolved) | ug/l | 20.8 | | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618389
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/7/2023

| | | Field Sample ID | MW-B2D13-04062023 | | | MW-B2D13-04062023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618389009 | | | 618389010 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Nickel | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Nickel (Dissolved) | ug/l | 0.647 | J+ | ICSA high | -- | -- | |
| SW6020B | Potassium | ug/l | 8020 | | | -- | -- | |
| SW6020B | Potassium (Dissolved) | ug/l | 8100 | | | -- | -- | |
| SW6020B | Selenium | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Selenium (Dissolved) | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Silver | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Silver (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Sodium | ug/l | 49700 | J | SD %D high | -- | -- | |
| SW6020B | Sodium (Dissolved) | ug/l | -- | -- | | 50000 | | |
| SW6020B | Thallium (Dissolved) | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thallium | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thorium | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Thorium (Dissolved) | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Uranium-235 | ug/l | 0.117 | | | -- | -- | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | 0.118 | | | -- | -- | |
| SW6020B | Uranium-238 | ug/l | 15.5 | J | SD %D high | -- | -- | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | 16.3 | | | -- | -- | |
| SW6020B | Vanadium | ug/l | 3.52 | J | | -- | -- | |
| SW6020B | Vanadium (Dissolved) | ug/l | 3.87 | J | | -- | -- | |
| SW6020B | Zinc | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Zinc (Dissolved) | ug/l | 3.30 | U | | -- | -- | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618389
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/7/2023

| | | Field Sample ID | MW-B3D13-04062023 | | | MW-B3D13-04062023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618389001 | | | 618389002 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium (Dissolved) | ug/l | 3.71 | | | -- | -- | |
| CALC | Uranium | ug/l | 3.51 | J | CCV %RSD high; SD %D high | -- | -- | |
| SW6020B | Aluminum | ug/l | 113 | | | -- | -- | |
| SW6020B | Aluminum (Dissolved) | ug/l | 19.3 | U | | -- | -- | |
| SW6020B | Antimony (Dissolved) | ug/l | 1.00 | U | | -- | -- | |
| SW6020B | Antimony | ug/l | 3.41 | | | -- | -- | |
| SW6020B | Arsenic | ug/l | 128 | | | -- | -- | |
| SW6020B | Arsenic (Dissolved) | ug/l | 127 | | | -- | -- | |
| SW6020B | Barium (Dissolved) | ug/l | 97.2 | | | -- | -- | |
| SW6020B | Barium | ug/l | 94.8 | | | -- | -- | |
| SW6020B | Beryllium | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Beryllium (Dissolved) | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Cadmium (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Cadmium | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Calcium | ug/l | -- | -- | | 60900 | | |
| SW6020B | Calcium (Dissolved) | ug/l | -- | -- | | 64800 | | |
| SW6020B | Chromium | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Chromium (Dissolved) | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Cobalt (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Cobalt | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Copper | ug/l | 0.547 | J+ | ICSA high | -- | -- | |
| SW6020B | Copper (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Iron (Dissolved) | ug/l | 409 | | | -- | -- | |
| SW6020B | Iron | ug/l | 600 | | | -- | -- | |
| SW6020B | Lead | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Lead (Dissolved) | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Magnesium | ug/l | -- | -- | | 21200 | | |
| SW6020B | Magnesium (Dissolved) | ug/l | -- | -- | | 23100 | | |
| SW6020B | Manganese | ug/l | 68.6 | | | -- | -- | |
| SW6020B | Manganese (Dissolved) | ug/l | 68.5 | | | -- | -- | |
| SW6020B | Molybdenum | ug/l | 52.5 | J | SD %D high | -- | -- | |
| SW6020B | Molybdenum (Dissolved) | ug/l | 52.8 | | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618389
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/7/2023

| | | Field Sample ID | MW-B3D13-04062023 | | | MW-B3D13-04062023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618389001 | | | 618389002 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Nickel | ug/l | 0.896 | J+ | ICSA high | -- | -- | |
| SW6020B | Nickel (Dissolved) | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Potassium | ug/l | 4300 | | | -- | -- | |
| SW6020B | Potassium (Dissolved) | ug/l | 4460 | | | -- | -- | |
| SW6020B | Selenium | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Selenium (Dissolved) | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Silver | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Silver (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Sodium | ug/l | 37900 | J | SD %D high | -- | -- | |
| SW6020B | Sodium (Dissolved) | ug/l | 39100 | | | -- | -- | |
| SW6020B | Thallium (Dissolved) | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thallium | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thorium | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Thorium (Dissolved) | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Uranium-235 | ug/l | 0.0252 | J | CCV %RSD high | -- | -- | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | 0.0251 | J | | -- | -- | |
| SW6020B | Uranium-238 | ug/l | 3.48 | J | CCV %RSD high; SD %D high | -- | -- | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | 3.68 | | | -- | -- | |
| SW6020B | Vanadium | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Vanadium (Dissolved) | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Zinc | ug/l | 10.5 | J | | -- | -- | |
| SW6020B | Zinc (Dissolved) | ug/l | 3.30 | U | | -- | -- | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618389
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/7/2023

| | | Field Sample ID | MW-BS03-04062023 | | | MW-BS03-04062023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618389005 | | | 618389005 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium (Dissolved) | ug/l | 40.9 | | | -- | -- | |
| CALC | Uranium | ug/l | 43.9 | J | SD %D high | -- | -- | |
| SW6020B | Aluminum | ug/l | 69.6 | | | -- | -- | |
| SW6020B | Aluminum (Dissolved) | ug/l | 19.3 | U | | -- | -- | |
| SW6020B | Antimony (Dissolved) | ug/l | 1.00 | U | | -- | -- | |
| SW6020B | Antimony | ug/l | 1.02 | J | | -- | -- | |
| SW6020B | Arsenic | ug/l | 97.8 | | | -- | -- | |
| SW6020B | Arsenic (Dissolved) | ug/l | 87.9 | | | -- | -- | |
| SW6020B | Barium (Dissolved) | ug/l | 44.4 | | | -- | -- | |
| SW6020B | Barium | ug/l | 48.9 | | | -- | -- | |
| SW6020B | Beryllium | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Beryllium (Dissolved) | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Cadmium (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Cadmium | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Calcium | ug/l | 42500 | | | -- | -- | |
| SW6020B | Calcium (Dissolved) | ug/l | 39200 | | | -- | -- | |
| SW6020B | Chromium | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Chromium (Dissolved) | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Cobalt (Dissolved) | ug/l | 1.93 | J+ | ICSA high | -- | -- | |
| SW6020B | Cobalt | ug/l | 1.82 | J+ | ICSA high | -- | -- | |
| SW6020B | Copper | ug/l | 0.678 | J+ | ICSA high | -- | -- | |
| SW6020B | Copper (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Iron (Dissolved) | ug/l | 1590 | | | -- | -- | |
| SW6020B | Iron | ug/l | 1860 | | | -- | -- | |
| SW6020B | Lead | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Lead (Dissolved) | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Magnesium | ug/l | -- | -- | | 15600 | | |
| SW6020B | Magnesium (Dissolved) | ug/l | -- | -- | | 13700 | | |
| SW6020B | Manganese | ug/l | 385 | | | -- | -- | |
| SW6020B | Manganese (Dissolved) | ug/l | 347 | | | -- | -- | |
| SW6020B | Molybdenum | ug/l | 7.17 | J | SD %D high | -- | -- | |
| SW6020B | Molybdenum (Dissolved) | ug/l | 6.59 | | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618389
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/7/2023

| | | Field Sample ID | MW-BS03-04062023 | | | MW-BS03-04062023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618389005 | | | 618389005 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Nickel | ug/l | 3.76 | J | Diss>Total | -- | -- | |
| SW6020B | Nickel (Dissolved) | ug/l | 4.37 | J | Diss>Total | -- | -- | |
| SW6020B | Potassium | ug/l | 6410 | | | -- | -- | |
| SW6020B | Potassium (Dissolved) | ug/l | 6540 | | | -- | -- | |
| SW6020B | Selenium | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Selenium (Dissolved) | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Silver | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Silver (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Sodium | ug/l | 33300 | J | SD %D high | -- | -- | |
| SW6020B | Sodium (Dissolved) | ug/l | 29800 | | | -- | -- | |
| SW6020B | Thallium (Dissolved) | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thallium | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thorium | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Thorium (Dissolved) | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Uranium-235 | ug/l | 0.319 | | | -- | -- | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | 0.297 | | | -- | -- | |
| SW6020B | Uranium-238 | ug/l | 43.5 | J | SD %D high | -- | -- | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | 40.6 | | | -- | -- | |
| SW6020B | Vanadium | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Vanadium (Dissolved) | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Zinc | ug/l | 4.47 | J | | -- | -- | |
| SW6020B | Zinc (Dissolved) | ug/l | 3.30 | U | | -- | -- | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618389
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/7/2023

| | | Field Sample ID | MW-BS03-04062023 DUP | | | MW-BS03-04062023 DUP | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618389007 | | | 618389007 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium (Dissolved) | ug/l | 37.7 | | | -- | -- | |
| CALC | Uranium | ug/l | 41.9 | J | SD %D high | -- | -- | |
| SW6020B | Aluminum | ug/l | 47.8 | J | | -- | -- | |
| SW6020B | Aluminum (Dissolved) | ug/l | 19.3 | U | | -- | -- | |
| SW6020B | Antimony (Dissolved) | ug/l | 1.00 | U | | -- | -- | |
| SW6020B | Antimony | ug/l | 1.00 | U | | -- | -- | |
| SW6020B | Arsenic | ug/l | 97.9 | | | -- | -- | |
| SW6020B | Arsenic (Dissolved) | ug/l | 81 | | | -- | -- | |
| SW6020B | Barium (Dissolved) | ug/l | 42.6 | | | -- | -- | |
| SW6020B | Barium | ug/l | 46.6 | | | -- | -- | |
| SW6020B | Beryllium | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Beryllium (Dissolved) | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Cadmium (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Cadmium | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Calcium | ug/l | 42500 | | | -- | -- | |
| SW6020B | Calcium (Dissolved) | ug/l | 36600 | | | -- | -- | |
| SW6020B | Chromium | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Chromium (Dissolved) | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Cobalt (Dissolved) | ug/l | 1.88 | J | ICSA high; Diss>Total | -- | -- | |
| SW6020B | Cobalt | ug/l | 1.63 | J | ICSA high; Diss>Total | -- | -- | |
| SW6020B | Copper | ug/l | 0.628 | J+ | ICSA high | -- | -- | |
| SW6020B | Copper (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Iron (Dissolved) | ug/l | 1550 | | | -- | -- | |
| SW6020B | Iron | ug/l | 1820 | | | -- | -- | |
| SW6020B | Lead | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Lead (Dissolved) | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Magnesium | ug/l | -- | -- | | 15500 | | |
| SW6020B | Magnesium (Dissolved) | ug/l | -- | -- | | 12800 | | |
| SW6020B | Manganese | ug/l | 378 | | | -- | -- | |
| SW6020B | Manganese (Dissolved) | ug/l | 323 | | | -- | -- | |
| SW6020B | Molybdenum | ug/l | 6.8 | J | SD %D high | -- | -- | |
| SW6020B | Molybdenum (Dissolved) | ug/l | 6.38 | | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618389
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/7/2023

| | | Field Sample ID | MW-BS03-04062023 DUP | | | MW-BS03-04062023 DUP | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618389007 | | | 618389007 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Nickel | ug/l | 3.3 | J | ICSA high; Diss>Total | -- | -- | |
| SW6020B | Nickel (Dissolved) | ug/l | 4.18 | J | Diss>Total | -- | -- | |
| SW6020B | Potassium | ug/l | 6050 | J | Diss>total | -- | -- | |
| SW6020B | Potassium (Dissolved) | ug/l | 6700 | J | Diss>total | -- | -- | |
| SW6020B | Selenium | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Selenium (Dissolved) | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Silver | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Silver (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Sodium | ug/l | 32700 | J | SD %D high | -- | -- | |
| SW6020B | Sodium (Dissolved) | ug/l | 28100 | | | -- | -- | |
| SW6020B | Thallium (Dissolved) | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thallium | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thorium | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Thorium (Dissolved) | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Uranium-235 | ug/l | 0.308 | | | -- | -- | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | 0.279 | | | -- | -- | |
| SW6020B | Uranium-238 | ug/l | 41.6 | J | SD %D high | -- | -- | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | 37.4 | | | -- | -- | |
| SW6020B | Vanadium | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Vanadium (Dissolved) | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Zinc | ug/l | 3.75 | J | | -- | -- | |
| SW6020B | Zinc (Dissolved) | ug/l | 3.30 | U | | -- | -- | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618389
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/7/2023

| | | Field Sample ID | MW-BS10-04062023 | | | MW-BS13-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618389003 | | | 618389014 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium (Dissolved) | ug/l | 25.7 | | | 50.3 | | |
| CALC | Uranium | ug/l | 28.2 | J | SD %D high | 52.4 | | |
| SW6020B | Aluminum | ug/l | 19.3 | U | | 19.3 | U | |
| SW6020B | Aluminum (Dissolved) | ug/l | 19.3 | U | | 19.3 | U | |
| SW6020B | Antimony (Dissolved) | ug/l | 1.00 | U | | 1.00 | U | |
| SW6020B | Antimony | ug/l | 1.00 | U | | 1.00 | U | |
| SW6020B | Arsenic | ug/l | 3.31 | J | | 3.44 | J | |
| SW6020B | Arsenic (Dissolved) | ug/l | 3.13 | J | | 3.4 | J | |
| SW6020B | Barium (Dissolved) | ug/l | 6.89 | | | 34.8 | | |
| SW6020B | Barium | ug/l | 7.44 | | | 36.3 | | |
| SW6020B | Beryllium | ug/l | 0.200 | U | | 0.200 | U | |
| SW6020B | Beryllium (Dissolved) | ug/l | 0.200 | U | | 0.200 | U | |
| SW6020B | Cadmium (Dissolved) | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Cadmium | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Calcium | ug/l | 17300 | | | -- | -- | |
| SW6020B | Calcium (Dissolved) | ug/l | 16900 | | | -- | -- | |
| SW6020B | Chromium | ug/l | 3.00 | U | | 3.00 | U | |
| SW6020B | Chromium (Dissolved) | ug/l | 3.00 | U | | 3.00 | U | |
| SW6020B | Cobalt (Dissolved) | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Cobalt | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Copper | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Copper (Dissolved) | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Iron (Dissolved) | ug/l | 167 | | | 109 | | |
| SW6020B | Iron | ug/l | 223 | | | 166 | | |
| SW6020B | Lead | ug/l | 0.500 | U | | 0.500 | U | |
| SW6020B | Lead (Dissolved) | ug/l | 0.500 | U | | 0.500 | U | |
| SW6020B | Magnesium | ug/l | 6200 | | | -- | -- | |
| SW6020B | Magnesium (Dissolved) | ug/l | 6120 | | | -- | -- | |
| SW6020B | Manganese | ug/l | 296 | | | 198 | | |
| SW6020B | Manganese (Dissolved) | ug/l | 288 | | | 182 | | |
| SW6020B | Molybdenum | ug/l | 17.2 | J | SD %D high | 0.918 | J | |
| SW6020B | Molybdenum (Dissolved) | ug/l | 16.6 | | | 0.791 | J | |

Data Summary Form for Groundwater Samples
Job No. 618389
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/7/2023

| | | Field Sample ID | MW-BS10-04062023 | | | MW-BS13-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618389003 | | | 618389014 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Nickel | ug/l | 0.600 | U | | 1.28 | J+ | ICSA high |
| SW6020B | Nickel (Dissolved) | ug/l | 0.600 | U | | 1.21 | J+ | ICSA high |
| SW6020B | Potassium | ug/l | 2700 | | | -- | -- | |
| SW6020B | Potassium (Dissolved) | ug/l | 2670 | | | -- | -- | |
| SW6020B | Selenium | ug/l | 1.50 | U | | 1.50 | U | |
| SW6020B | Selenium (Dissolved) | ug/l | 1.50 | U | | 1.50 | U | |
| SW6020B | Silver | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Silver (Dissolved) | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Sodium | ug/l | 13500 | J | SD %D high | 40400 | J | SD %D high |
| SW6020B | Sodium (Dissolved) | ug/l | 13100 | | | 39900 | | |
| SW6020B | Thallium (Dissolved) | ug/l | 0.600 | U | | 0.600 | U | |
| SW6020B | Thallium | ug/l | 0.600 | U | | 0.600 | U | |
| SW6020B | Thorium | ug/l | 0.700 | U | | 0.700 | U | |
| SW6020B | Thorium (Dissolved) | ug/l | 0.700 | U | | 0.700 | U | |
| SW6020B | Uranium-235 | ug/l | 0.205 | | | 0.382 | | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | 0.188 | | | 0.359 | | |
| SW6020B | Uranium-238 | ug/l | 28 | J | SD %D high | 52 | | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | 25.5 | | | 50 | | |
| SW6020B | Vanadium | ug/l | 3.30 | U | | 4.28 | J | |
| SW6020B | Vanadium (Dissolved) | ug/l | 3.30 | U | | 4.41 | J | |
| SW6020B | Zinc | ug/l | 3.30 | U | | 3.30 | U | |
| SW6020B | Zinc (Dissolved) | ug/l | 3.30 | U | | 3.30 | U | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618389
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/7/2023

| | | Field Sample ID | MW-BS13-04072023 | | | MW-BS54-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618389014 | | | 618389012 | | |
| | | Dilution Factor | 10 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium (Dissolved) | ug/l | -- | -- | | 0.208 | | |
| CALC | Uranium | ug/l | -- | -- | | 0.239 | | |
| SW6020B | Aluminum | ug/l | -- | -- | | 169 | | |
| SW6020B | Aluminum (Dissolved) | ug/l | -- | -- | | 19.3 | U | |
| SW6020B | Antimony (Dissolved) | ug/l | -- | -- | | 1.00 | U | |
| SW6020B | Antimony | ug/l | -- | -- | | 3.2 | | |
| SW6020B | Arsenic | ug/l | -- | -- | | 2.95 | J | |
| SW6020B | Arsenic (Dissolved) | ug/l | -- | -- | | 2.74 | J | |
| SW6020B | Barium (Dissolved) | ug/l | -- | -- | | 43.7 | | |
| SW6020B | Barium | ug/l | -- | -- | | 45.7 | | |
| SW6020B | Beryllium | ug/l | -- | -- | | 0.200 | U | |
| SW6020B | Beryllium (Dissolved) | ug/l | -- | -- | | 0.200 | U | |
| SW6020B | Cadmium (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Cadmium | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Calcium | ug/l | 102000 | | | 46700 | | |
| SW6020B | Calcium (Dissolved) | ug/l | 96300 | | | 46500 | | |
| SW6020B | Chromium | ug/l | -- | -- | | 3.00 | U | |
| SW6020B | Chromium (Dissolved) | ug/l | -- | -- | | 3.00 | U | |
| SW6020B | Cobalt (Dissolved) | ug/l | -- | -- | | 0.396 | J+ | ICSA high |
| SW6020B | Cobalt | ug/l | -- | -- | | 0.944 | J+ | ICSA high |
| SW6020B | Copper | ug/l | -- | -- | | 3.78 | J+ | ICSA high |
| SW6020B | Copper (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Iron (Dissolved) | ug/l | -- | -- | | 452 | | |
| SW6020B | Iron | ug/l | -- | -- | | 935 | | |
| SW6020B | Lead | ug/l | -- | -- | | 0.735 | J | |
| SW6020B | Lead (Dissolved) | ug/l | -- | -- | | 0.500 | U | |
| SW6020B | Magnesium | ug/l | 35800 | | | -- | -- | |
| SW6020B | Magnesium (Dissolved) | ug/l | 34000 | | | -- | -- | |
| SW6020B | Manganese | ug/l | -- | -- | | 104 | | |
| SW6020B | Manganese (Dissolved) | ug/l | -- | -- | | 92.9 | | |
| SW6020B | Molybdenum | ug/l | -- | -- | | 6.82 | | |
| SW6020B | Molybdenum (Dissolved) | ug/l | -- | -- | | 6.81 | | |

Data Summary Form for Groundwater Samples
Job No. 618389
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/7/2023

| | | Field Sample ID | MW-BS13-04072023 | | | MW-BS54-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618389014 | | | 618389012 | | |
| | | Dilution Factor | 10 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Nickel | ug/l | -- | -- | | 1.62 | J+ | ICSA high |
| SW6020B | Nickel (Dissolved) | ug/l | -- | -- | | 0.600 | U | |
| SW6020B | Potassium | ug/l | 12300 | | | 7250 | | |
| SW6020B | Potassium (Dissolved) | ug/l | 12100 | | | 6980 | | |
| SW6020B | Selenium | ug/l | -- | -- | | 1.50 | U | |
| SW6020B | Selenium (Dissolved) | ug/l | -- | -- | | 1.50 | U | |
| SW6020B | Silver | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Silver (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Sodium | ug/l | -- | -- | | 29000 | J | SD %D high |
| SW6020B | Sodium (Dissolved) | ug/l | -- | -- | | 29300 | | |
| SW6020B | Thallium (Dissolved) | ug/l | -- | -- | | 0.600 | U | |
| SW6020B | Thallium | ug/l | -- | -- | | 0.600 | U | |
| SW6020B | Thorium | ug/l | -- | -- | | 0.700 | U | |
| SW6020B | Thorium (Dissolved) | ug/l | -- | -- | | 0.700 | U | |
| SW6020B | Uranium-235 | ug/l | -- | -- | | 0.0100 | U | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | -- | -- | | 0.0100 | U | |
| SW6020B | Uranium-238 | ug/l | -- | -- | | 0.239 | | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | -- | -- | | 0.208 | | |
| SW6020B | Vanadium | ug/l | -- | -- | | 3.31 | J | |
| SW6020B | Vanadium (Dissolved) | ug/l | -- | -- | | 3.30 | U | |
| SW6020B | Zinc | ug/l | -- | -- | | 8.48 | J | |
| SW6020B | Zinc (Dissolved) | ug/l | -- | -- | | 3.30 | U | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618389
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/7/2023

| | | Field Sample ID | MW-BS54-04072023 | | | MW-S60-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618389012 | | | 618389016 | | |
| | | Dilution Factor | 10 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium (Dissolved) | ug/l | -- | -- | | 147 | | |
| CALC | Uranium | ug/l | -- | -- | | 178 | | |
| SW6020B | Aluminum | ug/l | -- | -- | | 19.3 | U | |
| SW6020B | Aluminum (Dissolved) | ug/l | -- | -- | | 19.3 | U | |
| SW6020B | Antimony (Dissolved) | ug/l | -- | -- | | 1.00 | U | |
| SW6020B | Antimony | ug/l | -- | -- | | 1.00 | U | |
| SW6020B | Arsenic | ug/l | -- | -- | | 2.00 | U | |
| SW6020B | Arsenic (Dissolved) | ug/l | -- | -- | | 2.00 | U | |
| SW6020B | Barium (Dissolved) | ug/l | -- | -- | | 7.51 | | |
| SW6020B | Barium | ug/l | -- | -- | | 7.79 | | |
| SW6020B | Beryllium | ug/l | -- | -- | | 0.200 | U | |
| SW6020B | Beryllium (Dissolved) | ug/l | -- | -- | | 0.200 | U | |
| SW6020B | Cadmium (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Cadmium | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Calcium | ug/l | -- | -- | | 23600 | | |
| SW6020B | Calcium (Dissolved) | ug/l | -- | -- | | 24100 | | |
| SW6020B | Chromium | ug/l | -- | -- | | 3.00 | U | |
| SW6020B | Chromium (Dissolved) | ug/l | -- | -- | | 3.00 | U | |
| SW6020B | Cobalt (Dissolved) | ug/l | -- | -- | | 7.26 | J | Diss>Total |
| SW6020B | Cobalt | ug/l | -- | -- | | 6.23 | J | Diss>Total |
| SW6020B | Copper | ug/l | -- | -- | | 23.3 | | |
| SW6020B | Copper (Dissolved) | ug/l | -- | -- | | 15.9 | | |
| SW6020B | Iron (Dissolved) | ug/l | -- | -- | | 1530 | | |
| SW6020B | Iron | ug/l | -- | -- | | 1840 | | |
| SW6020B | Lead | ug/l | -- | -- | | 0.500 | U | |
| SW6020B | Lead (Dissolved) | ug/l | -- | -- | | 0.500 | U | |
| SW6020B | Magnesium | ug/l | 16500 | | | 5630 | | |
| SW6020B | Magnesium (Dissolved) | ug/l | 17500 | | | 5740 | | |
| SW6020B | Manganese | ug/l | -- | -- | | 71.7 | J | Diss>Total |
| SW6020B | Manganese (Dissolved) | ug/l | -- | -- | | 84.9 | J | Diss>Total |
| SW6020B | Molybdenum | ug/l | -- | -- | | 19.4 | | |
| SW6020B | Molybdenum (Dissolved) | ug/l | -- | -- | | 17.9 | | |

Data Summary Form for Groundwater Samples
Job No. 618389
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/7/2023

| | | Field Sample ID | MW-BS54-04072023 | | | MW-S60-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618389012 | | | 618389016 | | |
| | | Dilution Factor | 10 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Nickel | ug/l | -- | -- | | 10.3 | J | Diss>Total |
| SW6020B | Nickel (Dissolved) | ug/l | -- | -- | | 11.8 | J | Diss>Total |
| SW6020B | Potassium | ug/l | -- | -- | | 3430 | | |
| SW6020B | Potassium (Dissolved) | ug/l | -- | -- | | 3330 | | |
| SW6020B | Selenium | ug/l | -- | -- | | 1.50 | U | |
| SW6020B | Selenium (Dissolved) | ug/l | -- | -- | | 1.50 | U | |
| SW6020B | Silver | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Silver (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Sodium | ug/l | -- | -- | | 28600 | J | SD %D high |
| SW6020B | Sodium (Dissolved) | ug/l | -- | -- | | 28600 | | |
| SW6020B | Thallium (Dissolved) | ug/l | -- | -- | | 0.600 | U | |
| SW6020B | Thallium | ug/l | -- | -- | | 0.600 | U | |
| SW6020B | Thorium | ug/l | -- | -- | | 0.700 | U | |
| SW6020B | Thorium (Dissolved) | ug/l | -- | -- | | 0.700 | U | |
| SW6020B | Uranium-235 | ug/l | -- | -- | | 0.357 | | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | -- | -- | | 0.312 | | |
| SW6020B | Uranium-238 | ug/l | -- | -- | | -- | -- | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Vanadium | ug/l | -- | -- | | 3.30 | U | |
| SW6020B | Vanadium (Dissolved) | ug/l | -- | -- | | 3.30 | U | |
| SW6020B | Zinc | ug/l | -- | -- | | 3.30 | U | |
| SW6020B | Zinc (Dissolved) | ug/l | -- | -- | | 3.30 | U | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | -- | -- | | 0.698 | J | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | -- | -- | | 9.90 | | |

Data Summary Form for Groundwater Samples
Job No. 618389
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/7/2023

| | | Field Sample ID | MW-S60-04072023 | | | MW-SD60-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618389016 | | | 618389021 | | |
| | | Dilution Factor | 5 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium (Dissolved) | ug/l | -- | -- | | 128 | J | CCV %RSD high |
| CALC | Uranium | ug/l | -- | -- | | 136 | | |
| SW6020B | Aluminum | ug/l | -- | -- | | 34.8 | J | |
| SW6020B | Aluminum (Dissolved) | ug/l | -- | -- | | 19.3 | U | |
| SW6020B | Antimony (Dissolved) | ug/l | -- | -- | | 1.00 | U | |
| SW6020B | Antimony | ug/l | -- | -- | | 1.00 | U | |
| SW6020B | Arsenic | ug/l | -- | -- | | 2.00 | U | |
| SW6020B | Arsenic (Dissolved) | ug/l | -- | -- | | 2.00 | U | |
| SW6020B | Barium (Dissolved) | ug/l | -- | -- | | 3.36 | J | |
| SW6020B | Barium | ug/l | -- | -- | | 3.41 | J | |
| SW6020B | Beryllium | ug/l | -- | -- | | 0.200 | U | |
| SW6020B | Beryllium (Dissolved) | ug/l | -- | -- | | 0.200 | U | |
| SW6020B | Cadmium (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Cadmium | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Calcium | ug/l | -- | -- | | 23300 | | |
| SW6020B | Calcium (Dissolved) | ug/l | -- | -- | | 23500 | | |
| SW6020B | Chromium | ug/l | -- | -- | | 3.00 | U | |
| SW6020B | Chromium (Dissolved) | ug/l | -- | -- | | 3.00 | U | |
| SW6020B | Cobalt (Dissolved) | ug/l | -- | -- | | 2.29 | | |
| SW6020B | Cobalt | ug/l | -- | -- | | 2.47 | | |
| SW6020B | Copper | ug/l | -- | -- | | 16.6 | | |
| SW6020B | Copper (Dissolved) | ug/l | -- | -- | | 15.6 | | |
| SW6020B | Iron (Dissolved) | ug/l | -- | -- | | 33.0 | U | |
| SW6020B | Iron | ug/l | -- | -- | | 63.5 | J | |
| SW6020B | Lead | ug/l | -- | -- | | 0.500 | U | |
| SW6020B | Lead (Dissolved) | ug/l | -- | -- | | 0.500 | U | |
| SW6020B | Magnesium | ug/l | -- | -- | | 5100 | | |
| SW6020B | Magnesium (Dissolved) | ug/l | -- | -- | | 5080 | | |
| SW6020B | Manganese | ug/l | -- | -- | | 106 | | |
| SW6020B | Manganese (Dissolved) | ug/l | -- | -- | | 98.9 | | |
| SW6020B | Molybdenum | ug/l | -- | -- | | 2.4 | | |
| SW6020B | Molybdenum (Dissolved) | ug/l | -- | -- | | 2.51 | | |

Data Summary Form for Groundwater Samples
Job No. 618389
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/7/2023

| | | Field Sample ID | MW-S60-04072023 | | | MW-SD60-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618389016 | | | 618389021 | | |
| | | Dilution Factor | 5 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Nickel | ug/l | -- | -- | | 1.69 | J+ | ICSA high |
| SW6020B | Nickel (Dissolved) | ug/l | -- | -- | | 1.62 | J+ | ICSA high |
| SW6020B | Potassium | ug/l | -- | -- | | 3660 | | |
| SW6020B | Potassium (Dissolved) | ug/l | -- | -- | | 3640 | | |
| SW6020B | Selenium | ug/l | -- | -- | | 1.50 | U | |
| SW6020B | Selenium (Dissolved) | ug/l | -- | -- | | 1.50 | U | |
| SW6020B | Silver | ug/l | -- | -- | | 0.362 | J | |
| SW6020B | Silver (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Sodium | ug/l | -- | -- | | 32700 | J | SD %D high |
| SW6020B | Sodium (Dissolved) | ug/l | -- | -- | | 32700 | | |
| SW6020B | Thallium (Dissolved) | ug/l | -- | -- | | 0.600 | U | |
| SW6020B | Thallium | ug/l | -- | -- | | 0.600 | U | |
| SW6020B | Thorium | ug/l | -- | -- | | 0.700 | U | |
| SW6020B | Thorium (Dissolved) | ug/l | -- | -- | | 0.700 | U | |
| SW6020B | Uranium-235 | ug/l | -- | -- | | 0.267 | | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | -- | -- | | 0.248 | J | CCV %RSD high |
| SW6020B | Uranium-238 | ug/l | 178 | | | -- | -- | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | 147 | | | -- | -- | |
| SW6020B | Vanadium | ug/l | -- | -- | | 3.30 | U | |
| SW6020B | Vanadium (Dissolved) | ug/l | -- | -- | | 3.30 | U | |
| SW6020B | Zinc | ug/l | -- | -- | | 3.30 | U | |
| SW6020B | Zinc (Dissolved) | ug/l | -- | -- | | 3.30 | U | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | -- | -- | | 0.574 | J | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | -- | -- | | 8.23 | | |

Data Summary Form for Groundwater Samples
Job No. 618389
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/7/2023

| | | Field Sample ID | MW-SD60-04072023 | | |
|---|---|---|---|---|---|
| | | Lab Sample ID | 618389021 | | |
| | | Dilution Factor | 5 | | |
| Analytical Method | Parameter | Unit | | | |
| CALC | Uranium (Dissolved) | ug/l | -- | -- | |
| CALC | Uranium | ug/l | -- | -- | |
| SW6020B | Aluminum | ug/l | -- | -- | |
| SW6020B | Aluminum (Dissolved) | ug/l | -- | -- | |
| SW6020B | Antimony (Dissolved) | ug/l | -- | -- | |
| SW6020B | Antimony | ug/l | -- | -- | |
| SW6020B | Arsenic | ug/l | -- | -- | |
| SW6020B | Arsenic (Dissolved) | ug/l | -- | -- | |
| SW6020B | Barium (Dissolved) | ug/l | -- | -- | |
| SW6020B | Barium | ug/l | -- | -- | |
| SW6020B | Beryllium | ug/l | -- | -- | |
| SW6020B | Beryllium (Dissolved) | ug/l | -- | -- | |
| SW6020B | Cadmium (Dissolved) | ug/l | -- | -- | |
| SW6020B | Cadmium | ug/l | -- | -- | |
| SW6020B | Calcium | ug/l | -- | -- | |
| SW6020B | Calcium (Dissolved) | ug/l | -- | -- | |
| SW6020B | Chromium | ug/l | -- | -- | |
| SW6020B | Chromium (Dissolved) | ug/l | -- | -- | |
| SW6020B | Cobalt (Dissolved) | ug/l | -- | -- | |
| SW6020B | Cobalt | ug/l | -- | -- | |
| SW6020B | Copper | ug/l | -- | -- | |
| SW6020B | Copper (Dissolved) | ug/l | -- | -- | |
| SW6020B | Iron (Dissolved) | ug/l | -- | -- | |
| SW6020B | Iron | ug/l | -- | -- | |
| SW6020B | Lead | ug/l | -- | -- | |
| SW6020B | Lead (Dissolved) | ug/l | -- | -- | |
| SW6020B | Magnesium | ug/l | -- | -- | |
| SW6020B | Magnesium (Dissolved) | ug/l | -- | -- | |
| SW6020B | Manganese | ug/l | -- | -- | |
| SW6020B | Manganese (Dissolved) | ug/l | -- | -- | |
| SW6020B | Molybdenum | ug/l | -- | -- | |
| SW6020B | Molybdenum (Dissolved) | ug/l | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618389
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/7/2023

| | | Field Sample ID | MW-SD60-04072023 | | |
|---|---|---|---|---|---|
| | | Lab Sample ID | 618389021 | | |
| | | Dilution Factor | 5 | | |
| Analytical Method | Parameter | Unit | | | |
| SW6020B | Nickel | ug/l | -- | -- | |
| SW6020B | Nickel (Dissolved) | ug/l | -- | -- | |
| SW6020B | Potassium | ug/l | -- | -- | |
| SW6020B | Potassium (Dissolved) | ug/l | -- | -- | |
| SW6020B | Selenium | ug/l | -- | -- | |
| SW6020B | Selenium (Dissolved) | ug/l | -- | -- | |
| SW6020B | Silver | ug/l | -- | -- | |
| SW6020B | Silver (Dissolved) | ug/l | -- | -- | |
| SW6020B | Sodium | ug/l | -- | -- | |
| SW6020B | Sodium (Dissolved) | ug/l | -- | -- | |
| SW6020B | Thallium (Dissolved) | ug/l | -- | -- | |
| SW6020B | Thallium | ug/l | -- | -- | |
| SW6020B | Thorium | ug/l | -- | -- | |
| SW6020B | Thorium (Dissolved) | ug/l | -- | -- | |
| SW6020B | Uranium-235 | ug/l | -- | -- | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | -- | -- | |
| SW6020B | Uranium-238 | ug/l | 136 | | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | 127 | | |
| SW6020B | Vanadium | ug/l | -- | -- | |
| SW6020B | Vanadium (Dissolved) | ug/l | -- | -- | |
| SW6020B | Zinc | ug/l | -- | -- | |
| SW6020B | Zinc (Dissolved) | ug/l | -- | -- | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | -- | -- | |

# Attachment B
# VALIDATION QUALIFIER DEFINITIONS
# SDG 618389

## Validation Qualifier Definitions

Final validated results are annotated with the following codes:

**U** The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

**J** The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

**J+** The result is an estimated quantity, but the result may be biased high.

**J-** The result is an estimated quantity, but the result may be biased low.

**NJ** The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.

**UJ** The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

**R** The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

July 11, 2023

Ms. Jessie McCusker
de maximis, Inc.
200 Day Hill Road, Suite 200
Windsor, CT 06095

Re: SDG No. 618391
GEL Laboratories
NMI Groundwater
Data Validation

7/Water
HB-12-04112023
HB-13-04112023 DUP
HBPZ-2R-04112023
GZW-10-2-04112023
HB-13-04112023
GZW-7-1-04112023
MW-BS7-2-04112023

1/Equipment Blank
EQ-BLANK-04112023

Dear Ms. McCusker:

A Tier I Plus data validation was performed on seven water samples and one equipment blank from the Nuclear Metals Superfund site. The data validation was performed using the Region 1 - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures dated June 2018, to the extent possible, Massachusetts Compendium of Analytical Methods (CAM) protocols, the site-specific QAPP, and ddms' Standard Operating Procedures (SOPs). Professional judgment was applied as necessary and appropriate.

Analyses were performed in accordance with the following methods:

| **Parameter** | **Method** |
|---|---|
| Total and Dissolved Metals | SW846 6020A |
| Dissolved Inorganic Carbon | SW846 9060A |
| Dissolved Organic Carbon | SW846 9060A |

The data were evaluated based on the parameters summarized in the table below, where applicable:

| | | |
|---|---|---|
| | • | Overall Evaluation of Data and Potential Usability Issues |
| * | • | Data Completeness |

| | | |
|---|---|---|
| * | • | Preservation and Technical Holding Times |
| | • | Interference Check Sample |
| | • | Initial and Continuing Calibrations |
| | • | Blanks |
| * | • | Internal Standards |
| * | • | Laboratory Control Sample/ Laboratory Control Sample Duplicates |
| * | • | Matrix Spike/Matrix Spike Duplicate |
| * | • | Field and Laboratory Duplicates |
| * | • | Serial Dilutions |
| * | • | Target Analyte Identification |
| * | • | Analyte Quantitation and Reported Quantitation Limits |
| | • | Dissolved v. Total |
| * | • | System Performance |

*All criteria were met for this quality element

The Data Validation Report includes the following attachments:

Attachment A: Data Summary Table – summarized validated results

Attachment B: Validation Qualifier Definitions

**Overall Evaluation of Data**

Based on the review effort, qualifiers were applied to the reported results as follows:

- The results for total uranium-238 in EQ-BLANK-04112023, for total and dissolved uranium-238 in MW-BS7-2-04112023 and GZW-10-2-04112023, for total beryllium in HB-12-04112023, for total and dissolved calcium in MW-BS7-2-04112023 and GZW-10-2-04112023, and for total and dissolved sodium in MW-BS7-2-04112023 were qualified as estimated (J, UJ) due to elevated %RSDs in the CCV replicates. The results for total and dissolved uranium-235 and uranium-238 in HA20-CMT-3B(OW)-04052023, MW-S16-04052023, and MW-BM03-04052023 were qualified as estimated (J, UJ) due to elevated percent relative standard deviations (%RSDs) in the continuing calibration verification (CCV) replicates.

- The results for total and dissolved cadmium in HBPZ-2R-04112023, total and dissolved cobalt in HB-12-04112023, HB-13-04112023, HB-13-04112023 DUP, HBPZ-2R-04112023, MW-BS7-2-04112023, and GZW-10-2-04112023, total and dissolved copper in GZW-10-2-04112023, total and dissolved manganese in GZW-7-1-04112023, HB-12-04112023, and HBPZ-2R-04112023, and total and dissolved nickel in HB-12-04112023, HB-13-04112023, HB-13-04112023 DUP, GZW-7-1-04112023, HBPZ-2R-04112023, MW-BS7-2-04112023, and GZW-10-2-04112023 were qualified as estimated (J+) with high bias due to detection in the

interference check sample at a concentration greater than twice the method detection limit (MDL).

- The result for total molybdenum in GZW-10-2-04112023 was qualified as not detected (U) at the practical quantitation limit (PQL) due to associated continuing calibration blank contamination.

- Results for total and dissolved vanadium in MW-BS7-2-04112023 were qualified as not detected at the PQL (U) due to associated equipment blank contamination.

- The results for total and dissolved uranium-235 and uranium-238 in GZW-10-2-04112023 were qualified as estimated (J) because the dissolved concentration exceeded the total concentration by more than ten percent.

- Results for total and dissolved molybdenum in GZW-10-2-04112023 and total and dissolved zinc in GZW-7-1-04112023 were qualified as estimated (J, UJ) due to lack of confirmation at a low concentration in the total analysis.

- The results for dissolved inorganic carbon in HB-13-04112023, HB-13-04112023 DUP, and HBPZ-2R-04112023 were qualified as estimated (J+) with high bias due to elevated post-digestion spike (PS) recovery.

The remaining results were determined to be usable as reported by the laboratory.

The following sections of this report detail the reasons qualifiers were applied to the sample results. Each parameter section discusses the quality control (QC) excursions that impacted sample results. Where a quality indicator was deemed acceptable after thorough review, no further discussion is included in this report. Detailed findings are included for each quality element that impacted the usability of the reported results. Additional information or explanation is included as needed, to provide support for decisions made, based on the validator's best professional judgment.

Where a result was qualified J+ and J, or J- and J, the J qualifier takes precedence. Where a result was qualified biased high and low for differing data quality excursions, the final qualifier is J, with indeterminate bias.

## Metals (SW846 6020B)

### Initial and Continuing Calibrations

Five initial calibrations (ICs) were performed on ICPMS15 on May 8, 9, and 10, 2023. All initial and continuing calibration verification standards were within acceptance criteria (90-110%R; <5%RSD), with the following exceptions:

| Analyte | %R | %RSD | Associated samples |
|---|---|---|---|
| CCV 5/8/23 at 17:17 | | | |
| Uranium-238 | a | 5.2 | MW-BS7-2-04112023<br>GZW-10-2-04112023<br>EQ-BLANK-04112023 |
| CCV 5/9/23 at 13:37 | | | |
| Beryllium | a | 6.4 | HB-12-04112023 |
| CCV 5/10/23 at 12:45 | | | |
| Calcium | a | 5.5 | MW-BS7-2-04112023<br>GZW-10-2-04112023 |
| Sodium | a | 5.5 | MW-BS7-2-04112023 |

a-acceptable

The results for total uranium-238 in EQ-BLANK-04112023, for total and dissolved uranium-238 in MW-BS7-2-04112023 and GZW-10-2-04112023, for total beryllium in HB-12-04112023, for total and dissolved calcium in MW-BS7-2-04112023 and GZW-10-2-04112023, and for total and dissolved sodium in MW-BS7-2-04112023 were qualified as estimated (J, UJ) due to elevated %RSDs in the CCV replicate measurements. The results for total and dissolved uranium-235 and uranium-238 in HA20-CMT-3B(OW)-04052023, MW-S16-04052023, and MW-BM03-04052023 were qualified as estimated (J, UJ) due to elevated %RSDs in the CCV replicates.

A Contract Required Detection Limit (CRDL) standard was analyzed with each analytical sequence and reported at or below the PQL for all reported analytes. All recoveries were within the 80-120% acceptance limits, with the exception of calcium in the 5/8/23 analytical sequence (141%). The calcium concentrations in all associated samples were above actionable levels, and qualifications were not warranted.

Interference Check Sample

Interference check sample solutions A (ICSA) and AB (ICSAB) were analyzed in each analytical sequence. All spiked analytes recovered within acceptance limits (80-120%R), and all non-spiked analytes were less than twice the method detection limit with the following exceptions:

| Analyte | ICSA Conc. (ug/L) | MDL (ug/L) | Affected Samples | Qualifier Applied |
|---|---|---|---|---|
| *ICSA 5/80/23 at 17:47* | | | | |
| Cadmium | 1.79 | 0.30 | HBPZ-2R-04112023 | J+ |
| Cobalt | 0.899 | 0.30 | HB-12-04112023<br>HB-13-04112023<br>HB-13-04112023 DUP<br>HBPZ-2R-04112023<br>MW-BS7-2-04112023 | |

| Analyte | ICSA Conc. (ug/L) | MDL (ug/L) | Affected Samples | Qualifier Applied |
|---|---|---|---|---|
| | | | GZW-10-2-04112023 | |
| Copper | 0.78 | 0.30 | GZW-10-2-04112023 | |
| Manganese | 8.89 | 1.0 | GZW-7-1-04112023<br>HB-12-04112023<br>HBPZ-2R-04112023 | |
| Nickel | 1.66 | 0.60 | HB-12-04112023<br>HB-13-04112023<br>HB-13-04112023 DUP<br>GZW-7-1-04112023<br>HBPZ-2R-04112023<br>MW-BS7-2-04112023<br>GZW-10-2-04112023 | |

The results for total and dissolved cadmium in HBPZ-2R-04112023, total and dissolved cobalt in HB-12-04112023, HB-13-04112023, HB-13-04112023 DUP, HBPZ-2R-04112023, MW-BS7-2-04112023, and GZW-10-2-04112023, total and dissolved copper in GZW-10-2-04112023, total and dissolved manganese in GZW-7-1-04112023, HB-12-04112023, and HBPZ-2R-04112023, and total and dissolved nickel in HB-12-04112023, HB-13-04112023, HB-13-04112023 DUP, GZW-7-1-04112023, HBPZ-2R-04112023, MW-BS7-2-04112023, and GZW-10-2-04112023 were qualified as estimated (J+) with high bias due to detection in the interference check sample at a concentration greater than twice the MDL.

For all other results listed above, the analyte was either not detected or was detected at a concentration greater than two times the ICSA concentration. Therefore, no additional qualifiers were applied.

Blanks

Initial and continuing calibration blanks (ICB/CCB) were analyzed at the appropriate frequency. A method blank was prepared and analyzed with the samples. One equipment blank (EQ-BLANK-04112023) was submitted with the samples. The following target analytes were detected in associated blanks:

| Blank | Analyte | Conc. (µg/L) | Affected Samples | Qualifier Applied |
|---|---|---|---|---|
| CCB 5/9/23 at 14:16 | Molybdenum | 0.207 J | GZW-10-2-04112023 | U |
| EQ-BLANK-04112023 | Vanadium | 3.86 | MW-BS7-2-04112023 | |

Results for total molybdenum in GZW-10-2-04112023 and for total and dissolved vanadium in MW-BS7-2-04112023 were qualified as not detected at the PQL (U) due to associated blank contamination.

For all other results listed above, the original sample concentrations in the MS/MSDs were more than four times the spike concentrations. Accurate recoveries would not be expected on this basis, and no additional qualifiers were necessary.

