February 23, 2024

Electronic Mail Delivery Only
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Mr. Michael DeBonis
Remedial Project Manager
U. S. Environmental Protection Agency, Region 3
1600 John F. Kennedy Boulevard
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RE: **GROUNDWATER AND SURFACE WATER ANALYSIS REPORT**
NOVEMBER 2023 SAMPLING EVENT
FOOTE MINERAL SUPERFUND SITE
FRAZER, PENNSYLVANIA (EPA ID # PA D077087989)

Dear Mr. DeBonis:

This letter report provides the November 2023 groundwater monitoring and surface water sampling event results for the Foote Mineral Superfund Site (the Site). The sampling was completed by Montrose Environmental Solutions, Inc. (Montrose) on behalf of Green Fig, LLC. This was the second sampling event completed in 2023, with the earlier event completed in May of 2023. Lithium in groundwater is the primary contaminant of concern at the Site.

Sampling Summary

The lithium results from the November sampling event were very similar to the May sampling event with eight (8) sampling locations with slightly lower surface water or groundwater lithium concentrations and eight (8) sampling locations with slightly higher concentrations. The results from GMZ-2 (shallow, intermediate, and deep) continue to be below the detection limit for lithium, which is consistent with results throughout the 14-year sampling program. The overall average relative percent difference of all the sampling points, compared to the last sampling event, was about 1% and no individual sampling location had an increase or decrease in the relative percent difference in the 2023 concentration greater than 30%. As a point of comparison, this is well below the 35% criteria used for acceptance of actual duplicate samples from the same round used for laboratory validation, demonstrating the stable nature of the plume. The two sampling events have shown the groundwater and surface water conditions are well characterized and the monitoring data presented in Appendix B documents the slowly decreasing trend in the concentration of lithium over time. These results from the 14 years of previous monitoring are consistent with the ERM and USGS Site Conceptual Model of a slowly decaying lithium plume extending from Site considered in the Record of Decision (ROD) for the Site. Considering the stable and slowly decaying nature of the plume, Montrose submitted a plan to modify the sampling events to provide a more cost-effective way to monitor the continual declining trend of lithium in correspondence dated October 3, 2023. The EPA responded in correspondence dated February 14, 2024, and stated that the third Five Year Review for the Site is in progress,

and after completion of the Five-Year Review, the EPA anticipates being in a better position to determine if any reductions in monitoring to the work required under the 2008 CD are appropriate.

Background

A summary of historical conditions, regional geology, and site characterizations is provided as Attachment A.

Sampling Overview

As part of the most recent sampling event groundwater samples were collected from 15 monitoring wells and 4 surface water sampling locations between November 19 through November 21, 2023. The sampling approach was based on the information provided in the November 2021 monitoring event report and in general accordance with the July 2008 Groundwater Monitoring Plan and its amendment, approved by the United States Environmental Protection Agency (EPA) on July 3, 2008, and January 9, 2009, respectively. Table 1 summarizes the details of the groundwater wells along with the analytical target compounds and water elevations collected during the sampling event. The surface water samples were collected from Valley Creek at points SW-01, SW-02, SW-05, and SW-06. The locations of the monitoring wells and surface water sampling points are shown in Figures 1 through 3. It may be noted that posted "No Trespassing" signs were observed at surface water location SW-06, so the furthest downstream sample was taken at SW-06A at a location slightly further downstream than previous samples, at the location shown on Figure 3. EPA personnel were advised of this change at the time of sampling and were shown the new sampling location. Although this sample was taken further downstream than past samples, to facilitate historical comparisons, this sample is compared to previous samples taken at location SW-06 in the tables and graphs provided with this report.

The water samples were analyzed for the following constituents of concern (COC), specified by the ROD and shown on Table 1:

- Metals: Antimony, Arsenic, Boron, Chromium, Lithium, and Thallium;
- Inorganic Anions: Fluoride, Bromate, Bromide; and
- Volatile Organic Compounds (VOCs): 1,2-dichloroethane, Benzene, Carbon Tetrachloride, Chloroform, cis-1,2-dichloroethene, Ethylbenzene, Tetrachloroethene, trans-1,2-dichloroethene, Bromo-form, and Trichloroethene were analyzed at MW-22.

Table 2 identifies the remediation goals established in the ROD at the Site for Groundwater and Table 3 summarizes the creek width and depth; the depths from which the surface water samples were taken; the characteristics of the water (the pH, dissolved oxygen (DO), conductivity, oxidation-reduction potential (ORP), temperature, pH, specific conductivity (SpC), and turbidity) and the creek flow rates at the surface water sample locations.

The monitoring wells were sampled with the low-flow method using the existing dedicated bladder pumps (Well Wizard® model P110N, QED Environmental Systems) pumped at a rate of less than 500 milliliters per minute (mL/min) with a QED MP-10 pump controller. Groundwater was pumped through a flow-through cell with a multi-parameter water quality meter. This was used to measure the pH, SpC, ORP, DO, and temperature of the water in the wells during sampling. Turbidity was measured using a separate turbidity meter. The groundwater samples

were then collected after these parameters stabilized. The final values of these parameters for each sample at the time of sample collection are presented in Table 4. A Heron oil/water interface probe was used to detect and measure the thickness of any potential light nonaqueous phase liquid (LNAPL) layer in MW-22. The surface water flow rate was measured with a Global Water Flow Probe #BA1100 portable flow meter.

The aqueous samples were analyzed by Eurofins Lancaster Laboratories Environment Testing, LLC (ELLE), a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory. Subsamples were forwarded by ELLE to the Eurofins Phoenix, Arizona, facility for analysis of bromate. The laboratory report provided in Appendix C contains summary forms for the laboratory quality control analysis. The samples were analyzed for trace metals by EPA SW-846 Method 6020B and 6010DEPA method 300.0 Determination of Inorganic Anions by Ion Chromatography for bromide and fluoride, EPA method 300.1B for Bromate, EPA SW-846 6010D Inductively Coupled Plasma – Atomic Emission Spectrometry for boron and lithium, and EPA SW-846 6010B Inductively Coupled Plasma – Mass Spectrometry for antimony, arsenic, chromium, and thallium. The lab also analyzed samples by EPA method 300.1B for bromide for confirmation. Samples from MW-22 were evaluated for VOC by SW-846 Method 8260D. A copy of the laboratory analytical data report with chain-of-custody forms for the current sampling event is provided in Appendix C. Data validation was performed by Montrose. The validator's report is included in Appendix D.

Results and Discussion

The purpose of the monitoring program is to characterize conditions at the Site and downgradient of the Site. The analytic results for inorganic anions and metals in the surface water samples are shown on Table 5 and the analysis of the water samples from the monitoring wells are summarized in Table 6. Constituents of concern that were found at levels above the project remediation goals (PRGs) established in the Record of Decision (ROD) are highlighted. Table 7 summarizes the results for VOCs in MW-22 with values that exceed the ROD remediation goals emphasized in bold typeface

No LNAPL was observed in MW-2 during this sampling event. The second five-year review notes that no LNAPL has been observed in MW-2 since the remediation (i.e., before 2010) and the Superfund Preliminary Close Out Report notes "the LNAPL may have been removed during the extensive excavations surrounding the well." Considering this, and the lack of LNAPL observed during the last 14 years, the sampling requirement to check for LNAPL in this well appears to no longer be necessary and Montrose has requested this LNAPL sampling be discontinued in our correspondence dated October 3, 2023, and will be considered by EPA after the currently ongoing Five-Year Review.

The following is a summary of significant observations based on the inorganic data presented in Table 6:

- Lithium is observed to be above the ROD groundwater PRG of 260 ug/l in the on-site well MW-22 and downgradient wells ERM-1D, ERM-2S, and the shallow and intermediate and deep wells at GMZ-3 and GMZ-4 and GMZ-1. No lithium was identified in the shallow, intermediate or deep GMZ-2 wells, which are outside the identified project fracture flow AOC. As Montrose noted in our October 3, 2023 correspondence and as documented on the lithium data provided in Appendix A, lithium has not been found in theses wells at significant levels above the detection limit over the 14-year period monitored. Given the stable, well-defined nature of the plume, the regular sampling of this well cluster increases the

cost of the sampling program without adding corresponding value, as described in Montrose's October 3, 2023 correspondence

- Bromate was found above the PRG of 10 ug/l, in all of the wells with elevated lithium except ERM-2S. The concentrations ranged from 35 ug/l to 120 ug/l.
- Boron was found above the PRG of 1340 ug/l only in the on-site well MW-22. This appears to be a localized condition and the plume is not moving downgradient.

Although a complete summary of historical groundwater and surface water results was not available to Montrose to compare recent sampling results, EPA provided a tabular summary of lithium results which was used to compare the monitoring results and understand groundwater conditions and is provided as Appendix B-9. Based on this, the historical lithium trends were graphed and are presented in Appendix B. The following observations can be made based on the available data and graphs.

- **On Site Source and Near Site Conditions Declining** – As shown on Figure B-1, the on-site source-area deep well MW-22 shows a consistent source area concentration with four of the lower concentrations documented over the last four sampling events, which cover a period of four years (as previously noted the initial sampling events were done much more frequently, prior to the documentation of the plume stability). The concentration in the highest on-site well, MW-22, has declined from 24,198 ug/l in 2010 to 13,000 ug/l in the most recent sampling event. The last four sampling events suggest stabilization to a lower source area concentration is occurring with a corresponding reduction in the concentrations of lithium leaving the Site. This is supported by measurements in the downgradient well, closest to the Site, ERM 1D, which shows a consistently declining concentration from 8,476 ug/l in 2010 to the most recently documented concentration of 3,800 ug/l, as shown on Figure B-1. This nearest downgradient well is also less than the 4,000 ug/l documented in ERM 1D during the May 2023 sampling event. Montrose notes these near-site wells are the most important wells to understand lithium behavior, as it may takes years for groundwater to move through the system. During the most recent November 2023 sampling event ERM-1S had insufficient water in the well for sampling purposes.
- **Downgradient Groundwater Concentrations are Declining** – As shown on Figure B-2 and B-3, lithium concentrations are trending downward in cluster GM-3, located 2,200 feet downgradient, and well cluster GMZ-4 located 4,400 ft downgradient in all three zones being monitored. All measured concentrations in these two downgradient clusters had a relative percent difference of less than 3% when compared to the previous sampling event. As noted in the Summary section of this letter, this is well below the 35% acceptability criteria used as part of data validation for duplicate samples during a sampling event, demonstrating the stable natures of the plume between sampling events and further supporting the reduced monitoring schedule proposed in the previously referenced Montrose October 3, 2023, sampling reduction correspondence. In each of these clusters it was noted that the deepest monitored units had the highest concentrations.

- **Shallow and Intermediate Wells Are Stable and Show Similar Concentrations and Trends** – As shown on Figure B-2 and B-3, the shallow and intermediate wells show very similar results over the entire period being monitored. This suggests the shallow and intermediate wells are actually monitoring the same unit and the concentrations throughout the units are stable. Given the well characterized site and the stability of the plume demonstrated by the 14 years of consistent monitoring, sampling both of the shallow and intermediate wells during each event is redundant.

- **Deep Aquifer Plume is Decreasing** – Figure B-4 shows the lithium concentrations in each of the deep wells in the downgradient well clusters are decreasing. The results from well GMZ-1, shown on Figure B-7, are also decreasing over the last three monitored intervals, but the degradation is not as significant since 2010. The Second Five Year Review, prepare by EPA, speculated this may be due to the location being further downgradient which has delayed the reaction of the downgradient wells to the source flux stabilization.

- **Surface Water Trends are Declining** – Figure B-5 and B-6 show the trends in surface water concentrations. Originally the four sampling locations were SW-1, SW-2, SW-3 and SW-4 at the locations shown on Figure 2. Of the original four locations, SW-1 is furthest from the quarry area at approximately 8,400 feet to the east; however, it is immediately downstream of an identified groundwater discharge point and has historically shown the highest levels of site-related contaminants. Location SW-2, closer to the Site at approximately 7,800 feet from the quarry area, has displayed significantly lower concentrations of site-related contaminants. The two original locations closest to the quarry area, SW-3 and SW-4, typically displayed very low or non-detect levels of site-related contaminants and were therefore reportedly discontinued in 2015. The further downstream locations SW-5 and SW-6 were selected as replacement locations. Results of the surface water sampling are presented on Figure B-6 and B-7 and show a high degree of variability likely caused by seasonal or precipitation effects on the creek. Stream flow volume, and therefore dilution, responds stronger and faster to precipitation events; the response in underlying groundwater is believed to be more moderate, as shown on Figure B-7, which shows the concentration in Well GMZ-1 has been relatively consistent and has recently been trending down, consistent with the observations in the other wells closer to the Site. The highest concentrations of lithium in the most recent sampling event was 680 ug/l at SW-01. It is believed that this location is at the end of the groundwater discharge area and surface water samples taken further downstream had lower measured concentrations believed to be a result of dilution. As shown on Figure B-6, the surface water sample results for the last six monitoring events are suggesting a downward trend of the contaminant concentrations in surface water. Although there was some variation from the last sampling round, using the 35% "duplicate" acceptability point of comparison, the samples remain in a range consistent with past sampling events. Consistent with the downgradient monitoring wells on-site, it is expected that the contaminant levels in the groundwater discharging to the creek will also continue to both be volatile and decrease with time, resulting in lower levels of Site impacts in the stream. It was also noted the monitoring results at locations SW-01, SW-04, SW-05, and SW-06 showed a very similar pattern and were nearly identical, as shown on Figure B-6. Sampling all of these wells, as part of every sampling event, appears redundant.