Quantitation

Several of the samples were analyzed at dilutions to obtain concentrations of one or more target analytes that were within the documented linear range of the instrument. Analyte concentrations, MDLs, and PQLs were appropriately adjusted for the dilution factor.

The instrument detection limit summary provides MDLs "effective" on 10/8/21 and verified on 3/7/23 (ICPMS15).

Linear ranges, according to the summary provided in the data package, were determined on 8/1/17 (ICPMS15). There is no indication in the data package that the linear ranges have been reproduced or verified between the date established and the date of field sample analyses, five years later. However, all analyte concentrations in the samples were within the established instrument calibration range for each analyte; therefore, there is no adverse impact on the sample results.

Total vs. Dissolved

The total concentration exceeded the dissolved concentration for detected analytes, with the exceptions noted below:

| Sample | Analyte | Total Conc (ug/L) | Dissolved Conc (ug/L) | %D |
|---|---|---|---|---|
| GZW-10-2-04112023 | Arsenic | 2.02 J | 2.59 J | 28 |
| | Magnesium | 26900 | 27700 | <10 |
| | Molybdenum | 1.00 U | 1.54 J | nc |
| | Potassium | 8370 | 8670 | <10 |
| | Sodium | 34400 | 35200 | <10 |
| | Uranium-235 | 0.375 | 0.428 | **14** |
| | Uranium-238 | 51.9 | 57.4 | **11** |
| GZW-7-1-04112023 | Barium | 6.88 | 6.89 | <10 |
| | Zinc | 3.30 U | 3.9 J | nc |
| HB-12-04112023 | Cobalt | 0.472 J | 0.474 J | <10 |
| | Copper | 8.35 | 8.59 | <10 |
| HB-13-04112023 | Calcium | 19400 | 20400 | <10 |
| | Cobalt | 1.13 | 1.14 | <10 |
| | Magnesium | 4970 | 5230 | <10 |
| | Manganese | 23.4 | 24.0 | <10 |
| | Nickel | 1.58 | 1.65 | <10 |
| | Potassium | 2760 | 2890 | <10 |

| Sample | Analyte | Total Conc (ug/L) | Dissolved Conc (ug/L) | %D |
|---|---|---|---|---|
| | Sodium | 17600 | 18800 | <10 |
| HB-13-04112023 DUP | Barium | 8.05 | 8.13 | <10 |
| | Calcium | 19700 | 20200 | <10 |
| | Magnesium | 4950 | 5280 | <10 |
| | Nickel | 1.63 | 1.75 | <10 |
| | Potassium | 2810 | 2900 | <10 |
| | Sodium | 17900 | 18900 | <10 |
| HBPZ-2R-04112023 | Barium | 3.16 J | 3.45 J | <10 |
| | Cadmium | 0.947 J | 0.987 J | <10 |
| | Calcium | 17000 | 17500 | <10 |
| | Copper | 16.2 | 16.7 | <10 |
| | Magnesium | 7370 | 7680 | <10 |
| | Manganese | 13.8 | 14.6 | <10 |
| | Molybdenum | 1060 | 1140 | <10 |
| | Nickel | 2.50 | 2.55 | <10 |
| | Potassium | 2920 | 2970 | <10 |
| | Sodium | 23600 | 24000 | <10 |
| | Uranium-238 | 837 | 848 | <10 |
| MW-BS7-2-04112023 | Arsenic | 2.17 J | 2.39 J | <10 |
| | Cobalt | 1.02 | 1.07 | <10 |
| | Magnesium | 17000 | 17200 | <10 |
| | Nickel | 1.14 J | 1.16 J | <10 |
| | Potassium | 6730 | 7320 | <10 |
| | Sodium | 74600 | 75500 | <10 |
| | Uranium-235 | 0.341 | 0.344 | <10 |

nc = not calculated

The results for total and dissolved uranium-235 and uranium-238 in GZW-10-2-04112023 were qualified as estimated (J) because the dissolved concentration exceeded the total concentration by more than ten percent difference. Results for total and dissolved molybdenum in GZW-10-2-04112023 and total and dissolved zinc in GZW-7-1-04112023 were qualified as estimated (J, UJ) due to lack of confirmation at a low concentration in the total metal analysis.

When the %D is 10% or less, experimental error is assumed, and no qualification of sample results is made. Where the percent difference is greater than 10% and total and dissolved concentrations were less than the PQL (and flagged with a J on this basis by the laboratory), no qualification of sample results is made. No additional action was necessary for the results detailed above.

## Dissolved Inorganic Carbon and Dissolved Organic Carbon (SW846 9060A)

Samples HB-13-04112023, HB-13-04112023 DUP, and HBPZ-2R-04112023 were analyzed for dissolved inorganic carbon and dissolved organic carbon.

Post-digestion Spike (PS)

PS was performed on samples MW-S62A-04102023 (SDG 618393) and MW-S64-04102023 (SDG 617335). The recovery of dissolved inorganic carbon (120%R) in the PS of MW-S62A-04102023 was outside acceptance criteria (85-115%R). The results for dissolved inorganic carbon in HB-13-04112023, HB-13-04112023 DUP, and HBPZ-2R-04112023 were qualified as estimated (J+) with high bias due to elevated PS recovery.

## Documentation

The following documentation issues were observed during the validation effort:

- Results for the MS and MSD in the metals analyses are also presented as "Duplicate Sample" results for assessment of precision. It should be noted that the comparison is made with results for the MS and MSD, not unspiked sample results.

Please feel free to contact me (edickinson@ddmsinc.com or 610-314-6284) with any questions you may have regarding this information.

Sincerely,

Elizabeth K. Dickinson
Sr. Environmental Chemist

Attachments

**Attachment A**
**DATA SUMMARY TABLE**
**SDG 618391**

Data Summary Form for Groundwater Samples
Job No. 618391
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/11/2023 - 4/11/2023

| | | Field Sample ID | EQ-BLANK-04112023 | | | GZW-10-2-04112023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618391015 | | | 618391013 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium | ug/l | 0.0670 | UJ | High CCV %RSD | 52.3 | J | High CCV %RSD, dissolved > total |
| CALC | Uranium (Dissolved) | ug/l | -- | -- | | 57.9 | J | Dissolved > total |
| SW6020B | Aluminum | ug/l | 19.3 | U | | 22.8 | J | |
| SW6020B | Aluminum (Dissolved) | ug/l | -- | -- | | 19.3 | U | |
| SW6020B | Antimony | ug/l | 1.00 | U | | 4.2 | | |
| SW6020B | Antimony (Dissolved) | ug/l | -- | -- | | 3.71 | | |
| SW6020B | Arsenic (Dissolved) | ug/l | -- | -- | | 2.59 | J | |
| SW6020B | Arsenic | ug/l | 2.00 | U | | 2.02 | J | |
| SW6020B | Barium | ug/l | 0.670 | U | | 24.3 | | |
| SW6020B | Barium (Dissolved) | ug/l | -- | -- | | 17.9 | | |
| SW6020B | Beryllium | ug/l | 0.200 | U | | 0.200 | U | |
| SW6020B | Beryllium (Dissolved) | ug/l | -- | -- | | 0.200 | U | |
| SW6020B | Cadmium | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Cadmium (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Calcium | ug/l | 80.0 | U | | -- | -- | |
| SW6020B | Calcium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Chromium | ug/l | 3.00 | U | | 3.00 | U | |
| SW6020B | Chromium (Dissolved) | ug/l | -- | -- | | 3.00 | U | |
| SW6020B | Cobalt | ug/l | 0.300 | U | | 0.901 | J+ | ICSA detection |
| SW6020B | Cobalt (Dissolved) | ug/l | -- | -- | | 0.332 | J+ | ICSA detection |
| SW6020B | Copper | ug/l | 0.300 | U | | 1.1 | J+ | ICSA detection |
| SW6020B | Copper (Dissolved) | ug/l | -- | -- | | 0.71 | J+ | ICSA detection |
| SW6020B | Iron (Dissolved) | ug/l | -- | -- | | 33.0 | U | |
| SW6020B | Iron | ug/l | 33.0 | U | | 43.3 | J | |
| SW6020B | Lead | ug/l | 0.500 | U | | 0.500 | U | |
| SW6020B | Lead (Dissolved) | ug/l | -- | -- | | 0.500 | U | |
| SW6020B | Magnesium (Dissolved) | ug/l | -- | -- | | 27700 | | |
| SW6020B | Magnesium | ug/l | 10.0 | U | | 26900 | | |
| SW6020B | Manganese | ug/l | 1.00 | U | | 273 | | |
| SW6020B | Manganese (Dissolved) | ug/l | -- | -- | | 23.6 | | |
| SW6020B | Molybdenum (Dissolved) | ug/l | -- | -- | | 1.54 | J | Dissolved > total |
| SW6020B | Molybdenum | ug/l | 0.200 | U | | 1.00 | UJ | CCB contamination, dissolved > total |
| SW6020B | Nickel | ug/l | 0.600 | U | | 3.86 | J+ | ICSA detection |
| SW6020B | Nickel (Dissolved) | ug/l | -- | -- | | 2.37 | J+ | ICSA detection |

Data Summary Form for Groundwater Samples
Job No. 618391
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/11/2023 - 4/11/2023

| | | Field Sample ID | EQ-BLANK-04112023 | | | GZW-10-2-04112023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618391015 | | | 618391013 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Potassium (Dissolved) | ug/l | -- | -- | | 8670 | | |
| SW6020B | Potassium | ug/l | 80.0 | U | | 8370 | | |
| SW6020B | Selenium | ug/l | 1.50 | U | | 1.50 | U | |
| SW6020B | Selenium (Dissolved) | ug/l | -- | -- | | 1.50 | U | |
| SW6020B | Silver | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Silver (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Sodium (Dissolved) | ug/l | -- | -- | | 35200 | | |
| SW6020B | Sodium | ug/l | 80.0 | U | | 34400 | | |
| SW6020B | Thallium | ug/l | 0.600 | U | | 0.600 | U | |
| SW6020B | Thallium (Dissolved) | ug/l | -- | -- | | 0.600 | U | |
| SW6020B | Thorium (Dissolved) | ug/l | -- | -- | | 0.700 | U | |
| SW6020B | Thorium | ug/l | 0.700 | U | | 0.700 | U | |
| SW6020B | Uranium-235 | ug/l | 0.0100 | U | | 0.375 | J | Dissolved > total |
| SW6020B | Uranium-235 (Dissolved) | ug/l | -- | -- | | 0.428 | J | Dissolved > total |
| SW6020B | Uranium-238 (Dissolved) | ug/l | -- | -- | | 57.4 | J | High CCV %RSD, dissolved > total |
| SW6020B | Uranium-238 | ug/l | 0.0670 | UJ | High CCV %RSD | 51.9 | J | High CCV %RSD, dissolved > total |
| SW6020B | Vanadium | ug/l | 3.86 | J | | 3.30 | U | |
| SW6020B | Vanadium (Dissolved) | ug/l | -- | -- | | 3.30 | U | |
| SW6020B | Zinc | ug/l | 3.30 | U | | 12.1 | J | |
| SW6020B | Zinc (Dissolved) | ug/l | -- | -- | | 3.95 | J | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618391
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/11/2023 - 4/11/2023

| | | Field Sample ID | GZW-10-2-04112023 | | | GZW-7-1-04112023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618391013 | | | 618391007 | | |
| | | Dilution Factor | 10 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium | ug/l | -- | -- | | 82.2 | | |
| CALC | Uranium (Dissolved) | ug/l | -- | -- | | 63.1 | | |
| SW6020B | Aluminum | ug/l | -- | -- | | 19.3 | U | |
| SW6020B | Aluminum (Dissolved) | ug/l | -- | -- | | 19.3 | U | |
| SW6020B | Antimony | ug/l | -- | -- | | 1.00 | U | |
| SW6020B | Antimony (Dissolved) | ug/l | -- | -- | | 1.00 | U | |
| SW6020B | Arsenic (Dissolved) | ug/l | -- | -- | | 2.00 | U | |
| SW6020B | Arsenic | ug/l | -- | -- | | 2.00 | U | |
| SW6020B | Barium | ug/l | -- | -- | | 6.88 | | |
| SW6020B | Barium (Dissolved) | ug/l | -- | -- | | 6.89 | | |
| SW6020B | Beryllium | ug/l | -- | -- | | 0.200 | U | |
| SW6020B | Beryllium (Dissolved) | ug/l | -- | -- | | 0.200 | U | |
| SW6020B | Cadmium | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Cadmium (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Calcium | ug/l | 80200 | J | High CCV %RSD | 26600 | | |
| SW6020B | Calcium (Dissolved) | ug/l | 73900 | J | High CCV %RSD | 26300 | | |
| SW6020B | Chromium | ug/l | -- | -- | | 3.00 | U | |
| SW6020B | Chromium (Dissolved) | ug/l | -- | -- | | 3.00 | U | |
| SW6020B | Cobalt | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Cobalt (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Copper | ug/l | -- | -- | | 20.7 | | |
| SW6020B | Copper (Dissolved) | ug/l | -- | -- | | 18.5 | | |
| SW6020B | Iron (Dissolved) | ug/l | -- | -- | | 33.0 | U | |
| SW6020B | Iron | ug/l | -- | -- | | 98.6 | J | |
| SW6020B | Lead | ug/l | -- | -- | | 0.500 | U | |
| SW6020B | Lead (Dissolved) | ug/l | -- | -- | | 0.500 | U | |
| SW6020B | Magnesium (Dissolved) | ug/l | -- | -- | | 6510 | | |
| SW6020B | Magnesium | ug/l | -- | -- | | 6580 | | |
| SW6020B | Manganese | ug/l | -- | -- | | 1.42 | J+ | ICSA detection |
| SW6020B | Manganese (Dissolved) | ug/l | -- | -- | | 1.1 | J+ | ICSA detection |
| SW6020B | Molybdenum (Dissolved) | ug/l | -- | -- | | 1 | | |
| SW6020B | Molybdenum | ug/l | -- | -- | | 1.01 | | |
| SW6020B | Nickel | ug/l | -- | -- | | 0.87 | J+ | ICSA detection |
| SW6020B | Nickel (Dissolved) | ug/l | -- | -- | | 0.853 | J+ | ICSA detection |

Data Summary Form for Groundwater Samples
Job No. 618391
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/11/2023 - 4/11/2023

| | | Field Sample ID | GZW-10-2-04112023 | | | GZW-7-1-04112023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618391013 | | | 618391007 | | |
| | | Dilution Factor | 10 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Potassium (Dissolved) | ug/l | -- | -- | | 4140 | | |
| SW6020B | Potassium | ug/l | -- | -- | | 4270 | | |
| SW6020B | Selenium | ug/l | -- | -- | | 1.50 | U | |
| SW6020B | Selenium (Dissolved) | ug/l | -- | -- | | 1.50 | U | |
| SW6020B | Silver | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Silver (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Sodium (Dissolved) | ug/l | -- | -- | | 38000 | | |
| SW6020B | Sodium | ug/l | -- | -- | | 39500 | | |
| SW6020B | Thallium | ug/l | -- | -- | | 0.600 | U | |
| SW6020B | Thallium (Dissolved) | ug/l | -- | -- | | 0.600 | U | |
| SW6020B | Thorium (Dissolved) | ug/l | -- | -- | | 0.700 | U | |
| SW6020B | Thorium | ug/l | -- | -- | | 0.700 | U | |
| SW6020B | Uranium-235 | ug/l | -- | -- | | 0.173 | | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | -- | -- | | 0.127 | | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | -- | -- | | 62.9 | | |
| SW6020B | Uranium-238 | ug/l | -- | -- | | 82.1 | | |
| SW6020B | Vanadium | ug/l | -- | -- | | 3.30 | U | |
| SW6020B | Vanadium (Dissolved) | ug/l | -- | -- | | 3.30 | U | |
| SW6020B | Zinc | ug/l | -- | -- | | 3.30 | UJ | Dissolved > total |
| SW6020B | Zinc (Dissolved) | ug/l | -- | -- | | 3.9 | J | Dissolved > total |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618391
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/11/2023 - 4/11/2023

| | | Field Sample ID | HB-12-04112023 | | | HB-12-04112023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618391001 | | | 618391001 | | |
| | | Dilution Factor | 1 | | | 5 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium | ug/l | 266 | | | -- | -- | |
| CALC | Uranium (Dissolved) | ug/l | 232 | | | -- | -- | |
| SW6020B | Aluminum | ug/l | 54.5 | | | -- | -- | |
| SW6020B | Aluminum (Dissolved) | ug/l | 19.3 | U | | -- | -- | |
| SW6020B | Antimony | ug/l | 1.00 | U | | -- | -- | |
| SW6020B | Antimony (Dissolved) | ug/l | 1.00 | U | | -- | -- | |
| SW6020B | Arsenic (Dissolved) | ug/l | 2.00 | U | | -- | -- | |
| SW6020B | Arsenic | ug/l | 2.00 | U | | -- | -- | |
| SW6020B | Barium | ug/l | 3.34 | J | | -- | -- | |
| SW6020B | Barium (Dissolved) | ug/l | 3.31 | J | | -- | -- | |
| SW6020B | Beryllium | ug/l | 0.200 | UJ | High CCV %RSD | -- | -- | |
| SW6020B | Beryllium (Dissolved) | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Cadmium | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Cadmium (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Calcium | ug/l | 17600 | | | -- | -- | |
| SW6020B | Calcium (Dissolved) | ug/l | 17200 | | | -- | -- | |
| SW6020B | Chromium | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Chromium (Dissolved) | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Cobalt | ug/l | 0.472 | J+ | ICSA detection | -- | -- | |
| SW6020B | Cobalt (Dissolved) | ug/l | 0.474 | J+ | ICSA detection | -- | -- | |
| SW6020B | Copper | ug/l | 8.35 | | | -- | -- | |
| SW6020B | Copper (Dissolved) | ug/l | 8.59 | | | -- | -- | |
| SW6020B | Iron (Dissolved) | ug/l | 33.0 | U | | -- | -- | |
| SW6020B | Iron | ug/l | 33.0 | U | | -- | -- | |
| SW6020B | Lead | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Lead (Dissolved) | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Magnesium (Dissolved) | ug/l | 6010 | | | -- | -- | |
| SW6020B | Magnesium | ug/l | 6140 | | | -- | -- | |
| SW6020B | Manganese | ug/l | 4.87 | J+ | ICSA detection | -- | -- | |
| SW6020B | Manganese (Dissolved) | ug/l | 4.4 | J+ | ICSA detection | -- | -- | |
| SW6020B | Molybdenum (Dissolved) | ug/l | 74 | | | -- | -- | |
| SW6020B | Molybdenum | ug/l | 76.5 | | | -- | -- | |
| SW6020B | Nickel | ug/l | 1.53 | J+ | ICSA detection | -- | -- | |
| SW6020B | Nickel (Dissolved) | ug/l | 1.52 | J+ | ICSA detection | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618391
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/11/2023 - 4/11/2023

| | | Field Sample ID | HB-12-04112023 | | | HB-12-04112023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618391001 | | | 618391001 | | |
| | | Dilution Factor | 1 | | | 5 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Potassium (Dissolved) | ug/l | 2790 | | | -- | -- | |
| SW6020B | Potassium | ug/l | 2920 | | | -- | -- | |
| SW6020B | Selenium | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Selenium (Dissolved) | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Silver | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Silver (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Sodium (Dissolved) | ug/l | 24200 | | | -- | -- | |
| SW6020B | Sodium | ug/l | 24700 | | | -- | -- | |
| SW6020B | Thallium | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thallium (Dissolved) | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thorium (Dissolved) | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Thorium | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Uranium-235 | ug/l | 0.575 | | | -- | -- | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | 0.501 | | | -- | -- | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | -- | -- | | 232 | | |
| SW6020B | Uranium-238 | ug/l | -- | -- | | 265 | | |
| SW6020B | Vanadium | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Vanadium (Dissolved) | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Zinc | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Zinc (Dissolved) | ug/l | 3.30 | U | | -- | -- | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618391
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/11/2023 - 4/11/2023

| | | Field Sample ID | HB-13-04112023 | | | HB-13-04112023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618391003 | | | 618391003 | | |
| | | Dilution Factor | 1 | | | 20 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium | ug/l | 2600 | | | -- | -- | |
| CALC | Uranium (Dissolved) | ug/l | 2450 | | | -- | -- | |
| SW6020B | Aluminum | ug/l | 19.3 | U | | -- | -- | |
| SW6020B | Aluminum (Dissolved) | ug/l | 19.3 | U | | -- | -- | |
| SW6020B | Antimony | ug/l | 1.00 | U | | -- | -- | |
| SW6020B | Antimony (Dissolved) | ug/l | 1.00 | U | | -- | -- | |
| SW6020B | Arsenic (Dissolved) | ug/l | 2.00 | U | | -- | -- | |
| SW6020B | Arsenic | ug/l | 2.00 | U | | -- | -- | |
| SW6020B | Barium | ug/l | 8.45 | | | -- | -- | |
| SW6020B | Barium (Dissolved) | ug/l | 8.12 | | | -- | -- | |
| SW6020B | Beryllium | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Beryllium (Dissolved) | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Cadmium | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Cadmium (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Calcium | ug/l | 19400 | | | -- | -- | |
| SW6020B | Calcium (Dissolved) | ug/l | 20400 | | | -- | -- | |
| SW6020B | Chromium | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Chromium (Dissolved) | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Cobalt | ug/l | 1.13 | J+ | ICSA detection | -- | -- | |
| SW6020B | Cobalt (Dissolved) | ug/l | 1.14 | J+ | ICSA detection | -- | -- | |
| SW6020B | Copper | ug/l | 10.8 | | | -- | -- | |
| SW6020B | Copper (Dissolved) | ug/l | 10.8 | | | -- | -- | |
| SW6020B | Iron (Dissolved) | ug/l | 33.0 | U | | -- | -- | |
| SW6020B | Iron | ug/l | 33.0 | U | | -- | -- | |
| SW6020B | Lead | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Lead (Dissolved) | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Magnesium (Dissolved) | ug/l | 5230 | | | -- | -- | |
| SW6020B | Magnesium | ug/l | 4970 | | | -- | -- | |
| SW6020B | Manganese | ug/l | 23.4 | | | -- | -- | |
| SW6020B | Manganese (Dissolved) | ug/l | 24 | | | -- | -- | |
| SW6020B | Molybdenum (Dissolved) | ug/l | 282 | | | -- | -- | |
| SW6020B | Molybdenum | ug/l | 297 | | | -- | -- | |
| SW6020B | Nickel | ug/l | 1.58 | J+ | ICSA detection | -- | -- | |
| SW6020B | Nickel (Dissolved) | ug/l | 1.65 | J+ | ICSA detection | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618391
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/11/2023 - 4/11/2023

| | | Field Sample ID | HB-13-04112023 | | | HB-13-04112023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618391003 | | | 618391003 | | |
| | | Dilution Factor | 1 | | | 20 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Potassium (Dissolved) | ug/l | 2890 | | | -- | -- | |
| SW6020B | Potassium | ug/l | 2760 | | | -- | -- | |
| SW6020B | Selenium | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Selenium (Dissolved) | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Silver | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Silver (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Sodium (Dissolved) | ug/l | 18800 | | | -- | -- | |
| SW6020B | Sodium | ug/l | 17600 | | | -- | -- | |
| SW6020B | Thallium | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thallium (Dissolved) | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thorium (Dissolved) | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Thorium | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Uranium-235 | ug/l | -- | -- | | 5.4 | | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | -- | -- | | 5.24 | | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Uranium-238 | ug/l | -- | -- | | -- | -- | |
| SW6020B | Vanadium | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Vanadium (Dissolved) | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Zinc | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Zinc (Dissolved) | ug/l | 3.30 | U | | -- | -- | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | 0.749 | J | | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | 7.67 | J+ | High PS %R | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618391
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/11/2023 - 4/11/2023

| | | Field Sample ID | HB-13-04112023 | | | HB-13-04112023 DUP | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618391004 | | | 618391005 | | |
| | | Dilution Factor | 100 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium | ug/l | -- | -- | | 2550 | | |
| CALC | Uranium (Dissolved) | ug/l | -- | -- | | 2460 | | |
| SW6020B | Aluminum | ug/l | -- | -- | | 19.3 | U | |
| SW6020B | Aluminum (Dissolved) | ug/l | -- | -- | | 19.3 | U | |
| SW6020B | Antimony | ug/l | -- | -- | | 1.00 | U | |
| SW6020B | Antimony (Dissolved) | ug/l | -- | -- | | 1.00 | U | |
| SW6020B | Arsenic (Dissolved) | ug/l | -- | -- | | 2.00 | U | |
| SW6020B | Arsenic | ug/l | -- | -- | | 2.00 | U | |
| SW6020B | Barium | ug/l | -- | -- | | 8.05 | | |
| SW6020B | Barium (Dissolved) | ug/l | -- | -- | | 8.13 | | |
| SW6020B | Beryllium | ug/l | -- | -- | | 0.200 | U | |
| SW6020B | Beryllium (Dissolved) | ug/l | -- | -- | | 0.200 | U | |
| SW6020B | Cadmium | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Cadmium (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Calcium | ug/l | -- | -- | | 19700 | | |
| SW6020B | Calcium (Dissolved) | ug/l | -- | -- | | 20200 | | |
| SW6020B | Chromium | ug/l | -- | -- | | 3.00 | U | |
| SW6020B | Chromium (Dissolved) | ug/l | -- | -- | | 3.00 | U | |
| SW6020B | Cobalt | ug/l | -- | -- | | 1.22 | J+ | ICSA detection |
| SW6020B | Cobalt (Dissolved) | ug/l | -- | -- | | 1.14 | J+ | ICSA detection |
| SW6020B | Copper | ug/l | -- | -- | | 11.1 | | |
| SW6020B | Copper (Dissolved) | ug/l | -- | -- | | 10.9 | | |
| SW6020B | Iron (Dissolved) | ug/l | -- | -- | | 33.0 | U | |
| SW6020B | Iron | ug/l | -- | -- | | 33.0 | U | |
| SW6020B | Lead | ug/l | -- | -- | | 0.500 | U | |
| SW6020B | Lead (Dissolved) | ug/l | -- | -- | | 0.500 | U | |
| SW6020B | Magnesium (Dissolved) | ug/l | -- | -- | | 5280 | | |
| SW6020B | Magnesium | ug/l | -- | -- | | 4950 | | |
| SW6020B | Manganese | ug/l | -- | -- | | 24.9 | | |
| SW6020B | Manganese (Dissolved) | ug/l | -- | -- | | 24.3 | | |
| SW6020B | Molybdenum (Dissolved) | ug/l | -- | -- | | 270 | | |
| SW6020B | Molybdenum | ug/l | -- | -- | | 284 | | |
| SW6020B | Nickel | ug/l | -- | -- | | 1.63 | J+ | ICSA detection |
| SW6020B | Nickel (Dissolved) | ug/l | -- | -- | | 1.75 | J+ | ICSA detection |

Data Summary Form for Groundwater Samples
Job No. 618391
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/11/2023 - 4/11/2023

| | | Field Sample ID | HB-13-04112023 | | | HB-13-04112023 DUP | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618391004 | | | 618391005 | | |
| | | Dilution Factor | 100 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Potassium (Dissolved) | ug/l | -- | -- | | 2900 | | |
| SW6020B | Potassium | ug/l | -- | -- | | 2810 | | |
| SW6020B | Selenium | ug/l | -- | -- | | 1.50 | U | |
| SW6020B | Selenium (Dissolved) | ug/l | -- | -- | | 1.50 | U | |
| SW6020B | Silver | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Silver (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Sodium (Dissolved) | ug/l | -- | -- | | 18900 | | |
| SW6020B | Sodium | ug/l | -- | -- | | 17900 | | |
| SW6020B | Thallium | ug/l | -- | -- | | 0.600 | U | |
| SW6020B | Thallium (Dissolved) | ug/l | -- | -- | | 0.600 | U | |
| SW6020B | Thorium (Dissolved) | ug/l | -- | -- | | 0.700 | U | |
| SW6020B | Thorium | ug/l | -- | -- | | 0.700 | U | |
| SW6020B | Uranium-235 | ug/l | -- | -- | | -- | -- | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | 2450 | | | -- | -- | |
| SW6020B | Uranium-238 | ug/l | 2590 | | | -- | -- | |
| SW6020B | Vanadium | ug/l | -- | -- | | 3.30 | U | |
| SW6020B | Vanadium (Dissolved) | ug/l | -- | -- | | 3.30 | U | |
| SW6020B | Zinc | ug/l | -- | -- | | 3.30 | U | |
| SW6020B | Zinc (Dissolved) | ug/l | -- | -- | | 3.30 | U | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | -- | -- | | 0.595 | J | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | -- | -- | | 8.44 | J+ | High PS %R |

Data Summary Form for Groundwater Samples
Job No. 618391
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/11/2023 - 4/11/2023

| | | Field Sample ID | HB-13-04112023 DUP | | | HB-13-04112023 DUP | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618391005 | | | 618391006 | | |
| | | Dilution Factor | 20 | | | 100 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium | ug/l | -- | -- | | -- | -- | |
| CALC | Uranium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Aluminum | ug/l | -- | -- | | -- | -- | |
| SW6020B | Aluminum (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Antimony | ug/l | -- | -- | | -- | -- | |
| SW6020B | Antimony (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Arsenic (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Arsenic | ug/l | -- | -- | | -- | -- | |
| SW6020B | Barium | ug/l | -- | -- | | -- | -- | |
| SW6020B | Barium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Beryllium | ug/l | -- | -- | | -- | -- | |
| SW6020B | Beryllium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Cadmium | ug/l | -- | -- | | -- | -- | |
| SW6020B | Cadmium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Calcium | ug/l | -- | -- | | -- | -- | |
| SW6020B | Calcium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Chromium | ug/l | -- | -- | | -- | -- | |
| SW6020B | Chromium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Cobalt | ug/l | -- | -- | | -- | -- | |
| SW6020B | Cobalt (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Copper | ug/l | -- | -- | | -- | -- | |
| SW6020B | Copper (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Iron (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Iron | ug/l | -- | -- | | -- | -- | |
| SW6020B | Lead | ug/l | -- | -- | | -- | -- | |
| SW6020B | Lead (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Magnesium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Magnesium | ug/l | -- | -- | | -- | -- | |
| SW6020B | Manganese | ug/l | -- | -- | | -- | -- | |
| SW6020B | Manganese (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Molybdenum (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Molybdenum | ug/l | -- | -- | | -- | -- | |
| SW6020B | Nickel | ug/l | -- | -- | | -- | -- | |
| SW6020B | Nickel (Dissolved) | ug/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618391
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/11/2023 - 4/11/2023

| | | Field Sample ID | HB-13-04112023 DUP | | | HB-13-04112023 DUP | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618391005 | | | 618391006 | | |
| | | Dilution Factor | 20 | | | 100 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Potassium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Potassium | ug/l | -- | -- | | -- | -- | |
| SW6020B | Selenium | ug/l | -- | -- | | -- | -- | |
| SW6020B | Selenium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Silver | ug/l | -- | -- | | -- | -- | |
| SW6020B | Silver (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Sodium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Sodium | ug/l | -- | -- | | -- | -- | |
| SW6020B | Thallium | ug/l | -- | -- | | -- | -- | |
| SW6020B | Thallium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Thorium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Thorium | ug/l | -- | -- | | -- | -- | |
| SW6020B | Uranium-235 | ug/l | 5.34 | | | -- | -- | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | 5.28 | | | -- | -- | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | -- | -- | | 2460 | | |
| SW6020B | Uranium-238 | ug/l | -- | -- | | 2550 | | |
| SW6020B | Vanadium | ug/l | -- | -- | | -- | -- | |
| SW6020B | Vanadium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Zinc | ug/l | -- | -- | | -- | -- | |
| SW6020B | Zinc (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618391
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/11/2023 - 4/11/2023

| | | Field Sample ID | HBPZ-2R-04112023 | | | HBPZ-2R-04112023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618391009 | | | 618391009 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium | ug/l | 839 | | | -- | -- | |
| CALC | Uranium (Dissolved) | ug/l | 850 | | | -- | -- | |
| SW6020B | Aluminum | ug/l | 29.3 | J | | -- | -- | |
| SW6020B | Aluminum (Dissolved) | ug/l | 19.3 | U | | -- | -- | |
| SW6020B | Antimony | ug/l | 1.00 | U | | -- | -- | |
| SW6020B | Antimony (Dissolved) | ug/l | 1.00 | U | | -- | -- | |
| SW6020B | Arsenic (Dissolved) | ug/l | 2.00 | U | | -- | -- | |
| SW6020B | Arsenic | ug/l | 2.00 | U | | -- | -- | |
| SW6020B | Barium | ug/l | 3.16 | J | | -- | -- | |
| SW6020B | Barium (Dissolved) | ug/l | 3.45 | J | | -- | -- | |
| SW6020B | Beryllium | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Beryllium (Dissolved) | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Cadmium | ug/l | 0.947 | J+ | ICSA detection | -- | -- | |
| SW6020B | Cadmium (Dissolved) | ug/l | 0.987 | J+ | ICSA detection | -- | -- | |
| SW6020B | Calcium | ug/l | 17000 | | | -- | -- | |
| SW6020B | Calcium (Dissolved) | ug/l | 17500 | | | -- | -- | |
| SW6020B | Chromium | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Chromium (Dissolved) | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Cobalt | ug/l | 0.759 | J+ | ICSA detection | -- | -- | |
| SW6020B | Cobalt (Dissolved) | ug/l | 0.757 | J+ | ICSA detection | -- | -- | |
| SW6020B | Copper | ug/l | 16.2 | | | -- | -- | |
| SW6020B | Copper (Dissolved) | ug/l | 16.7 | | | -- | -- | |
| SW6020B | Iron (Dissolved) | ug/l | 33.0 | U | | -- | -- | |
| SW6020B | Iron | ug/l | 33.0 | U | | -- | -- | |
| SW6020B | Lead | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Lead (Dissolved) | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Magnesium (Dissolved) | ug/l | 7680 | | | -- | -- | |
| SW6020B | Magnesium | ug/l | 7370 | | | -- | -- | |
| SW6020B | Manganese | ug/l | 13.8 | J+ | ICSA detection | -- | -- | |
| SW6020B | Manganese (Dissolved) | ug/l | 14.6 | J+ | ICSA detection | -- | -- | |
| SW6020B | Molybdenum (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Molybdenum | ug/l | -- | -- | | -- | -- | |
| SW6020B | Nickel | ug/l | 2.5 | J+ | ICSA detection | -- | -- | |
| SW6020B | Nickel (Dissolved) | ug/l | 2.55 | J+ | ICSA detection | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618391
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/11/2023 - 4/11/2023

| | | Field Sample ID | HBPZ-2R-04112023 | | | HBPZ-2R-04112023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618391009 | | | 618391009 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Potassium (Dissolved) | ug/l | 2970 | | | -- | -- | |
| SW6020B | Potassium | ug/l | 2920 | | | -- | -- | |
| SW6020B | Selenium | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Selenium (Dissolved) | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Silver | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Silver (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Sodium (Dissolved) | ug/l | 24000 | | | -- | -- | |
| SW6020B | Sodium | ug/l | 23600 | | | -- | -- | |
| SW6020B | Thallium | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thallium (Dissolved) | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thorium (Dissolved) | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Thorium | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Uranium-235 | ug/l | -- | -- | | 1.74 | | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | -- | -- | | 1.74 | | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | -- | -- | | 848 | | |
| SW6020B | Uranium-238 | ug/l | -- | -- | | 837 | | |
| SW6020B | Vanadium | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Vanadium (Dissolved) | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Zinc | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Zinc (Dissolved) | ug/l | 3.30 | U | | -- | -- | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | 0.996 | J | | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | 14.0 | J+ | High PS %R | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618391
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/11/2023 - 4/11/2023

| | | Field Sample ID | HBPZ-2R-04112023 | | | MW-BS7-2-04112023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618391009 | | | 618391011 | | |
| | | Dilution Factor | 20 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium | ug/l | -- | -- | | 47.8 | J | High CCV %RSD |
| CALC | Uranium (Dissolved) | ug/l | -- | -- | | 47.4 | | |
| SW6020B | Aluminum | ug/l | -- | -- | | 34 | J | |
| SW6020B | Aluminum (Dissolved) | ug/l | -- | -- | | 19.3 | U | |
| SW6020B | Antimony | ug/l | -- | -- | | 1.00 | U | |
| SW6020B | Antimony (Dissolved) | ug/l | -- | -- | | 1.00 | U | |
| SW6020B | Arsenic (Dissolved) | ug/l | -- | -- | | 2.3 | J | |
| SW6020B | Arsenic | ug/l | -- | -- | | 2.17 | J | |
| SW6020B | Barium | ug/l | -- | -- | | 31.3 | | |
| SW6020B | Barium (Dissolved) | ug/l | -- | -- | | 31.2 | | |
| SW6020B | Beryllium | ug/l | -- | -- | | 0.200 | U | |
| SW6020B | Beryllium (Dissolved) | ug/l | -- | -- | | 0.200 | U | |
| SW6020B | Cadmium | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Cadmium (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Calcium | ug/l | -- | -- | | -- | -- | |
| SW6020B | Calcium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Chromium | ug/l | -- | -- | | 3.00 | U | |
| SW6020B | Chromium (Dissolved) | ug/l | -- | -- | | 3.00 | U | |
| SW6020B | Cobalt | ug/l | -- | -- | | 1.02 | J+ | ICSA detection |
| SW6020B | Cobalt (Dissolved) | ug/l | -- | -- | | 1.07 | J+ | ICSA detection |
| SW6020B | Copper | ug/l | -- | -- | | 2.39 | | |
| SW6020B | Copper (Dissolved) | ug/l | -- | -- | | 2.3 | | |
| SW6020B | Iron (Dissolved) | ug/l | -- | -- | | 33.0 | U | |
| SW6020B | Iron | ug/l | -- | -- | | 49.4 | J | |
| SW6020B | Lead | ug/l | -- | -- | | 0.500 | U | |
| SW6020B | Lead (Dissolved) | ug/l | -- | -- | | 0.500 | U | |
| SW6020B | Magnesium (Dissolved) | ug/l | -- | -- | | 17200 | | |
| SW6020B | Magnesium | ug/l | -- | -- | | 17000 | | |
| SW6020B | Manganese | ug/l | -- | -- | | 400 | | |
| SW6020B | Manganese (Dissolved) | ug/l | -- | -- | | 396 | | |
| SW6020B | Molybdenum (Dissolved) | ug/l | 1140 | | | 51.2 | | |
| SW6020B | Molybdenum | ug/l | 1060 | | | 52.1 | | |
| SW6020B | Nickel | ug/l | -- | -- | | 1.14 | J+ | ICSA detection |
| SW6020B | Nickel (Dissolved) | ug/l | -- | -- | | 1.16 | J+ | ICSA detection |

Data Summary Form for Groundwater Samples
Job No. 618391
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/11/2023 - 4/11/2023

| | | Field Sample ID | HBPZ-2R-04112023 | | | MW-BS7-2-04112023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618391009 | | | 618391011 | | |
| | | Dilution Factor | 20 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Potassium (Dissolved) | ug/l | -- | -- | | 7320 | | |
| SW6020B | Potassium | ug/l | -- | -- | | 6730 | | |
| SW6020B | Selenium | ug/l | -- | -- | | 1.50 | U | |
| SW6020B | Selenium (Dissolved) | ug/l | -- | -- | | 1.50 | U | |
| SW6020B | Silver | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Silver (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Sodium (Dissolved) | ug/l | -- | -- | | -- | -- | |
| SW6020B | Sodium | ug/l | -- | -- | | -- | -- | |
| SW6020B | Thallium | ug/l | -- | -- | | 0.600 | U | |
| SW6020B | Thallium (Dissolved) | ug/l | -- | -- | | 0.600 | U | |
| SW6020B | Thorium (Dissolved) | ug/l | -- | -- | | 0.700 | U | |
| SW6020B | Thorium | ug/l | -- | -- | | 0.700 | U | |
| SW6020B | Uranium-235 | ug/l | -- | -- | | 0.341 | | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | -- | -- | | 0.344 | | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | -- | -- | | 47.1 | J | High CCV %RSD |
| SW6020B | Uranium-238 | ug/l | -- | -- | | 47.5 | J | High CCV %RSD |
| SW6020B | Vanadium | ug/l | -- | -- | | 20.0 | U | EB contamination |
| SW6020B | Vanadium (Dissolved) | ug/l | -- | -- | | 20.0 | U | EB contamination |
| SW6020B | Zinc | ug/l | -- | -- | | 3.30 | U | |
| SW6020B | Zinc (Dissolved) | ug/l | -- | -- | | 3.30 | U | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618391
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/11/2023 - 4/11/2023

| | | Field Sample ID | MW-BS7-2-04112023 | | |
|---|---|---|---|---|---|
| | | Lab Sample ID | 618391011 | | |
| | | Dilution Factor | 10 | | |
| Analytical Method | Parameter | Unit | | | |
| CALC | Uranium | ug/l | -- | -- | |
| CALC | Uranium (Dissolved) | ug/l | -- | -- | |
| SW6020B | Aluminum | ug/l | -- | -- | |
| SW6020B | Aluminum (Dissolved) | ug/l | -- | -- | |
| SW6020B | Antimony | ug/l | -- | -- | |
| SW6020B | Antimony (Dissolved) | ug/l | -- | -- | |
| SW6020B | Arsenic (Dissolved) | ug/l | -- | -- | |
| SW6020B | Arsenic | ug/l | -- | -- | |
| SW6020B | Barium | ug/l | -- | -- | |
| SW6020B | Barium (Dissolved) | ug/l | -- | -- | |
| SW6020B | Beryllium | ug/l | -- | -- | |
| SW6020B | Beryllium (Dissolved) | ug/l | -- | -- | |
| SW6020B | Cadmium | ug/l | -- | -- | |
| SW6020B | Cadmium (Dissolved) | ug/l | -- | -- | |
| SW6020B | Calcium | ug/l | 65200 | J | High CCV %RSD |
| SW6020B | Calcium (Dissolved) | ug/l | 64600 | J | High CCV %RSD |
| SW6020B | Chromium | ug/l | -- | -- | |
| SW6020B | Chromium (Dissolved) | ug/l | -- | -- | |
| SW6020B | Cobalt | ug/l | -- | -- | |
| SW6020B | Cobalt (Dissolved) | ug/l | -- | -- | |
| SW6020B | Copper | ug/l | -- | -- | |
| SW6020B | Copper (Dissolved) | ug/l | -- | -- | |
| SW6020B | Iron (Dissolved) | ug/l | -- | -- | |
| SW6020B | Iron | ug/l | -- | -- | |
| SW6020B | Lead | ug/l | -- | -- | |
| SW6020B | Lead (Dissolved) | ug/l | -- | -- | |
| SW6020B | Magnesium (Dissolved) | ug/l | -- | -- | |
| SW6020B | Magnesium | ug/l | -- | -- | |
| SW6020B | Manganese | ug/l | -- | -- | |
| SW6020B | Manganese (Dissolved) | ug/l | -- | -- | |
| SW6020B | Molybdenum (Dissolved) | ug/l | -- | -- | |
| SW6020B | Molybdenum | ug/l | -- | -- | |
| SW6020B | Nickel | ug/l | -- | -- | |
| SW6020B | Nickel (Dissolved) | ug/l | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618391
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/11/2023 - 4/11/2023

| | | Field Sample ID | MW-BS7-2-04112023 | | |
|---|---|---|---|---|---|
| | | Lab Sample ID | 618391011 | | |
| | | Dilution Factor | 10 | | |
| Analytical Method | Parameter | Unit | | | |
| SW6020B | Potassium (Dissolved) | ug/l | -- | -- | |
| SW6020B | Potassium | ug/l | -- | -- | |
| SW6020B | Selenium | ug/l | -- | -- | |
| SW6020B | Selenium (Dissolved) | ug/l | -- | -- | |
| SW6020B | Silver | ug/l | -- | -- | |
| SW6020B | Silver (Dissolved) | ug/l | -- | -- | |
| SW6020B | Sodium (Dissolved) | ug/l | 75500 | J | High CCV %RSD |
| SW6020B | Sodium | ug/l | 74600 | J | High CCV %RSD |
| SW6020B | Thallium | ug/l | -- | -- | |
| SW6020B | Thallium (Dissolved) | ug/l | -- | -- | |
| SW6020B | Thorium (Dissolved) | ug/l | -- | -- | |
| SW6020B | Thorium | ug/l | -- | -- | |
| SW6020B | Uranium-235 | ug/l | -- | -- | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | -- | -- | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | -- | -- | |
| SW6020B | Uranium-238 | ug/l | -- | -- | |
| SW6020B | Vanadium | ug/l | -- | -- | |
| SW6020B | Vanadium (Dissolved) | ug/l | -- | -- | |
| SW6020B | Zinc | ug/l | -- | -- | |
| SW6020B | Zinc (Dissolved) | ug/l | -- | -- | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | -- | -- | |

# Attachment B
# VALIDATION QUALIFIER DEFINITIONS
# SDG 618391

## Validation Qualifier Definitions

Final validated results are annotated with the following codes:

**U** The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

**J** The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

**J+** The result is an estimated quantity, but the result may be biased high.

**J-** The result is an estimated quantity, but the result may be biased low.

**NJ** The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.

**UJ** The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

**R** The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

July 11, 2023

Ms. Jessie McCusker
de maximis, Inc.
200 Day Hill Road, Suite 200
Windsor, CT 06095

Re: SDG No. 618393
GEL Laboratories
NMI Groundwater
Data Validation

12/Water
MW-S24-04102023
BEW-5-04102023
MW-BS01-04102023
MW-SD24-04102023 DUP
MW-BS14-04102023
MW-BS15-04102023
MW-S62A-04102023
MW-SD01-04102023
MW-SD24-04102023
MW-SD62A-04102023
MW-SD61-04102023

1/Equipment Blank
EQ-BLANK-04102023

Dear Ms. McCusker:

A Tier I Plus data validation was performed on twelve water samples and one equipment blank from the Nuclear Metals Superfund site. The data validation was performed using the Region 1 - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures dated June 2018, to the extent possible, Massachusetts Compendium of Analytical Methods (CAM) protocols, the site-specific QAPP, and ddms' Standard Operating Procedures (SOPs). Professional judgment was applied as necessary and appropriate.