Tetrachloroethane was detected in the on-site well MW-22 at a concentration of 120 ug/l and Trichloroethene was detected at a concentration of 8.1 ug/l. These concentrations were similar to the results from the recent previous events and represent localized conditions.

The second Five Year Review states surface water was not identified in the ROD or ESD as a medium of concern, and therefore no cleanup goals were established. However, site-related metals are still present in surface water. Therefore, in the Second Five Year Review, surface water results were evaluated as described below based on the October 2018 data. The Second Five Year Review notes East Valley Creek flows across a geologic fracture zone approximately one mile downgradient of the Site where contaminated groundwater discharges into the creek. Because of this fracture zone, the highest concentrations of metals at the time of this analysis were found in SW-1 and SW-5, relatively far from the Site. The presence of lithium and bromate indicates that the metals are likely site-related. The 2018 monitoring data were screened against ten times the tap water Regional Screening Levels (RSLs - to account for the expectation that surface water recreational exposure would be at least 10X less than tap water exposure). Arsenic, chromium, lithium, thallium, and bromate exceeded these screening levels. A simple risk assessment was performed for potential 15-kg child recreational exposure, using the maximum 2018 surface water concentrations for those five metals with conservative exposure assumptions and it was determined the Hazard Index would not exceed 1, and the cancer risk would be approximately SE-5, within the acceptable risk range.

These conclusions appear to be reasonable for both the May and November 2023 sampling events.

Quality Assurance/Quality Control

Eurofins Lancaster Laboratories Environment Testing, LLC (ELLE) performed the laboratory analyses for this sampling event. Subsamples were forwarded by ELLE to the Eurofins Phoenix, Arizona, facility for analysis of bromate. MES performed a data validation covering five surface water samples, sixteen groundwater samples and one field duplicate, for select metals by EPA Method 6010D/6020B, anions; bromide, and fluoride by EPA Method 300.0, and bromate by EPA Method 300.1B. Bromide was also analyzed by EPA method 300.1B to confirm the analysis of Bromide by method 300.0. Additional volumes of sample MW-22, the field duplicate (MW-22D), and a trip blank were submitted for analysis of ten site-specific volatile organic compounds (VOCs) by EPA method 8260D.

The following is a summary of key points from the review of the organic analysis:

- All samples were extracted and analyzed within the prescribed holding times. All samples had the proper preservation. Sample temperature upon receipt by the lab was acceptable as all samples were received < 6° C and "on ice".
- Samples were reported to the Method Detection Limit (MDL), and the Reporting Limit (RL). Samples detections below the RL and above the MDL were qualified as estimated (J)
- Surrogates were added to all samples as required by the method. All surrogate recoveries (%) were within the laboratory control limits. Method Blank
- Method blanks were analyzed as required by the method. No contaminants were found in the method blanks.

- A trip blank was received with the sample shipment and no contaminants were found in the trip blank.
- A field blank was not submitted.
- A Laboratory Control Standard (LCS) was analyzed with every batch of 20 samples or less. Percent recoveries were within the laboratory control limits.
- Sample MW-22 was submitted and analyzed as a project specific MS/MSD. The MS/MSD recoveries and RPDs were within the laboratory control limits.
- One field duplicate was submitted on the requirement of one per twenty samples. Relative percent differences (RPDs) were calculated when both concentrations were greater than five times the reporting limit (RL); otherwise, the difference between the two concentrations was calculated. The criteria of 35% RPD or ±RL for aqueous samples was applied. The submitted field duplicate RPDs for samples MW-22 and MW-22D were less than 35%, or the percent difference was less than the associated reporting limit concentration

The following is a summary of key points from the inorganic analysis:

- All samples were extracted and analyzed within the prescribed holding times with the exception of bromide and fluoride for samples GMZ-3S, GMZ-3I, GMZ-3D, GMZ-1, SW-05, SW-01, SW-02, and SW- 02A by EPA method 300.0. The bromide and fluoride samples were qualified as estimated (UJ/J). The laboratory also reported the bromide analysis by EPA method 300.1B, which was analyzed within the method hold time. Sample results were comparable. All samples had the proper preservation. Sample temperature upon receipt by the lab was acceptable as all samples were received < 6° C and "on ice" . The lab also analyzed samples by EPA method 300.1B for bromide for confirmation. The analysis was included as the initial analysis of EPA method 300.0 for Bromide was analyzed one day past the method hold due to a laboratory error for samples GMZ-3S, GMZ-3I, GMZ-3D, GMZ-1, SW-05, SW-01, SW-02, and SW-02A.
- Samples were reported to the Method Detection Limit (MDL), and the Reporting Limit (RL). Sample detections below the RL were qualified as estimated (J). The bromate and bromide samples analyzed by EPA method 300.1B were diluted due to the nature of the sample matrix. The qualifiers applied by the laboratory to indicate the dilution (D) and case narrative documentation (cn) were removed during validation.
- Surrogates were added to all samples as required by the method 300.1B. All surrogate recoveries (%) were within the laboratory control limits.
- Method blanks were analyzed as required by the method. No contaminants were found in the method blanks.
- A field blank was not submitted.
- An LCS and/or LCSD was analyzed with every batch of 20 samples or less. Percent recoveries were within the laboratory control limits and relative percent differences (RPD) were less than 20%.

- Samples SW-01 and GMZ-4S were submitted and analyzed as a project specific MS/MSD. The MS/MSD recoveries and RPDs were within the method control limits Laboratory duplicate RPDs were within the method control limits.
- Laboratory duplicate RPDs were within the method control limits.
- Laboratory duplicate RPDs were within the method control limits except SW-01/SW-01A which had a PRD of 54.5%.

The laboratory report contains summary forms for the laboratory quality control analysis. MES performed a data validation covering five surface water samples, sixteen groundwater samples and one field duplicate, for select metals by EPA Method 6010D/6020B, anions; bromide, and fluoride by EPA Method 300.0, and bromate by EPA Method 300.1B. Bromide was also analyzed by EPA method 300.1B to confirm the analysis of Bromide by method 300.0. Additional volumes of sample MW-22, the field duplicate (MW-22D), and a trip blank were submitted for analysis of ten site-specific volatile organic compounds (VOCs) by EPA method 8260D.

Concluding Comments

The available data indicates the lithium plume extending from the groundwater site is well characterized and the monitoring data shows a decreasing trend in the primary site chemical of concern, lithium. Over 13 years of monitoring data has been collected which supports these opinions. As shown on Figures B-2 and B-3 of the report, the data from the deep and intermediate zone being monitored is nearly identical. Continuation of monitoring of both of these wells is redundant. Similarly, the surface water data monitoring shows very similar results at many of the locations being monitored and the data collected is redundant. Although this data may have initially been required to understand the conditions, collecting data from all of these locations at this time appears unnecessary. Further, it is the opinion of Montrose that alternative groundwater sampling methods may be able to be employed to allow better and more cost-effective approaches to future sampling as described in the October 3, letter to EPA. Montrose understands that the third Five Year Review for the Site is in progress, and after completion of the Five-Year Review, the EPA will be in a better position to discuss modifications to the current sampling plan. We will contact you after you have a chance to review this document to discuss these alternative approaches.