Analyses were performed in accordance with the following methods:

| **Parameter** | **Method** |
|---|---|
| Total and Dissolved Metals | SW846 6020A |
| Dissolved Inorganic Carbon | SW846 9060A |
| Dissolved Organic Carbon | SW846 9060A |

The data were evaluated based on the parameters summarized in the table below, where applicable:

| | | |
|---|---|---|
| | • | Overall Evaluation of Data and Potential Usability Issues |
| * | • | Data Completeness |
| * | • | Preservation and Technical Holding Times |
| | • | Interference Check Sample |
| | • | Initial and Continuing Calibrations |
| * | • | Blanks |
| * | • | Internal Standards |
| * | • | Laboratory Control Sample/ Laboratory Control Sample Duplicates |
| | • | Matrix Spike/Matrix Spike Duplicate |
| | • | Field and Laboratory Duplicates |
| | • | Serial Dilutions |
| * | • | Target Analyte Identification |
| * | • | Analyte Quantitation and Reported Quantitation Limits |
| | • | Dissolved v. Total |
| * | • | System Performance |

*All criteria were met for this quality element

The Data Validation Report includes the following attachments:

Attachment A: Data Summary Table – summarized validated results

Attachment B: Validation Qualifier Definitions

**Overall Evaluation of Data**

Based on the review effort, qualifiers were applied to the reported results as follows:

- The results for total copper in MW-BS01-04102023 and MW-BS14-04102023, for dissolved copper in MW-S62A-04102023 and MW-SD62A-04102023, for total and dissolved manganese in MW-SD01-04102023 and MW-BS01-04102023, for total nickel in MW-BS01-0410202, for total and dissolved nickel in MW-S24-04102023, MW-S62A-04102023, BEW-5-04102023, MW-SD01-04102023, MW-SD24-04102023, MW-SD24-04102023 DUP, MW-SD62A-04102023, and MW-BS15-04102023, and for total and dissolved cobalt in MW-SD61-04102023 were qualified as estimated (J+) with high bias due to detection in the interference check sample at a concentration greater than twice the method detection limit (MDL).

- Results for total uranium-235 and dissolved potassium in all field samples were qualified as estimated (J, UJ) due to high matrix spike duplicate (MSD) recoveries.

- Results for total aluminum and total manganese in all field samples were qualified as estimated (J, UJ) due to field duplicate imprecision.

- Results for total magnesium and total uranium-238 in all field samples and for total sodium in MW-BS15-04102023 were qualified as estimated (J) due to an unacceptable serial dilution result.

- The results for total and dissolved iron and manganese in MW-S24-04102023, for total and dissolved cobalt and manganese in MW-SD24-04102023, and for total and dissolved molybdenum in MW-SD62A-04102023 were qualified as estimated (J) because the dissolved concentration exceeded the total concentration by more than ten percent.

- Results for total and dissolved aluminum in MW-BS14-04102023 were qualified as estimated (J, UJ) due to lack of confirmation at a low concentration in the total analysis.

- The results for dissolved inorganic carbon in MW-S24-04102023, MW-S62A-04102023, MW-SD24-04102023, MW-SD24-04102023 DUP, MW-SD62A-04102023 and MW-SD61-04102023 were qualified as estimated (J+) with high bias due to elevated post-digestion spike (PS) recovery.

The remaining results were determined to be usable as reported by the laboratory.

The following sections of this report detail the reasons qualifiers were applied to the sample results. Each parameter section discusses the quality control (QC) excursions that impacted sample results. Where a quality indicator was deemed acceptable after thorough review, no further discussion is included in this report. Detailed findings are included for each quality element that impacted the usability of the reported results. Additional information or explanation is included as needed, to provide support for decisions made, based on the validator's best professional judgment.

Where a result was qualified J+ and J, or J- and J, the J qualifier takes precedence. Where a result was qualified biased high and low for differing data quality excursions, the final qualifier is J, with indeterminate bias.

## Metals (SW846 6020B)

### Initial and Continuing Calibrations

Seven initial calibrations (ICs) were performed on ICPMS15 on April 20, 22, and 26, 2023, and May 6 and 7, 2023. Initial and continuing calibration verification (ICV/CCV) standard were analyzed at the appropriate frequency. All ICV/CCV standards were within acceptance criteria (90-110%R; <5%RSD).

A Contract Required Detection Limit (CRDL) standard was analyzed with each analytical sequence and values reported were at or below the practical quantitation limit (PQL) for all target analytes. All recoveries were within the 80-120% acceptance limits, with the

exception of calcium in four of the analytical sequences (126-148%). The calcium concentrations in all associated samples were above actionable levels, and qualifications were not warranted.

Interference Check Sample

Interference check sample solutions A (ICSA) and AB (ICSAB) were analyzed in each analytical sequence. All spiked analytes recovered within acceptance limits (80-120%R), and all non-spiked analytes were less than twice the MDL with the following exceptions:

| Analyte | ICSA Conc. (ug/L) | MDL (ug/L) | Affected Samples | Qualifier Applied |
|---|---|---|---|---|
| *ICSA 4/20/23 at 21:53* | | | | |
| Copper | 0.705 | 0.30 | MW-BS01-04102023<br>MW-BS14-04102023<br>MW-S62A-04102023<br>MW-SD62A-04102023 | J+ |
| Manganese | 11.9 | 1.0 | MW-SD01-04102023<br>MW-BS01-04102023 | |
| Nickel | 1.61 | 0.60 | MW-S24-04102023<br>MW-S62A-04102023<br>BEW-5-04102023<br>MW-SD01-04102023<br>MW-BS01-0410202<br>MW-SD24-04102023<br>MW-SD24-04102023 DUP<br>MW-SD62A-04102023 | |
| Selenium | 1.82 | 1.5 | None | None |
| Cadmium | 1.20 | 0.30 | | |
| *ICSA 5/6/23 at 15:33* | | | | |
| Nickel | 1.73 | 0.60 | MW-BS15-04102023 | J+ |
| Cobalt | 0.928 | 0.30 | MW-SD61-04102023 | |
| Cadmium | 2.38 | 0.30 | None | None |
| Manganese | 7.66 | 1.0 | | |
| *ICSA 5/7/23 at 21:39* | | | | |
| Manganese | 9.44 | 1.0 | None | None |

The results for total copper in MW-BS01-04102023 and MW-BS14-04102023, for dissolved copper in MW-S62A-04102023 and MW-SD62A-04102023, for total and dissolved manganese in MW-SD01-04102023 and MW-BS01-04102023, for total nickel in MW-BS01-0410202, for total and dissolved nickel in MW-S24-04102023, MW-S62A-04102023, BEW-5-04102023, MW-SD01-04102023, MW-SD24-04102023, MW-SD24-04102023 DUP, MW-SD62A-04102023, and MW-BS15-04102023, and for total and dissolved cobalt in MW-SD61-04102023 were qualified as estimated (J+) with high bias

due to detection in the interference check sample at a concentration greater than twice the MDL.

For all other results listed above, the analyte was either not detected or was detected at a concentration greater than two times the ICSA concentration. Therefore, no additional qualifiers were applied.

Matrix Spike (MS)/Matrix Spike Duplicate (MSD)

MS/MSDs were performed on samples MW-S62A-04102023 and MW-BS01-04102023 (total and dissolved metals) and on MW-SD60-04072023 from SDG 618389 (total metals). Recoveries and MS/MSD precision were within the acceptance criteria (80-120%R; RPD<20), with the exceptions noted below:

| Analyte | MS %R | MSD %R | RPD | Associated Samples | Qualifier Applied |
|---|---|---|---|---|---|
| *Parent Sample: MW-S62A-04102023* | | | | | |
| Calcium, Total | 127 | 129 | a | All | None |
| Manganese, Total | 134 | 23 | a | | |
| Sodium, Total | 149 | 137 | a | | |
| Calcium, Dissolved | a | 66 | a | | |
| Manganese, Dissolved | a | 66 | a | | |
| *Parent Sample: MW-BS01-04102023* | | | | | |
| Calcium, Total | 88 | 125 | a | All | None |
| Sodium, Total | 72 | a | a | | |
| Uranium-235, Total | a | 121 | a | | J, UJ |
| Calcium, Dissolved | 128 | 134 | a | | None |
| Magnesium, Dissolved | a | 125 | a | | |
| Potassium, Dissolved | a | 132 | a | | J |
| Sodium, Dissolved | a | 161 | a | | None |
| *Parent Sample: MW-SD60-04072023* | | | | | |
| Sodium, Total | 134 | a | a | MW-BS15-04102023 | None |

a = acceptable

A post spike was performed on MW-BS01-04102023 and recoveries of total uranium-235 and dissolved potassium were acceptable, indicating that the high recoveries may be attributable to the sample matrix. Results for total uranium-235 and dissolved potassium in all field samples were qualified as estimated (J, UJ) due to high MSD recoveries.

For all other results listed above, the original sample concentrations in the MS/MSDs were more than four times the spike concentrations. Accurate recoveries would not be expected on this basis, and no additional qualifiers were necessary.

ddms

Field Duplicate

Sample MW-SD24-04102023 DUP was submitted as a field duplicate of MW-SD24-04102023. Precision between paired field duplicate results was acceptable (QC ≤30 RPD), except for total aluminum (35 RPD) and total manganese (36 RPD). Results for total aluminum and total manganese in all field samples were qualified as estimated (J) due to field duplicate imprecision.

Serial Dilution

Serial dilution analyses were performed on MW-S62A-04102023 and MW-BS01-04102023 (total and dissolved metals) and on MW-SD60-04072023 from SDG 618389 (total metals) in support of sample analyses. Where the parent sample concentration exceeded 50 times the MDL, the percent difference was less than the maximum acceptance limit of 10%, with the following exceptions:

| Parent Sample | Analyte | %D | Associated Samples | Qualifier Applied |
|---|---|---|---|---|
| MW-BS01-04102023 | Magnesium, Total | 11.1 | All | J |
| | Uranium-238, Total | 57.9 | | |
| MW-SD60-04072023 | Sodium, Total | 15.0 | MW-BS15-04102023 | |

Results for total magnesium and total uranium-238 in all field samples and for total sodium in MW-BS15-04102023 were qualified as estimated (J) due to an unacceptable serial dilution result.

Quantitation

Several of the samples were analyzed at dilutions to obtain concentrations of one or more target analytes that were within the documented linear ranges of the instrument. Analyte concentrations, MDLs, and PQLs were appropriately adjusted for the dilution factors.

The instrument detection limit summary provides MDLs “effective” on 10/8/21 and verified on 3/7/23 (ICPMS15).

Linear ranges, according to the summary provided in the data package, were determined on 8/1/17 (ICPMS15). There is no indication in the data package that the linear ranges have been reproduced or verified between the date established and the date of field sample analyses, five years later. However, all analyte concentrations in the samples were within the established instrument calibration range for each analyte; therefore, there is no adverse impact on the sample results.

ddms

Total vs. Dissolved

The total concentration exceeded the dissolved concentration for detected analytes, with the exceptions noted below:

| Sample | Analyte | Total Conc (ug/L) | Dissolved Conc (ug/L) | %D |
|---|---|---|---|---|
| BEW-5-04102023 | Arsenic | 6.57 | 6.38 | <10 |
| | Calcium | 172000 | 179000 | <10 |
| | Magnesium | 50500 | 52000 | <10 |
| | Manganese | 1090 | 1140 | <10 |
| | Sodium | 46000 | 46400 | <10 |
| | Uranium-235 | 0.114 | 0.116 | <10 |
| MW-BS01-04102023 | Uranium-235 | 0.0507 J | 0.0573 J | 13 |
| | Uranium-238 | 7.01 | 7.63 | <10 |
| MW-BS14-04102023 | Aluminum | 50 U | 27.3 J | nc |
| MW-BS15-04102023 | Arsenic | 2.09 J | 2.35 J | 12 |
| | Calcium | 96300 | 99100 | <10 |
| | Magnesium | 29700 | 30400 | <10 |
| | Potassium | 12200 | 12400 | <10 |
| | Uranium-235 | 0.0218 J | 0.0232 J | <10 |
| | Uranium-238 | 2.98 | 3.14 | <10 |
| | Vanadium | 3.69 J | 4.28 J | 16 |
| MW-S24-04102023 | Calcium | 28300 | 28600 | <10 |
| | Cobalt | 1.75 | 1.78 | <10 |
| | Iron | 274 | 362 | **32** |
| | Magnesium | 7280 | 7410 | <10 |
| | Manganese | 39.7 | 44.4 | **12** |
| | Molybdenum | 297 | 302 | <10 |
| | Potassium | 3980 | 4060 | <10 |
| | Sodium | 20000 | 20600 | <10 |
| MW-S62A-04102023 | Calcium | 23300 | 24000 | <10 |
| | Magnesium | 5720 | 5960 | <10 |
| | Manganese | 417 | 433 | <10 |
| | Molybdenum | 43.7 | 44.8 | <10 |
| | Sodium | 36500 | 37000 | <10 |
| MW-SD24-04102023 | Calcium | 24800 | 25700 | <10 |
| | Cobalt | 1.03 | 1.32 | **28** |
| | Magnesium | 5830 | 6010 | <10 |
| | Manganese | 33.9 | 56.5 | **67** |
| | Potassium | 4760 | 5080 | <10 |
| | Sodium | 31900 | 33800 | <10 |
| MW-SD24-04102023 DUP | Potassium | 4570 | 4640 | <10 |
| MW-SD62A-04102023 | Barium | 5.91 | 6.07 | <10 |

| Sample | Analyte | Total Conc (ug/L) | Dissolved Conc (ug/L) | %D |
|---|---|---|---|---|
| | Molybdenum | 2.89 | 3.27 | **13** |

nc = not calculated

The results for total and dissolved iron and manganese in MW-S24-04102023, for total and dissolved cobalt and manganese in MW-SD24-04102023, and for total and dissolved molybdenum in MW-SD62A-04102023 were qualified as estimated (J) because the dissolved concentration exceeded the total concentration by more than ten percent. Results for total and dissolved aluminum in MW-BS14-04102023 were qualified as estimated (J, UJ) due to lack of confirmation at a low concentration in the total analysis.

When the %D is 10% or less, experimental error is assumed, and no qualification of sample results is made. Where the percent difference is greater than 10% and total and dissolved concentrations were less than the PQL (and flagged with a J on this basis by the laboratory), no qualification of sample results is made. No additional action was necessary for the results detailed above.

## Dissolved Inorganic Carbon and Dissolved Organic Carbon (SW846 9060A)

Samples MW-S24-04102023, MW-S62A-04102023, MW-SD24-04102023, MW-SD24-04102023 DUP, MW-SD62A-04102023 and MW-SD61-04102023 were analyzed for dissolved inorganic carbon and dissolved organic carbon.

### Post Spike (PS)

PS was performed on samples MW-S62A-04102023 and MW-S64-04102023 (SDG 617335). The recovery of dissolved inorganic carbon (120%R) in the PS of MW-S62A-04102023 was outside acceptance criteria (85-115%R). The results for dissolved inorganic carbon in MW-S24-04102023, MW-S62A-04102023, MW-SD24-04102023, MW-SD24-04102023 DUP, MW-SD62A-04102023 and MW-SD61-04102023 were qualified as estimated (J+) with potential high bias due to elevated PS recovery.

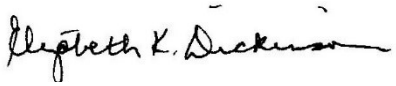
## Documentation

The following documentation issues were observed during the validation effort:

- Results for the MS and MSD in the metals analyses are also presented as “Duplicate Sample” results for assessment of precision. It should be noted that the comparison is made with results for the MS and MSD, not unspiked sample results.

Please feel free to contact me (edickinson@ddmsinc.com or 610-314-6284) with any questions you may have regarding this information.

Sincerely,



Elizabeth K. Dickinson
Sr. Environmental Chemist

Attachments

**Attachment A**
**DATA SUMMARY TABLE**
**SDG 618393**

Data Summary Form for Groundwater Samples
Job No. 618393
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/10/2023 - 4/10/2023

| | | Field Sample ID | BEW-5-04102023 | | | BEW-5-04102023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618393005 | | | 618393005 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium | ug/l | 15.9 | | | -- | -- | |
| CALC | Uranium (Dissolved) | ug/l | 15.8 | | | -- | -- | |
| SW6020B | Aluminum (Dissolved) | ug/l | 19.3 | U | | -- | -- | |
| SW6020B | Aluminum | ug/l | 63.4 | J | Field dup imprecision | -- | -- | |
| SW6020B | Antimony (Dissolved) | ug/l | 1.00 | U | | -- | -- | |
| SW6020B | Antimony | ug/l | 1.00 | U | | -- | -- | |
| SW6020B | Arsenic | ug/l | 6.38 | | | -- | -- | |
| SW6020B | Arsenic (Dissolved) | ug/l | 6.57 | | | -- | -- | |
| SW6020B | Barium (Dissolved) | ug/l | 32.2 | | | -- | -- | |
| SW6020B | Barium | ug/l | 33.5 | | | -- | -- | |
| SW6020B | Beryllium | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Beryllium (Dissolved) | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Cadmium (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Cadmium | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Calcium (Dissolved) | ug/l | -- | -- | | 179000 | | |
| SW6020B | Calcium | ug/l | -- | -- | | 172000 | | |
| SW6020B | Chromium | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Chromium (Dissolved) | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Cobalt (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Cobalt | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Copper | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Copper (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Iron (Dissolved) | ug/l | 2750 | | | -- | -- | |
| SW6020B | Iron | ug/l | 3170 | | | -- | -- | |
| SW6020B | Lead (Dissolved) | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Lead | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Magnesium (Dissolved) | ug/l | -- | -- | | 52000 | | |
| SW6020B | Magnesium | ug/l | -- | -- | | 50500 | J | High Serial Dil %D |
| SW6020B | Manganese (Dissolved) | ug/l | -- | -- | | 1140 | | |
| SW6020B | Manganese | ug/l | -- | -- | | 1090 | J | Field dup imprecision |
| SW6020B | Molybdenum (Dissolved) | ug/l | 1.07 | | | -- | -- | |
| SW6020B | Molybdenum | ug/l | 1.16 | | | -- | -- | |
| SW6020B | Nickel (Dissolved) | ug/l | 0.745 | J+ | ICSA detection | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618393
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/10/2023 - 4/10/2023

| | | Field Sample ID | BEW-5-04102023 | | | BEW-5-04102023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618393005 | | | 618393005 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Nickel | ug/l | 0.86 | J+ | ICSA detection | -- | -- | |
| SW6020B | Potassium (Dissolved) | ug/l | 16100 | J | High MSD %R | -- | -- | |
| SW6020B | Potassium | ug/l | 16800 | | | -- | -- | |
| SW6020B | Selenium (Dissolved) | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Selenium | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Silver (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Silver | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Sodium (Dissolved) | ug/l | -- | -- | | 46400 | | |
| SW6020B | Sodium | ug/l | -- | -- | | 46000 | | |
| SW6020B | Thallium (Dissolved) | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thallium | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thorium (Dissolved) | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Thorium | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Uranium-235 | ug/l | 0.114 | J | High MSD %R | -- | -- | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | 0.116 | | | -- | -- | |
| SW6020B | Uranium-238 | ug/l | 15.8 | J | High Serial Dil %D | -- | -- | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | 15.7 | | | -- | -- | |
| SW6020B | Vanadium (Dissolved) | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Vanadium | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Zinc (Dissolved) | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Zinc | ug/l | 5.53 | J | | -- | -- | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618393
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/10/2023 - 4/10/2023

| | | Field Sample ID | EQ-BLANK-04102023 | | | MW-BS01-04102023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618393017 | | | 618393009 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium | ug/l | 0.0670 | U | | 7.06 | | |
| CALC | Uranium (Dissolved) | ug/l | -- | -- | | 7.69 | | |
| SW6020B | Aluminum (Dissolved) | ug/l | -- | -- | | 72.6 | | |
| SW6020B | Aluminum | ug/l | 19.3 | U | | 213 | J | Field dup imprecision |
| SW6020B | Antimony (Dissolved) | ug/l | -- | -- | | 1.00 | U | |
| SW6020B | Antimony | ug/l | 1.00 | U | | 1.00 | U | |
| SW6020B | Arsenic | ug/l | 2.00 | U | | 9.57 | | |
| SW6020B | Arsenic (Dissolved) | ug/l | -- | -- | | 9.2 | | |
| SW6020B | Barium (Dissolved) | ug/l | -- | -- | | 20 | | |
| SW6020B | Barium | ug/l | 0.670 | U | | 21 | | |
| SW6020B | Beryllium | ug/l | 0.200 | U | | 0.200 | U | |
| SW6020B | Beryllium (Dissolved) | ug/l | -- | -- | | 0.200 | U | |
| SW6020B | Cadmium (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Cadmium | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Calcium (Dissolved) | ug/l | -- | -- | | 27800 | | |
| SW6020B | Calcium | ug/l | 80.0 | U | | 28100 | | |
| SW6020B | Chromium | ug/l | 3.00 | U | | 3.00 | U | |
| SW6020B | Chromium (Dissolved) | ug/l | -- | -- | | 3.00 | U | |
| SW6020B | Cobalt (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Cobalt | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Copper | ug/l | 0.300 | U | | 1.36 | J+ | ICSA detection |
| SW6020B | Copper (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Iron (Dissolved) | ug/l | -- | -- | | 33.0 | U | |
| SW6020B | Iron | ug/l | 33.0 | U | | 202 | | |
| SW6020B | Lead (Dissolved) | ug/l | -- | -- | | 0.500 | U | |
| SW6020B | Lead | ug/l | 0.500 | U | | 0.500 | U | |
| SW6020B | Magnesium (Dissolved) | ug/l | -- | -- | | 8870 | | |
| SW6020B | Magnesium | ug/l | 10.0 | U | | 9170 | J | High Serial Dil %D |
| SW6020B | Manganese (Dissolved) | ug/l | -- | -- | | 2.22 | J+ | ICSA detection |
| SW6020B | Manganese | ug/l | 1.00 | U | | 10.4 | J | ICSA detection, field dup imprecision |
| SW6020B | Molybdenum (Dissolved) | ug/l | -- | -- | | 7.62 | | |
| SW6020B | Molybdenum | ug/l | 0.200 | U | | 7.74 | | |
| SW6020B | Nickel (Dissolved) | ug/l | -- | -- | | 0.600 | U | |

Data Summary Form for Groundwater Samples
Job No. 618393
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/10/2023 - 4/10/2023

| | | Field Sample ID | EQ-BLANK-04102023 | | | MW-BS01-04102023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618393017 | | | 618393009 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Nickel | ug/l | 0.600 | U | | 2.14 | J+ | ICSA detection |
| SW6020B | Potassium (Dissolved) | ug/l | -- | -- | | 6130 | J | High MSD %R |
| SW6020B | Potassium | ug/l | 80.0 | U | | 6680 | | |
| SW6020B | Selenium (Dissolved) | ug/l | -- | -- | | 1.50 | U | |
| SW6020B | Selenium | ug/l | 1.50 | U | | 1.50 | U | |
| SW6020B | Silver (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Silver | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Sodium (Dissolved) | ug/l | -- | -- | | 31400 | | |
| SW6020B | Sodium | ug/l | 80.0 | U | | 31700 | | |
| SW6020B | Thallium (Dissolved) | ug/l | -- | -- | | 0.600 | U | |
| SW6020B | Thallium | ug/l | 0.600 | U | | 0.600 | U | |
| SW6020B | Thorium (Dissolved) | ug/l | -- | -- | | 0.700 | U | |
| SW6020B | Thorium | ug/l | 0.700 | U | | 0.700 | U | |
| SW6020B | Uranium-235 | ug/l | 0.0100 | U | | 0.0507 | J | High MSD %R |
| SW6020B | Uranium-235 (Dissolved) | ug/l | -- | -- | | 0.0573 | J | |
| SW6020B | Uranium-238 | ug/l | 0.0670 | UE | | 7.01 | J | High Serial Dil %D |
| SW6020B | Uranium-238 (Dissolved) | ug/l | -- | -- | | 7.63 | | |
| SW6020B | Vanadium (Dissolved) | ug/l | -- | -- | | 3.30 | U | |
| SW6020B | Vanadium | ug/l | 3.30 | U | | 3.43 | J | |
| SW6020B | Zinc (Dissolved) | ug/l | -- | -- | | 3.30 | U | |
| SW6020B | Zinc | ug/l | 3.30 | U | | 6.64 | J | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618393
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/10/2023 - 4/10/2023

| | | Field Sample ID | MW-BS14-04102023 | | | MW-BS14-04102023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618393018 | | | 618393018 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium | ug/l | 1.87 | | | -- | -- | |
| CALC | Uranium (Dissolved) | ug/l | 1.74 | | | -- | -- | |
| SW6020B | Aluminum (Dissolved) | ug/l | 27.3 | J | Total > dissolved | -- | -- | |
| SW6020B | Aluminum | ug/l | 19.3 | UJ | Field dup imprecision, Total > dissolved | -- | -- | |
| SW6020B | Antimony (Dissolved) | ug/l | 1.00 | U | | -- | -- | |
| SW6020B | Antimony | ug/l | 1.00 | U | | -- | -- | |
| SW6020B | Arsenic | ug/l | 2.00 | U | | -- | -- | |
| SW6020B | Arsenic (Dissolved) | ug/l | 2.00 | U | | -- | -- | |
| SW6020B | Barium (Dissolved) | ug/l | 49.5 | | | -- | -- | |
| SW6020B | Barium | ug/l | 51.1 | | | -- | -- | |
| SW6020B | Beryllium | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Beryllium (Dissolved) | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Cadmium (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Cadmium | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Calcium (Dissolved) | ug/l | -- | -- | | 49400 | | |
| SW6020B | Calcium | ug/l | -- | -- | | 53500 | | |
| SW6020B | Chromium | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Chromium (Dissolved) | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Cobalt (Dissolved) | ug/l | 2.76 | | | -- | -- | |
| SW6020B | Cobalt | ug/l | 2.93 | | | -- | -- | |
| SW6020B | Copper | ug/l | 0.457 | J+ | ICSA detection | -- | -- | |
| SW6020B | Copper (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Iron (Dissolved) | ug/l | 844 | | | -- | -- | |
| SW6020B | Iron | ug/l | 885 | | | -- | -- | |
| SW6020B | Lead (Dissolved) | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Lead | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Magnesium (Dissolved) | ug/l | 19200 | | | -- | -- | |
| SW6020B | Magnesium | ug/l | 19800 | J | High Serial Dil %D | -- | -- | |
| SW6020B | Manganese (Dissolved) | ug/l | -- | -- | | 1020 | | |
| SW6020B | Manganese | ug/l | -- | -- | | 1020 | J | Field dup imprecision |
| SW6020B | Molybdenum (Dissolved) | ug/l | 2.05 | | | -- | -- | |
| SW6020B | Molybdenum | ug/l | 2.26 | | | -- | -- | |
| SW6020B | Nickel (Dissolved) | ug/l | 4.37 | | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618393
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/10/2023 - 4/10/2023

| | | Field Sample ID | MW-BS14-04102023 | | | MW-BS14-04102023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618393018 | | | 618393018 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Nickel | ug/l | 4.6 | | | -- | -- | |
| SW6020B | Potassium (Dissolved) | ug/l | 8030 | J | High MSD %R | -- | -- | |
| SW6020B | Potassium | ug/l | 8230 | | | -- | -- | |
| SW6020B | Selenium (Dissolved) | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Selenium | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Silver (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Silver | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Sodium (Dissolved) | ug/l | 28200 | | | -- | -- | |
| SW6020B | Sodium | ug/l | 28900 | | | -- | -- | |
| SW6020B | Thallium (Dissolved) | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thallium | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thorium (Dissolved) | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Thorium | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Uranium-235 | ug/l | 0.014 | J | High MSD %R | -- | -- | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | 0.0124 | J | | -- | -- | |
| SW6020B | Uranium-238 | ug/l | 1.86 | J | High Serial Dil %D | -- | -- | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | 1.73 | | | -- | -- | |
| SW6020B | Vanadium (Dissolved) | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Vanadium | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Zinc (Dissolved) | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Zinc | ug/l | 4.18 | J | | -- | -- | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618393
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/10/2023 - 4/10/2023

| | | Field Sample ID | MW-BS15-04102023 | | | MW-BS15-04102023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618393022 | | | 618393023 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium | ug/l | 3 | | | -- | -- | |
| CALC | Uranium (Dissolved) | ug/l | 3.16 | | | -- | -- | |
| SW6020B | Aluminum (Dissolved) | ug/l | 19.3 | U | | -- | -- | |
| SW6020B | Aluminum | ug/l | 58.7 | J | Field dup imprecision | -- | -- | |
| SW6020B | Antimony (Dissolved) | ug/l | 1.00 | U | | -- | -- | |
| SW6020B | Antimony | ug/l | 1.00 | U | | -- | -- | |
| SW6020B | Arsenic | ug/l | 2.09 | J | | -- | -- | |
| SW6020B | Arsenic (Dissolved) | ug/l | 2.35 | J | | -- | -- | |
| SW6020B | Barium (Dissolved) | ug/l | 13.4 | | | -- | -- | |
| SW6020B | Barium | ug/l | 16.5 | | | -- | -- | |
| SW6020B | Beryllium | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Beryllium (Dissolved) | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Cadmium (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Cadmium | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Calcium (Dissolved) | ug/l | -- | -- | | 99100 | | |
| SW6020B | Calcium | ug/l | -- | -- | | 96300 | | |
| SW6020B | Chromium | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Chromium (Dissolved) | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Cobalt (Dissolved) | ug/l | 2.53 | | | -- | -- | |
| SW6020B | Cobalt | ug/l | 8.58 | | | -- | -- | |
| SW6020B | Copper | ug/l | 1.05 | J | | -- | -- | |
| SW6020B | Copper (Dissolved) | ug/l | 0.378 | J | | -- | -- | |
| SW6020B | Iron (Dissolved) | ug/l | 103 | | | -- | -- | |
| SW6020B | Iron | ug/l | 325 | | | -- | -- | |
| SW6020B | Lead (Dissolved) | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Lead | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Magnesium (Dissolved) | ug/l | -- | -- | | 30400 | | |
| SW6020B | Magnesium | ug/l | -- | -- | | 29700 | J | High Serial Dil %D |
| SW6020B | Manganese (Dissolved) | ug/l | 138 | | | -- | -- | |
| SW6020B | Manganese | ug/l | 258 | J | Field dup imprecision | -- | -- | |
| SW6020B | Molybdenum (Dissolved) | ug/l | 6.16 | | | -- | -- | |
| SW6020B | Molybdenum | ug/l | 6.31 | | | -- | -- | |
| SW6020B | Nickel (Dissolved) | ug/l | 2.05 | J+ | ICSA detection | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618393
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/10/2023 - 4/10/2023

| | | Field Sample ID | MW-BS15-04102023 | | | MW-BS15-04102023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618393022 | | | 618393023 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Nickel | ug/l | 2.95 | J+ | ICSA detection | -- | -- | |
| SW6020B | Potassium (Dissolved) | ug/l | -- | -- | | 12400 | J | High MSD %R |
| SW6020B | Potassium | ug/l | -- | -- | | 12200 | | |
| SW6020B | Selenium (Dissolved) | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Selenium | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Silver (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Silver | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Sodium (Dissolved) | ug/l | -- | -- | | 65200 | | |
| SW6020B | Sodium | ug/l | -- | -- | | 65200 | | |
| SW6020B | Thallium (Dissolved) | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thallium | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thorium (Dissolved) | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Thorium | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Uranium-235 | ug/l | 0.0218 | J | High MSD %R | -- | -- | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | 0.0232 | J | | -- | -- | |
| SW6020B | Uranium-238 | ug/l | 2.98 | J | High Serial Dil %D | -- | -- | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | 3.14 | | | -- | -- | |
| SW6020B | Vanadium (Dissolved) | ug/l | 4.28 | J | | -- | -- | |
| SW6020B | Vanadium | ug/l | 3.69 | J | | -- | -- | |
| SW6020B | Zinc (Dissolved) | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Zinc | ug/l | 4.79 | J | | -- | -- | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618393
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/10/2023 - 4/10/2023

| | | Field Sample ID | MW-S24-04102023 | | | MW-S24-04102023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618393002 | | | 618393001 | | |
| | | Dilution Factor | 1 | | | 20 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium | ug/l | 1460 | | | -- | -- | |
| CALC | Uranium (Dissolved) | ug/l | 1400 | | | -- | -- | |
| SW6020B | Aluminum (Dissolved) | ug/l | 19.3 | U | | -- | -- | |
| SW6020B | Aluminum | ug/l | 19.3 | UJ | Field dup imprecision | -- | -- | |
| SW6020B | Antimony (Dissolved) | ug/l | 1.00 | U | | -- | -- | |
| SW6020B | Antimony | ug/l | 1.00 | U | | -- | -- | |
| SW6020B | Arsenic | ug/l | 2.00 | U | | -- | -- | |
| SW6020B | Arsenic (Dissolved) | ug/l | 2.00 | U | | -- | -- | |
| SW6020B | Barium (Dissolved) | ug/l | 6.81 | | | -- | -- | |
| SW6020B | Barium | ug/l | 7.08 | | | -- | -- | |
| SW6020B | Beryllium | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Beryllium (Dissolved) | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Cadmium (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Cadmium | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Calcium (Dissolved) | ug/l | 28600 | | | -- | -- | |
| SW6020B | Calcium | ug/l | 28300 | | | -- | -- | |
| SW6020B | Chromium | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Chromium (Dissolved) | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Cobalt (Dissolved) | ug/l | 1.78 | | | -- | -- | |
| SW6020B | Cobalt | ug/l | 1.75 | | | -- | -- | |
| SW6020B | Copper | ug/l | 9.93 | | | -- | -- | |
| SW6020B | Copper (Dissolved) | ug/l | 7.54 | | | -- | -- | |
| SW6020B | Iron (Dissolved) | ug/l | 362 | J | Total > dissolved | -- | -- | |
| SW6020B | Iron | ug/l | 274 | J | Total > dissolved | -- | -- | |
| SW6020B | Lead (Dissolved) | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Lead | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Magnesium (Dissolved) | ug/l | 7410 | | | -- | -- | |
| SW6020B | Magnesium | ug/l | 7280 | J | High Serial Dil %D | -- | -- | |
| SW6020B | Manganese (Dissolved) | ug/l | 44.4 | J | Total > dissolved | -- | -- | |
| SW6020B | Manganese | ug/l | 39.7 | J | Field dup imprecision, Total > dissolved | -- | -- | |
| SW6020B | Molybdenum (Dissolved) | ug/l | 302 | | | -- | -- | |
| SW6020B | Molybdenum | ug/l | 297 | | | -- | -- | |
| SW6020B | Nickel (Dissolved) | ug/l | 1.92 | J+ | ICSA detection | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618393
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/10/2023 - 4/10/2023

| | | Field Sample ID | MW-S24-04102023 | | | MW-S24-04102023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618393002 | | | 618393001 | | |
| | | Dilution Factor | 1 | | | 20 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Nickel | ug/l | 1.99 | J+ | ICSA detection | -- | -- | |
| SW6020B | Potassium (Dissolved) | ug/l | 4060 | J | High MSD %R | -- | -- | |
| SW6020B | Potassium | ug/l | 3980 | | | -- | -- | |
| SW6020B | Selenium (Dissolved) | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Selenium | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Silver (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Silver | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Sodium (Dissolved) | ug/l | 20600 | | | -- | -- | |
| SW6020B | Sodium | ug/l | 20000 | | | -- | -- | |
| SW6020B | Thallium (Dissolved) | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thallium | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thorium (Dissolved) | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Thorium | ug/l | 0.853 | J | | -- | -- | |
| SW6020B | Uranium-235 | ug/l | -- | -- | | 2.9 | J | High MSD %R |
| SW6020B | Uranium-235 (Dissolved) | ug/l | -- | -- | | 2.83 | | |
| SW6020B | Uranium-238 | ug/l | -- | -- | | 1460 | J | High Serial Dil %D |
| SW6020B | Uranium-238 (Dissolved) | ug/l | -- | -- | | 1400 | | |
| SW6020B | Vanadium (Dissolved) | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Vanadium | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Zinc (Dissolved) | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Zinc | ug/l | 3.30 | U | | -- | -- | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | 1.08 | | | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | 12.7 | J+ | High PS %R | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618393
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/10/2023 - 4/10/2023

| | | Field Sample ID | MW-S62A-04102023 | | | MW-SD01-04102023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618393003 | | | 618393007 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium | ug/l | 34.7 | | | 7.78 | | |
| CALC | Uranium (Dissolved) | ug/l | 30.2 | | | 5.4 | | |
| SW6020B | Aluminum (Dissolved) | ug/l | 19.3 | U | | 19.3 | U | |
| SW6020B | Aluminum | ug/l | 24.4 | J | Field dup imprecision | 99.1 | J | Field dup imprecision |
| SW6020B | Antimony (Dissolved) | ug/l | 1.00 | U | | 1.00 | U | |
| SW6020B | Antimony | ug/l | 1.00 | U | | 1.00 | U | |
| SW6020B | Arsenic | ug/l | 2.55 | J | | 2.00 | U | |
| SW6020B | Arsenic (Dissolved) | ug/l | 2.14 | J | | 2.00 | U | |
| SW6020B | Barium (Dissolved) | ug/l | 12.4 | | | 12.7 | | |
| SW6020B | Barium | ug/l | 12.7 | | | 13.3 | | |
| SW6020B | Beryllium | ug/l | 0.200 | U | | 0.200 | U | |
| SW6020B | Beryllium (Dissolved) | ug/l | 0.200 | U | | 0.200 | U | |
| SW6020B | Cadmium (Dissolved) | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Cadmium | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Calcium (Dissolved) | ug/l | 24000 | | | 13400 | | |
| SW6020B | Calcium | ug/l | 23300 | | | 13600 | | |
| SW6020B | Chromium | ug/l | 3.00 | U | | 3.00 | U | |
| SW6020B | Chromium (Dissolved) | ug/l | 3.00 | U | | 3.00 | U | |
| SW6020B | Cobalt (Dissolved) | ug/l | 0.696 | J | | 0.614 | J | |
| SW6020B | Cobalt | ug/l | 0.71 | J | | 0.695 | J | |
| SW6020B | Copper | ug/l | 2.02 | | | 2 | J | |
| SW6020B | Copper (Dissolved) | ug/l | 0.389 | J+ | ICSA detection | 1.87 | J | |
| SW6020B | Iron (Dissolved) | ug/l | 680 | | | 33.0 | U | |
| SW6020B | Iron | ug/l | 849 | | | 137 | | |
| SW6020B | Lead (Dissolved) | ug/l | 0.500 | U | | 0.500 | U | |
| SW6020B | Lead | ug/l | 0.500 | U | | 0.500 | U | |
| SW6020B | Magnesium (Dissolved) | ug/l | 5960 | | | 2660 | | |
| SW6020B | Magnesium | ug/l | 5720 | J | High Serial Dil %D | 2750 | J | High Serial Dil %D |
| SW6020B | Manganese (Dissolved) | ug/l | 433 | | | 1.46 | J+ | ICSA detection |
| SW6020B | Manganese | ug/l | 417 | J | Field dup imprecision | 4.29 | J | ICSA detection, field dup imprecision |
| SW6020B | Molybdenum (Dissolved) | ug/l | 44.8 | | | 13.9 | | |
| SW6020B | Molybdenum | ug/l | 43.7 | | | 14.1 | | |
| SW6020B | Nickel (Dissolved) | ug/l | 0.705 | J+ | ICSA detection | 0.613 | J+ | ICSA detection |

Data Summary Form for Groundwater Samples
Job No. 618393
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/10/2023 - 4/10/2023

| | | Field Sample ID | MW-S62A-04102023 | | | MW-SD01-04102023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618393003 | | | 618393007 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Nickel | ug/l | 0.747 | J+ | ICSA detection | 0.809 | J+ | ICSA detection |
| SW6020B | Potassium (Dissolved) | ug/l | 3680 | J | High MSD %R | 3200 | J | High MSD %R |
| SW6020B | Potassium | ug/l | 3680 | | | 3260 | | |
| SW6020B | Selenium (Dissolved) | ug/l | 1.50 | U | | 1.50 | U | |
| SW6020B | Selenium | ug/l | 1.50 | U | | 1.50 | U | |
| SW6020B | Silver (Dissolved) | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Silver | ug/l | 0.300 | U | | 0.300 | U | |
| SW6020B | Sodium (Dissolved) | ug/l | 37000 | | | 21400 | | |
| SW6020B | Sodium | ug/l | 36500 | | | 22100 | | |
| SW6020B | Thallium (Dissolved) | ug/l | 0.600 | U | | 0.600 | U | |
| SW6020B | Thallium | ug/l | 0.600 | U | | 0.600 | U | |
| SW6020B | Thorium (Dissolved) | ug/l | 0.700 | U | | 0.700 | U | |
| SW6020B | Thorium | ug/l | 0.700 | U | | 0.700 | U | |
| SW6020B | Uranium-235 | ug/l | 0.0704 | J | High MSD %R | 0.0178 | J | High MSD %R |
| SW6020B | Uranium-235 (Dissolved) | ug/l | 0.0624 | J | | 0.0109 | J | |
| SW6020B | Uranium-238 | ug/l | 34.6 | J | High Serial Dil %D | 7.77 | J | High Serial Dil %D |
| SW6020B | Uranium-238 (Dissolved) | ug/l | 30.1 | | | 5.39 | | |
| SW6020B | Vanadium (Dissolved) | ug/l | 3.30 | U | | 3.30 | U | |
| SW6020B | Vanadium | ug/l | 3.30 | U | | 3.30 | U | |
| SW6020B | Zinc (Dissolved) | ug/l | 3.30 | U | | 3.30 | U | |
| SW6020B | Zinc | ug/l | 3.30 | U | | 3.30 | U | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | 0.687 | J | | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | 5.59 | J+ | High PS %R | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618393
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/10/2023 - 4/10/2023

| | | Field Sample ID | MW-SD24-04102023 | | | MW-SD24-04102023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618393011 | | | 618393011 | | |
| | | Dilution Factor | 1 | | | 2 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium | ug/l | 128 | | | -- | -- | |
| CALC | Uranium (Dissolved) | ug/l | 88.7 | | | -- | -- | |
| SW6020B | Aluminum (Dissolved) | ug/l | 19.3 | U | | -- | -- | |
| SW6020B | Aluminum | ug/l | 337 | J | Field dup imprecision | -- | -- | |
| SW6020B | Antimony (Dissolved) | ug/l | 1.00 | U | | -- | -- | |
| SW6020B | Antimony | ug/l | 1.00 | U | | -- | -- | |
| SW6020B | Arsenic | ug/l | 2.00 | U | | -- | -- | |
| SW6020B | Arsenic (Dissolved) | ug/l | 2.00 | U | | -- | -- | |
| SW6020B | Barium (Dissolved) | ug/l | 7.11 | | | -- | -- | |
| SW6020B | Barium | ug/l | 8.49 | | | -- | -- | |
| SW6020B | Beryllium | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Beryllium (Dissolved) | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Cadmium (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Cadmium | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Calcium (Dissolved) | ug/l | 25700 | | | -- | -- | |
| SW6020B | Calcium | ug/l | 24800 | | | -- | -- | |
| SW6020B | Chromium | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Chromium (Dissolved) | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Cobalt (Dissolved) | ug/l | 1.32 | J | Total > dissolved | -- | -- | |
| SW6020B | Cobalt | ug/l | 1.03 | J | Total > dissolved | -- | -- | |
| SW6020B | Copper | ug/l | 24.3 | | | -- | -- | |
| SW6020B | Copper (Dissolved) | ug/l | 17.6 | | | -- | -- | |
| SW6020B | Iron (Dissolved) | ug/l | 127 | | | -- | -- | |
| SW6020B | Iron | ug/l | 495 | | | -- | -- | |
| SW6020B | Lead (Dissolved) | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Lead | ug/l | 0.685 | J | | -- | -- | |
| SW6020B | Magnesium (Dissolved) | ug/l | 6010 | | | -- | -- | |
| SW6020B | Magnesium | ug/l | 5830 | J | High Serial Dil %D | -- | -- | |
| SW6020B | Manganese (Dissolved) | ug/l | 56.5 | J | Total > dissolved | -- | -- | |
| SW6020B | Manganese | ug/l | 33.9 | J | Field dup imprecision, Total > dissolved | -- | -- | |
| SW6020B | Molybdenum (Dissolved) | ug/l | 12.2 | | | -- | -- | |
| SW6020B | Molybdenum | ug/l | 13 | | | -- | -- | |
| SW6020B | Nickel (Dissolved) | ug/l | 1.38 | J+ | ICSA detection | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618393
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/10/2023 - 4/10/2023

| | | Field Sample ID | MW-SD24-04102023 | | | MW-SD24-04102023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618393011 | | | 618393011 | | |
| | | Dilution Factor | 1 | | | 2 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Nickel | ug/l | 1.94 | J+ | ICSA detection | -- | -- | |
| SW6020B | Potassium (Dissolved) | ug/l | 5080 | J | High MSD %R | -- | -- | |
| SW6020B | Potassium | ug/l | 4760 | | | -- | -- | |
| SW6020B | Selenium (Dissolved) | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Selenium | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Silver (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Silver | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Sodium (Dissolved) | ug/l | 33800 | | | -- | -- | |
| SW6020B | Sodium | ug/l | 31900 | | | -- | -- | |
| SW6020B | Thallium (Dissolved) | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thallium | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thorium (Dissolved) | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Thorium | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Uranium-235 | ug/l | 0.276 | J | High MSD %R | -- | -- | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | 0.187 | | | -- | -- | |
| SW6020B | Uranium-238 | ug/l | -- | -- | | 128 | J | High Serial Dil %D |
| SW6020B | Uranium-238 (Dissolved) | ug/l | 88.5 | | | -- | -- | |
| SW6020B | Vanadium (Dissolved) | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Vanadium | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Zinc (Dissolved) | ug/l | 4.49 | J | | -- | -- | |
| SW6020B | Zinc | ug/l | 9.36 | J | | -- | -- | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | 0.624 | J | | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | 7.84 | J+ | High PS %R | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618393
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/10/2023 - 4/10/2023

| | | Field Sample ID | MW-SD24-04102023 DUP | | | MW-SD24-04102023 DUP | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618393013 | | | 618393013 | | |
| | | Dilution Factor | 1 | | | 2 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium | ug/l | 122 | | | -- | -- | |
| CALC | Uranium (Dissolved) | ug/l | 82.7 | | | -- | -- | |
| SW6020B | Aluminum (Dissolved) | ug/l | 33.5 | J | | -- | -- | |
| SW6020B | Aluminum | ug/l | 236 | J | Field dup imprecision | -- | -- | |
| SW6020B | Antimony (Dissolved) | ug/l | 1.00 | U | | -- | -- | |
| SW6020B | Antimony | ug/l | 1.00 | U | | -- | -- | |
| SW6020B | Arsenic | ug/l | 2.00 | U | | -- | -- | |
| SW6020B | Arsenic (Dissolved) | ug/l | 2.00 | U | | -- | -- | |
| SW6020B | Barium (Dissolved) | ug/l | 7.52 | | | -- | -- | |
| SW6020B | Barium | ug/l | 8.03 | | | -- | -- | |
| SW6020B | Beryllium | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Beryllium (Dissolved) | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Cadmium (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Cadmium | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Calcium (Dissolved) | ug/l | 24600 | | | -- | -- | |
| SW6020B | Calcium | ug/l | 25700 | | | -- | -- | |
| SW6020B | Chromium | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Chromium (Dissolved) | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Cobalt (Dissolved) | ug/l | 1.1 | | | -- | -- | |
| SW6020B | Cobalt | ug/l | 1.3 | | | -- | -- | |
| SW6020B | Copper | ug/l | 23.5 | | | -- | -- | |
| SW6020B | Copper (Dissolved) | ug/l | 18.4 | | | -- | -- | |
| SW6020B | Iron (Dissolved) | ug/l | 124 | | | -- | -- | |
| SW6020B | Iron | ug/l | 383 | | | -- | -- | |
| SW6020B | Lead (Dissolved) | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Lead | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Magnesium (Dissolved) | ug/l | 5750 | | | -- | -- | |
| SW6020B | Magnesium | ug/l | 6010 | J | High Serial Dil %D | -- | -- | |
| SW6020B | Manganese (Dissolved) | ug/l | 44.9 | | | -- | -- | |
| SW6020B | Manganese | ug/l | 48.9 | J | Field dup imprecision | -- | -- | |
| SW6020B | Molybdenum (Dissolved) | ug/l | 11.8 | | | -- | -- | |
| SW6020B | Molybdenum | ug/l | 12.7 | | | -- | -- | |
| SW6020B | Nickel (Dissolved) | ug/l | 1.52 | J+ | ICSA detection | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618393
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/10/2023 - 4/10/2023

| | | Field Sample ID | MW-SD24-04102023 DUP | | | MW-SD24-04102023 DUP | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618393013 | | | 618393013 | | |
| | | Dilution Factor | 1 | | | 2 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Nickel | ug/l | 1.68 | J+ | ICSA detection | -- | -- | |
| SW6020B | Potassium (Dissolved) | ug/l | 4640 | J | High MSD %R | -- | -- | |
| SW6020B | Potassium | ug/l | 4570 | | | -- | -- | |
| SW6020B | Selenium (Dissolved) | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Selenium | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Silver (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Silver | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Sodium (Dissolved) | ug/l | 32100 | | | -- | -- | |
| SW6020B | Sodium | ug/l | 33000 | | | -- | -- | |
| SW6020B | Thallium (Dissolved) | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thallium | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thorium (Dissolved) | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Thorium | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Uranium-235 | ug/l | 0.256 | J | High MSD %R | -- | -- | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | 0.173 | | | -- | -- | |
| SW6020B | Uranium-238 | ug/l | -- | -- | | 122 | J | High Serial Dil %D |
| SW6020B | Uranium-238 (Dissolved) | ug/l | 82.5 | | | -- | -- | |
| SW6020B | Vanadium (Dissolved) | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Vanadium | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Zinc (Dissolved) | ug/l | 4.92 | J | | -- | -- | |
| SW6020B | Zinc | ug/l | 7.06 | J | | -- | -- | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | 0.643 | J | | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | 6.78 | J+ | High PS %R | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618393
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/10/2023 - 4/10/2023

| | | Field Sample ID | MW-SD61-04102023 | | | MW-SD61-04102023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618393020 | | | 618393021 | | |
| | | Dilution Factor | 1 | | | 5 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium | ug/l | 5.2 | | | -- | -- | |
| CALC | Uranium (Dissolved) | ug/l | 4.19 | | | -- | -- | |
| SW6020B | Aluminum (Dissolved) | ug/l | 19.3 | U | | -- | -- | |
| SW6020B | Aluminum | ug/l | 19.3 | UJ | Field dup imprecision | -- | -- | |
| SW6020B | Antimony (Dissolved) | ug/l | 1.00 | U | | -- | -- | |
| SW6020B | Antimony | ug/l | 1.00 | U | | -- | -- | |
| SW6020B | Arsenic | ug/l | 8.69 | | | -- | -- | |
| SW6020B | Arsenic (Dissolved) | ug/l | 8.62 | | | -- | -- | |
| SW6020B | Barium (Dissolved) | ug/l | 5.12 | | | -- | -- | |
| SW6020B | Barium | ug/l | 5.95 | | | -- | -- | |
| SW6020B | Beryllium | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Beryllium (Dissolved) | ug/l | 0.200 | U | | -- | -- | |
| SW6020B | Cadmium (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Cadmium | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Calcium (Dissolved) | ug/l | 33800 | | | -- | -- | |
| SW6020B | Calcium | ug/l | 35700 | | | -- | -- | |
| SW6020B | Chromium | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Chromium (Dissolved) | ug/l | 3.00 | U | | -- | -- | |
| SW6020B | Cobalt (Dissolved) | ug/l | 1.07 | J+ | ICSA detection | -- | -- | |
| SW6020B | Cobalt | ug/l | 1.07 | J+ | ICSA detection | -- | -- | |
| SW6020B | Copper | ug/l | 3.88 | | | -- | -- | |
| SW6020B | Copper (Dissolved) | ug/l | 0.563 | J | | -- | -- | |
| SW6020B | Iron (Dissolved) | ug/l | 8730 | | | -- | -- | |
| SW6020B | Iron | ug/l | 9150 | | | -- | -- | |
| SW6020B | Lead (Dissolved) | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Lead | ug/l | 0.500 | U | | -- | -- | |
| SW6020B | Magnesium (Dissolved) | ug/l | 5960 | | | -- | -- | |
| SW6020B | Magnesium | ug/l | 6410 | J | High Serial Dil %D | -- | -- | |
| SW6020B | Manganese (Dissolved) | ug/l | -- | -- | | 1510 | | |
| SW6020B | Manganese | ug/l | -- | -- | | -- | -- | |
| SW6020B | Molybdenum (Dissolved) | ug/l | 9.69 | | | -- | -- | |
| SW6020B | Molybdenum | ug/l | 10.9 | | | -- | -- | |
| SW6020B | Nickel (Dissolved) | ug/l | 0.600 | U | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618393
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/10/2023 - 4/10/2023

| | | Field Sample ID | MW-SD61-04102023 | | | MW-SD61-04102023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618393020 | | | 618393021 | | |
| | | Dilution Factor | 1 | | | 5 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Nickel | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Potassium (Dissolved) | ug/l | 2770 | J | High MSD %R | -- | -- | |
| SW6020B | Potassium | ug/l | 2920 | | | -- | -- | |
| SW6020B | Selenium (Dissolved) | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Selenium | ug/l | 1.50 | U | | -- | -- | |
| SW6020B | Silver (Dissolved) | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Silver | ug/l | 0.300 | U | | -- | -- | |
| SW6020B | Sodium (Dissolved) | ug/l | 29800 | | | -- | -- | |
| SW6020B | Sodium | ug/l | 31900 | | | -- | -- | |
| SW6020B | Thallium (Dissolved) | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thallium | ug/l | 0.600 | U | | -- | -- | |
| SW6020B | Thorium (Dissolved) | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Thorium | ug/l | 0.700 | U | | -- | -- | |
| SW6020B | Uranium-235 | ug/l | 0.0107 | J | High MSD %R | -- | -- | |
| SW6020B | Uranium-235 (Dissolved) | ug/l | 0.0100 | U | | -- | -- | |
| SW6020B | Uranium-238 | ug/l | 5.19 | J | High Serial Dil %D | -- | -- | |
| SW6020B | Uranium-238 (Dissolved) | ug/l | 4.19 | | | -- | -- | |
| SW6020B | Vanadium (Dissolved) | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Vanadium | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Zinc (Dissolved) | ug/l | 3.30 | U | | -- | -- | |
| SW6020B | Zinc | ug/l | 3.30 | U | | -- | -- | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | 2.92 | | | -- | -- | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | 14.3 | J+ | High PS %R | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. 618393
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/10/2023 - 4/10/2023

| | | Field Sample ID | MW-SD61-04102023 | | | MW-SD62A-04102023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618393020 | | | 618393016 | | |
| | | Dilution Factor | 10 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| CALC | Uranium | ug/l | -- | -- | | 1.63 | | |
| CALC | Uranium (Dissolved) | ug/l | -- | -- | | 1.17 | | |
| SW6020B | Aluminum (Dissolved) | ug/l | -- | -- | | 19.3 | U | |
| SW6020B | Aluminum | ug/l | -- | -- | | 28.2 | J | Field dup imprecision |
| SW6020B | Antimony (Dissolved) | ug/l | -- | -- | | 1.00 | U | |
| SW6020B | Antimony | ug/l | -- | -- | | 1.00 | U | |
| SW6020B | Arsenic | ug/l | -- | -- | | 2.00 | U | |
| SW6020B | Arsenic (Dissolved) | ug/l | -- | -- | | 2.00 | U | |
| SW6020B | Barium (Dissolved) | ug/l | -- | -- | | 6.07 | | |
| SW6020B | Barium | ug/l | -- | -- | | 5.91 | | |
| SW6020B | Beryllium | ug/l | -- | -- | | 0.200 | U | |
| SW6020B | Beryllium (Dissolved) | ug/l | -- | -- | | 0.200 | U | |
| SW6020B | Cadmium (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Cadmium | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Calcium (Dissolved) | ug/l | -- | -- | | 25800 | | |
| SW6020B | Calcium | ug/l | -- | -- | | 26000 | | |
| SW6020B | Chromium | ug/l | -- | -- | | 3.00 | U | |
| SW6020B | Chromium (Dissolved) | ug/l | -- | -- | | 3.00 | U | |
| SW6020B | Cobalt (Dissolved) | ug/l | -- | -- | | 1.08 | | |
| SW6020B | Cobalt | ug/l | -- | -- | | 1.13 | | |
| SW6020B | Copper | ug/l | -- | -- | | 2.28 | | |
| SW6020B | Copper (Dissolved) | ug/l | -- | -- | | 1.08 | J+ | ICSA detection |
| SW6020B | Iron (Dissolved) | ug/l | -- | -- | | 6060 | | |
| SW6020B | Iron | ug/l | -- | -- | | 6700 | | |
| SW6020B | Lead (Dissolved) | ug/l | -- | -- | | 0.500 | U | |
| SW6020B | Lead | ug/l | -- | -- | | 0.500 | U | |
| SW6020B | Magnesium (Dissolved) | ug/l | -- | -- | | 5990 | | |
| SW6020B | Magnesium | ug/l | -- | -- | | 6080 | J | High Serial Dil %D |
| SW6020B | Manganese (Dissolved) | ug/l | -- | -- | | 78.2 | | |
| SW6020B | Manganese | ug/l | 1540 | J | Field dup imprecision | 80.4 | J | Field dup imprecision |
| SW6020B | Molybdenum (Dissolved) | ug/l | -- | -- | | 3.27 | J | Total > dissolved |
| SW6020B | Molybdenum | ug/l | -- | -- | | 2.89 | J | Total > dissolved |
| SW6020B | Nickel (Dissolved) | ug/l | -- | -- | | 1.24 | J+ | ICSA detection |

Data Summary Form for Groundwater Samples
Job No. 618393
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/10/2023 - 4/10/2023

| | | Field Sample ID | MW-SD61-04102023 | | | MW-SD62A-04102023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | 618393020 | | | 618393016 | | |
| | | Dilution Factor | 10 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW6020B | Nickel | ug/l | -- | -- | | 1.35 | J+ | ICSA detection |
| SW6020B | Potassium (Dissolved) | ug/l | -- | -- | | 4110 | J | High MSD %R |
| SW6020B | Potassium | ug/l | -- | -- | | 4190 | | |
| SW6020B | Selenium (Dissolved) | ug/l | -- | -- | | 1.50 | U | |
| SW6020B | Selenium | ug/l | -- | -- | | 1.50 | U | |
| SW6020B | Silver (Dissolved) | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Silver | ug/l | -- | -- | | 0.300 | U | |
| SW6020B | Sodium (Dissolved) | ug/l | -- | -- | | 38000 | | |
| SW6020B | Sodium | ug/l | -- | -- | | 39100 | | |
| SW6020B | Thallium (Dissolved) | ug/l | -- | -- | | 0.600 | U | |
| SW6020B | Thallium | ug/l | -- | -- | | 0.600 | U | |
| SW6020B | Thorium (Dissolved) | ug/l | -- | -- | | 0.700 | U | |
| SW6020B | Thorium | ug/l | -- | -- | | 0.700 | U | |
| SW6020B | Uranium-235 | ug/l | -- | -- | | 0.0100 | UJ | High MSD %R |
| SW6020B | Uranium-235 (Dissolved) | ug/l | -- | -- | | 0.0100 | U | |
| SW6020B | Uranium-238 | ug/l | -- | -- | | 1.63 | J | High Serial Dil %D |
| SW6020B | Uranium-238 (Dissolved) | ug/l | -- | -- | | 1.17 | | |
| SW6020B | Vanadium (Dissolved) | ug/l | -- | -- | | 3.30 | U | |
| SW6020B | Vanadium | ug/l | -- | -- | | 3.30 | U | |
| SW6020B | Zinc (Dissolved) | ug/l | -- | -- | | 3.30 | U | |
| SW6020B | Zinc | ug/l | -- | -- | | 3.30 | U | |
| SW9060A | Dissolved Organic Carbon (Dissolved) | mg/l | -- | -- | | 0.834 | J | |
| SW9060A | Total Inorganic Carbon, Average (Dissolved) | mg/l | -- | -- | | 7.55 | J+ | High PS %R |

# Attachment B
# VALIDATION QUALIFIER DEFINITIONS
# SDG 618393

## Validation Qualifier Definitions

Final validated results are annotated with the following codes:

**U** The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

**J** The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

**J+** The result is an estimated quantity, but the result may be biased high.

**J-** The result is an estimated quantity, but the result may be biased low.

**NJ** The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.

**UJ** The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

**R** The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

June 29, 2023

Ms. Jessie McCusker
de maximis, Inc.
200 Day Hill Road, Suite 200
Windsor, CT 06095

Re: SDG No. L2317308
Alpha Analytical
NMI Groundwater
Data Validation

1/Water
HA20-CMT-5(OW)-04032023

1/Equipment Blank
EQ-BLANK-04032023

1/Trip Blank
TRIP-BLANK

Dear Ms. McCusker:

A Tier I Plus data validation was performed on one water sample, one equipment blank, and one trip blank from the Nuclear Metals Superfund site. The data validation was performed using the Region 1 - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures dated June 2018, to the extent possible, Massachusetts Compendium of Analytical Methods (CAM) protocols, the site-specific QAPP, and ddms' Standard Operating Procedures (SOPs). Professional judgment was applied as necessary and appropriate.

Analyses were performed in accordance with the following methods:

| **Parameter** | **Method** |
|---|---|
| Volatile Organics (VO) | SW846 8260D |
| 1,4-Dioxane | SW846 8270E SIM Isotope Dilution |
| Alkalinity (Bicarbonate and Carbonate) | Standard Methods 2320B |
| Phosphorus (Total) | Standard Methods 4500P-E |

The data were evaluated based on the parameters summarized in the table below, where applicable:

| | | |
|---|---|---|
| | • | Overall Evaluation of Data and Potential Usability Issues |
| * | • | Data Completeness |
| * | • | Preservation and Technical Holding Times |
| * | • | GC/MS Instrument Performance Check |
| | • | Initial and Continuing Calibrations |
| | • | Blanks |
| * | • | Surrogate Compounds/Labeled Analogs |
| * | • | Internal Standards |
| * | • | Laboratory Control Sample/ Laboratory Control Sample Duplicates |
| NA | • | Matrix Spike/Matrix Spike Duplicate |
| * | • | Field and Laboratory Duplicates |
| * | • | Target Compound Identification |
| * | • | Compound Quantitation and Reported Quantitation Limits |
| * | • | System Performance |

*All criteria were met for this parameter.
NA = not analyzed

The Data Validation Report includes the following attachments:

Attachment A: Data Summary Table – summarized validated results

Attachment B: Validation Qualifier Definitions

## Overall Evaluation of Data

Volatile Organics (Method 8260D)

- Results for dichlorodifluoromethane, chloromethane, vinyl chloride, bromomethane, chloroethane, 4-methyl-2-pentanone, 2-hexanone, and 1,2-dibromo-3-chloropropane in all samples were qualified as estimated (UJ) due to low CC standard responses.

- The results for 1,4-dioxane in all samples were qualified as estimated (UJ) due to low relative response factors (RRFs) in the initial calibration (IC), IC verification (ICV), and continuing calibration (CC) standards. Results for 1,4-dioxane should be taken from the SW846 8270E SIM Isotope Dilution analysis.

The following sections of this report detail the reasons for qualifiers were applied to the sample results. Each parameter section discusses the quality control (QC) excursions that impacted sample results. Where a quality indicator was deemed acceptable after thorough review, no further discussion is included in this report. Detailed findings are included for each quality element that impacted the usability of the reported results. Additional information or explanation is included as needed, to provide support for decisions made, based on the validator's best professional judgment.

Where a result was qualified J+ or J- and J, the J qualifier takes precedence. Where a result was qualified biased high and low for differing data quality excursions, the final qualifier is J with an indeterminate bias.

## Volatile Organics (SW-846 8260D)

### Calibration

One IC, run on March 8, 2023, was reported in support of sample analyses. All RRFs and relative standard deviations (RSDs) or correlation coefficients ($r^2$) were acceptable, except that low RRFs were observed in all applicable IC standards for 1,4-dioxane. A second-source ICV standard was analyzed after the IC, and the RRF for 1,4-dioxane in the ICV standard was also unacceptably low. The results for 1,4-dioxane in all samples were qualified as estimated (UJ) due to low RRFs in the IC and ICV.

One CC standard was analyzed with the site samples. RRFs for the reported compounds were acceptable except that a low RRF was observed in the CC standard for 1,4-dioxane. The results for 1,4-dioxane in all samples were qualified as estimated (UJ) due to low RRFs in the CC standard. The percent differences were acceptable (≤20%D), with the following exceptions:

| Analyte | %D | Affected Sample | Qualifier Applied |
|---|---|---|---|
| *CC Standard 04/11/23 at 11:14, Instrument JACK1* | | | |
| Dichlorodifluoromethane | -27.0 | All samples | UJ |
| Chloromethane | -28.4 | | |
| Vinyl chloride | -24.2 | | |
| Bromomethane | -28.8 | | |
| Chloroethane | -27.9 | | |
| 4-Methyl-2-pentanone | -24.5 | | |
| 2-Hexanone | -23.6 | | |
| 1,2-Dibromo-3-chloropropane | -26.1 | | |

All of the above high %Ds resulted from low responses relative to the IC, indicating the potential for low bias or false negatives. Results for dichlorodifluoromethane, chloromethane, vinyl chloride, bromomethane, chloroethane, 4-methyl-2-pentanone, 2-hexanone, and 1,2-dibromo-3-chloropropane in all samples were qualified as estimated (UJ) due to low CC standard responses.

### Blanks

One method blank was prepared with the samples, and hexachlorobutadiene was reported at 0.56 µg/L. Since this compound was not reported in any of the samples no data required qualification on this basis.

## 1,4-Dioxane (SW846 8270E SIM Isotope Dilution)

Results were determined to be valid as reported. No qualifiers were applied to the results based on the review of the data.

## Bicarbonate and Carbonate Alkalinity (Standard Methods 2320B)

Results were determined to be valid as reported. No qualifiers were applied to the results based on the review of the data.

## Phosphorus (Standard Methods 4500P-E)

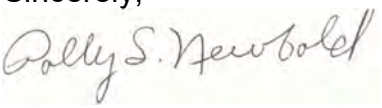
Results were determined to be valid as reported. No qualifiers were applied to the results based on the review of the data.

## Documentation

No documentation issues were observed during the validation effort.

Please feel free to contact Liz Dickinson (edickinson@ddmsinc.com or 610-314-6284) with any questions you may have regarding this information.

Sincerely,



Polly S. Newbold
Sr. Environmental Chemist

Attachments

**Attachment A**
**DATA SUMMARY TABLE**
**L2317308**

Data Summary Form for Groundwater Samples
Job No. L2317308
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/3/2023

| | | Field Sample ID | EQ-BLANK-04032023 | | | HA20-CMT-5(OW)-04032023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317308-02 | | | L2317308-01 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | 2.00 | U | | 75.7 | | |
| SM 2320B | Carbonate (as CO3) | mg/l | 2.00 | U | | 2.00 | U | |
| SM 4500-P-E | Phosphorus | mg/l | 0.010 | U | | 0.042 | | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | 2.0 | UJ | CCV RPD excursion | 2.0 | UJ | CCV RPD excursion |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | 0.40 | U | | 0.40 | U | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 2-Hexanone | ug/l | 5.0 | UJ | CCV RPD excursion | 5.0 | UJ | CCV RPD excursion |
| SW-846 8260D | 4-Chlorotoluene | ug/l | 2.0 | U | | 2.0 | U | |

Data Summary Form for Groundwater Samples
Job No. L2317308
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/3/2023

| | | Field Sample ID | EQ-BLANK-04032023 | | | HA20-CMT-5(OW)-04032023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317308-02 | | | L2317308-01 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | 5.0 | UJ | CCV RPD excursion | 5.0 | UJ | CCV RPD excursion |
| SW-846 8260D | Acetone | ug/l | 5.0 | U | | 5.0 | U | |
| SW-846 8260D | Benzene | ug/l | 0.50 | U | | 0.50 | U | |
| SW-846 8260D | Bromobenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Bromochloromethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Bromodichloromethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Bromoform | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Bromomethane | ug/l | 2.0 | UJ | CCV RPD excursion | 2.0 | UJ | CCV RPD excursion |
| SW-846 8260D | Carbon disulfide | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Carbon tetrachloride | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Chlorobenzene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Chloroethane | ug/l | 2.0 | UJ | CCV RPD excursion | 2.0 | UJ | CCV RPD excursion |
| SW-846 8260D | Chloroform | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Chloromethane | ug/l | 2.0 | UJ | CCV RPD excursion | 2.0 | UJ | CCV RPD excursion |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | 0.40 | U | | 0.40 | U | |
| SW-846 8260D | Dibromochloromethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Dibromomethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | 2.0 | UJ | CCV RPD excursion | 2.0 | UJ | CCV RPD excursion |
| SW-846 8260D | Ethyl ether | ug/l | 2.0 | UJ | High ICV %D | 2.0 | UJ | High ICV %D |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Ethylbenzene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | 0.60 | U | | 0.60 | U | |
| SW-846 8260D | Isopropyl Ether | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Isopropylbenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | m-&p-Xylenes | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | 5.0 | U | | 5.0 | U | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Methylene Chloride | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Naphthalene | ug/l | 2.0 | U | | 2.0 | U | |

Data Summary Form for Groundwater Samples
Job No. L2317308
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/3/2023

| | | Field Sample ID | EQ-BLANK-04032023 | | | HA20-CMT-5(OW)-04032023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317308-02 | | | L2317308-01 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | N-Butylbenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | N-Propylbenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | o-Xylene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Styrene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Tetrachloroethylene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Tetrahydrofuran | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Toluene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | 0.40 | U | | 0.40 | U | |
| SW-846 8260D | Trichloroethene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Vinyl Chloride | ug/l | 1.0 | UJ | CCV RPD excursion | 1.0 | UJ | CCV RPD excursion |
| SW-846 8260D | Xylenes (total) | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 0.139 | U | | 0.230 | | |

Data Summary Form for Groundwater Samples
Job No. L2317308
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/3/2023

| | | Field Sample ID | TRIP-BLANK_20230322 | | |
|---|---|---|---|---|---|
| | | Lab Sample ID | L2317308-03 | | |
| | | Dilution Factor | 1 | | |
| Analytical Method | Parameter | Unit | | | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | -- | -- | |
| SM 2320B | Carbonate (as CO3) | mg/l | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | 1.0 | U | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | 1.0 | U | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | 1.0 | U | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | 2.0 | U | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | 2.0 | UJ | CCV RPD excursion |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | 2.0 | U | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | 1.0 | U | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | 2.0 | U | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | 1.0 | U | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | 2.0 | U | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | 0.40 | U | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | 1.0 | U | |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | 2.0 | U | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | 2.0 | U | |
| SW-846 8260D | 2-Hexanone | ug/l | 5.0 | UJ | CCV RPD excursion |
| SW-846 8260D | 4-Chlorotoluene | ug/l | 2.0 | U | |

Data Summary Form for Groundwater Samples
Job No. L2317308
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/3/2023

| | | Field Sample ID | TRIP-BLANK_20230322 | | |
|---|---|---|---|---|---|
| | | Lab Sample ID | L2317308-03 | | |
| | | Dilution Factor | 1 | | |
| Analytical Method | Parameter | Unit | | | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | 5.0 | UJ | CCV RPD excursion |
| SW-846 8260D | Acetone | ug/l | 5.0 | U | |
| SW-846 8260D | Benzene | ug/l | 0.50 | U | |
| SW-846 8260D | Bromobenzene | ug/l | 2.0 | U | |
| SW-846 8260D | Bromochloromethane | ug/l | 2.0 | U | |
| SW-846 8260D | Bromodichloromethane | ug/l | 1.0 | U | |
| SW-846 8260D | Bromoform | ug/l | 2.0 | U | |
| SW-846 8260D | Bromomethane | ug/l | 2.0 | UJ | CCV RPD excursion |
| SW-846 8260D | Carbon disulfide | ug/l | 2.0 | U | |
| SW-846 8260D | Carbon tetrachloride | ug/l | 1.0 | U | |
| SW-846 8260D | Chlorobenzene | ug/l | 1.0 | U | |
| SW-846 8260D | Chloroethane | ug/l | 2.0 | UJ | CCV RPD excursion |
| SW-846 8260D | Chloroform | ug/l | 1.0 | U | |
| SW-846 8260D | Chloromethane | ug/l | 2.0 | UJ | CCV RPD excursion |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | 1.0 | U | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | 0.40 | U | |
| SW-846 8260D | Dibromochloromethane | ug/l | 1.0 | U | |
| SW-846 8260D | Dibromomethane | ug/l | 2.0 | U | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | 2.0 | UJ | CCV RPD excursion |
| SW-846 8260D | Ethyl ether | ug/l | 2.0 | UJ | High ICV %D |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | 2.0 | U | |
| SW-846 8260D | Ethylbenzene | ug/l | 1.0 | U | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | 0.60 | U | |
| SW-846 8260D | Isopropyl Ether | ug/l | 2.0 | U | |
| SW-846 8260D | Isopropylbenzene | ug/l | 2.0 | U | |
| SW-846 8260D | m-&p-Xylenes | ug/l | 2.0 | U | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | 5.0 | U | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | 2.0 | U | |
| SW-846 8260D | Methylene Chloride | ug/l | 2.0 | U | |
| SW-846 8260D | Naphthalene | ug/l | 2.0 | U | |

Data Summary Form for Groundwater Samples
Job No. L2317308
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/3/2023

| | | Field Sample ID | TRIP-BLANK_20230322 | | |
|---|---|---|---|---|---|
| | | Lab Sample ID | L2317308-03 | | |
| | | Dilution Factor | 1 | | |
| Analytical Method | Parameter | Unit | | | |
| SW-846 8260D | N-Butylbenzene | ug/l | 2.0 | U | |
| SW-846 8260D | N-Propylbenzene | ug/l | 2.0 | U | |
| SW-846 8260D | o-Xylene | ug/l | 1.0 | U | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | 2.0 | U | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | 2.0 | U | |
| SW-846 8260D | Styrene | ug/l | 1.0 | U | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | 2.0 | U | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | 2.0 | U | |
| SW-846 8260D | Tetrachloroethylene | ug/l | 1.0 | U | |
| SW-846 8260D | Tetrahydrofuran | ug/l | 2.0 | U | |
| SW-846 8260D | Toluene | ug/l | 1.0 | U | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | 1.0 | U | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | 0.40 | U | |
| SW-846 8260D | Trichloroethene | ug/l | 1.0 | U | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | 2.0 | U | |
| SW-846 8260D | Vinyl Chloride | ug/l | 1.0 | UJ | CCV RPD excursion |
| SW-846 8260D | Xylenes (total) | ug/l | 1.0 | U | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | -- | -- | |

# Attachment B
# VALIDATION QUALIFIER DEFINITIONS
# L2317308

## Validation Qualifier Definitions

Final validated results are annotated with the following codes:

**U** The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

**J** The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

**J+** The result is an estimated quantity, but the result may be biased high.

**J-** The result is an estimated quantity, but the result may be biased low.

**NJ** The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.

**UJ** The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

**R** The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

July 11, 2023

Ms. Jessie McCusker
de maximis, Inc.
200 Day Hill Road, Suite 200
Windsor, CT 06095

Re: SDG No. L2317663
Alpha Analytical
NMI Groundwater
Data Validation

15/Water
- ML-3-3-04042023
- MW-BS28-04042023
- GZW-8-2-04042023
- MW-SD42A-04042023 DUP
- ASSABET-1A(PZ-1A)-04042023
- HA20-CMT-3T(OW)-04042023
- EW-1-04042023
- MW-SD52-04042023
- HA20-CMT-6(OW)-04042023
- MW-SD34-04042023
- MW-SD42A-04042023
- MW-SD44-04042023
- ASSABET-2A(PZ-2A)-04042023
- SW-101-04042023
- ML-1-3-04042023

1/EQUIPMENT BLANK
- EQ-BLANK-04042023

1/TRIP BLANK
- TRIP BLANK_20230404

Dear Ms. McCusker:

A Tier I Plus data validation was performed on 15 water samples, one equipment blank, and one trip blank from the Nuclear Metals Superfund site. The data validation was performed using the Region 1 - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures dated June 2018, to the extent possible, Massachusetts Compendium of Analytical Methods (CAM) protocols, the site-specific QAPP, and ddms' Standard Operating Procedures (SOPs). Professional judgment was applied as necessary and appropriate.

Analyses were performed in accordance with the following methods:

| **Parameter** | **Method** |
|---|---|
| Volatile Organics (VO) | SW846 8260D |
| 1,4-Dioxane | SW846 8270E SIM Isotope Dilution |

| Parameter | Method |
|---|---|
| Hardness | SW846 6020B |
| Alkalinity (Bicarbonate and Carbonate) | Standard Methods 2320B |
| Phosphorus (Total) | Standard Methods 4500P-E |
| Total Suspended Solids | Standard Methods 2540D |
| Nitrite/Nitrate | EPA 353.2 |
| Total Organic Carbon | Standard Methods 5310C |
| Anions (Chloride, Fluoride, Sulfate) | EPA 300.0 |

The data were evaluated based on the parameters summarized in the table below, where applicable:

| | | |
|---|---|---|
| | • | Overall Evaluation of Data and Potential Usability Issues |
| * | • | Data Completeness |
| * | • | Preservation and Technical Holding Times |
| * | • | GC/MS Instrument Performance Check |
| | • | Initial and Continuing Calibrations |
| | • | Blanks |
| * | • | Surrogate Compounds/Labeled Analogs |
| * | • | Internal Standards |
| * | • | Laboratory Control Sample/ Laboratory Control Sample Duplicates |
| * | • | Matrix Spike/Matrix Spike Duplicate |
| * | • | Field and Laboratory Duplicates |
| * | • | Target Compound Identification |
| * | • | Compound Quantitation and Reported Quantitation Limits |
| * | • | System Performance |

*All criteria were met for this parameter.
NA = not analyzed

The Data Validation Report includes the following attachments:

Attachment A: Data Summary Table – summarized validated results
Attachment B: Validation Qualifier Definitions

## Overall Evaluation of Data

Volatile Organics (Method 8260D)

- The results for 1,4-dioxane in HA20-CMT-6(OW)-04042023, MW-SD34-04042023, TRIP BLANK_20230404, EQ-BLANK-04042023, HA20-CMT-3T(OW)-04042023, and MW-SD52-04042023 were qualified as estimated (UJ) due to low relative response factors (RRFs) in the initial calibration (IC), IC verification (ICV), and continuing calibration (CC) standards. Results for 1,4-dioxane in these samples should be taken from the SW846 8270E SIM Isotope Dilution analyses.

- The results for 4-methyl-2-pentanone, 2-hexanone, and 1,1,2,2-tetrachloroethane in HA20-CMT-6(OW)-04042023, MW-SD34-04042023, TRIP BLANK_20230404,

EQ-BLANK-04042023, HA20-CMT-3T(OW)-04042023, and MW-SD52-04042023 were qualified as estimated (UJ) due to unacceptable relative percent differences (RPD) in the CC standard.

Nitrite/Nitrate (EPA 353.2)

- The result for nitrite in MW-SD34-04042023 were qualified as not detected (U) at the RL due to equipment blank contamination.

The following sections of this report detail the reasons qualifiers were applied to the sample results. Each parameter section discusses the quality control (QC) excursions that impacted sample results. Where a quality indicator was deemed acceptable after thorough review, no further discussion is included in this report. Detailed findings are included for each quality element that impacted the usability of the reported results. Additional information or explanation is included as needed, to provide support for decisions made, based on the validator's best professional judgment.

Where a result was qualified J+ and J or J- and J, the J qualifier takes precedence. Where a result was qualified biased high and low for differing data quality excursions, the final qualifier is J with an indeterminate bias.

## Volatile Organics (SW-846 8260D)

### Calibration

One IC was performed on March 30, 2023, on instrument QUIMBY in support of the sample analyses. All RRFs and RSDs or correlation coefficients ($r^2$) were acceptable (QC >0.05 RRF, ≤20% RSD, >0.99 $r^2$), except that a low RRF was observed in the IC standards for 1,4-dioxane (0.0011).

A second-source ICV standard was analyzed after the IC, and the RRF for 1,4-dioxane was unacceptably low. The %Ds in the ICV standards were acceptable (%D≤20), with the following exception:

| Analyte | %D | Associated Sample | Qualifier Applied |
|---|---|---|---|
| *ICV Standard 3/30/23, Instrument QUIMBY* | | | |
| 1,4-Dioxane | 34.0 | MW-BS54-04072023<br>MW-BS50-04072023<br>MW-S60-04072023<br>MW-SD60-04072023<br>TRIP BLANK<br>EQ-BLANK-04072023 | UJ |

The results for 1,4-dioxane in HA20-CMT-6(OW)-04042023, MW-SD34-04042023, TRIP BLANK_20230404, EQ-BLANK-04042023, HA20-CMT-3T(OW)-04042023, and MW-SD52-04042023 were qualified as estimated (UJ) due to low RRFs in the associated IC and ICV standards. Results for 1,4-dioxane in these samples were qualified as estimated (UJ) due to high %D in the associated ICV standard.

One CC standard was run with the site samples on April 10, 2023. The percent differences were acceptable (≤20%D), with the following exceptions:

| Analyte | %D | Affected Sample | Qualifier Applied |
|---|---|---|---|
| *CC Standard 04/10/23 at 07:52 Instrument QUIMBY* | | | |
| 4-Methyl-2-pentanone | -26.8 | HA20-CMT-6(OW)-04042023<br>MW-SD34-04042023<br>TRIP BLANK_20230404<br>EQ-BLANK-04042023<br>HA20-CMT-3T(OW)-04042023<br>MW-SD52-04042023 | UJ |
| 2-Hexanone | -21.6 | | |
| 1,1,2,2-Tetrachloroethane | -20.6 | | |

All of the high %Ds listed above resulted from low responses relative to the IC, indicating the potential for low bias or false negatives. Results as detailed above were qualified as estimated (UJ) due to low CC standard responses.

**1,4-Dioxane (SW846 8270E SIM Isotope Dilution)**

Results were determined to be valid as reported. No qualifiers were applied to the results based on the review of the data.

**Hardness (SW846 6020B)**

Results were determined to be valid as reported. No qualifiers were applied to the results based on the review of the data.

**Bicarbonate and Carbonate Alkalinity (Standard Methods 2320B)**

Results were determined to be valid as reported. No qualifiers were applied to the results based on the review of the data.

**Phosphorus (Standard Methods 4500P-E)**

Results were determined to be valid as reported. No qualifiers were applied to the results based on the review of the data.

**Total Suspended Solids (Standard Methods 2540D)**

Results were determined to be valid as reported. No qualifiers were applied to the results based on the review of the data.

## Nitrate/Nitrite (EPA 353.2)

### Blanks

A method blank was prepared with the samples, and initial and continuing calibration blanks were analyzed at the appropriate frequencies. One equipment blank (EQ-BLANK-04042023) was submitted with the field samples. Nitrite was detected in EQ-BLANK-04042023 at 0.020 mg/L. The result for nitrite in MW-SD34-04042023 were qualified as not detected (U) at the reporting limit (RL) due to equipment blank contamination.

## Total Organic Carbon (Standard Methods 5310C)

Results were determined to be valid as reported. No qualifiers were applied to the results based on the review of the data.

## Anions - Chloride, Fluoride, Sulfate (EPA 300.0)

Spike recoveries (80%R MS/84%R MSD) for sulfate in MW-SD34-04042023 were outside of acceptance criteria (90-110%R); however, the concentration of sulfate in the unspiked sample was five times greater than the spike concentration. Acceptable spike recoveries would not be expected, and no action was necessary.

Results were determined to be valid as reported. No qualifiers were applied to the results based on the review of the data.

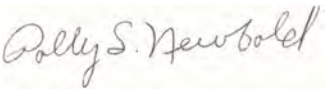
## Documentation

The following documentation issues were observed during the validation effort:

- On the 1,4-dioxane MS/MSD summary form for MW-SD34-04042023, the lab reported an MS recovery as 46%R. The actual recovery, based on the provided data, should have been 94%R for the MS.

Please feel free to contact me (edickinson@ddmsinc.com or 610-314-6284) with any questions you may have regarding this information.

Sincerely,



Polly S. Newbold
Sr. Environmental Chemist

Attachments

**Attachment A**
**DATA SUMMARY TABLE**
**L2317663**

Data Summary Form for Groundwater Samples
Job No. L2317663
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/4/2023 - 4/4/2023

| | | Field Sample ID | ASSABET-1A(PZ-1A)-04042023 | | | ASSABET-2A(PZ-2A)-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317663-10 | | | L2317663-11 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Fluoride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Sulfate as SO4 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Carbonate (as CO3) | mg/l | -- | -- | | -- | -- | |
| SM 2540D | Total Suspended Solids (TSS) | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrite as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | -- | -- | | -- | -- | |
| SM 5310C | Total Organic Carbon (TOC) | mg/l | -- | -- | | -- | -- | |
| SW6020B | HARDNESS AS CaCO3 | mg/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2317663
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/4/2023 - 4/4/2023

| | | Field Sample ID | ASSABET-1A(PZ-1A)-04042023 | | | ASSABET-2A(PZ-2A)-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317663-10 | | | L2317663-11 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2-Hexanone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 4-Chlorotoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Acetone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Benzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromochloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromodichloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromoform | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromomethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Carbon disulfide | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Carbon tetrachloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloroform | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dibromochloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dibromomethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Isopropyl Ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Isopropylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | m-&p-Xylenes | ug/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2317663
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/4/2023 - 4/4/2023

| | | Field Sample ID | ASSABET-1A(PZ-1A)-04042023 | | | ASSABET-2A(PZ-2A)-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317663-10 | | | L2317663-11 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methylene Chloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Naphthalene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | N-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | N-Propylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | o-Xylene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Styrene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tetrachloroethylene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tetrahydrofuran | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Toluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Trichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Vinyl Chloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Xylenes (total) | ug/l | -- | -- | | -- | -- | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 0.203 | | | 0.419 | | |

Data Summary Form for Groundwater Samples
Job No. L2317663
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/4/2023 - 4/4/2023

| | | Field Sample ID | EQ-BLANK-04042023 | | | EW-1-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317663-12 | | | L2317663-15 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | 0.500 | U | | -- | -- | |
| EPA 300.0 | Fluoride | mg/l | 0.050 | U | | -- | -- | |
| EPA 300.0 | Sulfate as SO4 | mg/l | 1.00 | U | | -- | -- | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | 2.00 | U | | -- | -- | |
| SM 2320B | Carbonate (as CO3) | mg/l | 2.00 | U | | -- | -- | |
| SM 2540D | Total Suspended Solids (TSS) | mg/l | 5.0 | U | | -- | -- | |
| SM 4500-NO3-F | Nitrite as N | mg/l | 0.020 | J | | -- | -- | |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | 0.100 | U | | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | 0.010 | U | | -- | -- | |
| SM 5310C | Total Organic Carbon (TOC) | mg/l | 0.198 | J | | -- | -- | |
| SW6020B | HARDNESS AS CaCO3 | mg/l | 0.6600 | U | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | 1.0 | UJ | Low CC response | -- | -- | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | 2.0 | U | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2317663
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/4/2023 - 4/4/2023

| | | Field Sample ID | EQ-BLANK-04042023 | | | EW-1-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317663-12 | | | L2317663-15 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 2-Hexanone | ug/l | 5.0 | UJ | Low CC response | -- | -- | |
| SW-846 8260D | 4-Chlorotoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | 5.0 | UJ | Low CC response | -- | -- | |
| SW-846 8260D | Acetone | ug/l | 5.0 | U | | -- | -- | |
| SW-846 8260D | Benzene | ug/l | 0.50 | U | | -- | -- | |
| SW-846 8260D | Bromobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromochloromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromodichloromethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Bromoform | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromomethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Carbon disulfide | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Carbon tetrachloride | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chloroethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Chloroform | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chloromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | Dibromochloromethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Dibromomethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethylbenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | 0.60 | U | | -- | -- | |
| SW-846 8260D | Isopropyl Ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Isopropylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | m-&p-Xylenes | ug/l | 2.0 | U | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2317663
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/4/2023 - 4/4/2023

| | | Field Sample ID | EQ-BLANK-04042023 | | | EW-1-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317663-12 | | | L2317663-15 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | 5.0 | U | | -- | -- | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Methylene Chloride | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Naphthalene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | N-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | N-Propylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | o-Xylene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Styrene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Tetrachloroethylene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Tetrahydrofuran | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Toluene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | Trichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Vinyl Chloride | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Xylenes (total) | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 0.144 | U | | 2.46 | | |

Data Summary Form for Groundwater Samples
Job No. L2317663
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/4/2023 - 4/4/2023

| | | Field Sample ID | GZW-8-2-04042023 | | | HA20-CMT-3T(OW)-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317663-05 | | | L2317663-13 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Fluoride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Sulfate as SO4 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | -- | -- | | 70.7 | | |
| SM 2320B | Carbonate (as CO3) | mg/l | -- | -- | | 2.00 | U | |
| SM 2540D | Total Suspended Solids (TSS) | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrite as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | -- | -- | | 0.146 | | |
| SM 5310C | Total Organic Carbon (TOC) | mg/l | -- | -- | | -- | -- | |
| SW6020B | HARDNESS AS CaCO3 | mg/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | -- | -- | | 1.0 | UJ | Low CC response |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | -- | -- | | 1.7 | | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | -- | -- | | 7.4 | | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | -- | -- | | 0.14 | J | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | -- | -- | | 2.0 | U | |

Data Summary Form for Groundwater Samples
Job No. L2317663
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/4/2023 - 4/4/2023

| | | Field Sample ID | GZW-8-2-04042023 | | | HA20-CMT-3T(OW)-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317663-05 | | | L2317663-13 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | -- | -- | | 0.40 | U | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 2-Hexanone | ug/l | -- | -- | | 5.0 | UJ | Low CC response |
| SW-846 8260D | 4-Chlorotoluene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | -- | -- | | 5.0 | UJ | Low CC response |
| SW-846 8260D | Acetone | ug/l | -- | -- | | 5.0 | U | |
| SW-846 8260D | Benzene | ug/l | -- | -- | | 0.50 | U | |
| SW-846 8260D | Bromobenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Bromochloromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Bromodichloromethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Bromoform | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Bromomethane | ug/l | -- | -- | | 0.61 | J | |
| SW-846 8260D | Carbon disulfide | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Carbon tetrachloride | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Chlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Chloroethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Chloroform | ug/l | -- | -- | | 0.46 | J | |
| SW-846 8260D | Chloromethane | ug/l | -- | -- | | 0.30 | J | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | -- | -- | | 0.40 | U | |
| SW-846 8260D | Dibromochloromethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Dibromomethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Ethyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Ethylbenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | -- | -- | | 0.60 | U | |
| SW-846 8260D | Isopropyl Ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Isopropylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | m-&p-Xylenes | ug/l | -- | -- | | 2.0 | U | |

Data Summary Form for Groundwater Samples
Job No. L2317663
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/4/2023 - 4/4/2023

| | | Field Sample ID | GZW-8-2-04042023 | | | HA20-CMT-3T(OW)-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317663-05 | | | L2317663-13 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | -- | -- | | 5.0 | U | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Methylene Chloride | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Naphthalene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | N-Butylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | N-Propylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | o-Xylene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Styrene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Tetrachloroethylene | ug/l | -- | -- | | 1.4 | | |
| SW-846 8260D | Tetrahydrofuran | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Toluene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | -- | -- | | 0.40 | U | |
| SW-846 8260D | Trichloroethene | ug/l | -- | -- | | 8.8 | | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Vinyl Chloride | ug/l | -- | -- | | 0.08 | J | |
| SW-846 8260D | Xylenes (total) | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 0.144 | U | | 54.6 | | |

Data Summary Form for Groundwater Samples
Job No. L2317663
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/4/2023 - 4/4/2023

| | | Field Sample ID | HA20-CMT-6(OW)-04042023 | | | ML-1-3-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317663-02 | | | L2317663-16 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Fluoride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Sulfate as SO4 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | 75.2 | | | -- | -- | |
| SM 2320B | Carbonate (as CO3) | mg/l | 2.00 | U | | -- | -- | |
| SM 2540D | Total Suspended Solids (TSS) | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrite as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | 0.011 | | | -- | -- | |
| SM 5310C | Total Organic Carbon (TOC) | mg/l | -- | -- | | -- | -- | |
| SW6020B | HARDNESS AS CaCO3 | mg/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | 1.0 | UJ | Low CC response | -- | -- | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | 2.0 | U | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2317663
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/4/2023 - 4/4/2023

| | | Field Sample ID | HA20-CMT-6(OW)-04042023 | | | ML-1-3-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317663-02 | | | L2317663-16 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 2-Hexanone | ug/l | 5.0 | UJ | Low CC response | -- | -- | |
| SW-846 8260D | 4-Chlorotoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | 5.0 | UJ | Low CC response | -- | -- | |
| SW-846 8260D | Acetone | ug/l | 5.0 | U | | -- | -- | |
| SW-846 8260D | Benzene | ug/l | 0.50 | U | | -- | -- | |
| SW-846 8260D | Bromobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromochloromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromodichloromethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Bromoform | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromomethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Carbon disulfide | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Carbon tetrachloride | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chloroethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Chloroform | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chloromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | Dibromochloromethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Dibromomethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethylbenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | 0.60 | U | | -- | -- | |
| SW-846 8260D | Isopropyl Ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Isopropylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | m-&p-Xylenes | ug/l | 2.0 | U | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2317663
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/4/2023 - 4/4/2023

| | | Field Sample ID | HA20-CMT-6(OW)-04042023 | | | ML-1-3-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317663-02 | | | L2317663-16 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | 5.0 | U | | -- | -- | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Methylene Chloride | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Naphthalene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | N-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | N-Propylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | o-Xylene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Styrene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Tetrachloroethylene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Tetrahydrofuran | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Toluene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | Trichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Vinyl Chloride | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Xylenes (total) | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 0.190 | | | 4.25 | | |