Sincerely,

Christopher T. Reitman, P.E.
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CTR:GPS:mm

Attachments

Tables

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Appendices

Appendix A – Historical Conditions, Geology and Previous Site Characterizations
Appendix B – Analysis of Historical Lithium Results
Appendix C – Laboratory Analytical Data Report
Appendix D – Data Validator's Report

References

Montrose notes these references were provided in the December 13, 2021 Terranear Groundwater and Surface Water Analysis Report for the Site. References 4, and 5 were not available to Montrose in preparation of this report. Reference 6 was added by Montrose and the USGS report cited in the Reference 6 and described in this report was not available to Montrose.

1. Groundwater Monitoring Plan: Foote Mineral Company Superfund Site, East Whiteland Township, Chester County, Pennsylvania (043-6320.004), July 2008, Golder Associates, Inc.
2. Foote Mineral Co. Superfund Site, East Whiteland, Pennsylvania, Record of Decision (AR302442), 2006-03- 31, EPA, Region 3.
3. Off-Site Monitoring Well Installation Report at the Foote Mineral Superfund Site, East Whiteland Township, Chester County, PA, 2010-12-03, ECOR Solutions, Inc.
4. Groundwater and Surface Water Baseline Analysis Report, letter report ECOR Solutions, Inc., March 16, 2011.
5. Innovative Approaches to Data Validation, Revision 1, June 1995, and the Quality Assurance Project Plan (QAPP) for Former Cyprus Foote Mineral Site (Frazer Exton Development), East Whiteland Township, Pennsylvania, Revision 0, July 2008.
6. Second Five Year Review Report for Foote Mineral Co. Superfund Site, East Whiteland Township, Chester County, Pennsylvania, September 20, 2019.

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Table 1
Groundwater Analytical Targets and Water Elevations
Foote Mineral Superfund Site, Frazer PA
May 2023 Sampling Event

Well ID	Well Elevation[1]	Well Depth (ft bgs)	Well Screen Depth Range (ft bgs)	Sample Depth (ft below top of well casing)	Sampling Date	Depth to Water (ft bgs)	Water Surface Elevation (ft, before purging)	Target Compound List/Target Analyte List (TCL/TAL)[2]
ERM-1D	387.47	300	280–300	290.9	11/20/2023	70.17	317.30	Total Metals and Inorganic Anions
ERM-1S	387.62	60	40–60	50.9	NA	58.13	329.49	Total Metals and Inorganic Anions
ERM-2D	357.75	247	230–247	238.6	11/20/2023	45.68	312.07	Total Metals and Inorganic Anions
ERM-2S	357.71	140	120–140	130.2	11/20/2023	42.98	314.73	Total Metals and Inorganic Anions
ERM-5	373.37	200	40–200	120.3	11/21/2023	60.72	312.65	Total Metals and Inorganic Anions
MW-2	383.76	150	30–150	NA	11/21/2023	70.93	312.83	LNAPL layer thickness (No Measurable Thickness)
MW-22	370.45	152	50–152	99.4	11/21/2023	61.65	308.8	VOC, Total Metals and Inorganic Anions
GMZ-1	283.54	149	126–136	131.4	11/19/2023	10.48	273.06	Total Metals and Inorganic Anions
GMZ-2S	347.11	295	80–110	95.4	11/21/2023	27.09	320.02	Total Metals and Inorganic Anions
GMZ-2I	347.11	295	167–197	182.4	11/21/2023	21.53	325.58	Total Metals and Inorganic Anions
GMZ-2D	347.11	295	240–270	255.4	11/21/2023	30.32	316.79	Total Metals and Inorganic Anions
GMZ-3S	336.1	296	50–60	55.3	11/19/2023	32.38	303.72	Total Metals and Inorganic Anions
GMZ-3I	336.1	296	115–125	120.3	11/19/2023	32.61	303.49	Total Metals and Inorganic Anions
GMZ-3D	336.1	296	245–255	250.4	11/19/2023	31.72	304.38	Total Metals and Inorganic Anions
GMZ-4S	333.75	303	116–126	121.3	11/20/2023	55.83	277.92	Total Metals and Inorganic Anions
GMZ-4I	333.75	303	215–225	230.3	11/20/2023	55.83	277.92	Total Metals and Inorganic Anions
GMZ-4D	333.75	303	288–303	294.3	11/20/2023	55.83	277.92	Total Metals and Inorganic Anions

[1] Top of casing, ft above NGVD 1929 datum

[2] TAL Metals and Inorganic Anions (Sb, As, B, Cr, Li, Tl; fluoride, bromate, bromide), TCL VOC: 1,2-dichloroethane, benzene, carbon tetrachloride bromoform, chloroform, cis-1,2-dichloroethene, ethylbenzene, tetrachloroethene, trans-1,2-dichloroethene, and trichloroethene

Table 2
Groundwater Remediation Goals
Foote Mineral Superfund Site, Frazer PA
First Quarter 2014 Sampling Event

Target	Concentration (µg/L)
Fluoride	4000
Bromide	—
Bromate	10
Sb	6
As	10
Cr	100
Tl	0.5
B	1340
Li	260
trans-1,2-Dichloroethene	100
cis-1,2-Dichloroethene	70
Chloroform	70
Carbon tetrachloride	5
Benzene	5
1,2-Dichloroethane	5
Trichloroethene	5
Tetrachloroethene	5
Ethylbenzene	700
Bromoform	80

Table 3
Surface Water Analytical Targets and Water Flow Rates
Foote Mineral Superfund Site Frazer, PA
November 2023 Sampling Event

Surface Sample Location ID	Creek Width (inches)	Creek Depth (inches)	Sample Depth (inches)	Sample Date	Water Flow Rate (ft/s)	Temp (°C)	pH (standard unit)	SpC (ms/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)
SW-01	223	10	6	11/19/23	0.6	12.7	7.97	0.879	206.6	6.82	0.29
SW-02	212	28	6	11/19/23	0.2	11	8.19	0.858	153.8	9.37	0.68
SW-2A	212	28	6	11/19/23	0.2	11	8.19	0.858	153.8	9.37	0.68
SW-05	236	14	6	11/19/23	0.4	11.6	8.07	0.866	214.2	8.29	0.20
SW-06	185	8	6	11/21/23	1.3	8.2	7.97	0.964	58.9	7.38	1.60

Analysis: TAL Metals and Inorganic Anions (Sb, As, B, Cr, Li, Tl; fluoride, bromate, bromide).