Data Summary Form for Groundwater Samples
Job No. L2317663
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/4/2023 - 4/4/2023

| | | Field Sample ID | ML-3-3-04042023 | | | MW-BS28-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317663-01 | | | L2317663-03 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Fluoride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Sulfate as SO4 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Carbonate (as CO3) | mg/l | -- | -- | | -- | -- | |
| SM 2540D | Total Suspended Solids (TSS) | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrite as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | -- | -- | | -- | -- | |
| SM 5310C | Total Organic Carbon (TOC) | mg/l | -- | -- | | -- | -- | |
| SW6020B | HARDNESS AS CaCO3 | mg/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2317663
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/4/2023 - 4/4/2023

| | | Field Sample ID | ML-3-3-04042023 | | | MW-BS28-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317663-01 | | | L2317663-03 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2-Hexanone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 4-Chlorotoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Acetone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Benzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromochloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromodichloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromoform | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromomethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Carbon disulfide | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Carbon tetrachloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloroform | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dibromochloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dibromomethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Isopropyl Ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Isopropylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | m-&p-Xylenes | ug/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2317663
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/4/2023 - 4/4/2023

| | | Field Sample ID | ML-3-3-04042023 | | | MW-BS28-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317663-01 | | | L2317663-03 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methylene Chloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Naphthalene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | N-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | N-Propylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | o-Xylene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Styrene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tetrachloroethylene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tetrahydrofuran | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Toluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Trichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Vinyl Chloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Xylenes (total) | ug/l | -- | -- | | -- | -- | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 1.40 | | | 24.5 | | |

Data Summary Form for Groundwater Samples
Job No. L2317663
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/4/2023 - 4/4/2023

| | | Field Sample ID | MW-SD34-04042023 | | | MW-SD34-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317663-04 | | | L2317663-04 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | -- | -- | | 97.1 | | |
| EPA 300.0 | Fluoride | mg/l | 0.050 | U | | -- | -- | |
| EPA 300.0 | Sulfate as SO4 | mg/l | -- | -- | | 498 | | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Carbonate (as CO3) | mg/l | -- | -- | | -- | -- | |
| SM 2540D | Total Suspended Solids (TSS) | mg/l | 16 | | | -- | -- | |
| SM 4500-NO3-F | Nitrite as N | mg/l | 0.050 | U | EB contam | -- | -- | |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | 0.032 | J | | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | -- | -- | | -- | -- | |
| SM 5310C | Total Organic Carbon (TOC) | mg/l | 0.719 | | | -- | -- | |
| SW6020B | HARDNESS AS CaCO3 | mg/l | 608.8 | | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | 1.0 | UJ | Low CC response | -- | -- | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | 1.8 | | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | 2.4 | | | -- | -- | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | 2.3 | | | -- | -- | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | 2.0 | U | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2317663
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/4/2023 - 4/4/2023

| | | Field Sample ID | MW-SD34-04042023 | | | MW-SD34-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317663-04 | | | L2317663-04 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 2-Hexanone | ug/l | 5.0 | UJ | Low CC response | -- | -- | |
| SW-846 8260D | 4-Chlorotoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | 5.0 | UJ | Low CC response | -- | -- | |
| SW-846 8260D | Acetone | ug/l | 5.0 | U | | -- | -- | |
| SW-846 8260D | Benzene | ug/l | 0.50 | U | | -- | -- | |
| SW-846 8260D | Bromobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromochloromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromodichloromethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Bromoform | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromomethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Carbon disulfide | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Carbon tetrachloride | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chloroethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Chloroform | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chloromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | 2.3 | | | -- | -- | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | Dibromochloromethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Dibromomethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethylbenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | 0.60 | U | | -- | -- | |
| SW-846 8260D | Isopropyl Ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Isopropylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | m-&p-Xylenes | ug/l | 2.0 | U | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2317663
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/4/2023 - 4/4/2023

| | | Field Sample ID | MW-SD34-04042023 | | | MW-SD34-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317663-04 | | | L2317663-04 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | 5.0 | U | | -- | -- | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Methylene Chloride | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Naphthalene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | N-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | N-Propylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | o-Xylene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Styrene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Tetrachloroethylene | ug/l | 0.61 | J | | -- | -- | |
| SW-846 8260D | Tetrahydrofuran | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Toluene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | Trichloroethene | ug/l | 4.8 | | | -- | -- | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Vinyl Chloride | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Xylenes (total) | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 40.9 | | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2317663
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/4/2023 - 4/4/2023

| | | Field Sample ID | MW-SD42A-04042023 | | | MW-SD42A-04042023 DUP | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317663-07 | | | L2317663-08 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Fluoride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Sulfate as SO4 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Carbonate (as CO3) | mg/l | -- | -- | | -- | -- | |
| SM 2540D | Total Suspended Solids (TSS) | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrite as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | -- | -- | | -- | -- | |
| SM 5310C | Total Organic Carbon (TOC) | mg/l | -- | -- | | -- | -- | |
| SW6020B | HARDNESS AS CaCO3 | mg/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2317663
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/4/2023 - 4/4/2023

| | | Field Sample ID | MW-SD42A-04042023 | | | MW-SD42A-04042023 DUP | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317663-07 | | | L2317663-08 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2-Hexanone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 4-Chlorotoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Acetone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Benzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromochloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromodichloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromoform | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromomethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Carbon disulfide | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Carbon tetrachloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloroform | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dibromochloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dibromomethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Isopropyl Ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Isopropylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | m-&p-Xylenes | ug/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2317663
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/4/2023 - 4/4/2023

| | | Field Sample ID | MW-SD42A-04042023 | | | MW-SD42A-04042023 DUP | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317663-07 | | | L2317663-08 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methylene Chloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Naphthalene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | N-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | N-Propylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | o-Xylene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Styrene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tetrachloroethylene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tetrahydrofuran | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Toluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Trichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Vinyl Chloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Xylenes (total) | ug/l | -- | -- | | -- | -- | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 1.92 | | | 2.02 | | |

Data Summary Form for Groundwater Samples
Job No. L2317663
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/4/2023 - 4/4/2023

| | | Field Sample ID | MW-SD44-04042023 | | | MW-SD52-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317663-09 | | | L2317663-17 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Fluoride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Sulfate as SO4 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Carbonate (as CO3) | mg/l | -- | -- | | -- | -- | |
| SM 2540D | Total Suspended Solids (TSS) | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrite as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | -- | -- | | -- | -- | |
| SM 5310C | Total Organic Carbon (TOC) | mg/l | -- | -- | | -- | -- | |
| SW6020B | HARDNESS AS CaCO3 | mg/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | -- | -- | | 1.0 | UJ | Low CC response |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | -- | -- | | 2.0 | U | |

Data Summary Form for Groundwater Samples
Job No. L2317663
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/4/2023 - 4/4/2023

| | | Field Sample ID | MW-SD44-04042023 | | | MW-SD52-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317663-09 | | | L2317663-17 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | -- | -- | | 0.40 | U | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 2-Hexanone | ug/l | -- | -- | | 5.0 | UJ | Low CC response |
| SW-846 8260D | 4-Chlorotoluene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | -- | -- | | 5.0 | UJ | Low CC response |
| SW-846 8260D | Acetone | ug/l | -- | -- | | 5.0 | U | |
| SW-846 8260D | Benzene | ug/l | -- | -- | | 0.50 | U | |
| SW-846 8260D | Bromobenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Bromochloromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Bromodichloromethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Bromoform | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Bromomethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Carbon disulfide | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Carbon tetrachloride | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Chlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Chloroethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Chloroform | ug/l | -- | -- | | 0.84 | J | |
| SW-846 8260D | Chloromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | -- | -- | | 0.40 | U | |
| SW-846 8260D | Dibromochloromethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Dibromomethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Ethyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Ethylbenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | -- | -- | | 0.60 | U | |
| SW-846 8260D | Isopropyl Ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Isopropylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | m-&p-Xylenes | ug/l | -- | -- | | 2.0 | U | |

Data Summary Form for Groundwater Samples
Job No. L2317663
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/4/2023 - 4/4/2023

| | | Field Sample ID | MW-SD44-04042023 | | | MW-SD52-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317663-09 | | | L2317663-17 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | -- | -- | | 5.0 | U | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Methylene Chloride | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Naphthalene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | N-Butylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | N-Propylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | o-Xylene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Styrene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Tetrachloroethylene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Tetrahydrofuran | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Toluene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | -- | -- | | 0.40 | U | |
| SW-846 8260D | Trichloroethene | ug/l | -- | -- | | 0.23 | J | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Vinyl Chloride | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Xylenes (total) | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 1.16 | | | 0.136 | U | |

Data Summary Form for Groundwater Samples
Job No. L2317663
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/4/2023 - 4/4/2023

| | | Field Sample ID | SW-101-04042023 | | | TRIP BLANK_20230404 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317663-14 | | | L2317663-06 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Fluoride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Sulfate as SO4 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Carbonate (as CO3) | mg/l | -- | -- | | -- | -- | |
| SM 2540D | Total Suspended Solids (TSS) | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrite as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | -- | -- | | -- | -- | |
| SM 5310C | Total Organic Carbon (TOC) | mg/l | -- | -- | | -- | -- | |
| SW6020B | HARDNESS AS CaCO3 | mg/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | -- | -- | | 1.0 | UJ | Low CC response |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | -- | -- | | 2.0 | U | |

Data Summary Form for Groundwater Samples
Job No. L2317663
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/4/2023 - 4/4/2023

| | | Field Sample ID | SW-101-04042023 | | | TRIP BLANK_20230404 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317663-14 | | | L2317663-06 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | -- | -- | | 0.40 | U | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 2-Hexanone | ug/l | -- | -- | | 5.0 | UJ | Low CC response |
| SW-846 8260D | 4-Chlorotoluene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | -- | -- | | 5.0 | UJ | Low CC response |
| SW-846 8260D | Acetone | ug/l | -- | -- | | 1.5 | J | |
| SW-846 8260D | Benzene | ug/l | -- | -- | | 0.50 | U | |
| SW-846 8260D | Bromobenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Bromochloromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Bromodichloromethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Bromoform | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Bromomethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Carbon disulfide | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Carbon tetrachloride | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Chlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Chloroethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Chloroform | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Chloromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | -- | -- | | 0.40 | U | |
| SW-846 8260D | Dibromochloromethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Dibromomethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Ethyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Ethylbenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | -- | -- | | 0.60 | U | |
| SW-846 8260D | Isopropyl Ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Isopropylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | m-&p-Xylenes | ug/l | -- | -- | | 2.0 | U | |

Data Summary Form for Groundwater Samples
Job No. L2317663
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/4/2023 - 4/4/2023

| | | Field Sample ID | SW-101-04042023 | | | TRIP BLANK_20230404 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317663-14 | | | L2317663-06 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | -- | -- | | 5.0 | U | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Methylene Chloride | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Naphthalene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | N-Butylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | N-Propylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | o-Xylene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Styrene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Tetrachloroethylene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Tetrahydrofuran | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Toluene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | -- | -- | | 0.40 | U | |
| SW-846 8260D | Trichloroethene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Vinyl Chloride | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Xylenes (total) | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 0.142 | U | | -- | -- | |

# Attachment B
# VALIDATION QUALIFIER DEFINITIONS
# L2317663

## Validation Qualifier Definitions

Final validated results are annotated with the following codes:

**U** The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

**J** The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

**J+** The result is an estimated quantity, but the result may be biased high.

**J-** The result is an estimated quantity, but the result may be biased low.

**NJ** The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.

**UJ** The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

**R** The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

July 12, 2023

Ms. Jessie McCusker
de maximis, Inc.
200 Day Hill Road, Suite 200
Windsor, CT 06095

Re: SDG No. L2317983
Alpha Analytical
NMI Groundwater
Data Validation

18/Water

| | |
|---|---|
| MW-SD17-04052023 | MW-B1D28-04042023 |
| MW-S02-04052023 | BEW-3-04052023 |
| BEW-2-04052023 | BEW-4-04052023 |
| MW-SD46-04052023 | MW-S46-04052023 |
| MW-BS02-04052023 | MW-BS52-04052023 |
| MW-BS52-04052023 DUP | MW-S64-04052023 |
| MW-S64-04052023 DUP | HA20-CMT-3B(OW)-04052023 |
| MW-S16-04052023 | MW-SD38-04052023 |
| MW-BS53-04052023 | MW-BM03-04052023 |

1/Trip Blank
TRIP BLANK

1/Equipment Blank
EQ-BLANK-04052023

Dear Ms. McCusker:

A Tier I Plus data validation was performed on 18 water samples, one trip blank, and one equipment blank from the Nuclear Metals Superfund site. The data validation was performed using the Region 1 - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures dated June 2018, to the extent possible, Massachusetts Compendium of Analytical Methods (CAM) protocols, the site-specific QAPP, and ddms' Standard Operating Procedures (SOPs). Professional judgment was applied as necessary and appropriate.

Analyses were performed in accordance with the following methods:

| **Parameter** | **Method** |
|---|---|
| Hardness | SW846 6020B |

| Parameter | Method |
|---|---|
| Volatile Organic Compounds (VOCs) | SW846 8260D |
| Semivolatile Organic Compounds (SVOCs) – 1,4-Dioxane | SW846 8270E SIM |
| Total Suspended Solids (TSS) | SM 2540D |
| Bicarbonate and Carbonate Alkalinity | SM 2320B |
| Total and Dissolved Phosphorus | SM 4500-P-E |
| Ammonia | SM 4500-NN3-H |
| Nitrate/Nitrite | SM 4500 NO3-F |
| Anions (chloride, fluoride, and sulfate) | EPA 300.0 |

The data were evaluated based on the parameters summarized in the table below, where applicable:

| | | |
|---|---|---|
| | • | Overall Evaluation of Data and Potential Usability Issues |
| * | • | Data Completeness |
| * | • | Preservation and Technical Holding Times |
| * | • | GC/MS Instrument Performance Check |
| | • | Initial and Continuing Calibrations |
| | • | Blanks |
| | • | Surrogate Compounds/Labeled Analogs |
| * | • | Internal Standards |
| | • | Laboratory Control Sample/ Laboratory Control Sample Duplicates |
| | • | Matrix Spike/Matrix Spike Duplicate |
| * | • | Field and Laboratory Duplicates |
| * | • | Target Compound Identification |
| * | • | Compound Quantitation and Reported Quantitation Limits |
| * | • | Total v. Dissolved Concentrations |
| * | • | System Performance |

*All criteria were met for this parameter.
NA = not analyzed or not applicable

The Data Validation Report includes the following attachments:

Attachment A: Data Summary Table – summarized validated results
Attachment B: Validation Qualifier Definitions

## Overall Evaluation of Data

- Results for 1,4-dioxane in BEW-2-04052023, BEW-4-04052023, MW-BS52-04052023, MW-BS52-04052023 DUP, HA20-CMT-3B(OW)-04052023, MW-SD38-04052023, EQ-BLANK-04052023, and MW-BS53-04052023 were reported from the volatile and semi-volatile fractions (methods 8260D and 8270E SIM). The

validator's recommendation is to use the results reported from the semi-volatile fraction.

VOCs

- Results for 1,4-dioxane in BEW-2-04052023, BEW-4-04052023, MW-BS52-04052023, MW-BS52-04052023 DUP, MW-S64-04052023, MW-S64-04052023 DUP, HA20-CMT-3B(OW)-04052023, TRIP BLANK, MW-SD38-04052023, EQ-BLANK-04052023, and MW-BS53-04052023 were qualified as estimated (UJ) due to low relative response factors (RRFs) in the initial calibration (IC), IC verification (ICV), and continuing calibration (CC) standards.

- Results for 1,4-dioxane in BEW-2-04052023, BEW-4-04052023, MW-BS52-04052023, MW-BS52-04052023 DUP, MW-S64-04052023, MW-S64-04052023 DUP, HA20-CMT-3B(OW)-04052023, TRIP BLANK, MW-SD38-04052023, EQ-BLANK-04052023, and MW-BS53-04052023 were qualified as estimated (UJ) based on variability between the ICV and IC standards.

- Results for methyl isobutyl ketone in BEW-2-04052023, BEW-4-04052023, MW-BS52-04052023, MW-BS52-04052023 DUP, MW-S64-04052023, MW-S64-04052023 DUP, HA20-CMT-3B(OW)-04052023, TRIP BLANK, MW-SD38-04052023, EQ-BLANK-04052023, and MW-BS53-04052023 were qualified as estimated (UJ) based on low responses in the CC standard when compared to the IC.

- The result for acetone in BEW-4-04052023 was qualified as estimated with potential high bias (J+) due to high response in the CC standard.

The following sections of this report detail the reasons qualifiers were applied to the sample results. Each parameter section discusses the quality control (QC) excursions that impacted sample results. Where a quality indicator was deemed acceptable after thorough review, no further discussion is included in this report. Detailed findings are included for each quality element that impacted the usability of the reported results. Additional information or explanation is included as needed, to provide support for decisions made, based on the validator's best professional judgment.

Where a result was qualified J+ and J, or J- and J, the J qualifier takes precedence. Where a result was qualified biased high and low for differing data quality excursions, the final qualifier is J, with an indeterminate bias.

## Hardness (SW846 6020B)

Samples MW-BS52-04052023, MW-BS52-04052023 DUP, and EQ-BLANK-04052023 were analyzed for hardness. All hardness results were determined to be acceptable as reported. No qualifiers were applied to these results based on review of the data provided.

## Volatiles Organics (SW-846 8260D)

Samples BEW-2-04052023, BEW-4-04052023, MW-BS52-04052023, MW-BS52-04052023 DUP, MW-S64-04052023, MW-S64-04052023 DUP, HA20-CMT-3B(OW)-04052023, TRIP BLANK, MW-SD38-04052023, EQ-BLANK-04052023, and MW-BS53-04052023 were analyzed for volatile organics.

Sample BEW-3-04052023 was also submitted for volatile organics analysis. According to the case narrative, headspace was observed in the sample vial, and the volatile organics analysis was canceled by the client.

### Calibration

One IC was performed on March 30, 2023, on instrument QUIMBY in support of the sample analyses. All RRFs and relative standard deviations (RSDs) or correlation coefficients ($r^2$) were acceptable (QC >0.05 RRF, ≤20% RSD, >0.99 $r^2$), except that low RRFs were observed in the IC standards for 1,4-dioxane.

A second-source ICV standard was analyzed after the IC, and the RRF for 1,4-dioxane was unacceptably low in the ICV standard. The percent differences (%Ds) in the ICV standards were acceptable (%D≤20), with the following exception:

| Analyte | %D | Associated Sample | Qualifier Applied |
|---|---|---|---|
| *ICV Standard 3/30/23, Instrument QUIMBY* | | | |
| 1,4-Dioxane | 34.0 | BEW-2-04052023<br>BEW-4-04052023<br>MW-BS52-04052023<br>MW-BS52-04052023 DUP<br>MW-S64-04052023<br>MW-S64-04052023 DUP<br>HA20-CMT-3B(OW)-04052023<br>TRIP BLANK<br>MW-SD38-04052023<br>EQ-BLANK-04052023<br>MW-BS53-04052023 | UJ |

The results for 1,4-dioxane in BEW-2-04052023, BEW-4-04052023, MW-BS52-04052023, MW-BS52-04052023 DUP, MW-S64-04052023, MW-S64-04052023 DUP, HA20-CMT-3B(OW)-04052023, TRIP BLANK, MW-SD38-04052023, EQ-BLANK-04052023, and MW-BS53-04052023 were qualified as estimated (UJ) due to low RRFs in the associated IC and ICV standards. Results for 1,4-dioxane in these samples were also qualified as estimated (UJ) based on variability between the ICV and IC standards.

One CC standard was analyzed with the site samples. RRFs for the reported compounds were acceptable except that a low RRF was observed for 1,4-dioxane. The results for 1,4-dioxane in BEW-2-04052023, BEW-4-04052023, MW-BS52-04052023, MW-BS52-04052023 DUP, MW-S64-04052023, MW-S64-04052023 DUP, HA20-CMT-3B(OW)-04052023, TRIP BLANK, MW-SD38-04052023, EQ-BLANK-04052023, and MW-BS53-04052023 were qualified as estimated (UJ) due to low RRFs in the CC standard. The percent differences were acceptable (≤20%D), with the following exceptions:

| Analyte | %D | Affected Sample | Qualifier Applied |
|---|---|---|---|
| *CC Standard 04/13/23 at 05:25, Instrument QUIMBY* | | | |
| Acetone | +26.1 | BEW-2-04052023 | J+ |
| Methyl isobutyl ketone | -24.1 | BEW-4-04052023<br>MW-BS52-04052023<br>MW-BS52-04052023 DUP<br>MW-S64-04052023<br>MW-S64-04052023 DUP<br>HA20-CMT-3B(OW)-04052023<br>TRIP BLANK<br>MW-SD38-04052023<br>EQ-BLANK-04052023<br>MW-BS53-04052023 | UJ |

The high %D for methyl isobutyl ketone resulted from a low response relative to the IC, indicating the potential for low bias or false negatives. Results for methyl isobutyl ketone in BEW-2-04052023, BEW-4-04052023, MW-BS52-04052023, MW-BS52-04052023 DUP, MW-S64-04052023, MW-S64-04052023 DUP, HA20-CMT-3B(OW)-04052023, TRIP BLANK, MW-SD38-04052023, EQ-BLANK-04052023, and MW-BS53-04052023 were qualified as estimated (UJ) due to a low CC standard response.

The high %Ds for acetone resulted from high responses relative to the IC, which suggests the potential for reporting false positives or for sample results that are biased high. The result for acetone in BEW-4-04052023 was qualified as estimated with potential high bias (J+) due to the high CC response. Since acetone was not detected in any other associated sample, no additional action was necessary for this compound.

**1,4-Dioxane (SW-846 8270E SIM)**

Samples MW-SD17-04052023, MW-B1D28-04042023, BEW-3-04052023, BEW-2-04052023, BEW-4-04052023, MW-SD46-04052023, MW-S46-04052023, MW-BS02-04052023, MW-BS52-04052023, MW-BS52-04052023 DUP, HA20-CMT-3B(OW)-04052023, MW-SD38-04052023, EQ-BLANK-04052023, MW-BS53-04052023, and MW-BM03-04052023 were analyzed for 1,4-dioxane according to method SW-846 8270E SIM. Results for 1,4-dioxane in all of these samples were determined to be usable as reported by the laboratory. No qualifiers were applied to these results by the validator.

**Carbonate and Bicarbonate Alkalinity (SM 2320B)**

Samples BEW-3-04052023, BEW-2-04052023, BEW-4-04052023, MW-BS02-04052023, MW-BS52-04052023, MW-BS52-04052023 DUP, HA20-CMT-3B(OW)-04052023, and EQ-BLANK-04052023 were analyzed for carbonate and bicarbonate alkalinity. Results for these analytes in all of these samples were determined to be usable as reported by the laboratory. No qualifiers were applied to these results by the validator.

**Total and Dissolved Phosphorus (SM 4500-P-E)**

Samples MW-B1D28-04042023, MW-S02-04052023, BEW-4-04052023, MW-S64-04052023, MW-S64-04052023 DUP, HA20-CMT-3B(OW)-04052023, MW-S16-04052023, and EQ-BLANK-04052023 were analyzed for total phosphorus. Samples MW-S02-04052023, MW-S64-04052023, MW-S64-04052023 DUP, and MW-S16-04052023 were analyzed for dissolved phosphorus. Results for these analytes in all of these samples were determined to be usable as reported by the laboratory. No qualifiers were applied to these results by the validator.

**Nitrate/Nitrite (SM 4500-NO3-F)**

Samples MW-S02-04052023, MW-BS52-04052023, MW-BS52-04052023 DUP, MW-S64-04052023, MW-S64-04052023 DUP, MW-S16-04052023, and EQ-BLANK-04052023 were analyzed for nitrate and nitrite. Results for these analytes in all of these samples were determined to be usable as reported by the laboratory. No qualifiers were applied to these results by the validator.

**Total Suspended Solids (TSS by SM 2540B)**

Samples MW-BS52-04052023, MW-BS52-04052023 DUP, and EQ-BLANK-04052023 were analyzed for TSS. Results for TSS in both samples were determined to be usable as reported by the laboratory. No qualifiers were applied to these results by the validator.

**Total Organic Carbon (TOC by SM 5310C)**

Samples MW-BS52-04052023, MW-BS52-04052023 DUP, EQ-BLANK-04052023 were analyzed for TOC. Results for TOC in all three samples were determined to be usable as reported by the laboratory. No qualifiers were applied to these results by the validator.

Blanks

A method blank was prepared with the samples, and initial and continuing calibration blanks were analyzed at the appropriate frequencies. One equipment blank (EQ-BLANK-04052023) was submitted with the field samples. TOC was detected in the method blank at 0.098 J mg/L and in EQ-BLANK-040523 at 0.109 J mg/L. Concentrations of TOC in the

associated field samples were well above the reporting limit; therefore, no action was necessary on this basis.

Quantitation

Samples MW-BS52-04052023 and MW-BS52-04052023 DUP were analyzed at 8-fold dilutions to obtain concentrations of TOC within the established calibration range. TOC concentrations and reporting limits were appropriately adjusted for the dilution factor.

## Anions (Chloride, Fluoride, and Sulfate) (EPA 300.0)

Samples MW-BS52-04052023, MW-BS52-04052023 DUP, EQ-BLANK-04052023 were analyzed for chloride, fluoride and sulfate. Results for chloride, fluoride, and sulfate in these samples were determined to be usable as reported by the laboratory. No qualifiers were added to the results based on the data validation effort.

## Documentation

The following documentation issue was observed during the validation effort:

- The time of sample collection recorded on the chain of custody record for MW-SD38-04052023 was 14:20, but a sample collection time of 14:30 was recorded on the sample containers. According to the case narrative, the client requested that the time of 14:30 be reported.

Please feel free to contact me (edickinson@ddmsinc.com or 610-314-6284) with any questions you may have regarding this information.

Sincerely,

Elizabeth K. Dickinson
Sr. Environmental Chemist

Attachments

**Attachment A**
**DATA SUMMARY TABLE**
**L2317983**

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | BEW-2-04052023 | | | BEW-3-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-05 | | | L2317983-04 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Fluoride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Sulfate as SO4 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | 181 | | | 165 | | |
| SM 2320B | Carbonate (as CO3) | mg/l | 2.00 | U | | 2.00 | U | |
| SM 2540D | Total Suspended Solids (TSS) | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrite as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | -- | -- | | -- | -- | |
| SM 5310C | Total Organic Carbon (TOC) | mg/l | -- | -- | | -- | -- | |
| SW6020B | HARDNESS AS CaCO3 | mg/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | 0.53 | J | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | 2.6 | | | -- | -- | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | BEW-2-04052023 | | | BEW-3-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-05 | | | L2317983-04 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,4-Dioxane | ug/l | 250 | UJ | Low IC, ICV, CC RRF, high ICV %D | -- | -- | |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 2-Hexanone | ug/l | 5.0 | U | | -- | -- | |
| SW-846 8260D | 4-Chlorotoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | 5.0 | UJ | Low CC response | -- | -- | |
| SW-846 8260D | Acetone | ug/l | 5.0 | U | | -- | -- | |
| SW-846 8260D | Benzene | ug/l | 0.50 | U | | -- | -- | |
| SW-846 8260D | Bromobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromochloromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromodichloromethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Bromoform | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromomethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Carbon disulfide | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Carbon tetrachloride | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chloroethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Chloroform | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chloromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | 2.6 | | | -- | -- | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | Dibromochloromethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Dibromomethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethylbenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | 0.60 | U | | -- | -- | |
| SW-846 8260D | Isopropyl Ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Isopropylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | m-&p-Xylenes | ug/l | 2.0 | U | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | BEW-2-04052023 | | | BEW-3-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-05 | | | L2317983-04 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | 5.0 | U | | -- | -- | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Methylene Chloride | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Naphthalene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | N-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | N-Propylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | o-Xylene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Styrene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Tetrachloroethylene | ug/l | 0.41 | J | | -- | -- | |
| SW-846 8260D | Tetrahydrofuran | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Toluene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | Trichloroethene | ug/l | 1.8 | | | -- | -- | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Vinyl Chloride | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Xylenes (total) | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 3.95 | | | 32.9 | | |

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | BEW-4-04052023 | | | EQ-BLANK-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-06 | | | L2317983-18 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | -- | -- | | 0.500 | U | |
| EPA 300.0 | Fluoride | mg/l | -- | -- | | 0.050 | U | |
| EPA 300.0 | Sulfate as SO4 | mg/l | -- | -- | | 1.00 | U | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | 49.4 | | | 2.00 | U | |
| SM 2320B | Carbonate (as CO3) | mg/l | 2.00 | U | | 2.00 | U | |
| SM 2540D | Total Suspended Solids (TSS) | mg/l | -- | -- | | 5.0 | U | |
| SM 4500-NO3-F | Nitrite as N | mg/l | -- | -- | | 0.050 | U | |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | -- | -- | | 0.100 | U | |
| SM 4500-P-E | Phosphorus (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | 0.004 | J | | 0.010 | U | |
| SM 5310C | Total Organic Carbon (TOC) | mg/l | -- | -- | | 0.109 | J | |
| SW6020B | HARDNESS AS CaCO3 | mg/l | -- | -- | | 0.6600 | U | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | 0.60 | J | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | 0.23 | J | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | 1.0 | U | | 1.0 | U | |

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | BEW-4-04052023 | | | EQ-BLANK-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-06 | | | L2317983-18 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | 0.40 | U | | 0.40 | U | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,4-Dioxane | ug/l | 250 | UJ | Low IC, ICV, CC RRF, high ICV %D | 250 | UJ | Low IC, ICV, CC RRF, high ICV %D |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 2-Hexanone | ug/l | 5.0 | U | | 5.0 | U | |
| SW-846 8260D | 4-Chlorotoluene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | 5.0 | UJ | Low CC response | 5.0 | UJ | Low CC response |
| SW-846 8260D | Acetone | ug/l | 2.3 | J+ | High CC response | 5.0 | U | |
| SW-846 8260D | Benzene | ug/l | 0.50 | U | | 0.50 | U | |
| SW-846 8260D | Bromobenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Bromochloromethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Bromodichloromethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Bromoform | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Bromomethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Carbon disulfide | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Carbon tetrachloride | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Chlorobenzene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Chloroethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Chloroform | ug/l | 0.52 | J | | 1.0 | U | |
| SW-846 8260D | Chloromethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | 0.23 | J | | 1.0 | U | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | 0.40 | U | | 0.40 | U | |
| SW-846 8260D | Dibromochloromethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Dibromomethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Ethyl ether | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Ethylbenzene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | 0.60 | U | | 0.60 | U | |
| SW-846 8260D | Isopropyl Ether | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Isopropylbenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | m-&p-Xylenes | ug/l | 2.0 | U | | 2.0 | U | |

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | BEW-4-04052023 | | | EQ-BLANK-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-06 | | | L2317983-18 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | 2.4 | J | | 5.0 | U | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Methylene Chloride | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Naphthalene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | N-Butylbenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | N-Propylbenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | o-Xylene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Styrene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Tetrachloroethylene | ug/l | 0.73 | J | | 1.0 | U | |
| SW-846 8260D | Tetrahydrofuran | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Toluene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | 0.40 | U | | 0.40 | U | |
| SW-846 8260D | Trichloroethene | ug/l | 0.55 | J | | 1.0 | U | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Vinyl Chloride | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Xylenes (total) | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 0.999 | | | 0.150 | U | |

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | HA20-CMT-3B(OW)-04052023 | | | MW-B1D28-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-14 | | | L2317983-02 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Fluoride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Sulfate as SO4 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | 134 | | | -- | -- | |
| SM 2320B | Carbonate (as CO3) | mg/l | 2.00 | U | | -- | -- | |
| SM 2540D | Total Suspended Solids (TSS) | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrite as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | 0.057 | | | 0.040 | | |
| SM 5310C | Total Organic Carbon (TOC) | mg/l | -- | -- | | -- | -- | |
| SW6020B | HARDNESS AS CaCO3 | mg/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | 0.17 | J | | -- | -- | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | 0.31 | J | | -- | -- | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | HA20-CMT-3B(OW)-04052023 | | | MW-B1D28-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-14 | | | L2317983-02 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,4-Dioxane | ug/l | 250 | UJ | Low IC, ICV, CC RRF, high ICV %D | -- | -- | |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 2-Hexanone | ug/l | 5.0 | U | | -- | -- | |
| SW-846 8260D | 4-Chlorotoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | 5.0 | UJ | Low CC response | -- | -- | |
| SW-846 8260D | Acetone | ug/l | 5.0 | U | | -- | -- | |
| SW-846 8260D | Benzene | ug/l | 0.50 | U | | -- | -- | |
| SW-846 8260D | Bromobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromochloromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromodichloromethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Bromoform | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromomethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Carbon disulfide | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Carbon tetrachloride | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chloroethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Chloroform | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chloromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | 0.31 | J | | -- | -- | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | Dibromochloromethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Dibromomethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethylbenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | 0.60 | U | | -- | -- | |
| SW-846 8260D | Isopropyl Ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Isopropylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | m-&p-Xylenes | ug/l | 2.0 | U | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | HA20-CMT-3B(OW)-04052023 | | | MW-B1D28-04042023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-14 | | | L2317983-02 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | 5.0 | U | | -- | -- | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Methylene Chloride | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Naphthalene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | N-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | N-Propylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | o-Xylene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Styrene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Tetrachloroethylene | ug/l | 0.75 | J | | -- | -- | |
| SW-846 8260D | Tetrahydrofuran | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Toluene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | Trichloroethene | ug/l | 0.85 | J | | -- | -- | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Vinyl Chloride | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Xylenes (total) | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 2.18 | | | 1.39 | | |

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | MW-BM03-04052023 | | | MW-BS02-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-20 | | | L2317983-09 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Fluoride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Sulfate as SO4 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | -- | -- | | 179 | | |
| SM 2320B | Carbonate (as CO3) | mg/l | -- | -- | | 2.00 | U | |
| SM 2540D | Total Suspended Solids (TSS) | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrite as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | -- | -- | | -- | -- | |
| SM 5310C | Total Organic Carbon (TOC) | mg/l | -- | -- | | -- | -- | |
| SW6020B | HARDNESS AS CaCO3 | mg/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | MW-BM03-04052023 | | | MW-BS02-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-20 | | | L2317983-09 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,4-Dioxane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2-Hexanone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 4-Chlorotoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Acetone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Benzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromochloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromodichloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromoform | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromomethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Carbon disulfide | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Carbon tetrachloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloroform | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dibromochloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dibromomethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Isopropyl Ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Isopropylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | m-&p-Xylenes | ug/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | MW-BM03-04052023 | | | MW-BS02-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-20 | | | L2317983-09 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methylene Chloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Naphthalene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | N-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | N-Propylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | o-Xylene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Styrene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tetrachloroethylene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tetrahydrofuran | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Toluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Trichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Vinyl Chloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Xylenes (total) | ug/l | -- | -- | | -- | -- | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 4.80 | | | 5.70 | | |

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | MW-BS52-04052023 | | | MW-BS52-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-10 | | | L2317983-10 | | |
| | | Dilution Factor | 1 | | | 8 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | 42.8 | | | -- | -- | |
| EPA 300.0 | Fluoride | mg/l | 0.120 | | | -- | -- | |
| EPA 300.0 | Sulfate as SO4 | mg/l | 26.2 | | | -- | -- | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | 87.6 | | | -- | -- | |
| SM 2320B | Carbonate (as CO3) | mg/l | 2.00 | U | | -- | -- | |
| SM 2540D | Total Suspended Solids (TSS) | mg/l | 11 | | | -- | -- | |
| SM 4500-NO3-F | Nitrite as N | mg/l | 0.016 | J | | -- | -- | |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | 0.079 | J | | -- | -- | |
| SM 4500-P-E | Phosphorus (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | -- | -- | | -- | -- | |
| SM 5310C | Total Organic Carbon (TOC) | mg/l | -- | -- | | 3.19 | J | |
| SW6020B | HARDNESS AS CaCO3 | mg/l | 113.1 | | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | MW-BS52-04052023 | | | MW-BS52-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-10 | | | L2317983-10 | | |
| | | Dilution Factor | 1 | | | 8 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,4-Dioxane | ug/l | 250 | UJ | Low IC, ICV, CC RRF, high ICV %D | -- | -- | |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 2-Hexanone | ug/l | 5.0 | U | | -- | -- | |
| SW-846 8260D | 4-Chlorotoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | 5.0 | UJ | Low CC response | -- | -- | |
| SW-846 8260D | Acetone | ug/l | 5.0 | U | | -- | -- | |
| SW-846 8260D | Benzene | ug/l | 0.50 | U | | -- | -- | |
| SW-846 8260D | Bromobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromochloromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromodichloromethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Bromoform | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromomethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Carbon disulfide | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Carbon tetrachloride | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chloroethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Chloroform | ug/l | 0.40 | J | | -- | -- | |
| SW-846 8260D | Chloromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | Dibromochloromethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Dibromomethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethylbenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | 0.60 | U | | -- | -- | |
| SW-846 8260D | Isopropyl Ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Isopropylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | m-&p-Xylenes | ug/l | 2.0 | U | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | MW-BS52-04052023 | | | MW-BS52-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-10 | | | L2317983-10 | | |
| | | Dilution Factor | 1 | | | 8 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | 5.0 | U | | -- | -- | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Methylene Chloride | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Naphthalene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | N-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | N-Propylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | o-Xylene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Styrene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Tetrachloroethylene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Tetrahydrofuran | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Toluene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | Trichloroethene | ug/l | 0.28 | J | | -- | -- | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Vinyl Chloride | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Xylenes (total) | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 3.75 | | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | MW-BS52-04052023 DUP | | | MW-BS52-04052023 DUP | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-11 | | | L2317983-11 | | |
| | | Dilution Factor | 1 | | | 8 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | 42.7 | | | -- | -- | |
| EPA 300.0 | Fluoride | mg/l | 0.118 | | | -- | -- | |
| EPA 300.0 | Sulfate as SO4 | mg/l | 26.0 | | | -- | -- | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | 88.9 | | | -- | -- | |
| SM 2320B | Carbonate (as CO3) | mg/l | 2.00 | U | | -- | -- | |
| SM 2540D | Total Suspended Solids (TSS) | mg/l | 11 | | | -- | -- | |
| SM 4500-NO3-F | Nitrite as N | mg/l | 0.017 | J | | -- | -- | |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | 0.091 | J | | -- | -- | |
| SM 4500-P-E | Phosphorus (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | -- | -- | | -- | -- | |
| SM 5310C | Total Organic Carbon (TOC) | mg/l | -- | -- | | 2.61 | J | |
| SW6020B | HARDNESS AS CaCO3 | mg/l | 110.1 | | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | MW-BS52-04052023 DUP | | | MW-BS52-04052023 DUP | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-11 | | | L2317983-11 | | |
| | | Dilution Factor | 1 | | | 8 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,4-Dioxane | ug/l | 250 | UJ | Low IC, ICV, CC RRF, high ICV %D | -- | -- | |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 2-Hexanone | ug/l | 5.0 | U | | -- | -- | |
| SW-846 8260D | 4-Chlorotoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | 5.0 | UJ | Low CC response | -- | -- | |
| SW-846 8260D | Acetone | ug/l | 5.0 | U | | -- | -- | |
| SW-846 8260D | Benzene | ug/l | 0.50 | U | | -- | -- | |
| SW-846 8260D | Bromobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromochloromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromodichloromethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Bromoform | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromomethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Carbon disulfide | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Carbon tetrachloride | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chloroethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Chloroform | ug/l | 0.42 | J | | -- | -- | |
| SW-846 8260D | Chloromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | Dibromochloromethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Dibromomethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethylbenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | 0.60 | U | | -- | -- | |
| SW-846 8260D | Isopropyl Ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Isopropylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | m-&p-Xylenes | ug/l | 2.0 | U | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | MW-BS52-04052023 DUP | | | MW-BS52-04052023 DUP | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-11 | | | L2317983-11 | | |
| | | Dilution Factor | 1 | | | 8 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | 5.0 | U | | -- | -- | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Methylene Chloride | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Naphthalene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | N-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | N-Propylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | o-Xylene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Styrene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Tetrachloroethylene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Tetrahydrofuran | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Toluene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | Trichloroethene | ug/l | 0.26 | J | | -- | -- | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Vinyl Chloride | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Xylenes (total) | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 3.56 | | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | MW-BS53-04052023 | | | MW-S02-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-19 | | | L2317983-03 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Fluoride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Sulfate as SO4 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Carbonate (as CO3) | mg/l | -- | -- | | -- | -- | |
| SM 2540D | Total Suspended Solids (TSS) | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrite as N | mg/l | -- | -- | | 0.050 | U | |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | -- | -- | | 1.35 | | |
| SM 4500-P-E | Phosphorus (Dissolved) | mg/l | -- | -- | | 0.020 | | |
| SM 4500-P-E | Phosphorus | mg/l | -- | -- | | 0.019 | | |
| SM 5310C | Total Organic Carbon (TOC) | mg/l | -- | -- | | -- | -- | |
| SW6020B | HARDNESS AS CaCO3 | mg/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | 0.27 | J | | -- | -- | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | MW-BS53-04052023 | | | MW-S02-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-19 | | | L2317983-03 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,4-Dioxane | ug/l | 250 | UJ | Low IC, ICV, CC RRF, high ICV %D | -- | -- | |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 2-Hexanone | ug/l | 5.0 | U | | -- | -- | |
| SW-846 8260D | 4-Chlorotoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | 5.0 | UJ | Low CC response | -- | -- | |
| SW-846 8260D | Acetone | ug/l | 5.0 | U | | -- | -- | |
| SW-846 8260D | Benzene | ug/l | 0.50 | U | | -- | -- | |
| SW-846 8260D | Bromobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromochloromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromodichloromethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Bromoform | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromomethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Carbon disulfide | ug/l | 37 | | | -- | -- | |
| SW-846 8260D | Carbon tetrachloride | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chloroethane | ug/l | 0.18 | J | | -- | -- | |
| SW-846 8260D | Chloroform | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chloromethane | ug/l | 0.45 | J | | -- | -- | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | 0.27 | J | | -- | -- | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | Dibromochloromethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Dibromomethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethylbenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | 0.60 | U | | -- | -- | |
| SW-846 8260D | Isopropyl Ether | ug/l | 0.62 | J | | -- | -- | |
| SW-846 8260D | Isopropylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | m-&p-Xylenes | ug/l | 2.0 | U | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | MW-BS53-04052023 | | | MW-S02-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-19 | | | L2317983-03 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | 5.0 | U | | -- | -- | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Methylene Chloride | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Naphthalene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | N-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | N-Propylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | o-Xylene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Styrene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Tetrachloroethylene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Tetrahydrofuran | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Toluene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | Trichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Vinyl Chloride | ug/l | 0.30 | J | | -- | -- | |
| SW-846 8260D | Xylenes (total) | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 0.291 | | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | MW-S16-04052023 | | | MW-S46-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-15 | | | L2317983-08 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Fluoride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Sulfate as SO4 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Carbonate (as CO3) | mg/l | -- | -- | | -- | -- | |
| SM 2540D | Total Suspended Solids (TSS) | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrite as N | mg/l | 0.015 | J | | -- | -- | |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | 1.83 | | | -- | -- | |
| SM 4500-P-E | Phosphorus (Dissolved) | mg/l | 0.010 | U | | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | 0.007 | J | | -- | -- | |
| SM 5310C | Total Organic Carbon (TOC) | mg/l | -- | -- | | -- | -- | |
| SW6020B | HARDNESS AS CaCO3 | mg/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | MW-S16-04052023 | | | MW-S46-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-15 | | | L2317983-08 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,4-Dioxane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2-Hexanone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 4-Chlorotoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Acetone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Benzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromochloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromodichloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromoform | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromomethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Carbon disulfide | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Carbon tetrachloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloroform | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dibromochloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dibromomethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Isopropyl Ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Isopropylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | m-&p-Xylenes | ug/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | MW-S16-04052023 | | | MW-S46-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-15 | | | L2317983-08 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methylene Chloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Naphthalene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | N-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | N-Propylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | o-Xylene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Styrene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tetrachloroethylene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tetrahydrofuran | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Toluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Trichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Vinyl Chloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Xylenes (total) | ug/l | -- | -- | | -- | -- | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | -- | -- | | 0.286 | | |

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | MW-S64-04052023 | | | MW-S64-04052023 DUP | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-12 | | | L2317983-13 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Fluoride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Sulfate as SO4 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Carbonate (as CO3) | mg/l | -- | -- | | -- | -- | |
| SM 2540D | Total Suspended Solids (TSS) | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrite as N | mg/l | 0.025 | J | | 0.050 | U | |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | 0.565 | | | 0.567 | | |
| SM 4500-P-E | Phosphorus (Dissolved) | mg/l | 0.009 | J | | 0.009 | J | |
| SM 4500-P-E | Phosphorus | mg/l | 0.013 | | | 0.015 | | |
| SM 5310C | Total Organic Carbon (TOC) | mg/l | -- | -- | | -- | -- | |
| SW6020B | HARDNESS AS CaCO3 | mg/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | 5.4 | | | 5.0 | | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | 0.30 | J | | 0.24 | J | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | 1.0 | U | | 1.0 | U | |

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | MW-S64-04052023 | | | MW-S64-04052023 DUP | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-12 | | | L2317983-13 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | 0.40 | U | | 0.40 | U | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,4-Dioxane | ug/l | 250 | UJ | Low IC, ICV, CC RRF, high ICV %D | 250 | UJ | Low IC, ICV, CC RRF, high ICV %D |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 2-Hexanone | ug/l | 5.0 | U | | 5.0 | U | |
| SW-846 8260D | 4-Chlorotoluene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | 5.0 | UJ | Low CC response | 5.0 | UJ | Low CC response |
| SW-846 8260D | Acetone | ug/l | 5.0 | U | | 5.0 | U | |
| SW-846 8260D | Benzene | ug/l | 0.50 | U | | 0.50 | U | |
| SW-846 8260D | Bromobenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Bromochloromethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Bromodichloromethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Bromoform | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Bromomethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Carbon disulfide | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Carbon tetrachloride | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Chlorobenzene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Chloroethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Chloroform | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Chloromethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | 0.40 | U | | 0.40 | U | |
| SW-846 8260D | Dibromochloromethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Dibromomethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Ethyl ether | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Ethylbenzene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | 0.60 | U | | 0.60 | U | |
| SW-846 8260D | Isopropyl Ether | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Isopropylbenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | m-&p-Xylenes | ug/l | 2.0 | U | | 2.0 | U | |

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | MW-S64-04052023 | | | MW-S64-04052023 DUP | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-12 | | | L2317983-13 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | 5.0 | U | | 5.0 | U | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Methylene Chloride | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Naphthalene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | N-Butylbenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | N-Propylbenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | o-Xylene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Styrene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Tetrachloroethylene | ug/l | 0.30 | J | | 0.31 | J | |
| SW-846 8260D | Tetrahydrofuran | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Toluene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | 0.40 | U | | 0.40 | U | |
| SW-846 8260D | Trichloroethene | ug/l | 1.6 | | | 1.6 | | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | 0.30 | J | | 0.27 | J | |
| SW-846 8260D | Vinyl Chloride | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Xylenes (total) | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | MW-SD17-04052023 | | | MW-SD38-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-01 | | | L2317983-17 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Fluoride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Sulfate as SO4 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Carbonate (as CO3) | mg/l | -- | -- | | -- | -- | |
| SM 2540D | Total Suspended Solids (TSS) | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrite as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | -- | -- | | -- | -- | |
| SM 5310C | Total Organic Carbon (TOC) | mg/l | -- | -- | | -- | -- | |
| SW6020B | HARDNESS AS CaCO3 | mg/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | -- | -- | | 1.0 | U | |

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | MW-SD17-04052023 | | | MW-SD38-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-01 | | | L2317983-17 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | -- | -- | | 0.40 | U | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,4-Dioxane | ug/l | -- | -- | | 250 | UJ | Low IC, ICV, CC RRF, high ICV %D |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 2-Hexanone | ug/l | -- | -- | | 5.0 | U | |
| SW-846 8260D | 4-Chlorotoluene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | -- | -- | | 5.0 | UJ | Low CC response |
| SW-846 8260D | Acetone | ug/l | -- | -- | | 5.0 | U | |
| SW-846 8260D | Benzene | ug/l | -- | -- | | 0.50 | U | |
| SW-846 8260D | Bromobenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Bromochloromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Bromodichloromethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Bromoform | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Bromomethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Carbon disulfide | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Carbon tetrachloride | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Chlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Chloroethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Chloroform | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Chloromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | -- | -- | | 0.40 | U | |
| SW-846 8260D | Dibromochloromethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Dibromomethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Ethyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Ethylbenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | -- | -- | | 0.60 | U | |
| SW-846 8260D | Isopropyl Ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Isopropylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | m-&p-Xylenes | ug/l | -- | -- | | 2.0 | U | |

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | MW-SD17-04052023 | | | MW-SD38-04052023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-01 | | | L2317983-17 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | -- | -- | | 5.0 | U | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Methylene Chloride | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Naphthalene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | N-Butylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | N-Propylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | o-Xylene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Styrene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Tetrachloroethylene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Tetrahydrofuran | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Toluene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | -- | -- | | 0.40 | U | |
| SW-846 8260D | Trichloroethene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Vinyl Chloride | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Xylenes (total) | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 0.369 | | | 0.419 | | |

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | MW-SD46-04052023 | | | TRIP BLANK_20230405 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-07 | | | L2317983-16 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Fluoride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Sulfate as SO4 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Carbonate (as CO3) | mg/l | -- | -- | | -- | -- | |
| SM 2540D | Total Suspended Solids (TSS) | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrite as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | -- | -- | | -- | -- | |
| SM 5310C | Total Organic Carbon (TOC) | mg/l | -- | -- | | -- | -- | |
| SW6020B | HARDNESS AS CaCO3 | mg/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | -- | -- | | 1.0 | U | |

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | MW-SD46-04052023 | | | TRIP BLANK_20230405 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-07 | | | L2317983-16 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | -- | -- | | 0.40 | U | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,4-Dioxane | ug/l | -- | -- | | 250 | UJ | Low IC, ICV, CC RRF, high ICV %D |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 2-Hexanone | ug/l | -- | -- | | 5.0 | U | |
| SW-846 8260D | 4-Chlorotoluene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | -- | -- | | 5.0 | UJ | Low CC response |
| SW-846 8260D | Acetone | ug/l | -- | -- | | 5.0 | U | |
| SW-846 8260D | Benzene | ug/l | -- | -- | | 0.50 | U | |
| SW-846 8260D | Bromobenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Bromochloromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Bromodichloromethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Bromoform | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Bromomethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Carbon disulfide | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Carbon tetrachloride | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Chlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Chloroethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Chloroform | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Chloromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | -- | -- | | 0.40 | U | |
| SW-846 8260D | Dibromochloromethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Dibromomethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Ethyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Ethylbenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | -- | -- | | 0.60 | U | |
| SW-846 8260D | Isopropyl Ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Isopropylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | m-&p-Xylenes | ug/l | -- | -- | | 2.0 | U | |

Data Summary Form for Groundwater Samples
Job No. L2317983
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/5/2023

| | | Field Sample ID | MW-SD46-04052023 | | | TRIP BLANK_20230405 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2317983-07 | | | L2317983-16 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | -- | -- | | 5.0 | U | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Methylene Chloride | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Naphthalene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | N-Butylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | N-Propylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | o-Xylene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Styrene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Tetrachloroethylene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Tetrahydrofuran | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Toluene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | -- | -- | | 0.40 | U | |
| SW-846 8260D | Trichloroethene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Vinyl Chloride | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Xylenes (total) | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 0.554 | | | -- | -- | |

**Attachment B**
**VALIDATION QUALIFIER DEFINITIONS**
**L2317983**

## Validation Qualifier Definitions

Final validated results are annotated with the following codes:

**U** The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

**J** The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

**J+** The result is an estimated quantity, but the result may be biased high.

**J-** The result is an estimated quantity, but the result may be biased low.

**NJ** The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.

**UJ** The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

**R** The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

June 29, 2023

Ms. Jessie McCusker
de maximis, Inc.
200 Day Hill Road, Suite 200
Windsor, CT 06095

Re: SDG No. L2318377
Alpha Analytical
NMI Groundwater
Data Validation

11/Water

| | |
|---|---|
| MW-SD15-04062023 | MW-B3D13-04062023 |
| MW-BS10-04062023 | MW-SD40-04062023 |
| MW-S32-04062023 | SW-102-04062023 |
| SW-103-04062023 | MW-BS03-04062023 |
| MW-BS03-04062023 DUP | MW-B2D13-04062023 |
| MW-SD32-04062023 | |

1/Trip Blank
TRIP BLANK

1/Equipment Blank
EQ-BLANK-04062023

Dear Ms. McCusker:

A Tier I Plus data validation was performed on 11 water samples, one trip blank, and one equipment blank from the Nuclear Metals Superfund site. The data validation was performed using the Region 1 - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures dated June 2018, to the extent possible, Massachusetts Compendium of Analytical Methods (CAM) protocols, the site-specific QAPP, and ddms' Standard Operating Procedures (SOPs). Professional judgment was applied as necessary and appropriate.