Table 4
Groundwater Properties at Time of Sampling
Foote Mineral Superfund Site Frazer, PA
November 2023 Sampling Event

Well ID	Sample Date	Sample Time	Purge Rate (mL/min)	Temp (oC)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)
ERM-1D	11/20/2023	1122	250	12.7	1.047	0.40	8.26	-66.8	0.43
ERM-1S	NA	NA	NA	NA	NA	NA	NA	NA	NA
ERM-2D	11/20/2023	0957	150	11.4	0.927	0.63	11.89	-59.8	15.10
ERM-2S	11/20/2023	0902	120	10.6	3.125	0.60	12.47	-149.2	0.80
ERM-5	11/21/2023	0800	140	10.4	0.430	5.95	7.70	166.1	0.98
MW-22	11/21/2023	1137	120	11.2	0.734	0.51	7.75	4.7	4.46
GMZ-1	11/14/2023	1308	160	14.0	0.861	2.91	7.58	-12.0	3.61
GMZ-2S	11/21/2023	1037	120	11.4	0.507	0.35	7.67	-118.7	0.55
GMZ-2I	11/21/2023	0957	150	11.4	0.523	0.61	7.59	-64.3	3.23
GMZ-2D	11/21/2023	0922	120	11.4	0.556	0.35	7.60	-41.7	0.43
GMZ-3S	11/19/2023	1012	200	12.5	1.064	7.90	7.49	159.7	28.10
GMZ-3I	11/19/2023	1100	180	12.8	1.091	2.74	7.50	160.7	4.90
GMZ-3D	11/19/2023	1145	150	13.0	1.120	2.74	7.49	152.8	0.30
GMZ-4S	11/20/2023	1637	150	11.1	0.857	5.17	7.71	108.3	0.97
GMZ-4I	11/20/2023	1552	150	12.0	0.825	2.35	7.45	107.5	13.7
GMZ-4D	11/20/2023	1457	120	12.3	0.821	4.35	7.53	111.4	3.45

Table 5
Analytical Results for Inorganic Anions and Metals in Surface Water
Foote Mineral Superfund Site, Frazer PA
November2023 Sampling Event

Sample Location		SW-01			SW-02			SW-02A			SW-05			SW-06 (alternate)		
Lab ID		410-152361-06			410-152361-07			410-152361-08			410-152361-05			410-152361-22		
Sample Date		11 19 2023			11 19 2023			11 19 2023			11 19 2023			11 21 2023		
Matrix		Surface water			Surface water			Surface water			Surface water			Surface water		
Remarks								FD of SW-02								
Parameter	**Units**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**
Antimony	ug/L		U	1		U	1		U	1		U	1		U	1
Arsenic	ug/L		U	2		U	2		U	2		U	2		U	2
Boron	ug/L	200		50	74		50	68		50	200		50	170		50
Bromate	ug/L	47	J	50	12	J	50	21	J	50	48	J	50	25	J	25
Bromide	mg/L	0.65	J	0.5	0.27	J	0.5	0.27	J	0.5	0.64	J	0.5	1.1	J	2.5
Chromium	ug/L	9.9		2	2.3		2	2.2		2	10		2	3.2		2
Fluoride	mg/L	0.04	J	0.1	0.049	J	0.1	0.048	J	0.1	0.041	J	0.1		U	0.5
Lithium	ug/L	680		50	170		50	170		50	670		50	370		50
Thallium	ug/L		U	0.5		U	0.5		U	0.5		U	0.5	0.19	J	0.5

Notes:

ug/L - Microgram per liter

mg/L - Milligram per liter

RL - Reporting Limit

Q - Qualifier

U - Non-detected

J - Estimated value

UJ - Estimated Reporting Limit

Table 6
Analytical Results for Inorganic Anions and Metals in Groundwater
Foote Mineral Superfund Site, Frazer PA
November 2023 Sampling Event

Sample Location			FRM-1D			FRM-2S			FRM-2D			FRM-5			GMZ-1			GMZ-2S			GMZ-2I			GMZ-2D			GMZ-2SD		
Lab ID			410-152361-11			410-152361-09			410-152361-10			410-152361-15			410-152361-04			410-152361-18			410-152361-17			410-152361-16			410-152361-19		
Sample Date			11/20/2023			11/20/2023			11/20/2023			11/21/2023			11/19/2023			11/21/2023			11/21/2023			11/21/2023			11/21/2023		
Matrix			Groundwater			Groundwater			Groundwater			Groundwater			Groundwater			Groundwater			Groundwater			Groundwater			Groundwater		
Remarks	Remediation Goals (ROD 2006)																											FD of GMZ-2S		
Parameter		**Units**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**
Antimony	6	ug/L	0.83	J	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Arsenic	10	ug/L		U	2		U	2		U	2		U	2		U	2	0.88	J	2		U	2		U	2	0.85	J	2
Boron	1340	ug/L	210		50		U	50		U	50	74		50	140		50		U	50		U	50		U	50		U	50
Bromate	10	ug/L	**120**		50		U	50		U	50		U	50	**85**		50		U	50		U	50		U	50		U	25
Bromide	NS	mg/L	6.2		0.5		U	0.5		U	0.5		U	0.5	0.71	J	0.5		U	0.5		U	0.5		U	0.5		U	0.5
Chromium	100	ug/L	34		2	0.64	J	2		U	2		U	2	8.5		2		U	2		U	2		U	2		U	2
Fluoride	4	mg/L	0.24		0.1		U	0.1	0.041	J	0.1		U	0.1		UJ	0.1	0.066	J	0.1	0.093	J	0.1	0.066	J	0.1	0.075	J	0.1
Lithium	260	ug/L	**3800**		50	**360**		50	95		50	33	J	50	**510**		50		U	50		U	50		U	50		U	50
Thallium	0.5	ug/L		U	0.5		U	0.5		U	0.5		U	0.5		U	0.5		U	0.5		U	0.5		U	0.5		U	0.5

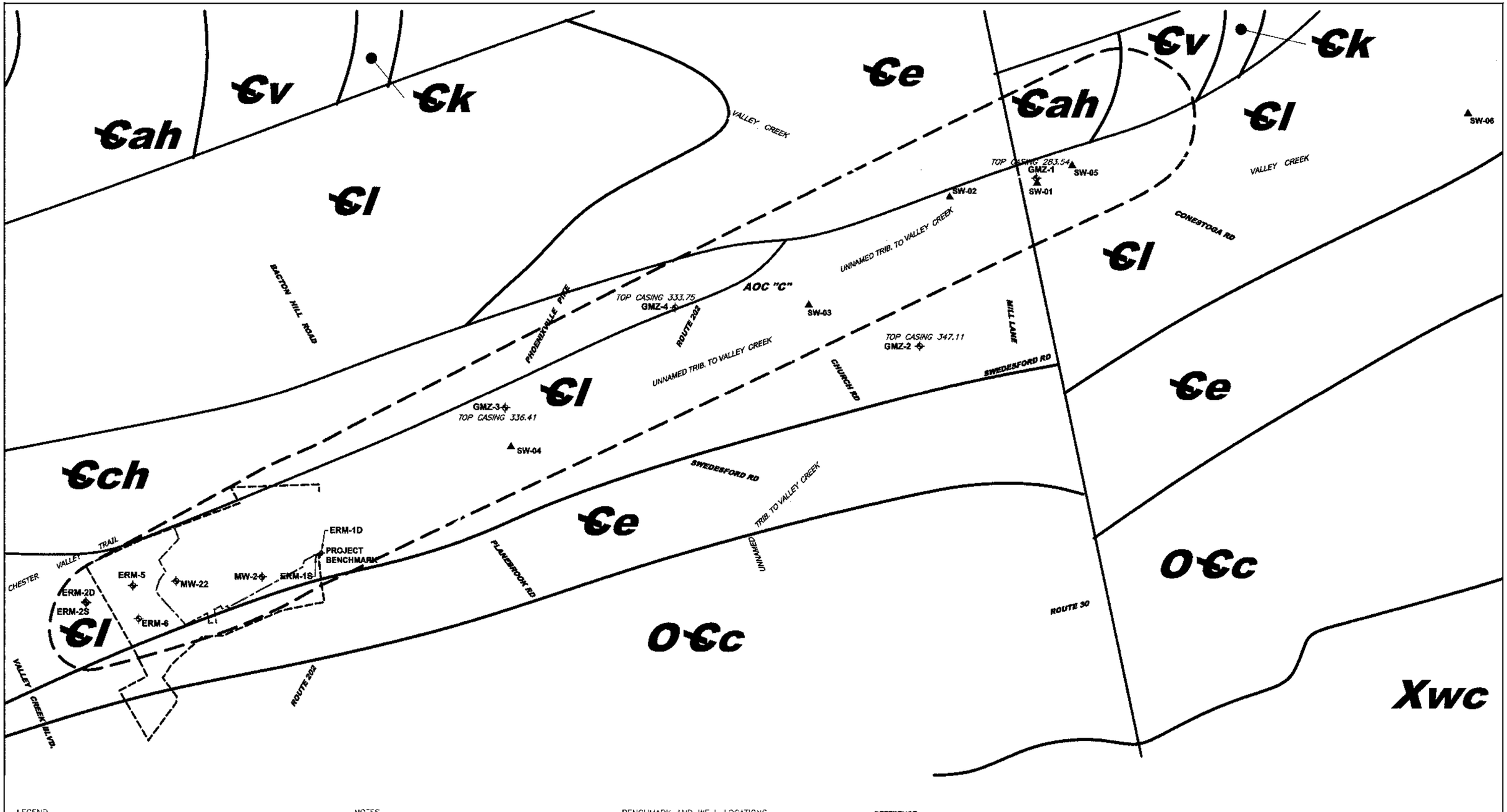
Sample Location			GMZ-3S			GMZ-3I			GMZ-3D			GMZ-4S			GMZ-4I			GMZ-4D			MW-22		
Lab ID			410-152361-01			410-152361-02			410-152361-03			410-152361-14			410-152361-13			410-152361-12			410-152361-20		
Sample Date			11/19/2023			11/19/2023			11/19/2023			11/20/2023			11/20/2023			11/20/2023			11/21/2023		
Matrix			Groundwater			Groundwater			Groundwater			Groundwater			Groundwater			Groundwater			Groundwater		
Remarks	Remediation Goals (ROD 2006)																						
Parameter		**Units**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**
Antimony	6	ug/L		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Arsenic	10	ug/L		U	2		U	2		U	2		U	2		U	2		U	2	2.2		2
Boron	1340	ug/L	490		50	690		50	690		50	250		50	410		50	350		50	**3500**		50
Bromate	10	ug/L	**51**		50	**48**	J	50	**67**		50	**35**	J	50	**41**		25	**58**		50		U	25
Bromide	NS	mg/L	1.4	J	0.5	1.7	J	0.5	2	J	0.5	0.6		0.5	0.89		0.5	0.89		0.5		U	0.5
Chromium	100	ug/L	22		2	25		2	27		2	13		2	21		2	**20**		2	1	J	2
Fluoride	4	mg/L	0.062	J	0.1	0.071	J	0.1	0.09	J	0.1		U	0.1		U	0.1	0.043	J	0.1	0.76		0.1
Lithium	260	ug/L	**2100**		50	**2700**		50	**3100**		50	**840**		50	**1300**		50	**1200**		50	**13000**		50
Thallium	0.5	ug/L		U	0.5		U	0.5		U	0.5		U	0.5		U	0.5		U	0.5	0.23	J	0.5

Notes:
ug/L - Microgram per liter
mg/L - Milligram per liter
RL - Reporting Limit
Q - Qualifier
U - Non-detected
J - Estimated Value
UJ - Estimated Reporting Limit
NS - No Standard

Table 7
Analytical Results for Volatile Groundwater Samples
Foote Mineral Superfund Site, Frazer PA
November
2023 Sampling Event

Sample Location			MW-22			MW-22D			TB-01-111923		
Lab ID			410-152361-20			410-152361-21			410-152361-23		
Sample Date	Remediation		11/21/2023			11/21/2023			11/19/2023		
Matrix	Goal		Groundwater			Groundwater			Aqueous		
Remarks	(ROD 2006)					FD of MW-22			Trip Blank		
Parameter		**Units**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**
Volatiles											
1,2-Dichloroethane	5	ug/L		U	1		U	1		U	1
Benzene	5	ug/L	1.5		1	1.4		1		U	1
Bromoform	80	ug/L		U	4		U	4		U	4
Carbon tetrachloride	5	ug/L		U	1		U	1		U	1
Chloroform	70	ug/L		U	1		U	1		U	1
cis-1,2-Dichloroethene	70	ug/L	5.8		1	5.7		1		U	1
Ethylbenzene	700	ug/L		U	1		U	1		U	1
Tetrachloroethene	5	ug/L	**150**		1	**150**		1		U	1
trans-1,2-Dichloroethene	100	ug/L		U	2		U	2		U	2
Trichloroethene	5	ug/L	**8**		1	**7.7**		1		U	1

Notes:
ug/L - Microgram per liter
mg/L - Milligram per liter
RL - Reporting Limit
Q - Qualifier
U - Non-detected
J - Estimated value
UJ - Estimated Reporting Limit



LEGEND

- PROPERTY BOUNDARY
- SUPERFUND SITE BOUNDARY
- PROPOSED GROUNDWATER AREA OF CONCERN (AOC) AS DEFINED IN ROD
- GEOLOGIC FORMATION CONTACT LINE
- FAULT LINE
- EAST VALLEY CREEK AND UNNAMED TRIBUTARIES
- TRAIL (FORMER RAILROAD)
- ▲ SURFACE WATER SAMPLING LOCATION
- ⊕ BENCHMARK/MONITORING WELL LOCATIONS
- QUARRY CAP