Analyses were performed in accordance with the following methods:

| **Parameter** | **Method** |
|---|---|
| Volatile Organic Compounds (VOCs) | SW846 8260D |
| 1,4-Dioxane | SW846 8270E SIM |
| Bicarbonate and Carbonate Alkalinity | SM 2320B |
| Total Phosphorus | SM 4500-P-E |

The data were evaluated based on the parameters summarized in the table below, where applicable:

| | | |
|---|---|---|
| | • | Overall Evaluation of Data and Potential Usability Issues |
| * | • | Data Completeness |
| * | • | Preservation and Technical Holding Times |
| * | • | GC/MS Instrument Performance Check |
| | • | Initial and Continuing Calibrations |
| * | • | Blanks |
| * | • | Surrogate Compounds/Labeled Analogs |
| * | • | Internal Standards |
| | • | Laboratory Control Sample/ Laboratory Control Sample Duplicates |
| NA | • | Matrix Spike/Matrix Spike Duplicate |
| * | • | Field and Laboratory Duplicates |
| * | • | Target Compound Identification |
| * | • | Compound Quantitation and Reported Quantitation Limits |
| * | • | System Performance |

*All criteria were met for this parameter.
NA = not analyzed or not applicable

The Data Validation Report includes the following attachments:

Attachment A: Data Summary Table – summarized validated results

Attachment B: Validation Qualifier Definitions

## Overall Evaluation of Data

- Results for 1,4-dioxane in MW-S32-04062023 and EQ-BLANK-04062023 were reported from the volatile and semi-volatile fractions (methods 8260D and 8270E SIM). The validator's recommendation is to use the result reported from the semi-volatile fraction.

VOCs

- Results for 1,4-dioxane in TRIP BLANK, MW-S32-04062023, and EQ-BLANK-04062023 were qualified as estimated (UJ) due to low relative response factors (RRFs) in the initial calibration (IC), IC verification (ICV), and continuing calibration (CC) standards.

- Results for 1,4-dioxane in TRIP BLANK, MW-S32-04062023, and EQ-BLANK-04062023 were qualified as estimated (UJ) due to high percent difference (%D) in the associated ICV standard.

- Results for methyl isobutyl ketone, 2-hexanone, and naphthalene in TRIP BLANK, MW-S32-04062023, and EQ-BLANK-04062023 were qualified as estimated (UJ) based on low responses in the continuing calibration (CC) standard when compared to the IC.

The following sections of this report detail the reasons qualifiers were applied to the sample results. Each parameter section discusses the quality control (QC) excursions that impacted sample results. Where a quality indicator was deemed acceptable after thorough review, no further discussion is included in this report. Detailed findings are included for each quality element that impacted the usability of the reported results. Additional information or explanation is included as needed, to provide support for decisions made, based on the validator's best professional judgment.

Where a result was qualified J+ and J or J- and J, the J qualifier takes precedence. Where a result was qualified biased high and low for differing data quality excursions, the final qualifier is J, with an indeterminate bias.

## Volatiles Organics (SW-846 8260D)

Samples TRIP BLANK, MW-S32-04062023, and EQ-BLANK-04062023 were analyzed for volatile organics.

### Calibration

One IC was performed on March 30, 2023, on instrument QUIMBY in support of the sample analyses. All RRFs and RSDs or correlation coefficients ($r^2$) were acceptable (QC >0.05 RRF, ≤20% RSD, >0.99 $r^2$), except that a low RRF was observed in the IC standards for 1,4-dioxane (0.0011).

A second-source ICV standard was analyzed after the IC, and the RRF for 1,4-dioxane was unacceptably low. The %Ds in the ICV standard were acceptable (%D≤20), with the following exception:

| Analyte | %D | Associated Sample | Qualifier Applied |
|---|---|---|---|
| *ICV Standard 3/30/23, Instrument QUIMBY* | | | |
| 1,4-Dioxane | 34.0 | TRIP BLANK<br>MW-S32-04062023<br>EQ-BLANK-04062023 | UJ |

The results for 1,4-dioxane in TRIP BLANK, MW-S32-04062023, and EQ-BLANK-04062023 were qualified as estimated (UJ) due to low RRFs in the associated IC and ICV standards. Results for 1,4-dioxane in these samples were qualified as estimated (UJ) due to high %D in the associated ICV standard.

One CC standard was analyzed on April 14, 2023, with the site samples. The RRF for 1,4-dioxane in the CC standard was unacceptably low. The percent differences were acceptable (<20%D), with the following exceptions:

| Analyte | %D | Affected Sample | Qualifier Applied |
|---|---|---|---|
| *CC Standard 4/14/23 at 03:44, Instrument QUIMBY* | | | |
| Bromomethane | +36.6 | TRIP BLANK<br>MW-S32-04062023<br>EQ-BLANK-04062023 | None |
| Acetone | +46.6 | | |
| Carbon tetrachloride | +26.3 | | |
| Methyl isobutyl ketone | -22.0 | | UJ |
| 2-Hexanone | -27.9 | | |
| Naphthalene | -22.3 | | |

The results for 1,4-dioxane in TRIP BLANK, MW-S32-04062023, and EQ-BLANK-04062023 were qualified as estimated (UJ) due to the low RRF in the CC standard.

The high %Ds for methyl isobutyl ketone, 2-hexanone, and naphthalene resulted from low responses relative to the IC, which suggests the potential for reporting false negatives or for sample results that are biased low. Results for these analytes in TRIP BLANK, MW-S32-04062023, and EQ-BLANK-04062023 were qualified as estimated (UJ) based on low responses in the CC standard when compared to the IC.

The high %Ds for bromomethane, acetone, and carbon tetrachloride resulted from high responses relative to the IC, which suggests the potential for reporting false positives or for sample results that are biased high. Since these compounds were not detected in TRIP BLANK, MW-S32-04062023, and EQ-BLANK-04062023, no action was necessary based on the high %Ds.

## Laboratory Control Sample / Laboratory Control Sample Duplicate (LCS/LCSD)

One LCS/LCSD pair was analyzed and reported in support of sample analyses. The percent recoveries (%Rs) and relative percent differences (RPDs) were acceptable (QC 70-130%R; ≤20RPD), with the following exceptions:

| Analyte | LCS %R | LCSD %R | LCS/LCSD RPD | Associated Sample | Qualifier Applied |
|---|---|---|---|---|---|
| *LCS/D WG1766791-3 and -4* | | | | | |
| Bromomethane | 140 | a | a | TRIP BLANK<br>MW-S32-04062023<br>EQ-BLANK-04062023 | None |
| Acetone | 150 | 170 | a | | |

a = acceptable

Since the recoveries were high, and bromomethane and acetone were not detected in the above samples, no action was necessary due to the high LCS/LCSD recoveries.

**1,4-Dioxane (SW-846 8270E SIM)**

All samples except TRIP BLANK were analyzed for 1,4-dioxane according to method SW-846 8270E SIM. All 1,4-dioxane results were determined to be acceptable as reported. No qualifiers were applied to these results based on review of the data provided.

**Bicarbonate and Carbonate Alkalinity (SM 2320B)**

Samples MW-B3D13-04062023, MW-BS10-04062023, MW-BS03-04062023, MW-BS03-04062023 DUP, MW-B2D13-04062023, and EQ-BLANK-04062023 were analyzed for bicarbonate and carbonate alkalinity. Results for bicarbonate and carbonate alkalinity in these samples were determined to be usable as reported by the laboratory. No qualifiers were applied to these results by the validator.

**Total Phosphorus (SM 4500-P-E)**

Samples MW-B3D13-04062023, MW-B2D13-04062023, and EQ-BLANK-04062023 were analyzed for total phosphorus. Results for total phosphorus in these samples were determined to be usable as reported by the laboratory. No qualifiers were added to the results based on the data validation effort.

**Documentation**

No documentation issues were observed during the validation effort.

Please feel free to contact me (edickinson@ddmsinc.com or 610-314-6284) with any questions you may have regarding this information.

Sincerely,

Elizabeth K. Dickinson
Sr. Environmental Chemist

Attachments

**Attachment A**
**DATA SUMMARY TABLE**
**L2318377**

Data Summary Form for Water Quality Control Samples
Job No. L2318377
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/6/2023

| | | Field Sample ID | EQ-BLANK-04062023 | | | MW-B2D13-04062023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318377-13 | | | L2318377-11 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | 2.00 | U | | 172 | | |
| SM 2320B | Carbonate (as CO3) | mg/l | 2.00 | U | | 2.00 | U | |
| SM 4500-P-E | Phosphorus | mg/l | 0.010 | U | | 0.016 | | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,4-Dioxane | ug/l | 250 | UJ | Low IC, ICV, CC RRF; high ICV %D | -- | -- | |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 2-Hexanone | ug/l | 5.0 | UJ | Low CC %D | -- | -- | |

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Sample Date Range: 4/6/2023 - 4/6/2023

| | | Field Sample ID | EQ-BLANK-04062023 | | | MW-B2D13-04062023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318377-13 | | | L2318377-11 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 4-Chlorotoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | 5.0 | UJ | Low CC %D | -- | -- | |
| SW-846 8260D | Acetone | ug/l | 5.0 | U | | -- | -- | |
| SW-846 8260D | Benzene | ug/l | 0.50 | U | | -- | -- | |
| SW-846 8260D | Bromobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromochloromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromodichloromethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Bromoform | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromomethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Carbon disulfide | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Carbon tetrachloride | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chloroethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Chloroform | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chloromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | Dibromochloromethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Dibromomethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethylbenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | 0.60 | U | | -- | -- | |
| SW-846 8260D | Isopropyl Ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Isopropylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | m-&p-Xylenes | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | 5.0 | U | | -- | -- | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Methylene Chloride | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Naphthalene | ug/l | 2.0 | UJ | Low CC %D | -- | -- | |
| SW-846 8260D | N-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | N-Propylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | o-Xylene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | 2.0 | U | | -- | -- | |

Data Summary Form for Water Quality Control Samples
Job No. L2318377
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/6/2023

| | | Field Sample ID | EQ-BLANK-04062023 | | | MW-B2D13-04062023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318377-13 | | | L2318377-11 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Styrene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Tetrachloroethylene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Tetrahydrofuran | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Toluene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | Trichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Vinyl Chloride | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Xylenes (total) | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 0.144 | U | | 28.8 | | |

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Job No. L2318377
Site Name: NMI
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Sample Date Range: 4/6/2023 - 4/6/2023

| | | Field Sample ID | MW-B3D13-04062023 | | | MW-BS03-04062023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318377-03 | | | L2318377-09 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | 195 | | | 187 | | |
| SM 2320B | Carbonate (as CO3) | mg/l | 2.00 | U | | 2.00 | U | |
| SM 4500-P-E | Phosphorus | mg/l | 0.043 | | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,4-Dioxane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2-Hexanone | ug/l | -- | -- | | -- | -- | |

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| | | Field Sample ID | MW-B3D13-04062023 | | | MW-BS03-04062023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318377-03 | | | L2318377-09 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 4-Chlorotoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Acetone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Benzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromochloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromodichloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromoform | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromomethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Carbon disulfide | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Carbon tetrachloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloroform | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dibromochloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dibromomethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Isopropyl Ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Isopropylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | m-&p-Xylenes | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methylene Chloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Naphthalene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | N-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | N-Propylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | o-Xylene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | -- | -- | | -- | -- | |

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Job No. L2318377
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/6/2023

| | | Field Sample ID | MW-B3D13-04062023 | | | MW-BS03-04062023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318377-03 | | | L2318377-09 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Styrene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tetrachloroethylene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tetrahydrofuran | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Toluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Trichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Vinyl Chloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Xylenes (total) | ug/l | -- | -- | | -- | -- | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 11.4 | | | 5.44 | | |

Data Summary Form for Water Quality Control Samples
Job No. L2318377
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/6/2023

| | | Field Sample ID | MW-BS03-04062023 DUP | | | MW-BS10-04062023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318377-10 | | | L2318377-04 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | 183 | | | 72.5 | | |
| SM 2320B | Carbonate (as CO3) | mg/l | 2.00 | U | | 2.00 | U | |
| SM 4500-P-E | Phosphorus | mg/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,4-Dioxane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2-Hexanone | ug/l | -- | -- | | -- | -- | |

Data Summary Form for Water Quality Control Samples
Job No. L2318377
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/6/2023

| | | Field Sample ID | MW-BS03-04062023 DUP | | | MW-BS10-04062023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318377-10 | | | L2318377-04 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 4-Chlorotoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Acetone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Benzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromochloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromodichloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromoform | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromomethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Carbon disulfide | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Carbon tetrachloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloroform | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dibromochloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dibromomethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Isopropyl Ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Isopropylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | m-&p-Xylenes | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methylene Chloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Naphthalene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | N-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | N-Propylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | o-Xylene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | -- | -- | | -- | -- | |

Data Summary Form for Water Quality Control Samples
Job No. L2318377
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/6/2023

| | | Field Sample ID | MW-BS03-04062023 DUP | | | MW-BS10-04062023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318377-10 | | | L2318377-04 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Styrene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tetrachloroethylene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tetrahydrofuran | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Toluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Trichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Vinyl Chloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Xylenes (total) | ug/l | -- | -- | | -- | -- | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 5.71 | | | 0.394 | | |

Data Summary Form for Water Quality Control Samples
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Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/6/2023

| | | Field Sample ID | MW-S32-04062023 | | | MW-SD15-04062023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318377-06 | | | L2318377-01 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Carbonate (as CO3) | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | 0.40 | J | | -- | -- | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | 1.2 | | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | 0.38 | J | | -- | -- | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | 0.32 | J | | -- | -- | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,4-Dioxane | ug/l | 250 | UJ | Low IC, ICV, CC RRF; high ICV %D | -- | -- | |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 2-Hexanone | ug/l | 5.0 | UJ | Low CC %D | -- | -- | |

Data Summary Form for Water Quality Control Samples
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Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/6/2023

| | | Field Sample ID | MW-S32-04062023 | | | MW-SD15-04062023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318377-06 | | | L2318377-01 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 4-Chlorotoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | 5.0 | UJ | Low CC %D | -- | -- | |
| SW-846 8260D | Acetone | ug/l | 5.0 | U | | -- | -- | |
| SW-846 8260D | Benzene | ug/l | 0.50 | U | | -- | -- | |
| SW-846 8260D | Bromobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromochloromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromodichloromethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Bromoform | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromomethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Carbon disulfide | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Carbon tetrachloride | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chloroethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Chloroform | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chloromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | 0.32 | J | | -- | -- | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | Dibromochloromethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Dibromomethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethylbenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | 0.60 | U | | -- | -- | |
| SW-846 8260D | Isopropyl Ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Isopropylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | m-&p-Xylenes | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | 5.0 | U | | -- | -- | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Methylene Chloride | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Naphthalene | ug/l | 2.0 | UJ | Low CC %D | -- | -- | |
| SW-846 8260D | N-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | N-Propylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | o-Xylene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | 2.0 | U | | -- | -- | |

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Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/6/2023

| | | Field Sample ID | MW-S32-04062023 | | | MW-SD15-04062023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318377-06 | | | L2318377-01 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Styrene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Tetrachloroethylene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Tetrahydrofuran | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Toluene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | Trichloroethene | ug/l | 1.5 | | | -- | -- | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Vinyl Chloride | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Xylenes (total) | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 1.11 | | | 0.291 | | |

Data Summary Form for Water Quality Control Samples
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Site Name: NMI
ddms Project No: proj_15473252
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| | | Field Sample ID | MW-SD32-04062023 | | | MW-SD40-04062023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318377-12 | | | L2318377-05 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Carbonate (as CO3) | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,4-Dioxane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2-Hexanone | ug/l | -- | -- | | -- | -- | |

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ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/6/2023

| | | Field Sample ID | MW-SD32-04062023 | | | MW-SD40-04062023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318377-12 | | | L2318377-05 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 4-Chlorotoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Acetone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Benzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromochloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromodichloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromoform | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromomethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Carbon disulfide | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Carbon tetrachloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloroform | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dibromochloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dibromomethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Isopropyl Ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Isopropylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | m-&p-Xylenes | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methylene Chloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Naphthalene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | N-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | N-Propylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | o-Xylene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | -- | -- | | -- | -- | |

Data Summary Form for Water Quality Control Samples
Job No. L2318377
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/6/2023

| | | Field Sample ID | MW-SD32-04062023 | | | MW-SD40-04062023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318377-12 | | | L2318377-05 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Styrene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tetrachloroethylene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tetrahydrofuran | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Toluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Trichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Vinyl Chloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Xylenes (total) | ug/l | -- | -- | | -- | -- | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 0.389 | | | 15.1 | | |

Data Summary Form for Water Quality Control Samples
Job No. L2318377
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/6/2023

| | | Field Sample ID | SW-102-04062023 | | | SW-103-04062023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318377-07 | | | L2318377-08 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Carbonate (as CO3) | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,4-Dioxane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2-Hexanone | ug/l | -- | -- | | -- | -- | |

Data Summary Form for Water Quality Control Samples
Job No. L2318377
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/6/2023

| | | Field Sample ID | SW-102-04062023 | | | SW-103-04062023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318377-07 | | | L2318377-08 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 4-Chlorotoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Acetone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Benzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromochloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromodichloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromoform | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromomethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Carbon disulfide | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Carbon tetrachloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloroform | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dibromochloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dibromomethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Isopropyl Ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Isopropylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | m-&p-Xylenes | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methylene Chloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Naphthalene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | N-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | N-Propylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | o-Xylene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | -- | -- | | -- | -- | |

Data Summary Form for Water Quality Control Samples
Job No. L2318377
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/6/2023

| | | Field Sample ID | SW-102-04062023 | | | SW-103-04062023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318377-07 | | | L2318377-08 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Styrene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tetrachloroethylene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tetrahydrofuran | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Toluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Trichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Vinyl Chloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Xylenes (total) | ug/l | -- | -- | | -- | -- | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 0.139 | U | | 0.139 | U | |

Data Summary Form for Water Quality Control Samples
Job No. L2318377
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/6/2023

| | | Field Sample ID | TRIP BLANK_20230406 | | |
|---|---|---|---|---|---|
| | | Lab Sample ID | L2318377-02 | | |
| | | Dilution Factor | 1 | | |
| Analytical Method | Parameter | Unit | | | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | -- | -- | |
| SM 2320B | Carbonate (as CO3) | mg/l | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | 1.0 | U | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | 1.0 | U | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | 1.0 | U | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | 2.0 | U | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | 2.0 | U | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | 2.0 | U | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | 1.0 | U | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | 2.0 | U | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | 1.0 | U | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | 2.0 | U | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | 0.40 | U | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | 1.0 | U | |
| SW-846 8260D | 1,4-Dioxane | ug/l | 250 | UJ | Low IC, ICV, CC RRF; high ICV %D |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | 2.0 | U | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | 2.0 | U | |
| SW-846 8260D | 2-Hexanone | ug/l | 5.0 | UJ | Low CC %D |

Data Summary Form for Water Quality Control Samples
Job No. L2318377
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/6/2023

| | | Field Sample ID | TRIP BLANK_20230406 | | |
|---|---|---|---|---|---|
| | | Lab Sample ID | L2318377-02 | | |
| | | Dilution Factor | 1 | | |
| Analytical Method | Parameter | Unit | | | |
| SW-846 8260D | 4-Chlorotoluene | ug/l | 2.0 | U | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | 5.0 | UJ | Low CC %D |
| SW-846 8260D | Acetone | ug/l | 5.0 | U | |
| SW-846 8260D | Benzene | ug/l | 0.50 | U | |
| SW-846 8260D | Bromobenzene | ug/l | 2.0 | U | |
| SW-846 8260D | Bromochloromethane | ug/l | 2.0 | U | |
| SW-846 8260D | Bromodichloromethane | ug/l | 1.0 | U | |
| SW-846 8260D | Bromoform | ug/l | 2.0 | U | |
| SW-846 8260D | Bromomethane | ug/l | 2.0 | U | |
| SW-846 8260D | Carbon disulfide | ug/l | 2.0 | U | |
| SW-846 8260D | Carbon tetrachloride | ug/l | 1.0 | U | |
| SW-846 8260D | Chlorobenzene | ug/l | 1.0 | U | |
| SW-846 8260D | Chloroethane | ug/l | 2.0 | U | |
| SW-846 8260D | Chloroform | ug/l | 1.0 | U | |
| SW-846 8260D | Chloromethane | ug/l | 2.0 | U | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | 1.0 | U | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | 0.40 | U | |
| SW-846 8260D | Dibromochloromethane | ug/l | 1.0 | U | |
| SW-846 8260D | Dibromomethane | ug/l | 2.0 | U | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | 2.0 | U | |
| SW-846 8260D | Ethyl ether | ug/l | 2.0 | U | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | 2.0 | U | |
| SW-846 8260D | Ethylbenzene | ug/l | 1.0 | U | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | 0.60 | U | |
| SW-846 8260D | Isopropyl Ether | ug/l | 2.0 | U | |
| SW-846 8260D | Isopropylbenzene | ug/l | 2.0 | U | |
| SW-846 8260D | m-&p-Xylenes | ug/l | 2.0 | U | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | 5.0 | U | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | 2.0 | U | |
| SW-846 8260D | Methylene Chloride | ug/l | 2.0 | U | |
| SW-846 8260D | Naphthalene | ug/l | 2.0 | UJ | Low CC %D |
| SW-846 8260D | N-Butylbenzene | ug/l | 2.0 | U | |
| SW-846 8260D | N-Propylbenzene | ug/l | 2.0 | U | |
| SW-846 8260D | o-Xylene | ug/l | 1.0 | U | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | 2.0 | U | |

Data Summary Form for Water Quality Control Samples
Job No. L2318377
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/6/2023 - 4/6/2023

| | | Field Sample ID | TRIP BLANK_20230406 | | |
|---|---|---|---|---|---|
| | | Lab Sample ID | L2318377-02 | | |
| | | Dilution Factor | 1 | | |
| Analytical Method | Parameter | Unit | | | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | 2.0 | U | |
| SW-846 8260D | Styrene | ug/l | 1.0 | U | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | 2.0 | U | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | 2.0 | U | |
| SW-846 8260D | Tetrachloroethylene | ug/l | 1.0 | U | |
| SW-846 8260D | Tetrahydrofuran | ug/l | 2.0 | U | |
| SW-846 8260D | Toluene | ug/l | 1.0 | U | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | 1.0 | U | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | 0.40 | U | |
| SW-846 8260D | Trichloroethene | ug/l | 1.0 | U | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | 2.0 | U | |
| SW-846 8260D | Vinyl Chloride | ug/l | 1.0 | U | |
| SW-846 8260D | Xylenes (total) | ug/l | 1.0 | U | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | -- | -- | |

**Attachment B**
**VALIDATION QUALIFIER DEFINITIONS**
**L2318377**

## Validation Qualifier Definitions

Final validated results are annotated with the following codes:

**U** The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

**J** The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

**J+** The result is an estimated quantity, but the result may be biased high.

**J-** The result is an estimated quantity, but the result may be biased low.

**NJ** The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.

**UJ** The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

**R** The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

July 1, 2023

Ms. Jessie McCusker
de maximis, Inc.
200 Day Hill Road, Suite 200
Windsor, CT 06095

Re: SDG No. L2318701
Alpha Analytical
NMI Groundwater
Data Validation

11/Water
MW-SD26-04072023
MW-BS50-04072023
MW-BS13-04072023
MW-S60-04072023
MW-SD60-04072023
MW-B1D13-04072023 DUP
MW-BS54-04072023
MW-BM15-04072023
MW-BS32-04072023
MW-8A-04072023
MW-B1D13-04072023

1/Trip Blank
TRIP BLANK

1/Equipment Blank
EQ-BLANK-04072023

Dear Ms. McCusker:

A Tier I Plus data validation was performed on 11 water samples, one trip blank, and one equipment blank from the Nuclear Metals Superfund site. The data validation was performed using the Region 1 - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures dated June 2018, to the extent possible, Massachusetts Compendium of Analytical Methods (CAM) protocols, the site-specific QAPP, and ddms' Standard Operating Procedures (SOPs). Professional judgment was applied as necessary and appropriate.

Analyses were performed in accordance with the following methods:

| **Parameter** | **Method** |
|---|---|
| Metals (boron, magnesium, potassium, sodium) | SW846 6010D |
| Volatile Organic Compounds (VOCs) | SW846 8260D |
| Semivolatile Organic Compounds (SVOCs) – 1,4-Dioxane | SW846 8270E SIM |

| Parameter | Method |
|---|---|
| Bicarbonate and Carbonate Alkalinity | SM 2320B |
| Total and Dissolved Phosphorus | SM 4500-P-E |
| Ammonia | SM 4500-NN3-H |
| Nitrate/Nitrite | SM 4500 NO3-F |
| Anions (chloride and sulfate) | EPA 300.0 |

The data were evaluated based on the parameters summarized in the table below, where applicable:

| | | |
|---|---|---|
| | • | Overall Evaluation of Data and Potential Usability Issues |
| * | • | Data Completeness |
| * | • | Preservation and Technical Holding Times |
| * | • | GC/MS Instrument Performance Check |
| | • | Initial and Continuing Calibrations |
| | • | Blanks |
| | • | Surrogate Compounds/Labeled Analogs |
| * | • | Internal Standards |
| | • | Laboratory Control Sample/ Laboratory Control Sample Duplicates |
| | • | Matrix Spike/Matrix Spike Duplicate |
| * | • | Field and Laboratory Duplicates |
| * | • | Target Compound Identification |
| * | • | Compound Quantitation and Reported Quantitation Limits |
| * | • | System Performance |

*All criteria were met for this parameter.
NA = not analyzed or not applicable

The Data Validation Report includes the following attachments:

Attachment A: Data Summary Table – summarized validated results

Attachment B: Validation Qualifier Definitions

## Overall Evaluation of Data

- Results for 1,4-dioxane in MW-BS54-04072023, MW-BS50-04072023, and EQ-BLANK-04072023 were reported from the volatile and semi-volatile fractions (methods 8260D and 8270E SIM). The validator's recommendation is to use the result reported from the semi-volatile fraction.

VOCs

- Results for 1,4-dioxane in MW-BS54-04072023, MW-BS50-04072023, MW-S60-04072023, MW-SD60-04072023, TRIP BLANK, and EQ-BLANK-04072023 were

qualified as estimated (UJ) due to low relative response factors (RRFs) in the initial calibration (IC), IC verification (ICV), and continuing calibration (CC) standards.

- Results for 1,4-dioxane in MW-BS54-04072023, MW-BS50-04072023, MW-S60-04072023, MW-SD60-04072023, TRIP BLANK, and EQ-BLANK-04072023 were qualified as estimated (UJ) due to high percent difference (%D) in the associated ICV standard.

- Results for tertiary-amyl methyl ether, methyl isobutyl ketone, and 2-hexanone in MW-BS54-04072023, MW-BS50-04072023, MW-S60-04072023, MW-SD60-04072023, TRIP BLANK, and EQ-BLANK-04072023 were qualified as estimated (UJ) based on low responses in the CC standard when compared to the IC.

- The result for acetone in MW-S60-04072023 was qualified as estimated with potential high bias (J+) due to a high response in the CC standard when compared to the IC, high laboratory control sample duplicate (LCSD) recovery, and high matrix spike duplicate (MSD) recovery.

Ammonia

- The result for ammonia in MW-SD60-04072023 was qualified as not detected (U) at the reporting limit due to associated equipment blank contamination.

Nitrite

- Results for nitrite in MW-S60-04072023 and MW-8A-04072023 were qualified as not detected (U) at the reporting limit due to associated equipment blank contamination.

The following sections of this report detail the reasons qualifiers were applied to the sample results. Each parameter section discusses the quality control (QC) excursions that impacted sample results. Where a quality indicator was deemed acceptable after thorough review, no further discussion is included in this report. Detailed findings are included for each quality element that impacted the usability of the reported results. Additional information or explanation is included as needed, to provide support for decisions made, based on the validator's best professional judgment.

Where a result was qualified J+ and J or J- and J, the J qualifier takes precedence. Where a result was qualified biased high and low for differing data quality excursions, the final qualifier is J, with an indeterminate bias.

## Metals (Boron, Magnesium, Potassium, Sodium Only) (SW846 6010D)

Samples MW-S60-04072023, MW-8A-04072023, MW-SD60-04072023, TRIP BLANK, and EQ-BLANK-04072023 were analyzed for metals. Results for boron, magnesium, potassium, and sodium in these samples were determined to be usable as reported by the laboratory. No qualifiers were applied to these results by the validator.

## Volatiles Organics (SW-846 8260D)

Samples MW-BS54-04072023, MW-BS50-04072023, MW-S60-04072023, MW-SD60-04072023, TRIP BLANK, and EQ-BLANK-04072023 were analyzed for volatile organics.

### Calibration

One IC was performed on March 30, 2023, on instrument QUIMBY in support of the sample analyses. All RRFs and relative standard deviations (RSDs) or correlation coefficients ($r^2$) were acceptable (QC >0.05 RRF, ≤20% RSD, >0.99 $r^2$, respectively), except that low RRFs were observed in the IC standards for 1,4-dioxane.

A second-source ICV standard was analyzed after the IC, and the RRF for 1,4-dioxane was unacceptably low. The percent differences (%Ds) in the ICV standard were acceptable (%D≤20), with the following exception:

| Analyte | %D | Associated Sample | Qualifier Applied |
|---|---|---|---|
| *ICV Standard 3/30/23, Instrument QUIMBY* | | | |
| 1,4-Dioxane | 34.0 | MW-BS54-04072023<br>MW-BS50-04072023<br>MW-S60-04072023<br>MW-SD60-04072023<br>TRIP BLANK<br>EQ-BLANK-04072023 | UJ |

The results for 1,4-dioxane in MW-BS54-04072023, MW-BS50-04072023, MW-S60-04072023, MW-SD60-04072023, TRIP BLANK, and EQ-BLANK-04072023 were qualified as estimated (UJ) due to low RRFs in the associated IC and ICV standards. Results for 1,4-dioxane in these samples were also qualified as estimated (UJ) due to high %D in the associated ICV standard.

One CC standard was analyzed on April 18, 2023, with the site samples. The RRF for 1,4-dioxane in the CC standard was unacceptably low. The percent differences were acceptable (<20%D), with the following exceptions:

| Analyte | %D | Affected Sample | Qualifier Applied |
|---|---|---|---|
| *CC Standard 4/18/23 at 15:02, Instrument QUIMBY* | | | |
| Acetone | +29.3 | MW-BS54-04072023<br>MW-BS50-04072023<br>MW-S60-04072023<br>MW-SD60-04072023<br>TRIP BLANK | J+ |
| Tertiary-amyl methyl ether | -22.6 | | UJ |
| 4-Methyl-2-pentanone | -25.9 | | |
| 2-Hexanone | -27.9 | | |

| Analyte | %D | Affected Sample | Qualifier Applied |
|---|---|---|---|
| | | EQ-BLANK-04072023 | |

The results for 1,4-dioxane in MW-BS54-04072023, MW-BS50-04072023, MW-S60-04072023, MW-SD60-04072023, TRIP BLANK, and EQ-BLANK-04072023 were qualified as estimated (UJ) due to the low RRF in the CC standard.

The high %Ds for tert-amyl methyl ether, methyl isobutyl ketone, and 2-hexanone resulted from low responses relative to the IC, which suggests the potential for reporting false negatives or for sample results that are biased low. Results for these analytes in MW-BS54-04072023, MW-BS50-04072023, MW-S60-04072023, MW-SD60-04072023, TRIP BLANK, and EQ-BLANK-04072023 were qualified as estimated (UJ) based on low responses in the CC standard when compared to the IC.

The high %D for acetone resulted from a high response relative to the IC, which suggests the potential for reporting false positives or for sample results that are biased high. The result for acetone in MW-S60-04072023 was qualified as estimated with potential high bias (J+) due to the high CC standard response. Since acetone was not detected in other associated samples, no additional action was necessary

Laboratory Control Sample / Laboratory Control Sample Duplicate (LCS/LCSD)

One LCS/LCSD pair was analyzed and reported in support of sample analyses. The percent recoveries (%Rs) and relative percent differences (RPDs) were acceptable (QC 70-130%R; ≤20RPD), with the following exception:

| Analyte | LCS %R | LCSD %R | LCS/LCSD RPD | Associated Sample | Qualifier Applied |
|---|---|---|---|---|---|
| *LCS/D WG1768399-3 and -4* | | | | | |
| Acetone | a | 140 | a | MW-BS54-04072023<br>MW-BS50-04072023<br>MW-S60-04072023<br>MW-SD60-04072023<br>TRIP BLANK<br>EQ-BLANK-04072023 | J+ |

a = acceptable

The result for acetone in MW-S60-04072023 was qualified as estimated with potential high bias (J+) due to the high LCSD recovery. Since the recovery was high, and acetone was not detected in other associated samples, no additional action was necessary.

Matrix Spike / Matrix Spike Duplicate (MS/MSD)

Sample MW-BS50-04072023 was prepared and analyzed as an MS/MSD pair with this set of samples. The %Rs and RPDs were acceptable (QC 70-130%R; ≤20RPD), with the following exception:

| Analyte | MS %R | MSD %R | MS/MSD RPD | Associated Sample | Qualifier Applied |
|---|---|---|---|---|---|
| *Parent Sample: MW-BS50-04072023* | | | | | |
| Acetone | a | 140 | a | MW-BS54-04072023<br>MW-BS50-04072023<br>MW-S60-04072023<br>MW-SD60-04072023<br>TRIP BLANK<br>EQ-BLANK-04072023 | J+ |

a = acceptable

The result for acetone in MW-S60-04072023 was qualified as estimated with potential high bias (J+) due to the high MSD recovery. Since the recovery was high, and acetone was not detected in other associated samples, no additional action was necessary.

**1,4-Dioxane (SW-846 8270E SIM)**

Samples MW-SD26-04072023, MW-BS54-04072023, MW-BS50-04072023, MW-BM15-04072023, MW-BS13-04072023, MW-BS32-04072023, MW-8A-04072023, MW-B1D13-04072023, MW-B1D13-04072023 DUP, and EQ-BLANK-04072023 were analyzed for 1,4-dioxane according to method SW-846 8270E SIM. All 1,4-dioxane results were determined to be acceptable as reported. No qualifiers were applied to these results based on review of the data provided.

**Bicarbonate and Carbonate Alkalinity (SM 2320B)**

Samples MW-BS13-04072023, MW-B1D13-04072023, MW-B1D13-04072023 DUP, and EQ-BLANK-04072023 were analyzed for bicarbonate and carbonate alkalinity. Results for bicarbonate and carbonate alkalinity in these samples were determined to be usable as reported by the laboratory. No qualifiers were applied to these results by the validator.

**Total and Dissolved Phosphorus (SM 4500-P-E)**

Samples MW-S60-04072023, MW-8A-04072023, MW-SD60-04072023, MW-B1D13-04072023, MW-B1D13-04072023 DUP, and EQ-BLANK-04072023 were analyzed for total phosphorus. Samples MW-S60-04072023, MW-8A-04072023, and MW-SD60-04072023 were analyzed for dissolved phosphorus. Results for total and dissolved phosphorus in the applicable samples were determined to be usable as reported by the laboratory. No qualifiers were added to the results based on the data validation effort.

## Ammonia (SM 4500-NH3-H)

Samples MW-S60-04072023, MW-8A-04072023, and MW-SD60-04072023, and EQ-BLANK-04072023 were analyzed for ammonia.

### Blanks

A method blank was prepared with the samples, and initial and continuing calibration blanks were analyzed at the appropriate frequencies. One equipment blank (EQ-BLANK-04072023) was submitted with the field samples. Ammonia was reported in EQ-BLANK-04072023 at 0.036 J mg/L. The result for ammonia in MW-SD60-04072023 was qualified as not detected (U) at the reporting limit due to associated equipment blank contamination.

## Nitrate/Nitrite (SM 4500-NO3-F)

Samples MW-S60-04072023, MW-8A-04072023, and MW-SD60-04072023, and EQ-BLANK-04072023 were analyzed for nitrate and nitrite.

### Blanks

A method blank was prepared with the samples, and initial and continuing calibration blanks were analyzed at the appropriate frequencies. One equipment blank (EQ-BLANK-04072023) was submitted with the field samples. Nitrate was not detected in EQ-BLANK-04072023, but nitrite was detected at a concentration of 0.019 J mg/L. The results for nitrite in MW-S60-04072023 and MW-8A-04072023 were qualified as not detected (U) at the reporting limit due to associated equipment blank contamination.

## Anions (Chloride and Sulfate) (EPA 300.0)

Samples MW-S60-04072023, MW-8A-04072023, MW-SD60-04072023, and EQ-BLANK-04072023 were analyzed for chloride and sulfate. Results for chloride and sulfate in these samples were determined to be usable as reported by the laboratory. No qualifiers were added to the results based on the data validation effort.

### Quantitation

Samples MW-S60-04072023, MW-8A-04072023, and MW-SD60-04072023 were analyzed at 10-fold dilutions to obtain concentrations of chloride within the established calibration range. Chloride concentrations and reporting limits were appropriately adjusted for the dilution factor.

**Documentation**

No documentation issues were observed during the validation effort.

Please feel free to contact me (edickinson@ddmsinc.com or 610-314-6284) with any questions you may have regarding this information.