NOTES

1. ALL LOCATIONS ARE APPROXIMATE.

- Cch CHICKIES FORMATION
- Ce ELBROOK FORMATION
- Cl LEDGER FORMATION
- Cah ANTIETAM–HARPERS FORMATION
- OCc CONESTOGA FORMATION
- Cv VINTAGE FORMATION
- Ck KINZERS FORMATION
- Xwc OCTORARO FORMATION

BENCHMARK AND WELL LOCATIONS

BENCHMARK DESCRIPTION:
1.7 MILES SOUTHWEST OF FRAZER ALONG PENNSYLVANIA RAILROAD BRIDGE AT THE GLENLOCH STATION, AT NORTHERLY–MOST RAILROAD BRIDGE OVER PHOENIXVILLE PIKE AT THE SOUTHWEST WING WALL. STANDARD DISK STAMPED K 106 1935, ELEVATION=437.93, DATUM: NGVD 1929

STATE PLANE SURVEY BENCHMARK:

POINT ID	NORTHING	EASTING	ELEVATION
IP FND	264,889.817	2575468.331	386.96

WELL COORDINATES:

POINT ID	NORTHING	EASTING	ELEVATION
GMZ-1	269034.1737	2583081.8555	283.54
GMZ-2	267219.3652	2581883.5308	347.11
GMZ-3	266474.3748	2577472.4082	336.41
GMZ-4	267579.1975	25/9263.1050	333.75

REFERENCE

1. BASE MAP INFORMATION FROM "AS–BUILT GROUNDWATER MANAMENT ZONE PLAN" FROM EDWARD B. WALSH AND ASSOCIATES, INC., MAY 6,2015.
2. INFORMATION INITIALLY PRESENTED IN FIGURE 1 OF TERRANEAR PMC DECEMBER 2021 GROUNDWATER AND SURFACE ANALYSIS REPORT DATED DECEMBER 13, 2021.

0' 500' 1000' 2000'

SCALE 1"=1000'

FOOTE MINERAL SUPERFUND SITE

EAST WHITELAND TOWNSHIP, CHESTER COUNTY, PA

SITE BOUNDARY, WELL LOCATIONS, AND GEOLOGICAL FORMATIONS

MONTROSE ENVIRONMENTAL

MONTROSE ENVIRONMENTAL SOLUTIONS, INC.
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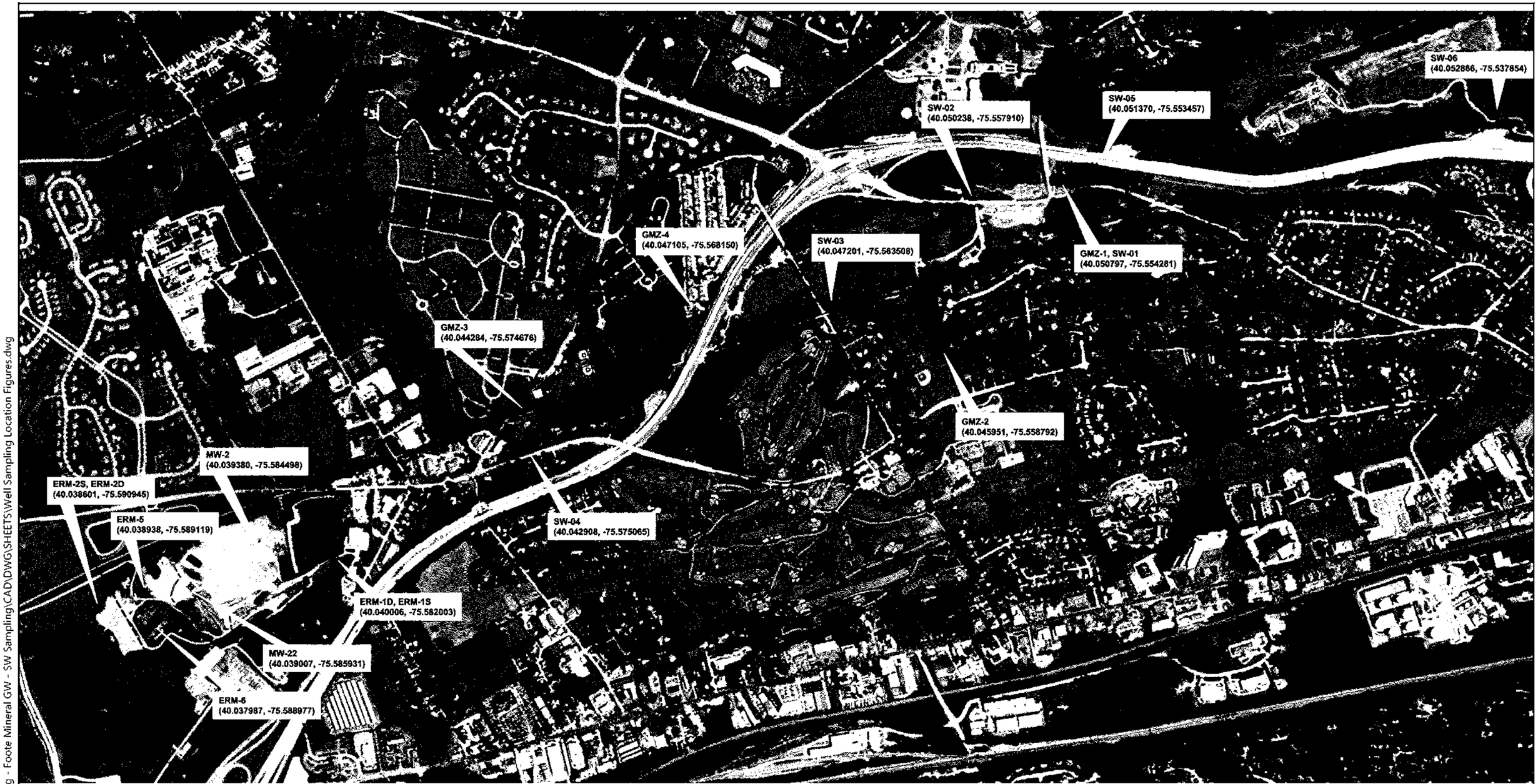
Checked By	CTR
Project Mgr.	CTR
Originated By	KHF
Project No.	2023–4439
Drawing Date	MAY 2023
Sheet No.	1 OF 2
Revision Number	0

FIGURE 1

G:\Projects\2023\20234439 - Green Fig - Foote Mineral GW - SW Sampling\CAD\DWG\SHEETS\Well Sampling Location Figures.dwg



LEGEND

- PROPERTY BOUNDARY
- SUPERFUND SITE BOUNDARY
- SURFACE WATER SAMPLING LOCATION
- BENCHMARK/MONITORING WELL LOCATIONS

NOTES
1. ALL LOCATIONS ARE APPROXIMATE.
2. INFORMATION INITIAL PRESENTED IN FIGURE 2 OF TERRANEAR PMC DECEMBER 2021 GROUNDWATER AND SURFACE WATER ANALYSIS REPORT DATED DECEMBER 13, 2021.