Sincerely,

Elizabeth K. Dickinson
Sr. Environmental Chemist

Attachments

**Attachment A**
**DATA SUMMARY TABLE**
**L2318701**

Data Summary Form for Water Samples
Job No. L2318701
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/7/2023 - 4/7/2023

| | | Field Sample ID | EQ-BLANK-04072023 | | | MW-8A-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318701-10 | | | L2318701-09 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | 0.500 | U | | -- | -- | |
| EPA 300.0 | Sulfate as SO4 | mg/l | 1.00 | U | | 10.6 | | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | 2.00 | U | | -- | -- | |
| SM 2320B | Carbonate (as CO3) | mg/l | 2.00 | U | | -- | -- | |
| SM 4500-NH3-H | Ammonia (as N) | mg/l | 0.036 | J | | 0.420 | | |
| SM 4500-NO3-F | Nitrite as N | mg/l | 0.019 | J | | 0.050 | U | EB contamination |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | 0.100 | U | | 1.06 | | |
| SM 4500-P-E | Phosphorus | mg/l | 0.010 | U | | 0.023 | | |
| SM 4500-P-E | Phosphorus (Dissolved) | mg/l | -- | -- | | 0.015 | | |
| SW6010D | Boron | mg/l | 0.0300 | U | | 0.0104 | J | |
| SW6010D | Magnesium | mg/l | 0.100 | U | | 5.07 | | |
| SW6010D | Potassium | mg/l | 2.50 | U | | 3.19 | | |
| SW6010D | Sodium | mg/l | 2.00 | U | | 27.0 | | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | 2.0 | U | | -- | -- | |

Data Summary Form for Water Samples
Job No. L2318701
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/7/2023 - 4/7/2023

| | | Field Sample ID | EQ-BLANK-04072023 | | | MW-8A-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318701-10 | | | L2318701-09 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,4-Dioxane | ug/l | 250 | UJ | High IC, ICV, CC RRF, high ICV %D | -- | -- | |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 2-Hexanone | ug/l | 5.0 | UJ | Low CC response | -- | -- | |
| SW-846 8260D | 4-Chlorotoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | 5.0 | UJ | Low CC response | -- | -- | |
| SW-846 8260D | Acetone | ug/l | 5.0 | U | | -- | -- | |
| SW-846 8260D | Benzene | ug/l | 0.50 | U | | -- | -- | |
| SW-846 8260D | Bromobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromochloromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromodichloromethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Bromoform | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromomethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Carbon disulfide | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Carbon tetrachloride | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chloroethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Chloroform | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chloromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | Dibromochloromethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Dibromomethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethylbenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | 0.60 | U | | -- | -- | |

Data Summary Form for Water Samples
Job No. L2318701
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/7/2023 - 4/7/2023

| | | Field Sample ID | EQ-BLANK-04072023 | | | MW-8A-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318701-10 | | | L2318701-09 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Isopropyl Ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Isopropylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | m-&p-Xylenes | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | 5.0 | U | | -- | -- | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Methylene Chloride | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Naphthalene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | N-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | N-Propylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | o-Xylene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Styrene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | 2.0 | UJ | Low CC response | -- | -- | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Tetrachloroethylene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Tetrahydrofuran | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Toluene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | Trichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Vinyl Chloride | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Xylenes (total) | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 0.139 | U | | 0.144 | U | |

Data Summary Form for Water Samples
Job No. L2318701
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/7/2023 - 4/7/2023

| | | Field Sample ID | MW-8A-04072023 | | | MW-B1D13-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318701-09 | | | L2318701-12 | | |
| | | Dilution Factor | 10 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | 75.0 | | | -- | -- | |
| EPA 300.0 | Sulfate as SO4 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | -- | -- | | 224 | | |
| SM 2320B | Carbonate (as CO3) | mg/l | -- | -- | | 2.00 | U | |
| SM 4500-NH3-H | Ammonia (as N) | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrite as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | -- | -- | | 0.010 | U | |
| SM 4500-P-E | Phosphorus (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SW6010D | Boron | mg/l | -- | -- | | -- | -- | |
| SW6010D | Magnesium | mg/l | -- | -- | | -- | -- | |
| SW6010D | Potassium | mg/l | -- | -- | | -- | -- | |
| SW6010D | Sodium | mg/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | -- | -- | | -- | -- | |

Data Summary Form for Water Samples
Job No. L2318701
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/7/2023 - 4/7/2023

| | | Field Sample ID | MW-8A-04072023 | | | MW-B1D13-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318701-09 | | | L2318701-12 | | |
| | | Dilution Factor | 10 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,4-Dioxane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2-Hexanone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 4-Chlorotoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Acetone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Benzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromochloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromodichloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromoform | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromomethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Carbon disulfide | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Carbon tetrachloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloroform | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dibromochloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dibromomethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | -- | -- | | -- | -- | |

Data Summary Form for Water Samples
Job No. L2318701
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/7/2023 - 4/7/2023

| | | Field Sample ID | MW-8A-04072023 | | | MW-B1D13-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318701-09 | | | L2318701-12 | | |
| | | Dilution Factor | 10 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Isopropyl Ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Isopropylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | m-&p-Xylenes | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methylene Chloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Naphthalene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | N-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | N-Propylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | o-Xylene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Styrene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tetrachloroethylene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tetrahydrofuran | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Toluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Trichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Vinyl Chloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Xylenes (total) | ug/l | -- | -- | | -- | -- | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | -- | -- | | 31.8 | | |

Data Summary Form for Water Samples
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ddms Project No: proj_15473252
Sample Date Range: 4/7/2023 - 4/7/2023

| | | Field Sample ID | MW-B1D13-04072023 DUP | | | MW-BM15-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318701-13 | | | L2318701-05 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Sulfate as SO4 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | 254 | | | -- | -- | |
| SM 2320B | Carbonate (as CO3) | mg/l | 2.00 | U | | -- | -- | |
| SM 4500-NH3-H | Ammonia (as N) | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrite as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | 0.010 | U | | -- | -- | |
| SM 4500-P-E | Phosphorus (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SW6010D | Boron | mg/l | -- | -- | | -- | -- | |
| SW6010D | Magnesium | mg/l | -- | -- | | -- | -- | |
| SW6010D | Potassium | mg/l | -- | -- | | -- | -- | |
| SW6010D | Sodium | mg/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | -- | -- | | -- | -- | |

Data Summary Form for Water Samples
Job No. L2318701
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/7/2023 - 4/7/2023

| | | Field Sample ID | MW-B1D13-04072023 DUP | | | MW-BM15-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318701-13 | | | L2318701-05 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,4-Dioxane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2-Hexanone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 4-Chlorotoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Acetone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Benzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromochloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromodichloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromoform | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromomethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Carbon disulfide | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Carbon tetrachloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloroform | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dibromochloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dibromomethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | -- | -- | | -- | -- | |

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Site Name: NMI
ddms Project No: proj_15473252
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| | | Field Sample ID | MW-B1D13-04072023 DUP | | | MW-BM15-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318701-13 | | | L2318701-05 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Isopropyl Ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Isopropylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | m-&p-Xylenes | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methylene Chloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Naphthalene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | N-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | N-Propylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | o-Xylene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Styrene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tetrachloroethylene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tetrahydrofuran | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Toluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Trichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Vinyl Chloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Xylenes (total) | ug/l | -- | -- | | -- | -- | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 32.3 | | | 0.279 | | |

Data Summary Form for Water Samples
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Sample Date Range: 4/7/2023 - 4/7/2023

| | | Field Sample ID | MW-BS13-04072023 | | | MW-BS32-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318701-06 | | | L2318701-07 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Sulfate as SO4 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | 190 | | | -- | -- | |
| SM 2320B | Carbonate (as CO3) | mg/l | 2.00 | U | | -- | -- | |
| SM 4500-NH3-H | Ammonia (as N) | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrite as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SW6010D | Boron | mg/l | -- | -- | | -- | -- | |
| SW6010D | Magnesium | mg/l | -- | -- | | -- | -- | |
| SW6010D | Potassium | mg/l | -- | -- | | -- | -- | |
| SW6010D | Sodium | mg/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | -- | -- | | -- | -- | |

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| | | Field Sample ID | MW-BS13-04072023 | | | MW-BS32-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318701-06 | | | L2318701-07 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,4-Dioxane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2-Hexanone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 4-Chlorotoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Acetone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Benzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromochloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromodichloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromoform | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromomethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Carbon disulfide | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Carbon tetrachloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloroform | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dibromochloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dibromomethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | -- | -- | | -- | -- | |

Data Summary Form for Water Samples
Job No. L2318701
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/7/2023 - 4/7/2023

| | | Field Sample ID | MW-BS13-04072023 | | | MW-BS32-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318701-06 | | | L2318701-07 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Isopropyl Ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Isopropylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | m-&p-Xylenes | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methylene Chloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Naphthalene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | N-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | N-Propylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | o-Xylene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Styrene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tetrachloroethylene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tetrahydrofuran | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Toluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Trichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Vinyl Chloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Xylenes (total) | ug/l | -- | -- | | -- | -- | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 57.6 | | | 0.144 | U | |

Data Summary Form for Water Samples
Job No. L2318701
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/7/2023 - 4/7/2023

| | | Field Sample ID | MW-BS50-04072023 | | | MW-BS54-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318701-03 | | | L2318701-02 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Sulfate as SO4 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Carbonate (as CO3) | mg/l | -- | -- | | -- | -- | |
| SM 4500-NH3-H | Ammonia (as N) | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrite as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SW6010D | Boron | mg/l | -- | -- | | -- | -- | |
| SW6010D | Magnesium | mg/l | -- | -- | | -- | -- | |
| SW6010D | Potassium | mg/l | -- | -- | | -- | -- | |
| SW6010D | Sodium | mg/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | 5.4 | | | 0.61 | J | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | 0.30 | J | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | 0.48 | J | | 0.43 | J | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | 2.0 | U | | 2.0 | U | |

Data Summary Form for Water Samples
Job No. L2318701
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/7/2023 - 4/7/2023

| | | Field Sample ID | MW-BS50-04072023 | | | MW-BS54-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318701-03 | | | L2318701-02 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | 0.40 | U | | 0.40 | U | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,4-Dioxane | ug/l | 250 | UJ | High IC, ICV, CC RRF, high ICV %D | 250 | UJ | High IC, ICV, CC RRF, high ICV %D |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 2-Hexanone | ug/l | 5.0 | UJ | Low CC response | 5.0 | UJ | Low CC response |
| SW-846 8260D | 4-Chlorotoluene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | 5.0 | UJ | Low CC response | 5.0 | UJ | Low CC response |
| SW-846 8260D | Acetone | ug/l | 5.0 | U | | 5.0 | U | |
| SW-846 8260D | Benzene | ug/l | 0.50 | U | | 0.50 | U | |
| SW-846 8260D | Bromobenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Bromochloromethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Bromodichloromethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Bromoform | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Bromomethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Carbon disulfide | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Carbon tetrachloride | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Chlorobenzene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Chloroethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Chloroform | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Chloromethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | 0.48 | J | | 0.43 | J | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | 0.40 | U | | 0.40 | U | |
| SW-846 8260D | Dibromochloromethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Dibromomethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Ethyl ether | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Ethylbenzene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | 0.60 | U | | 0.60 | U | |

Data Summary Form for Water Samples
Job No. L2318701
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/7/2023 - 4/7/2023

| | | Field Sample ID | MW-BS50-04072023 | | | MW-BS54-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318701-03 | | | L2318701-02 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Isopropyl Ether | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Isopropylbenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | m-&p-Xylenes | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | 5.0 | U | | 5.0 | U | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Methylene Chloride | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Naphthalene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | N-Butylbenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | N-Propylbenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | o-Xylene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Styrene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | 2.0 | UJ | Low CC response | 2.0 | UJ | Low CC response |
| SW-846 8260D | Tert-Butylbenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Tetrachloroethylene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Tetrahydrofuran | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Toluene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | 0.40 | U | | 0.40 | U | |
| SW-846 8260D | Trichloroethene | ug/l | 0.22 | J | | 0.18 | J | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Vinyl Chloride | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Xylenes (total) | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 8.95 | | | 5.84 | | |

Data Summary Form for Water Samples
Job No. L2318701
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/7/2023 - 4/7/2023

| | | Field Sample ID | MW-S60-04072023 | | | MW-S60-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318701-08 | | | L2318701-08 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | -- | -- | | 70.5 | | |
| EPA 300.0 | Sulfate as SO4 | mg/l | 13.9 | | | -- | -- | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Carbonate (as CO3) | mg/l | -- | -- | | -- | -- | |
| SM 4500-NH3-H | Ammonia (as N) | mg/l | 0.266 | | | -- | -- | |
| SM 4500-NO3-F | Nitrite as N | mg/l | 0.050 | U | EB contamination | -- | -- | |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | 1.43 | | | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | 0.008 | J | | -- | -- | |
| SM 4500-P-E | Phosphorus (Dissolved) | mg/l | 0.004 | J | | -- | -- | |
| SW6010D | Boron | mg/l | 0.0146 | J | | -- | -- | |
| SW6010D | Magnesium | mg/l | 5.75 | | | -- | -- | |
| SW6010D | Potassium | mg/l | 3.19 | | | -- | -- | |
| SW6010D | Sodium | mg/l | 27.4 | | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | 2.0 | U | | -- | -- | |

Data Summary Form for Water Samples
Job No. L2318701
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/7/2023 - 4/7/2023

| | | Field Sample ID | MW-S60-04072023 | | | MW-S60-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318701-08 | | | L2318701-08 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | 1,4-Dioxane | ug/l | 250 | UJ | High IC, ICV, CC RRF, high ICV %D | -- | -- | |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 2-Hexanone | ug/l | 5.0 | UJ | Low CC response | -- | -- | |
| SW-846 8260D | 4-Chlorotoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | 5.0 | UJ | Low CC response | -- | -- | |
| SW-846 8260D | Acetone | ug/l | 1.5 | J+ | High CC response; high LCSD %R; high MSD %R | -- | -- | |
| SW-846 8260D | Benzene | ug/l | 0.24 | J | | -- | -- | |
| SW-846 8260D | Bromobenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromochloromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromodichloromethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Bromoform | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Bromomethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Carbon disulfide | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Carbon tetrachloride | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chlorobenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Chloroethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Chloroform | ug/l | 0.51 | J | | -- | -- | |
| SW-846 8260D | Chloromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | Dibromochloromethane | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Dibromomethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Ethylbenzene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | 0.60 | U | | -- | -- | |

Data Summary Form for Water Samples
Job No. L2318701
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/7/2023 - 4/7/2023

| | | Field Sample ID | MW-S60-04072023 | | | MW-S60-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318701-08 | | | L2318701-08 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Isopropyl Ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Isopropylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | m-&p-Xylenes | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | 5.0 | U | | -- | -- | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Methylene Chloride | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Naphthalene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | N-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | N-Propylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | o-Xylene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Styrene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | 2.0 | UJ | Low CC response | -- | -- | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Tetrachloroethylene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Tetrahydrofuran | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Toluene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | 0.40 | U | | -- | -- | |
| SW-846 8260D | Trichloroethene | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | 2.0 | U | | -- | -- | |
| SW-846 8260D | Vinyl Chloride | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8260D | Xylenes (total) | ug/l | 1.0 | U | | -- | -- | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | -- | -- | | -- | -- | |

Data Summary Form for Water Samples
Job No. L2318701
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/7/2023 - 4/7/2023

| | | Field Sample ID | MW-SD26-04072023 | | | MW-SD60-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318701-01 | | | L2318701-11 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Sulfate as SO4 | mg/l | -- | -- | | 19.1 | | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Carbonate (as CO3) | mg/l | -- | -- | | -- | -- | |
| SM 4500-NH3-H | Ammonia (as N) | mg/l | -- | -- | | 0.075 | U | EB contamination |
| SM 4500-NO3-F | Nitrite as N | mg/l | -- | -- | | 0.099 | | |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | -- | -- | | 1.64 | | |
| SM 4500-P-E | Phosphorus | mg/l | -- | -- | | 0.010 | U | |
| SM 4500-P-E | Phosphorus (Dissolved) | mg/l | -- | -- | | 0.010 | U | |
| SW6010D | Boron | mg/l | -- | -- | | 0.0113 | J | |
| SW6010D | Magnesium | mg/l | -- | -- | | 5.14 | | |
| SW6010D | Potassium | mg/l | -- | -- | | 3.48 | | |
| SW6010D | Sodium | mg/l | -- | -- | | 31.9 | | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | -- | -- | | 2.0 | U | |

Data Summary Form for Water Samples
Job No. L2318701
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/7/2023 - 4/7/2023

| | | Field Sample ID | MW-SD26-04072023 | | | MW-SD60-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318701-01 | | | L2318701-11 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | -- | -- | | 0.40 | U | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,4-Dioxane | ug/l | -- | -- | | 250 | UJ | High IC, ICV, CC RRF, high ICV %D |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 2-Hexanone | ug/l | -- | -- | | 5.0 | UJ | Low CC response |
| SW-846 8260D | 4-Chlorotoluene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | -- | -- | | 5.0 | UJ | Low CC response |
| SW-846 8260D | Acetone | ug/l | -- | -- | | 5.0 | U | |
| SW-846 8260D | Benzene | ug/l | -- | -- | | 0.50 | U | |
| SW-846 8260D | Bromobenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Bromochloromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Bromodichloromethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Bromoform | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Bromomethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Carbon disulfide | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Carbon tetrachloride | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Chlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Chloroethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Chloroform | ug/l | -- | -- | | 1.6 | | |
| SW-846 8260D | Chloromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | -- | -- | | 0.40 | U | |
| SW-846 8260D | Dibromochloromethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Dibromomethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Ethyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Ethylbenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | -- | -- | | 0.60 | U | |

Data Summary Form for Water Samples
Job No. L2318701
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/7/2023 - 4/7/2023

| | | Field Sample ID | MW-SD26-04072023 | | | MW-SD60-04072023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318701-01 | | | L2318701-11 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Isopropyl Ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Isopropylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | m-&p-Xylenes | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | -- | -- | | 5.0 | U | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Methylene Chloride | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Naphthalene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | N-Butylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | N-Propylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | o-Xylene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Styrene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | -- | -- | | 2.0 | UJ | Low CC response |
| SW-846 8260D | Tert-Butylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Tetrachloroethylene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Tetrahydrofuran | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Toluene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | -- | -- | | 0.40 | U | |
| SW-846 8260D | Trichloroethene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Vinyl Chloride | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Xylenes (total) | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 1.20 | | | -- | -- | |

Data Summary Form for Water Samples
Job No. L2318701
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/7/2023 - 4/7/2023

| | | Field Sample ID | MW-SD60-04072023 | | | TRIP BLANK_20230407 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318701-11 | | | L2318701-04 | | |
| | | Dilution Factor | 10 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | 74.6 | | | -- | -- | |
| EPA 300.0 | Sulfate as SO4 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Carbonate (as CO3) | mg/l | -- | -- | | -- | -- | |
| SM 4500-NH3-H | Ammonia (as N) | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrite as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SW6010D | Boron | mg/l | -- | -- | | -- | -- | |
| SW6010D | Magnesium | mg/l | -- | -- | | -- | -- | |
| SW6010D | Potassium | mg/l | -- | -- | | -- | -- | |
| SW6010D | Sodium | mg/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | -- | -- | | 2.0 | U | |

Data Summary Form for Water Samples
Job No. L2318701
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/7/2023 - 4/7/2023

| | | Field Sample ID | MW-SD60-04072023 | | | TRIP BLANK_20230407 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318701-11 | | | L2318701-04 | | |
| | | Dilution Factor | 10 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | -- | -- | | 0.40 | U | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,4-Dioxane | ug/l | -- | -- | | 250 | UJ | High IC, ICV, CC RRF, high ICV %D |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 2-Hexanone | ug/l | -- | -- | | 5.0 | UJ | Low CC response |
| SW-846 8260D | 4-Chlorotoluene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | -- | -- | | 5.0 | UJ | Low CC response |
| SW-846 8260D | Acetone | ug/l | -- | -- | | 5.0 | U | |
| SW-846 8260D | Benzene | ug/l | -- | -- | | 0.50 | U | |
| SW-846 8260D | Bromobenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Bromochloromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Bromodichloromethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Bromoform | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Bromomethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Carbon disulfide | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Carbon tetrachloride | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Chlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Chloroethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Chloroform | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Chloromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | -- | -- | | 0.40 | U | |
| SW-846 8260D | Dibromochloromethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Dibromomethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Ethyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Ethylbenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | -- | -- | | 0.60 | U | |

Data Summary Form for Water Samples
Job No. L2318701
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/7/2023 - 4/7/2023

| | | Field Sample ID | MW-SD60-04072023 | | | TRIP BLANK_20230407 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318701-11 | | | L2318701-04 | | |
| | | Dilution Factor | 10 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Isopropyl Ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Isopropylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | m-&p-Xylenes | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | -- | -- | | 5.0 | U | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Methylene Chloride | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Naphthalene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | N-Butylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | N-Propylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | o-Xylene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Styrene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | -- | -- | | 2.0 | UJ | Low CC response |
| SW-846 8260D | Tert-Butylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Tetrachloroethylene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Tetrahydrofuran | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Toluene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | -- | -- | | 0.40 | U | |
| SW-846 8260D | Trichloroethene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Vinyl Chloride | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Xylenes (total) | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | -- | -- | | -- | -- | |

**Attachment B**
**VALIDATION QUALIFIER DEFINITIONS**
**L2318701**

## Validation Qualifier Definitions

Final validated results are annotated with the following codes:

**U** The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

**J** The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

**J+** The result is an estimated quantity, but the result may be biased high.

**J-** The result is an estimated quantity, but the result may be biased low.

**NJ** The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.

**UJ** The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

**R** The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

July 11, 2023

Ms. Jessie McCusker
de maximis, Inc.
200 Day Hill Road, Suite 200
Windsor, CT 06095

Re: SDG No. L2318972
Alpha Analytical
NMI Groundwater
Data Validation

11/Water

| | |
|---|---|
| MW-S24-04102023 | MW-S62A-04102023 |
| BEW-5-04102023 | MW-SD01-04102023 |
| MW-BS01-04102023 | MW-SD24-04102023 |
| MW-SD24-04102023 DUP | MW-SD62A-04102023 |
| MW-BS14-04102023 | MW-SD61-04102023 |
| MW-BS15-04102023 | |

1/Trip Blank
TRIP BLANK

1/Equipment Blank
EQ-BLANK-04102023

Dear Ms. McCusker:

A Tier I Plus data validation was performed on 11 water samples, one trip blank, and one equipment blank from the Nuclear Metals Superfund site. The data validation was performed using the Region 1 - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures dated June 2018, to the extent possible, Massachusetts Compendium of Analytical Methods (CAM) protocols, the site-specific QAPP, and ddms' Standard Operating Procedures (SOPs). Professional judgment was applied as necessary and appropriate.

Analyses were performed in accordance with the following methods:

| **Parameter** | **Method** |
|---|---|
| Metals (boron, magnesium, potassium, sodium) | SW846 6010D |
| Hardness | SW846 6010D |
| Volatile Organic Compounds (VOCs) | SW846 8260D |
| Semivolatile Organic Compounds (SVOCs) – | SW846 8270E SIM |

| Parameter | Method |
|---|---|
| 1,4-Dioxane | |
| Total and Dissolved Phosphorus | SM 4500-P-E |
| Ammonia | SM 4500-NN3-H |
| Nitrate/Nitrite | SM 4500 NO3-F |
| Anions (chloride, fluoride, and sulfate) | EPA 300.0 |
| Total Suspended Solids (TSS) | SM 2540D |
| Total Organic Carbon (TOC) | SM 5310C |

The data were evaluated based on the parameters summarized in the table below, where applicable:

| | | |
|---|---|---|
| | • | Overall Evaluation of Data and Potential Usability Issues |
| * | • | Data Completeness |
| * | • | Preservation and Technical Holding Times |
| * | • | GC/MS Instrument Performance Check |
| | • | Initial and Continuing Calibrations |
| | • | Blanks |
| * | • | Surrogate Compounds/Labeled Analogs |
| * | • | Internal Standards |
| | • | Laboratory Control Sample/ Laboratory Control Sample Duplicates |
| | • | Matrix Spike/Matrix Spike Duplicate |
| | • | Field and Laboratory Duplicates |
| * | • | Target Compound Identification |
| * | • | Compound Quantitation and Reported Quantitation Limits |
| | • | Total v. Dissolved Concentrations |
| * | • | System Performance |

*All criteria were met for this parameter.
NA = not analyzed or not applicable

The Data Validation Report includes the following attachments:

Attachment A: Data Summary Table – summarized validated results

Attachment B: Validation Qualifier Definitions

## Overall Evaluation of Data

- Results for 1,4-dioxane in BEW-5-04102023, EQ-BLANK-04102023, MW-BS01-04102023, MW-BS15-04102023, and MW-S62A-04102023 were reported from the volatile and semi-volatile fractions (methods 8260D and 8270E SIM). The validator's recommendation is to use the result reported from the semi-volatile fraction.

VOCs

- Results for 1,4-dioxane in MW-S62A-04102023, BEW-5-04102023, MW-BS01-04102023, TRIP BLANK, MW-SD62A-04102023, EQ-BLANK-04102023, MW-SD61-04102023, and MW-BS15-04102023 were qualified as estimated (UJ) due to low relative response factors (RRFs) in the initial calibration (IC), IC verification (ICV), and continuing calibration (CC) standards.

- Results for 1,4-dioxane and diethyl ether in BEW-5-04102023, TRIP BLANK, MW-SD62A-04102023, EQ-BLANK-04102023, MW-SD61-04102023, and MW-BS15-04102023 and for 1,4-dioxane in MW-S62A-04102023 and MW-BS01-04102023 were qualified as estimated (UJ) based on variability between the ICV and IC standards.

- Results for dichlorodifluoromethane, chloromethane, vinyl chloride, bromomethane, chloroethane, 4-methyl-2-pentanone, 2-hexanone, and 1,2-dibromo-3-chloropropane in BEW-5-04102023, TRIP BLANK, MW-SD62A-04102023, EQ-BLANK-04102023, MW-SD61-04102023, and MW-BS15-04102023, for methyl isobutyl ketone and 2-hexanone in MW-S62A-04102023, and for methyl isobutyl ketone in MW-BS01-04102023 were qualified as estimated (UJ) based on low responses in the CC standard when compared to the IC.

- Results for acetone in MW-SD62A-04102023 and MW-SD61-04102023 were qualified as estimated with potential high bias (J+) due to high matrix spike (MS) recovery. These results were also qualified as estimated (J) due to MS/MS duplicate (MSD) imprecision. The “J” qualifier takes precedence.

Total and Dissolved Phosphorus

- Results for total phosphorus in MW-BS01-04102023, MW-S24-04102023, MW-S62A-04102023, MW-SD01-04102023, MW-SD24-04102023, MW-SD24-04102023 DUP, MW-SD61-04102023, and MW-SD62A-04102023 were qualified as estimated (J, UJ) due to field duplicate imprecision.

- The results for total and dissolved phosphorus in MW-SD61-04102023 were qualified as estimated (J) because the dissolved concentration exceeded the total concentration by more than ten percent.

The following sections of this report detail the reasons qualifiers were applied to the sample results. Each parameter section discusses the quality control (QC) excursions that impacted sample results. Where a quality indicator was deemed acceptable after thorough review, no further discussion is included in this report. Detailed findings are included for each quality element that impacted the usability of the reported results. Additional information or explanation is included as needed, to provide support for decisions made, based on the validator’s best professional judgment.

Where a result was qualified J+ and J or J- and J, the J qualifier takes precedence. Where a result was qualified biased high and low for differing data quality excursions, the final qualifier is J, with an indeterminate bias.

**Metals (Boron, Magnesium, Potassium, Sodium Only) (SW846 6010D)**

Samples MW-S24-04102023, MW-S62A-04102023, MW-SD24-04102023, MW-SD24-04102023 DUP, MW-SD62A-04102023, MW-SD61-04102023 and EQ-BLANK-04102023 were analyzed for metals. Results for boron, magnesium, potassium, and sodium in these samples were determined to be usable as reported by the laboratory. No qualifiers were applied to these results by the validator.

**Hardness (SW846 6010D)**

Samples BEW-5-04102023 and EQ-BLANK-04102023 were analyzed for hardness. Both hardness results were determined to be acceptable as reported. No qualifiers were applied to these results based on review of the data provided.

**Volatiles Organics (SW-846 8260D)**

Samples MW-S62A-04102023, BEW-5-04102023, MW-BS01-04102023, TRIP BLANK, MW-SD62A-04102023, EQ-BLANK-04102023, MW-SD61-04102023, and MW-BS15-04102023 were analyzed for volatile organics.

Calibration

Two ICs were performed in support of the sample analyses; these were run on March 8, 2023, on instrument JACK1 and on March 30, 2023, on instrument QUIMBY. All RRFs and relative standard deviations (RSDs) or correlation coefficients ($r^2$) were acceptable (QC >0.05 RRF, ≤20% RSD, >0.99 $r^2$), except that low RRFs were observed in the IC standards on both instruments for 1,4-dioxane.

A second-source ICV standard was analyzed after each IC, and RRFs for 1,4-dioxane were unacceptably low in both ICV standards. The percent differences (%Ds) in the ICV standards were acceptable (%D≤20), with the following exceptions:

| Analyte | %D | Associated Sample | Qualifier Applied |
|---|---|---|---|
| *ICV Standard 3/8/23, Instrument JACK1* | | | |
| 1,4-Dioxane | 28.2 | BEW-5-04102023<br>TRIP BLANK<br>MW-SD62A-04102023<br>EQ-BLANK-04102023<br>MW-SD61-04102023<br>MW-BS15-04102023 | UJ |
| Diethyl ether | 29.5 | | |

| Analyte | %D | Associated Sample | Qualifier Applied |
|---|---|---|---|
| *ICV Standard 3/30/23, Instrument QUIMBY* | | | |
| 1,4-Dioxane | 34.0 | MW-S62A-04102023<br>MW-BS01-04102023 | UJ |

The results for 1,4-dioxane in MW-S62A-04102023, BEW-5-04102023, MW-BS01-04102023, TRIP BLANK, MW-SD62A-04102023, EQ-BLANK-04102023, MW-SD61-04102023, and MW-BS15-04102023 were qualified as estimated (UJ) due to low RRFs in the associated IC and ICV standards. Results for 1,4-dioxane and diethyl ether in BEW-5-04102023, TRIP BLANK, MW-SD62A-04102023, EQ-BLANK-04102023, MW-SD61-04102023, and MW-BS15-04102023 and for 1,4-dioxane in MW-S62A-04102023 and MW-BS01-04102023 were qualified as estimated (UJ) based on high variability between the ICV and IC standards.

Three CC standards were analyzed with the site samples. RRFs for the reported compounds were acceptable, except that low RRFs were observed for 1,4-dioxane in all three CC standards. The results for 1,4-dioxane in MW-S62A-04102023, BEW-5-04102023, MW-BS01-04102023, TRIP BLANK, MW-SD62A-04102023, EQ-BLANK-04102023, MW-SD61-04102023, and MW-BS15-04102023 were qualified as estimated (UJ) due to low RRFs in the CC standard. The percent differences were acceptable (≤20%D), with the following exceptions:

| Analyte | %D | Affected Sample | Qualifier Applied |
|---|---|---|---|
| *CC Standard 04/11/23 at 11:14, Instrument JACK1* | | | |
| Dichlorodifluoromethane | -27.0 | BEW-5-04102023<br>TRIP BLANK<br>MW-SD62A-04102023<br>EQ-BLANK-04102023<br>MW-SD61-04102023<br>MW-BS15-04102023 | UJ |
| Chloromethane | -28.4 | | |
| Vinyl chloride | -24.2 | | |
| Bromomethane | -28.8 | | |
| Chloroethane | -27.9 | | |
| Methyl isobutyl ketone | -24.5 | | |
| 2-Hexanone | -23.6 | | |
| 1,2-Dibromo-3-chloropropane | -26.1 | | |
| *CC Standard 4/13/23 at 05:25, Instrument QUIMBY* | | | |
| Acetone | +26.1 | MW-S62A-04102023 | None |
| Methyl isobutyl ketone | -24.1 | | UJ |
| 2-Hexanone | -27.0 | | |
| *CC Standard 4/18/23 at 03:37, Instrument QUIMBY* | | | |
| Acetone | +47.9 | MW-BS01-04102023 | None |
| Methyl isobutyl ketone | -22.4 | | UJ |

The high %Ds for all of the compounds listed above except acetone resulted from low responses relative to the IC, indicating the potential for low bias or false negatives. Results for dichlorodifluoromethane, chloromethane, vinyl chloride, bromomethane,

chloroethane, methyl isobutyl ketone, 2-hexanone, and 1,2-dibromo-3-chloropropane in BEW-5-04102023, TRIP BLANK, MW-SD62A-04102023, EQ-BLANK-04102023, MW-SD61-04102023, and MW-BS15-04102023, for methyl isobutyl ketone and 2-hexanone in MW-S62A-04102023, and for methyl isobutyl ketone in MW-BS01-04102023 were qualified as estimated (UJ) due to low CC standard responses.

The high %Ds for acetone resulted from high responses relative to the IC, which suggests the potential for reporting false positives or for sample results that are biased high. Since acetone was not detected in either of the associated samples, no action was necessary for this compound.

Blanks

Three method blanks were prepared with the samples. One trip blank (TRIP BLANK) and one equipment blank (EQ-BLANK-04102023) were submitted with the samples. Hexachlorobutadiene was reported at 0.56 µg/L in the method blank analyzed on April 11, 2023, on instrument JACK1. Since this compound was not reported in any of the associated samples, no data required qualification on this basis. No other target analytes were detected in any of the associated laboratory or field-submitted blanks.

Laboratory Control Sample / Laboratory Control Sample Duplicate (LCS/LCSD)

Three LCS/LCSD pairs were analyzed and reported in support of sample analyses. The percent recoveries (%Rs) and relative percent differences (RPDs) were acceptable (QC 70-130%R; ≤20RPD), with the following exceptions:

| Analyte | LCS %R | LCSD %R | LCS/LCSD RPD | Associated Sample | Qualifier Applied |
|---|---|---|---|---|---|
| *LCS/D WG1767968-3 and -4* | | | | | |
| Acetone | 150 | 140 | a | MW-BS01-04102023 | None |

a = acceptable

Since the recovery was high, and acetone was not detected in the associated sample, no action was necessary.

Matrix Spike / Matrix Spike Duplicate (MS/MSD)

Samples MW-S62A-04102023 and MW-BS01-04102023 were prepared and analyzed as MS/MSD pairs with this set of samples. The %Rs and RPDs were acceptable (QC 70-130%R; ≤20RPD), with the following exceptions:

| Analyte | MS %R | MSD %R | MS/MSD RPD | Associated Sample | Qualifier Applied |
|---|---|---|---|---|---|
| *Parent Sample: MW-S62A-04102023* | | | | | |
| Bromomethane | 140 | a | a | MW-SD62A-04102023 | J+ |

| Analyte | MS %R | MSD %R | MS/MSD RPD | Associated Sample | Qualifier Applied |
|---|---|---|---|---|---|
| Acetone | 160 | a | 29 | MW-S62A-04102023<br>BEW-5-04102023<br>MW-BS15-04102023<br>MW-SD61-04102023 | |

a = acceptable

Results for acetone in MW-SD62A-04102023 and MW-SD61-04102023 were qualified as estimated with potential high bias (J+) due to the high MS recovery. These results were also qualified as estimated (J) due to MS/MSD imprecision. The "J" qualifier takes precedence. Since acetone was not detected in any other associated sample, no additional action was necessary.

**1,4-Dioxane (SW-846 8270E SIM)**

Samples MW-S24-04102023, MW-S62A-04102023, BEW-5-04102023, MW-SD01-04102023, MW-BS01-04102023, MW-SD24-04102023, MW-SD24-04102023 DUP, EQ-BLANK-04102023, MW-BS14-04102023, and MW-BS15-04102023 were analyzed for 1,4-dioxane. All 1,4-dioxane results were determined to be acceptable as reported. No qualifiers were applied to these results based on review of the data provided.

**Total and Dissolved Phosphorus (SM 4500-P-E)**

Samples EQ-BLANK-04102023, MW-BS01-04102023, MW-S24-04102023, MW-S62A-04102023, MW-SD01-04102023, MW-SD24-04102023, MW-SD24-04102023 DUP, MW-SD61-04102023, and MW-SD62A-04102023 were analyzed for total phosphorus. Samples MW-S24-04102023, MW-S62A-04102023, MW-SD24-04102023, MW-SD24-04102023 DUP, MW-SD61-04102023, MW-SD62A-04102023 were analyzed for dissolved phosphorus.

Field Duplicate

Sample MW-SD24-04102023 DUP was submitted as a field duplicate of MW-SD24-04102023. Precision between paired field duplicate results for dissolved phosphorus (0 RPD) was acceptable (QC ≤30 RPD) but was unacceptable for total phosphorus (110 RPD). Results for total phosphorus in MW-BS01-04102023, MW-S24-04102023, MW-S62A-04102023, MW-SD01-04102023, MW-SD24-04102023, MW-SD24-04102023 DUP, MW-SD61-04102023, and MW-SD62A-04102023 were qualified as estimated (J, UJ) due to field duplicate Imprecision.

Total v. Dissolved

The total concentration exceeded the dissolved concentration for phosphorus, with the exception noted below:

| Sample | Analyte | Total Conc (mg/L) | Dissolved Conc (mg/L) | %D |
|---|---|---|---|---|
| MW-SD61-04102023 | Phosphorus | 0.053 | 0.068 | 28 |

The results for total and dissolved phosphorus in MW-SD61-04102023 were qualified as estimated (J) because the dissolved concentration exceeded the total concentration by more than ten percent.

**Ammonia (SM 4500-NH3-H)**

Samples MW-S24-04102023, MW-S62A-04102023, MW-SD24-04102023, MW-SD24-04102023 DUP, MW-SD62A-04102023, EQ-BLANK-04102023, and MW-SD61-04102023 were analyzed for ammonia. Results for ammonia in all of these samples were determined to be usable as reported by the laboratory. No qualifiers were applied to these results by the validator.

**Nitrate/Nitrite (SM 4500-NO3-F)**

Samples MW-S24-04102023, MW-S62A-04102023, BEW-5-04102023, MW-SD24-04102023, MW-SD24-04102023 DUP, MW-SD62A-04102023, EQ-BLANK-04102023, and MW-SD61-04102023 were analyzed for nitrate and nitrite. Results for nitrate and nitrite in all of these samples were determined to be usable as reported by the laboratory. No qualifiers were applied to these results by the validator.

**Total Suspended Solids (TSS by SM 2540B)**

Samples BEW-5-04102023 and EQ-BLANK-04102023 were analyzed for TSS. Results for TSS in both samples were determined to be usable as reported by the laboratory. No qualifiers were applied to these results by the validator.

**Total Organic Carbon (TOC by SM 5310C)**

Samples BEW-5-04102023 and EQ-BLANK-04102023 were analyzed for TOC. Results for TOC in both samples were determined to be usable as reported by the laboratory. No qualifiers were applied to these results by the validator.

**Anions (Chloride, Fluoride, and Sulfate by EPA 300.0)**

Samples MW-S24-04102023, MW-S62A-04102023, BEW-5-04102023, MW-SD24-04102023, MW-SD24-04102023 DUP, MW-SD62A-04102023, EQ-BLANK-04102023, and MW-SD61-04102023 were analyzed for chloride, fluoride and sulfate. Results for chloride, fluoride, and sulfate in these samples were determined to be usable as reported by the laboratory. No qualifiers were added to the results based on the data validation effort.

Quantitation

Samples MW-S62A-04102023, MW-SD24-04102023, MW-SD24-04102023 DUP, MW-SD62A-04102023, and MW-SD61-04102023 were analyzed at 10-fold dilutions to obtain concentrations of chloride within the established calibration range, and sample BEW-5-04102023 was analyzed at a 25-fold dilution to obtain a concentration of sulfate within the established calibration range. Chloride and sulfate concentrations and reporting limits were appropriately adjusted for the dilution factors.

## Documentation

No documentation issues were observed during the validation effort.

Please feel free to contact me (edickinson@ddmsinc.com or 610-314-6284) with any questions you may have regarding this information.

Sincerely,

Elizabeth K. Dickinson
Sr. Environmental Chemist

Attachments

**Attachment A**
**DATA SUMMARY TABLE**
**L2318972**

Data Summary Form for Groundwater Samples
Job No. L2318972
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/10/2023 - 4/10/2023

| | | Field Sample ID | MW-SD24-04102023 DUP | | | MW-SD24-04102023 DUP | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318972-08 | | | L2318972-08 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | -- | -- | | 80.7 | | |
| EPA 300.0 | Fluoride | mg/l | 0.050 | U | | -- | -- | |
| EPA 300.0 | Sulfate as SO4 | mg/l | 15.3 | | | -- | -- | |
| SM 4500-NH3-H | Ammonia (as N) | mg/l | 0.063 | J | | -- | -- | |
| SM 4500-NO3-F | Nitrite as N | mg/l | 0.013 | J | | -- | -- | |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | 2.03 | | | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | 0.048 | J | Field dup imprecision | -- | -- | |
| SM 4500-P-E | Phosphorus (Dissolved) | mg/l | 0.011 | | | -- | -- | |
| SW6010D | Boron | mg/l | 0.0130 | J | | -- | -- | |
| SW6010D | Magnesium | mg/l | 5.72 | | | -- | -- | |
| SW6010D | Potassium | mg/l | 4.08 | | | -- | -- | |
| SW6010D | Sodium | mg/l | 29.7 | | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2318972
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/10/2023 - 4/10/2023

| | | Field Sample ID | MW-SD24-04102023 DUP | | | MW-SD24-04102023 DUP | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318972-08 | | | L2318972-08 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,4-Dioxane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 2-Hexanone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 4-Chlorotoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Acetone | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Benzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromochloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromodichloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromoform | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Bromomethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Carbon disulfide | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Carbon tetrachloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chlorobenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloroethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloroform | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Chloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dibromochloromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dibromomethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Ethylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Isopropyl Ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Isopropylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | m-&p-Xylenes | ug/l | -- | -- | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2318972
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/10/2023 - 4/10/2023

| | | Field Sample ID | MW-SD24-04102023 DUP | | | MW-SD24-04102023 DUP | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2318972-08 | | | L2318972-08 | | |
| | | Dilution Factor | 1 | | | 10 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Methylene Chloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Naphthalene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | N-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | N-Propylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | o-Xylene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Styrene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tetrachloroethylene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Tetrahydrofuran | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Toluene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Trichloroethene | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Vinyl Chloride | ug/l | -- | -- | | -- | -- | |
| SW-846 8260D | Xylenes (total) | ug/l | -- | -- | | -- | -- | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 0.144 | U | | -- | -- | |

Data Summary Form for Groundwater Samples
Job No. L2318972
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/10/2023 - 4/10/2023

| | | Field Sample ID | TRIP BLANK_20230410 | | |
|---|---|---|---|---|---|
| | | Lab Sample ID | L2318972-06 | | |
| | | Dilution Factor | 1 | | |
| Analytical Method | Parameter | Unit | | | |
| EPA 300.0 | Chloride | mg/l | -- | -- | |
| EPA 300.0 | Fluoride | mg/l | -- | -- | |
| EPA 300.0 | Sulfate as SO4 | mg/l | -- | -- | |
| SM 4500-NH3-H | Ammonia (as N) | mg/l | -- | -- | |
| SM 4500-NO3-F | Nitrite as N | mg/l | -- | -- | |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | -- | -- | |
| SM 4500-P-E | Phosphorus (Dissolved) | mg/l | -- | -- | |
| SW6010D | Boron | mg/l | -- | -- | |
| SW6010D | Magnesium | mg/l | -- | -- | |
| SW6010D | Potassium | mg/l | -- | -- | |
| SW6010D | Sodium | mg/l | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | 1.0 | U | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | 1.0 | U | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | 1.0 | U | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | 2.0 | U | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | 2.0 | UJ | Low CC response |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | 2.0 | U | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | 1.0 | U | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | 2.0 | U | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | 1.0 | U | |

Data Summary Form for Groundwater Samples
Job No. L2318972
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/10/2023 - 4/10/2023

| | | Field Sample ID | TRIP BLANK_20230410 | | |
|---|---|---|---|---|---|
| | | Lab Sample ID | L2318972-06 | | |
| | | Dilution Factor | 1 | | |
| Analytical Method | Parameter | Unit | | | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | 2.0 | U | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | 0.40 | U | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | 1.0 | U | |
| SW-846 8260D | 1,4-Dioxane | ug/l | 250 | UJ | Low IC, ICV, CC RRF, high ICV %D |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | 2.0 | U | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | 2.0 | U | |
| SW-846 8260D | 2-Hexanone | ug/l | 5.0 | UJ | Low CC response |
| SW-846 8260D | 4-Chlorotoluene | ug/l | 2.0 | U | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | 5.0 | UJ | Low CC response |
| SW-846 8260D | Acetone | ug/l | 5.0 | U | |
| SW-846 8260D | Benzene | ug/l | 0.50 | U | |
| SW-846 8260D | Bromobenzene | ug/l | 2.0 | U | |
| SW-846 8260D | Bromochloromethane | ug/l | 2.0 | U | |
| SW-846 8260D | Bromodichloromethane | ug/l | 1.0 | U | |
| SW-846 8260D | Bromoform | ug/l | 2.0 | U | |
| SW-846 8260D | Bromomethane | ug/l | 2.0 | UJ | Low CC response |
| SW-846 8260D | Carbon disulfide | ug/l | 2.0 | U | |
| SW-846 8260D | Carbon tetrachloride | ug/l | 1.0 | U | |
| SW-846 8260D | Chlorobenzene | ug/l | 1.0 | U | |
| SW-846 8260D | Chloroethane | ug/l | 2.0 | UJ | Low CC response |
| SW-846 8260D | Chloroform | ug/l | 1.0 | U | |
| SW-846 8260D | Chloromethane | ug/l | 2.0 | UJ | Low CC response |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | 1.0 | U | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | 0.40 | U | |
| SW-846 8260D | Dibromochloromethane | ug/l | 1.0 | U | |
| SW-846 8260D | Dibromomethane | ug/l | 2.0 | U | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | 2.0 | UJ | Low CC response |
| SW-846 8260D | Ethyl ether | ug/l | 2.0 | UJ | High ICV %D |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | 2.0 | U | |
| SW-846 8260D | Ethylbenzene | ug/l | 1.0 | U | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | 0.60 | U | |
| SW-846 8260D | Isopropyl Ether | ug/l | 2.0 | U | |
| SW-846 8260D | Isopropylbenzene | ug/l | 2.0 | U | |
| SW-846 8260D | m-&p-Xylenes | ug/l | 2.0 | U | |

Data Summary Form for Groundwater Samples
Job No. L2318972
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 4/10/2023 - 4/10/2023

| | | Field Sample ID | TRIP BLANK_20230410 | | |
|---|---|---|---|---|---|
| | | Lab Sample ID | L2318972-06 | | |
| | | Dilution Factor | 1 | | |
| Analytical Method | Parameter | Unit | | | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | 5.0 | U | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | 2.0 | U | |
| SW-846 8260D | Methylene Chloride | ug/l | 2.0 | U | |
| SW-846 8260D | Naphthalene | ug/l | 2.0 | U | |
| SW-846 8260D | N-Butylbenzene | ug/l | 2.0 | U | |
| SW-846 8260D | N-Propylbenzene | ug/l | 2.0 | U | |
| SW-846 8260D | o-Xylene | ug/l | 1.0 | U | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | 2.0 | U | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | 2.0 | U | |
| SW-846 8260D | Styrene | ug/l | 1.0 | U | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | 2.0 | U | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | 2.0 | U | |
| SW-846 8260D | Tetrachloroethylene | ug/l | 1.0 | U | |
| SW-846 8260D | Tetrahydrofuran | ug/l | 2.0 | U | |
| SW-846 8260D | Toluene | ug/l | 1.0 | U | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | 1.0 | U | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | 0.40 | U | |
| SW-846 8260D | Trichloroethene | ug/l | 1.0 | U | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | 2.0 | U | |
| SW-846 8260D | Vinyl Chloride | ug/l | 1.0 | UJ | Low CC response |
| SW-846 8260D | Xylenes (total) | ug/l | 1.0 | U | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | -- | -- | |

**Attachment B**
**VALIDATION QUALIFIER DEFINITIONS**
**L2318972**

## Validation Qualifier Definitions

Final validated results are annotated with the following codes:

**U** The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

**J** The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

**J+** The result is an estimated quantity, but the result may be biased high.

**J-** The result is an estimated quantity, but the result may be biased low.

**NJ** The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.

**UJ** The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

**R** The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

July 11, 2023

Ms. Jessie McCusker
de maximis, Inc.
200 Day Hill Road, Suite 200
Windsor, CT 06095

Re: SDG No. L2319253
Alpha Analytical
NMI Groundwater
Data Validation

6/Water

| | |
|---|---|
| HB-13-04112023 | HB-13-04112023 DUP |
| MW-BS51-04112023 | HBPZ-2R-04112023 |
| MW-BS7-2-04112023 | GZW-10-2-04112023 |

1/Trip Blank
TRIP BLANK

1/Equipment Blank
EQ-BLANK-04112023

Dear Ms. McCusker:

A Tier I Plus data validation was performed on six water samples, one trip blank, and one equipment blank from the Nuclear Metals Superfund site. The data validation was performed using the Region 1 - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures dated June 2018, to the extent possible, Massachusetts Compendium of Analytical Methods (CAM) protocols, the site-specific QAPP, and ddms' Standard Operating Procedures (SOPs). Professional judgment was applied as necessary and appropriate.

Analyses were performed in accordance with the following methods:

| **Parameter** | **Method** |
|---|---|
| Metals (boron, magnesium, potassium, sodium) | SW846 6010D |
| Volatile Organic Compounds (VOCs) | SW846 8260D |
| Semivolatile Organic Compounds (SVOCs) – 1,4-Dioxane | SW846 8270E SIM |
| Bicarbonate and Carbonate Alkalinity | SM 2320B |
| Total and Dissolved Phosphorus | SM 4500-P-E |

| Parameter | Method |
|---|---|
| Ammonia | SM 4500-NN3-H |
| Nitrate/Nitrite | SM 4500 NO3-F |
| Anions (chloride, fluoride, and sulfate) | EPA 300.0 |

The data were evaluated based on the parameters summarized in the table below, where applicable:

| | | |
|---|---|---|
| | • | Overall Evaluation of Data and Potential Usability Issues |
| * | • | Data Completeness |
| * | • | Preservation and Technical Holding Times |
| * | • | GC/MS Instrument Performance Check |
| | • | Initial and Continuing Calibrations |
| | • | Blanks |
| | • | Surrogate Compounds/Labeled Analogs |
| * | • | Internal Standards |
| | • | Laboratory Control Sample/ Laboratory Control Sample Duplicates |
| | • | Matrix Spike/Matrix Spike Duplicate |
| * | • | Field and Laboratory Duplicates |
| * | • | Target Compound Identification |
| * | • | Compound Quantitation and Reported Quantitation Limits |
| * | • | Total v. Dissolved Concentrations |
| * | • | System Performance |

*All criteria were met for this parameter.
NA = not analyzed or not applicable

The Data Validation Report includes the following attachments:

Attachment A: Data Summary Table – summarized validated results
Attachment B: Validation Qualifier Definitions

## Overall Evaluation of Data

- Results for 1,4-dioxane in HB-13-04112023, HB-13-04112023 DUP, MW-BS51-04112023, GZW-10-2-04112023, and EQ-BLANK-04112023 were reported from the volatile and semi-volatile fractions (methods 8260D and 8270E SIM). The validator's recommendation is to use the result reported from the semi-volatile fraction.

VOCs

- Results for all target analytes in GZW-10-2-04112023 were qualified as estimated (J, UJ) due to the presence of headspace in the sample container used for analysis.

- Results for 1,4-dioxane in HB-13-04112023, HB-13-04112023 DUP, TRIP BLANK, MW-BS51-04112023, GZW-10-2-04112023, and EQ-BLANK-04112023 were qualified as estimated (UJ) due to low relative response factors (RRFs) in the initial calibration (IC), IC verification (ICV), and continuing calibration (CC) standards.

- Results for 1,4-dioxane in HB-13-04112023, HB-13-04112023 DUP, TRIP BLANK, MW-BS51-04112023, GZW-10-2-04112023, and EQ-BLANK-04112023 were qualified as estimated (UJ) based on variability between the ICV and IC standards.

- Results for methyl isobutyl ketone, 2-hexanone, and naphthalene in HB-13-04112023 DUP, TRIP BLANK, MW-BS51-04112023, and GZW-10-2-04112023 and for methyl isobutyl ketone, 2-hexanone, 1,1,2,2-tetrachloroethane, n-butylbenzene, and naphthalene in HB-13-04112023 and EQ-BLANK-04112023 were qualified as estimated (UJ) based on low responses in the CC standard when compared to the IC.

- Results for 2-hexanone in HB-13-04112023, HB-13-04112023 DUP, MW-BS51-04112023, and GZW-10-2-04112023 were qualified as estimated due to low matrix spike (MS)/MS duplicate (MSD) recoveries.

1,4-Dioxane

- Results for 1,4-dioxane in HB-13-04112023, HB-13-04112023 DUP, MW-BS51-04112023, MW-BS7-2-04112023, and GZW-10-2-04112023 were qualified as estimated with potential low bias (J-, UJ) due to low MS recovery.

Ammonia

- The result for ammonia in HBPZ-2R-04112023 was qualified as estimated with potential low bias (J-) due to the low MS recovery.

Nitrate/Nitrite

- Results for nitrite in HB-13-04112023, HB-13-04112023 DUP, and HBPZ-2R-04112023 were qualified as not detected (U) at the reporting limit due to associated equipment blank contamination.

The following sections of this report detail the reasons qualifiers were applied to the sample results. Each parameter section discusses the quality control (QC) excursions that impacted sample results. Where a quality indicator was deemed acceptable after thorough review, no further discussion is included in this report. Detailed findings are included for each quality element that impacted the usability of the reported results. Additional information or explanation is included as needed, to provide support for decisions made, based on the validator's best professional judgment.

Where a result was qualified J+ and J, or J- and J, the J qualifier takes precedence. Where a result was qualified biased high and low for differing data quality excursions, the final qualifier is J, with an indeterminate bias.

## Metals (Boron, Magnesium, Potassium, Sodium Only) (SW846 6010D)

Samples HBPZ-2R-04112023 and EQ-BLANK-04112023 were analyzed for metals. Results for boron, magnesium, potassium, and sodium in these samples were determined to be usable as reported by the laboratory. No qualifiers were applied to these results by the validator.

## Volatiles Organics (SW-846 8260D)

Samples HB-13-04112023, HB-13-04112023 DUP, TRIP BLANK, MW-BS51-04112023, GZW-10-2-04112023, and EQ-BLANK-04112023 were analyzed for volatile organics.

### Preservation and Sample Holding Times

The samples were collected on April 11, 2023, and were received at an acceptable cooler temperature (4.3°C; QC 4 ±2°C). Documentation of the sample pH measurements was not included in the data package; it was assumed that all samples were received with a pH of <2. The samples were analyzed on April 18 and 22, 2023, within the 14-day holding time for chemically-preserved water samples.

Headspace was observed in all three sample vials submitted for GZW-10-2-04112023. Results for all target analytes in GZW-10-2-04112023 were qualified as estimated (J, UJ) due to the presence of headspace in the sample container used for analysis.

### Calibration

One IC was performed on March 30, 2023, on instrument QUIMBY in support of the sample analyses. All RRFs and relative standard deviations (RSDs) or correlation coefficients ($r^2$) were acceptable (QC >0.05 RRF, ≤20% RSD, >0.99 $r^2$), except that low RRFs were observed in the IC standards for 1,4-dioxane.

A second-source ICV standard was analyzed after the IC, and the RRF for 1,4-dioxane was unacceptably low in the ICV standard. The percent differences (%Ds) in the ICV standards were acceptable (%D≤20), with the following exception:

| Analyte | %D | Associated Sample | Qualifier Applied |
|---|---|---|---|
| *ICV Standard 3/30/23, Instrument QUIMBY* | | | |
| 1,4-Dioxane | 34.0 | HB-13-04112023<br>HB-13-04112023 DUP<br>TRIP BLANK<br>MW-BS51-04112023<br>GZW-10-2-04112023<br>EQ-BLANK-04112023 | UJ |

The results for 1,4-dioxane in HB-13-04112023, HB-13-04112023 DUP, TRIP BLANK, MW-BS51-04112023, GZW-10-2-04112023, and EQ-BLANK-04112023 were qualified as estimated (UJ) due to low RRFs in the associated IC and ICV standards. Results for 1,4-dioxane in these samples were also qualified as estimated (UJ) based on variability between the ICV and IC standards.

Two CC standards were analyzed with the site samples. RRFs for the reported compounds were acceptable, except that low RRFs were observed for 1,4-dioxane in both CC standards. The results for 1,4-dioxane in HB-13-04112023, HB-13-04112023 DUP, TRIP BLANK, MW-BS51-04112023, GZW-10-2-04112023, and EQ-BLANK-04112023 were qualified as estimated (UJ) due to low RRFs in the CC standards. The percent differences were acceptable (≤20%D), with the following exceptions:

| Analyte | %D | Affected Sample | Qualifier Applied |
|---|---|---|---|
| *CC Standard 04/19/23 at 03:43, Instrument QUIMBY* | | | |
| Acetone | +26.9 | HB-13-04112023 DUP | None |
| Methyl isobutyl ketone | -20.3 | TRIP BLANK | UJ |
| 2-Hexanone | -24.3 | MW-BS51-04112023 | |
| Naphthalene | -24.9 | GZW-10-2-04112023 | |
| *CC Standard 4/20/23 at 03:35, Instrument QUIMBY* | | | |
| Acetone | +40.8 | HB-13-04112023 | None |
| Methyl isobutyl ketone | -28.1 | EQ-BLANK-04112023 | UJ |
| 2-Hexanone | -30.6 | | |
| 1,1,2,2-Tetrachloroethane | -28.9 | | |
| n-Butylbenzene | -22.9 | | |
| Naphthalene | -22.3 | | |

The high %Ds for all of the compounds listed above except acetone resulted from low responses relative to the IC, indicating the potential for low bias or false negatives. Results for methyl isobutyl ketone, 2-hexanone, and naphthalene in HB-13-04112023 DUP, TRIP BLANK, MW-BS51-04112023, and GZW-10-2-04112023 and for methyl isobutyl ketone, 2-hexanone, 1,1,2,2-tetrachloroethane, n-butylbenzene, and naphthalene in HB-13-04112023 and EQ-BLANK-04112023 were qualified as estimated (UJ) due to low CC standard responses.

The high %Ds for acetone resulted from high responses relative to the IC, which suggests the potential for reporting false positives or sample results that are biased high. Since acetone was not detected in any of the associated samples, no action was necessary for this compound.

Surrogate Compounds

Dibromofluoromethane, 1,2-dichloroethane-$d_4$, toluene-$d_8$, and bromofluorobenzene were used as the surrogate compounds for these analyses. Recoveries of all four surrogate compounds in the site and QC samples were within the acceptance limits of 70-130%, except for dibromofluoromethane in HB-13-04112023 DUP. Only trichloroethane and tetrachloroethene were detected in HB-13-04112023 DUP, and these compounds are not associated with dibromofluoromethane. Therefore, no action was necessary due to the high surrogate recovery.

Laboratory Control Sample / Laboratory Control Sample Duplicate (LCS/LCSD)

Two LCS/LCSD pairs were analyzed and reported in support of sample analyses. The percent recoveries (%Rs) and relative percent differences (RPDs) were acceptable (QC 70-130%R; ≤20RPD), with the following exceptions:

| Analyte | LCS %R | LCSD %R | LCS/LCSD RPD | Associated Sample | Qualifier Applied |
|---|---|---|---|---|---|
| *LCS/D WG17648497-3 and -4* | | | | | |
| Acetone | a | 170 | a | HB-13-04112023 DUP<br>TRIP BLANK<br>MW-BS51-04112023<br>GZW-10-2-04112023 | None |
| 2-Hexanone | a | a | 21 | | |
| *LCS/D WG1768958-3 and -4* | | | | | |
| Acetone | 140 | 140 | a | HB-13-04112023<br>EQ-BLANK-04112023 | None |

a = acceptable

Acetone and 2-hexanone were not detected in any of the associated samples. Therefore, no action was necessary based on the high %Rs or the high RPD.

Matrix Spike / Matrix Spike Duplicate (MS/MSD)

Sample BS51-04112023 was prepared and analyzed as an MS/MSD pair with this set of samples. The %Rs and RPDs were acceptable (QC 70-130%R; ≤20RPD), with the following exceptions:

| Analyte | MS %R | MSD %R | MS/MSD RPD | Associated Sample | Qualifier Applied |
|---|---|---|---|---|---|
| *Parent Sample: MW-S62A-04102023* | | | | | |
| Acetone | 140 | 150 | a | HB-13-04112023 | None |
| 2-Hexanone | 67 | 69 | a | HB-13-04112023 DUP<br>MW-BS51-04112023<br>GZW-10-2-04112023 | UJ |

a = acceptable

Results for 2-hexanone in HB-13-04112023, HB-13-04112023 DUP, MW-BS51-04112023, and GZW-10-2-04112023 were qualified as estimated due to low MS/MSD recoveries. Since the recoveries were high and acetone was not detected in any of the samples, no action was necessary for this compound.

## 1,4-Dioxane (SW-846 8270E SIM)

Samples HB-13-04112023, HB-13-04112023 DUP, MW-BS51-04112023, MW-BS7-2-04112023, GZW-10-2-04112023, and EQ-BLANK-04112023 were analyzed for 1,4-dioxane.

### Matrix Spike / Matrix Spike Duplicate (MS/MSD)

Sample MW-BS51-04112023 was prepared and analyzed as an MS/MSD pair with this set of samples. The %Rs and RPD were acceptable (QC 70-130%R; ≤20RPD), with the following exception:

| Analyte | MS %R | MSD %R | MS/MSD RPD | Associated Sample | Qualifier Applied |
|---|---|---|---|---|---|
| *Parent Sample: MW-BS51-04112023* | | | | | |
| 1,4-Dioxane | 35 | a | a | HB-13-04112023<br>HB-13-04112023 DUP<br>MW-BS51-04112023<br>MW-BS7-2-04112023<br>GZW-10-2-04112023 | J-, UJ |

a = acceptable

Results for 1,4-dioxane in HB-13-04112023, HB-13-04112023 DUP, MW-BS51-04112023, MW-BS7-2-04112023, and GZW-10-2-04112023 were qualified as estimated with potential low bias (J-, UJ) due to the low MS recovery.

## Carbonate and Bicarbonate Alkalinity (SM 2320B)

Samples MW-BS7-2-04112023 and EQ-BLANK-04112023 were analyzed for carbonate and bicarbonate alkalinity. Results for these analytes in both samples were determined to be usable as reported by the laboratory. No qualifiers were applied to these results by the validator.

## Total and Dissolved Phosphorus (SM 4500-P-E)

Samples HB-13-04112023, HB-13-04112023 DUP, HBPZ-2R-04112023, and EQ-BLANK-04112023 were analyzed for total phosphorus. Samples HB-13-04112023, HB-13-04112023 DUP, and HBPZ-2R-04112023 were analyzed for dissolved phosphorus.

Results for these analytes in all of these samples were determined to be usable as reported by the laboratory. No qualifiers were applied to these results by the validator.

**Ammonia (SM 4500-NH3-H)**

Samples HBPZ-2R-04112023 and EQ-BLANK-04112023 were analyzed for ammonia.

Blanks

A method blank was prepared with the samples, and initial and continuing calibration blanks were analyzed at the appropriate frequencies. One equipment blank (EQ-BLANK-04112023) was submitted with the field samples. Ammonia was reported in the method blank at 0.035 J mg/L and in EQ-BLANK-04112023 at 0.058 J mg/L. The concentration of ammonia in HBPZ-2R-04112023 was above the reporting limit; therefore, no action was necessary.

Matrix Spike (MS)

Sample HBPZ-2R-04112023 was prepared as an MS. The recovery of ammonia in the MS was below the minimum acceptance limit (75%; QC 80-120%). The result for ammonia in HBPZ-2R-04112023 was qualified as estimated with potential low bias (J-) due to the low MS recovery.

**Nitrate/Nitrite (SM 4500-NO3-F)**

Samples HB-13-04112023, HB-13-04112023 DUP, HBPZ-2R-04112023, and EQ-BLANK-04112023 were analyzed for nitrate and nitrite.

Blanks

A method blank was prepared with the samples, and initial and continuing calibration blanks were analyzed at the appropriate frequencies. One equipment blank (EQ-BLANK-04112023) was submitted with the field samples. Nitrate was not detected in EQ-BLANK-041123, but nitrite was detected at a concentration of 0.019 J mg/L. The results for nitrite in HB-13-04112023, HB-13-04112023 DUP, and HBPZ-2R-04112023 were qualified as not detected (U) at the reporting limit due to associated equipment blank contamination.

**Anions (Chloride, Fluoride, and Sulfate) (EPA 300.0)**

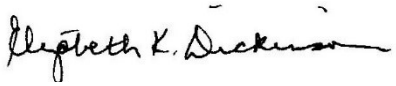
Samples HBPZ-2R-04112023 and EQ-BLANK were analyzed for chloride, fluoride, and sulfate. Results for chloride, fluoride, and sulfate in these samples were determined to be usable as reported by the laboratory. No qualifiers were added to the results based on the data validation effort.

**Documentation**

No documentation issues were observed during the validation effort.

Please feel free to contact me (edickinson@ddmsinc.com or 610-314-6284) with any questions you may have regarding this information.

Sincerely,



Elizabeth K. Dickinson
Sr. Environmental Chemist

Attachments

**Attachment A**
**DATA SUMMARY TABLE**
**L2319253**

Data Summary Form for Groundwater Samples
Job No. L2319253
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/11/2023

| | | Field Sample ID | EQ-BLANK-04112023 | | | GZW-10-2-04112023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2319253-08 | | | L2319253-07 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | 0.500 | U | | -- | -- | |
| EPA 300.0 | Fluoride | mg/l | 0.050 | U | | -- | -- | |
| EPA 300.0 | Sulfate as SO4 | mg/l | 1.00 | U | | -- | -- | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | 2.00 | U | | -- | -- | |
| SM 2320B | Carbonate (as CO3) | mg/l | 2.00 | U | | -- | -- | |
| SM 4500-NH3-H | Ammonia (as N) | mg/l | 0.058 | J | | -- | -- | |
| SM 4500-NO3-F | Nitrite as N | mg/l | 0.019 | J | | -- | -- | |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | 0.100 | U | | -- | -- | |
| SM 4500-P-E | Phosphorus (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | 0.010 | U | | -- | -- | |
| SW6010D | Boron | mg/l | 0.0300 | U | | -- | -- | |
| SW6010D | Magnesium | mg/l | 0.100 | U | | -- | -- | |
| SW6010D | Potassium | mg/l | 2.50 | U | | -- | -- | |
| SW6010D | Sodium | mg/l | 2.00 | U | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | 1.0 | UJ | Low CC response | 1.0 | UJ | Headspace |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | 1.0 | U | | 1.8 | J | Headspace |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | 1.0 | U | | 0.18 | J | Headspace |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | 1.0 | U | | 0.49 | J | Headspace |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |

Data Summary Form for Groundwater Samples
Job No. L2319253
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/11/2023

| | | Field Sample ID | EQ-BLANK-04112023 | | | GZW-10-2-04112023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2319253-08 | | | L2319253-07 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | 0.40 | U | | 0.40 | UJ | Headspace |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | 1,4-Dioxane | ug/l | 250 | UJ | Low IC, ICV, CC RRF, high ICV %D | 250 | UJ | Headspace, low IC, ICV, CC RRF, high ICV %D |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | 2-Chlorotoluene | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | 2-Hexanone | ug/l | 5.0 | UJ | Low CC response | 5.0 | UJ | Headspace, low MS/MSD %R, low CC response |
| SW-846 8260D | 4-Chlorotoluene | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | 5.0 | UJ | Low CC response | 5.0 | UJ | Headspace, low CC response |
| SW-846 8260D | Acetone | ug/l | 5.0 | U | | 5.0 | UJ | Headspace |
| SW-846 8260D | Benzene | ug/l | 0.50 | U | | 0.50 | UJ | Headspace |
| SW-846 8260D | Bromobenzene | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Bromochloromethane | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Bromodichloromethane | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | Bromoform | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Bromomethane | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Carbon disulfide | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Carbon tetrachloride | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | Chlorobenzene | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | Chloroethane | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Chloroform | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | Chloromethane | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | 1.0 | U | | 0.49 | J | Headspace |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | 0.40 | U | | 0.40 | UJ | Headspace |
| SW-846 8260D | Dibromochloromethane | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | Dibromomethane | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Ethyl ether | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Ethylbenzene | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |

Data Summary Form for Groundwater Samples
Job No. L2319253
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/11/2023

| | | Field Sample ID | EQ-BLANK-04112023 | | | GZW-10-2-04112023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2319253-08 | | | L2319253-07 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | 0.60 | U | | 0.60 | UJ | Headspace |
| SW-846 8260D | Isopropyl Ether | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Isopropylbenzene | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | m-&p-Xylenes | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | 5.0 | U | | 5.0 | UJ | Headspace |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Methylene Chloride | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Naphthalene | ug/l | 2.0 | UJ | Low CC response | 2.0 | UJ | Headspace, low CC response |
| SW-846 8260D | N-Butylbenzene | ug/l | 2.0 | UJ | Low CC response | 2.0 | UJ | Headspace |
| SW-846 8260D | N-Propylbenzene | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | o-Xylene | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | P-Isopropyltoluene | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Sec-Butylbenzene | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Styrene | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Tert-Butylbenzene | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Tetrachloroethylene | ug/l | 1.0 | U | | 0.27 | J | Headspace |
| SW-846 8260D | Tetrahydrofuran | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Toluene | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | 0.40 | U | | 0.40 | UJ | Headspace |
| SW-846 8260D | Trichloroethene | ug/l | 1.0 | U | | 1.1 | J | Headspace |
| SW-846 8260D | Trichlorofluoromethane | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Vinyl Chloride | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | Xylenes (total) | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 0.147 | U | | 27.9 | J- | Low MS %R |

Data Summary Form for Groundwater Samples
Job No. L2319253
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/11/2023

| | | Field Sample ID | HB-13-04112023 | | | HB-13-04112023 DUP | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2319253-01 | | | L2319253-02 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Fluoride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Sulfate as SO4 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Carbonate (as CO3) | mg/l | -- | -- | | -- | -- | |
| SM 4500-NH3-H | Ammonia (as N) | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrite as N | mg/l | 0.050 | U | EB contamination | 0.050 | U | EB contamination |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | 3.50 | | | 3.53 | | |
| SM 4500-P-E | Phosphorus (Dissolved) | mg/l | 0.010 | U | | 0.010 | U | |
| SM 4500-P-E | Phosphorus | mg/l | 0.010 | U | | 0.010 | U | |
| SW6010D | Boron | mg/l | -- | -- | | -- | -- | |
| SW6010D | Magnesium | mg/l | -- | -- | | -- | -- | |
| SW6010D | Potassium | mg/l | -- | -- | | -- | -- | |
| SW6010D | Sodium | mg/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | 1.0 | UJ | Low CC response | 1.0 | U | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | 2.0 | U | | 2.0 | U | |

Data Summary Form for Groundwater Samples
Job No. L2319253
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/11/2023

| | | Field Sample ID | HB-13-04112023 | | | HB-13-04112023 DUP | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2319253-01 | | | L2319253-02 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | 0.40 | U | | 0.40 | U | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | 1,4-Dioxane | ug/l | 250 | UJ | Low IC, ICV, CC RRF, high ICV %D | 250 | UJ | Low IC, ICV, CC RRF, high ICV %D |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 2-Hexanone | ug/l | 5.0 | UJ | Low MS/MSD %R, low CC response | 5.0 | UJ | Low MS/MSD %R, low CC response |
| SW-846 8260D | 4-Chlorotoluene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | 5.0 | UJ | Low CC response | 5.0 | UJ | Low CC response |
| SW-846 8260D | Acetone | ug/l | 5.0 | U | | 5.0 | U | |
| SW-846 8260D | Benzene | ug/l | 0.50 | U | | 0.50 | U | |
| SW-846 8260D | Bromobenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Bromochloromethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Bromodichloromethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Bromoform | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Bromomethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Carbon disulfide | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Carbon tetrachloride | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Chlorobenzene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Chloroethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Chloroform | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Chloromethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | 0.40 | U | | 0.40 | U | |
| SW-846 8260D | Dibromochloromethane | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Dibromomethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Ethyl ether | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Ethylbenzene | ug/l | 1.0 | U | | 1.0 | U | |

Data Summary Form for Groundwater Samples
Job No. L2319253
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/11/2023

| | | Field Sample ID | HB-13-04112023 | | | HB-13-04112023 DUP | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2319253-01 | | | L2319253-02 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | 0.60 | U | | 0.60 | U | |
| SW-846 8260D | Isopropyl Ether | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Isopropylbenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | m-&p-Xylenes | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | 5.0 | U | | 5.0 | U | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Methylene Chloride | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Naphthalene | ug/l | 2.0 | UJ | Low CC response | 2.0 | UJ | Low CC response |
| SW-846 8260D | N-Butylbenzene | ug/l | 2.0 | UJ | Low CC response | 2.0 | U | |
| SW-846 8260D | N-Propylbenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | o-Xylene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Styrene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Tetrachloroethylene | ug/l | 0.45 | J | | 0.45 | J | |
| SW-846 8260D | Tetrahydrofuran | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Toluene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | 0.40 | U | | 0.40 | U | |
| SW-846 8260D | Trichloroethene | ug/l | 0.44 | J | | 0.41 | J | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | 2.0 | U | | 2.0 | U | |
| SW-846 8260D | Vinyl Chloride | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8260D | Xylenes (total) | ug/l | 1.0 | U | | 1.0 | U | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 0.147 | UJ | Low MS %R | 0.144 | UJ | Low MS %R |

Data Summary Form for Groundwater Samples
Job No. L2319253
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/11/2023

| | | Field Sample ID | HBPZ-2R-04112023 | | | MW-BS51-04112023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2319253-05 | | | L2319253-04 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | 32.9 | | | -- | -- | |
| EPA 300.0 | Fluoride | mg/l | 0.113 | | | -- | -- | |
| EPA 300.0 | Sulfate as SO4 | mg/l | 29.0 | | | -- | -- | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Carbonate (as CO3) | mg/l | -- | -- | | -- | -- | |
| SM 4500-NH3-H | Ammonia (as N) | mg/l | 0.081 | J- | Low MS %R | -- | -- | |
| SM 4500-NO3-F | Nitrite as N | mg/l | 0.050 | U | EB contamination | -- | -- | |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | 3.45 | | | -- | -- | |
| SM 4500-P-E | Phosphorus (Dissolved) | mg/l | 0.010 | U | | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | 0.010 | U | | -- | -- | |
| SW6010D | Boron | mg/l | 0.0133 | J | | -- | -- | |
| SW6010D | Magnesium | mg/l | 7.62 | | | -- | -- | |
| SW6010D | Potassium | mg/l | 2.83 | | | -- | -- | |
| SW6010D | Sodium | mg/l | 22.6 | | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | -- | -- | | 0.58 | J | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | -- | -- | | 1.3 | | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | -- | -- | | 2.0 | U | |

Data Summary Form for Groundwater Samples
Job No. L2319253
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/11/2023

| | | Field Sample ID | HBPZ-2R-04112023 | | | MW-BS51-04112023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2319253-05 | | | L2319253-04 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | -- | -- | | 0.40 | U | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,4-Dioxane | ug/l | -- | -- | | 250 | UJ | Low IC, ICV, CC RRF, high ICV %D |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 2-Hexanone | ug/l | -- | -- | | 5.0 | UJ | Low MS/MSD %R, low CC response |
| SW-846 8260D | 4-Chlorotoluene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | -- | -- | | 5.0 | UJ | Low CC response |
| SW-846 8260D | Acetone | ug/l | -- | -- | | 5.0 | U | |
| SW-846 8260D | Benzene | ug/l | -- | -- | | 0.50 | U | |
| SW-846 8260D | Bromobenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Bromochloromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Bromodichloromethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Bromoform | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Bromomethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Carbon disulfide | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Carbon tetrachloride | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Chlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Chloroethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Chloroform | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Chloromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | -- | -- | | 1.3 | | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | -- | -- | | 0.40 | U | |
| SW-846 8260D | Dibromochloromethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Dibromomethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Ethyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Ethylbenzene | ug/l | -- | -- | | 1.0 | U | |

Data Summary Form for Groundwater Samples
Job No. L2319253
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/11/2023

| | | Field Sample ID | HBPZ-2R-04112023 | | | MW-BS51-04112023 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2319253-05 | | | L2319253-04 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | -- | -- | | 0.60 | U | |
| SW-846 8260D | Isopropyl Ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Isopropylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | m-&p-Xylenes | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | -- | -- | | 5.0 | U | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Methylene Chloride | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Naphthalene | ug/l | -- | -- | | 2.0 | UJ | Low CC response |
| SW-846 8260D | N-Butylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | N-Propylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | o-Xylene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Styrene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Tetrachloroethylene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Tetrahydrofuran | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Toluene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | -- | -- | | 0.40 | U | |
| SW-846 8260D | Trichloroethene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Vinyl Chloride | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Xylenes (total) | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | -- | -- | | 16.0 | J- | Low MS %R |

Data Summary Form for Groundwater Samples
Job No. L2319253
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/11/2023

| | | Field Sample ID | MW-BS7-2-04112023 | | | TRIP BLANK_20230322 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2319253-06 | | | L2319253-03 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| EPA 300.0 | Chloride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Fluoride | mg/l | -- | -- | | -- | -- | |
| EPA 300.0 | Sulfate as SO4 | mg/l | -- | -- | | -- | -- | |
| SM 2320B | Alkalinity, Bicarbonate as CaCO3 | mg/l | 112 | | | -- | -- | |
| SM 2320B | Carbonate (as CO3) | mg/l | 2.00 | U | | -- | -- | |
| SM 4500-NH3-H | Ammonia (as N) | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrite as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-NO3-F | Nitrogen, Nitrate as N | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus (Dissolved) | mg/l | -- | -- | | -- | -- | |
| SM 4500-P-E | Phosphorus | mg/l | -- | -- | | -- | -- | |
| SW6010D | Boron | mg/l | -- | -- | | -- | -- | |
| SW6010D | Magnesium | mg/l | -- | -- | | -- | -- | |
| SW6010D | Potassium | mg/l | -- | -- | | -- | -- | |
| SW6010D | Sodium | mg/l | -- | -- | | -- | -- | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | -- | -- | | 2.0 | U | |

Data Summary Form for Groundwater Samples
Job No. L2319253
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/11/2023

| | | Field Sample ID | MW-BS7-2-04112023 | | | TRIP BLANK_20230322 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2319253-06 | | | L2319253-03 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | -- | -- | | 0.40 | U | |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | 1,4-Dioxane | ug/l | -- | -- | | 250 | UJ | Low IC, ICV, CC RRF, high ICV %D |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 2-Chlorotoluene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 2-Hexanone | ug/l | -- | -- | | 5.0 | UJ | Low CC response |
| SW-846 8260D | 4-Chlorotoluene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | -- | -- | | 5.0 | UJ | Low CC response |
| SW-846 8260D | Acetone | ug/l | -- | -- | | 5.0 | U | |
| SW-846 8260D | Benzene | ug/l | -- | -- | | 0.50 | U | |
| SW-846 8260D | Bromobenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Bromochloromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Bromodichloromethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Bromoform | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Bromomethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Carbon disulfide | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Carbon tetrachloride | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Chlorobenzene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Chloroethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Chloroform | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Chloromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | -- | -- | | 0.40 | U | |
| SW-846 8260D | Dibromochloromethane | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Dibromomethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Ethyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Ethylbenzene | ug/l | -- | -- | | 1.0 | U | |

Data Summary Form for Groundwater Samples
Job No. L2319253
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 3/22/2023 - 4/11/2023

| | | Field Sample ID | MW-BS7-2-04112023 | | | TRIP BLANK_20230322 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2319253-06 | | | L2319253-03 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Hexachlorobutadiene | ug/l | -- | -- | | 0.60 | U | |
| SW-846 8260D | Isopropyl Ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Isopropylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | m-&p-Xylenes | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | -- | -- | | 5.0 | U | |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Methylene Chloride | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Naphthalene | ug/l | -- | -- | | 2.0 | UJ | Low CC response |
| SW-846 8260D | N-Butylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | N-Propylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | o-Xylene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | P-Isopropyltoluene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Sec-Butylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Styrene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Tert-Butylbenzene | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Tetrachloroethylene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Tetrahydrofuran | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Toluene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | -- | -- | | 0.40 | U | |
| SW-846 8260D | Trichloroethene | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Trichlorofluoromethane | ug/l | -- | -- | | 2.0 | U | |
| SW-846 8260D | Vinyl Chloride | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8260D | Xylenes (total) | ug/l | -- | -- | | 1.0 | U | |
| SW-846 8270E SIM | 1,4-Dioxane | ug/l | 17.2 | J- | Low MS %R | -- | -- | |

**Attachment B**
**VALIDATION QUALIFIER DEFINITIONS**
**L2319253**

## Validation Qualifier Definitions

Final validated results are annotated with the following codes:

**U** The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

**J** The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

**J+** The result is an estimated quantity, but the result may be biased high.

**J-** The result is an estimated quantity, but the result may be biased low.

**NJ** The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.

**UJ** The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

**R** The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

44June 30, 2023

Ms. Jessie McCusker
de maximis, Inc.
200 Day Hill Road, Suite 200
Windsor, CT 06095

Re: SDG No. L2320987
Alpha Analytical
NMI Groundwater
Data Validation

1/Water
BEW-3-04192023

1/Trip Blank
TRIP BLANK

Dear Ms. McCusker:

A Tier I Plus data validation was performed on one water sample and one trip blank from the Nuclear Metals Superfund site. The data validation was performed using the Region 1 - EPA New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures dated June 2018, to the extent possible, Massachusetts Compendium of Analytical Methods (CAM) protocols, the site-specific QAPP, and ddms' Standard Operating Procedures (SOPs). Professional judgment was applied as necessary and appropriate.

Analyses were performed in accordance with the following method:

| **Parameter** | **Method** |
|---|---|
| Volatile Organic Compounds (VOCs) | SW846 8260D |

The data were evaluated based on the parameters summarized in the table below, where applicable:

| | | |
|---|---|---|
| | • | Overall Evaluation of Data and Potential Usability Issues |
| * | • | Data Completeness |
| | • | Preservation and Technical Holding Times |
| * | • | GC/MS Instrument Performance Check |
| | • | Initial and Continuing Calibrations |
| * | • | Blanks |
| * | • | Surrogate Compounds/Labeled Analogs |

| | | |
|---|---|---|
| * | • | Internal Standards |
| | • | Laboratory Control Sample/ Laboratory Control Sample Duplicates |
| NA | • | Matrix Spike/Matrix Spike Duplicate |
| NA | • | Field and Laboratory Duplicates |
| * | • | Target Compound Identification |
| * | • | Compound Quantitation and Reported Quantitation Limits |
| * | • | System Performance |

*All criteria were met for this parameter.
NA = not analyzed or not applicable

The Data Validation Report includes the following attachments:

Attachment A: Data Summary Table – summarized validated results
Attachment B: Validation Qualifier Definitions

## Overall Evaluation of Data

VOCs

- Results for all target analytes in TRIP BLANK were qualified as estimated (UJ) due to the presence of headspace in the sample container used for analysis.

- Results for tetrahydrofuran, 1,4-dioxane, and 4-methyl-2-pentanone in BEW-3-04192023 and TRIP BLANK were qualified as estimated (J, UJ) due to low relative response factors (RRFs) in the associated initial calibration (IC) standards.

- Results for vinyl chloride and bromomethane in BEW-3-04192023 and TRIP BLANK were qualified as estimated (UJ) due to high percent difference (%D) in the associated IC verification (ICV) standard.

- Results for tetrahydrofuran, 1,4-dioxane, 4-methyl-2-pentanone, and 2-hexanone in BEW-3-04192023 and TRIP BLANK were qualified as estimated (UJ) due to low RRFs in the ICV and continuing calibration (CC) standards.

The following sections of this report detail the reasons qualifiers were applied to the sample results. Each parameter section discusses the quality control (QC) excursions that impacted sample results. Where a quality indicator was deemed acceptable after thorough review, no further discussion is included in this report. Detailed findings are included for each quality element that impacted the usability of the reported results. Additional information or explanation is included as needed, to provide support for decisions made, based on the validator's best professional judgment.

Where a result was qualified J+ and J or J- and J, the J qualifier takes precedence. Where a result was qualified biased high and low for differing data quality excursions, the final qualifier is J, with an indeterminate bias.

## Volatiles Organics (SW-846 8260D)

### Preservation and Sample Holding Times

Sample BEW-3-04192023 was collected on April 19, 2023. The samples were received at an acceptable cooler temperature (5.2°C; QC 4 ±2°C). Documentation of the sample pH measurements was not included in the data package; it was assumed that both samples were received with a pH of <2. Both samples were analyzed on April 27, 2023, within the 14-day holding time for chemically-preserved water samples.

A sample collection date of July 14, 2022, was recorded on the chain of custody record for TRIP BLANK, which is assumed to be the date the trip blank was prepared by the laboratory. Headspace was observed in the sample vial of TRIP BLANK that was used for analysis; this may be due to the extended storage time (either in the field or at the laboratory) between the time the trip blank was prepared and the time it was analyzed. Results for all target analytes in TRIP BLANK were qualified as estimated (UJ) due to the presence of headspace in the sample container used for analysis.

### Calibration

One IC was performed on April 25, 2023, on instrument VOA122, in support of the sample analyses. All RRFs and relative standard deviations (RSDs) or correlation coefficients ($r^2$) were acceptable (QC >0.05 RRF, ≤20% RSD, >0.99 $r^2$, respectively), except that low RRFs were observed in the IC standards for tetrahydrofuran, 1,4-dioxane, and 4-methyl-2-pentanone. Results for tetrahydrofuran, 1,4-dioxane, and 4-methyl-2-pentanone in BEW-3-04192023 and TRIP BLANK were qualified as estimated (J, UJ) due to the low RRFs in the associated IC standards.

A second-source ICV standard was analyzed after the IC, and the RRFs for tetrahydrofuran, 1,4-dioxane, 4-methyl-2-pentanone, and 2-hexanone were unacceptably low. The %Ds in the ICV standard were acceptable (%D≤20), with the following exceptions:

| Analyte | %D | Associated Sample | Qualifier Applied |
|---|---|---|---|
| *ICV Standard 4/26/23, Instrument VOA122* | | | |
| Vinyl chloride | 23.2 | BEW-3-04192023 | UJ |
| Bromomethane | 39.2 | TRIP BLANK | |

The results for tetrahydrofuran, 1,4-dioxane, 4-methyl-2-pentanone, and 2-hexanone in BEW-3-04192023 and TRIP BLANK were qualified as estimated (J, UJ) due to low RRFs in the associated ICV standard. Results for vinyl chloride and bromomethane in these samples were qualified as estimated (UJ) due to high %D in the associated ICV standard.

One CC standard was analyzed on April 27, 2023, with the site samples. The RRFs for tetrahydrofuran, 1,4-dioxane, 4-methyl-2-pentanone, and 2-hexanone in the CC standard were unacceptably low. The percent differences were acceptable (<20%D), with the following exceptions:

| Analyte | %D | Affected Sample | Qualifier Applied |
|---|---|---|---|
| *CC Standard 4/27/23 at 11:35, Instrument VOA122* | | | |
| Dichlorodifluoromethane | +36.2 | BEW-3-04192023<br>TRIP BLANK | None |
| Chloromethane | +23.2 | | |
| Vinyl chloride | +25.8 | | |
| Bromomethane | +35.1 | | |
| Trichlorofluoromethane | +20.8 | | |

The results for tetrahydrofuran, 1,4-dioxane, 4-methyl-2-pentanone, and 2-hexanone in BEW-3-04192023 and TRIP BLANK were qualified as estimated (UJ) due to the low RRFs in the CC standard.

The high %Ds for the above compounds resulted from high responses relative to the IC, which suggests the potential for reporting false positives or for sample results that are biased high. Since these compounds were not detected in TRIP BLANK, MW-S32-04062023, and EQ-BLANK-04062023, no action was necessary based on the high %Ds.

Laboratory Control Sample / Laboratory Control Sample Duplicate (LCS/LCSD)

One LCS/LCSD pair was analyzed and reported in support of sample analyses. The percent recoveries (%Rs) and relative percent differences (RPDs) were acceptable (QC 70-130%R; ≤20RPD), with the following exception:

| Analyte | LCS %R | LCSD %R | LCS/LCSD RPD | Associated Sample | Qualifier Applied |
|---|---|---|---|---|---|
| *LCS/D WG1772310-3 and -4* | | | | | |
| Dichlorodifluoromethane | 140 | a | a | BEW-3-04192023<br>TRIP BLANK | None |

a = acceptable

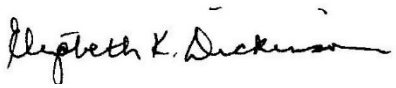
Since the recovery was high, and dichlorodifluoromethane was not detected in the above samples, no action was necessary due to the high LCS recovery.

**Documentation**

No documentation issues were observed during the validation effort.

Please feel free to contact me (edickinson@ddmsinc.com or 610-314-6284) with any questions you may have regarding this information.

Sincerely,



Elizabeth K. Dickinson
Sr. Environmental Chemist

Attachments

**Attachment A**
**DATA SUMMARY TABLE**
**L2320987**

Data Summary Form for Groundwater Samples
Job No. L2320987
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 7/14/2022 - 4/19/2023

| | | Field Sample ID | BEW-3-04192023 | | | TRIP BLANK_20230427 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2320987-01 | | | L2320987-02 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | 1,1,1,2-Tetrachloroethane | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | 1,1,1-Trichloroethane | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | 1,1,2,2-Tetrachloroethane | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | 1,1,2-Trichloroethane | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | 1,1-Dichloroethane | ug/l | 2.2 | | | 1.0 | UJ | Headspace |
| SW-846 8260D | 1,1-Dichloroethene | ug/l | 0.30 | J | | 1.0 | UJ | Headspace |
| SW-846 8260D | 1,1-Dichloropropene | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | 1,2,3-Trichlorobenzene | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | 1,2,3-Trichloropropane | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | 1,2,4-Trichlorobenzene | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | 1,2,4-Trimethylbenzene | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | 1,2-Dibromo-3-chloropropane | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | 1,2-Dibromoethane | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | 1,2-Dichlorobenzene | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | 1,2-Dichloroethane | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | 1,2-Dichloroethylene (total) | ug/l | 0.94 | J | | 1.0 | UJ | Headspace |
| SW-846 8260D | 1,2-Dichloropropane | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | 1,3,5-Trimethylbenzene | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | 1,3-Dichlorobenzene | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | 1,3-Dichloropropane | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | 1,3-Dichloropropene, Total | ug/l | 0.40 | U | | 0.40 | UJ | Headspace |
| SW-846 8260D | 1,4-Dichlorobenzene | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | 1,4-Dioxane | ug/l | 250 | UJ | Low IC, ICV, CC RRF | 250 | UJ | Headspace; low IC, ICV, CC RRF |
| SW-846 8260D | 2,2-Dichloropropane | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | 2-Chlorotoluene | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | 2-Hexanone | ug/l | 5.0 | UJ | Low ICV, CC RRF | 5.0 | UJ | Headspace; low ICV, CC RRF |
| SW-846 8260D | 4-Chlorotoluene | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | 4-Methyl-2-Pentanone | ug/l | 5.0 | UJ | Low IC, ICV, CC RRF | 5.0 | UJ | Headspace; low IC, ICV, CC RRF |

Data Summary Form for Groundwater Samples
Job No. L2320987
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 7/14/2022 - 4/19/2023

| | | Field Sample ID | BEW-3-04192023 | | | TRIP BLANK_20230427 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2320987-01 | | | L2320987-02 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Acetone | ug/l | 4.3 | J | | 5.0 | UJ | Headspace |
| SW-846 8260D | Benzene | ug/l | 0.50 | U | | 0.50 | UJ | Headspace |
| SW-846 8260D | Bromobenzene | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Bromochloromethane | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Bromodichloromethane | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | Bromoform | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Bromomethane | ug/l | 2.0 | UJ | High ICV %D | 2.0 | UJ | Headspace; high ICV %D |
| SW-846 8260D | Carbon disulfide | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Carbon tetrachloride | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | Chlorobenzene | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | Chloroethane | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Chloroform | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | Chloromethane | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | cis-1,2-Dichloroethene | ug/l | 0.94 | J | | 1.0 | UJ | Headspace |
| SW-846 8260D | cis-1,3-Dichloropropene | ug/l | 0.40 | U | | 0.40 | UJ | Headspace |
| SW-846 8260D | Dibromochloromethane | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | Dibromomethane | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Dichlorodifluoromethane | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Ethyl ether | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Ethyl tert-butyl ether | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Ethylbenzene | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | Hexachlorobutadiene | ug/l | 0.60 | U | | 0.60 | UJ | Headspace |
| SW-846 8260D | Isopropyl Ether | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Isopropylbenzene | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | m-&p-Xylenes | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Methyl Ethyl Ketone (2-Butanone) | ug/l | 8.3 | | | 5.0 | UJ | Headspace |
| SW-846 8260D | Methyl tert-butyl ether | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Methylene Chloride | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Naphthalene | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | N-Butylbenzene | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | N-Propylbenzene | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | o-Xylene | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | P-Isopropyltoluene | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Sec-Butylbenzene | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |

Data Summary Form for Groundwater Samples
Job No. L2320987
Site Name: NMI
ddms Project No: proj_15473252
Sample Date Range: 7/14/2022 - 4/19/2023

| | | Field Sample ID | BEW-3-04192023 | | | TRIP BLANK_20230427 | | |
|---|---|---|---|---|---|---|---|---|
| | | Lab Sample ID | L2320987-01 | | | L2320987-02 | | |
| | | Dilution Factor | 1 | | | 1 | | |
| Analytical Method | Parameter | Unit | | | | | | |
| SW-846 8260D | Styrene | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | tert-Amyl methyl ether | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Tert-Butylbenzene | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Tetrachloroethylene | ug/l | 0.68 | J | | 1.0 | UJ | Headspace |
| SW-846 8260D | Tetrahydrofuran | ug/l | 4.4 | J | Low IC, ICV, CC RRF | 2.0 | UJ | Headspace; low IC, ICV, CC RRF |
| SW-846 8260D | Toluene | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | trans-1,2-Dichloroethene | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |
| SW-846 8260D | trans-1,3-Dichloropropene | ug/l | 0.40 | U | | 0.40 | UJ | Headspace |
| SW-846 8260D | Trichloroethene | ug/l | 1.3 | | | 1.0 | UJ | Headspace |
| SW-846 8260D | Trichlorofluoromethane | ug/l | 2.0 | U | | 2.0 | UJ | Headspace |
| SW-846 8260D | Vinyl Chloride | ug/l | 1.0 | UJ | High ICV %D | 1.0 | UJ | Headspace; high ICV %D |
| SW-846 8260D | Xylenes (total) | ug/l | 1.0 | U | | 1.0 | UJ | Headspace |

# Attachment B
# VALIDATION QUALIFIER DEFINITIONS
# L2320987

## Validation Qualifier Definitions

Final validated results are annotated with the following codes:

**U** The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

**J** The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

**J+** The result is an estimated quantity, but the result may be biased high.

**J-** The result is an estimated quantity, but the result may be biased low.

**NJ** The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.

**UJ** The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

**R** The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.