0' 500' 1000' 2000'

SCALE 1"=1000'

FOOTE MINERAL SUPERFUND SITE

EAST WHITELAND TOWNSHIP, CHESTER COUNTY, PA

MONITORING PLAN SAMPLE LOCATIONS

MONTROSE ENVIRONMENTAL

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Originated By:	KHF
Project No.:	2023-4439
Drawing Date:	MAY 2023
Sheet No.:	2 OF 2
Revision Number:	0

FIGURE 2

G:\Projects\2023\20234439 - Green Fig - Foote Mineral GW - SW Sampling\CAD\DWG\SHEETS\Well Sampling Location Figures.dwg

CHARLESTOWN TOWNSHIP

TREDYFFRIN TOWNSHIP

EAST WHITELAND TOWNSHIP

MALVERN BOROUGH

401

29

202

30

352

BACTON HILL TRIBUTARY

VALLEY CREEK

PLANEBROOK TRIBUTARY

CHESTER VALLEY TRIBUTARY

WARREN RUN

SW-01

SW-02

SW-03

SW-04

SW-05

SW-06

SW-6A

APPROXIMATE SITE LOCATION

Legend

- Valley Creek Watershed Boundary
- Water
- Streams
- County Boundary
- Highways & State Routes
- Local Roads
- Railroads
- ▲ STREAM SAMPLING LOCATION (@ ▲ APEX)
- APPROXIMATE SITE LOCATION

NOTES
1. ALL LOCATIONS ARE APPROXIMATE.
2. INFORMATION INITIAL PRESENTED IN FIGURE 3 PROVIDED BY BORTON LAWSON ENGINEERING "BASE MAP A-1, VALLEY CREEK WATERSHED TECHNICAL COMPENDIUM, 2004"

0 1250 2500 5000

1 INCH = 2500 FT

FOOTE MINERAL SUPERFUND SITE

EAST WHITELAND TOWNSHIP, CHESTER COUNTY, PA

SURFACE WATER SAMPLING LOCATIONS INCLUDING SW-6A

MONTROSE ENVIRONMENTAL

MONTROSE ENVIRONMENTAL SOLUTIONS, INC.
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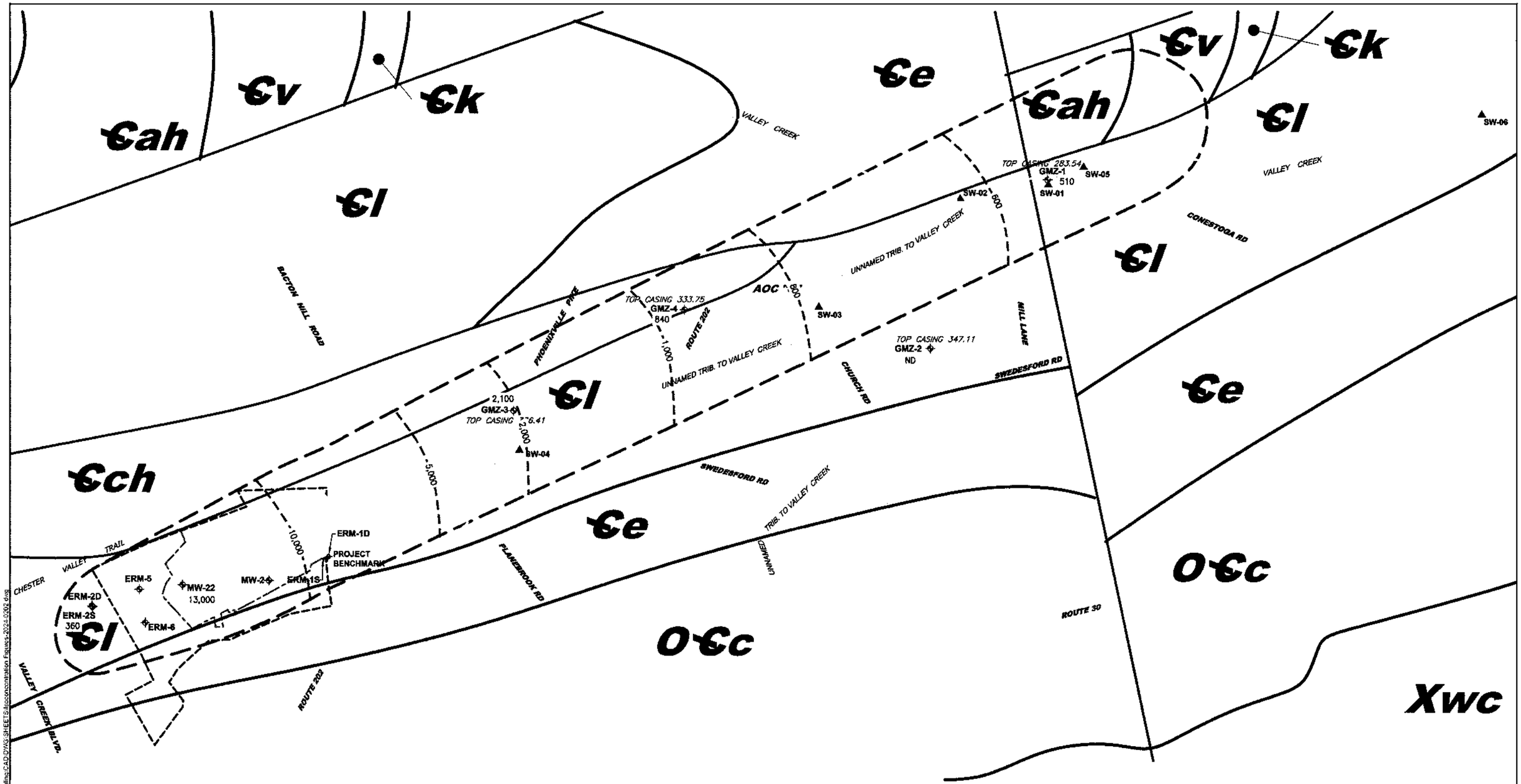
Checked By:	CTR
Project Mgr.:	CTR
Originated By:	KHF
Project No.:	2023-4439
Drawing Date:	MAY 2023
Sheet No.:	3 OF 3
Revision Number:	0

FIGURE 3

G:\Projects\2023\20234439 - Green Fig - Foote Mineral GW - SW Sampling\CAD\DWG\SHEETS\Well Sampling Location Figure-20234-0202.dwg



LEGEND

- PROPERTY BOUNDARY
- SUPERFUND SITE BOUNDARY
- PROPOSED GROUNDWATER AREA OF CONCERN (AOC) AS DEFINED IN ROD
- GEOLOGIC FORMATION CONTACT LINE
- FAULT LINE
- EAST VALLEY CREEK AND UNNAMED TRIBUTARIES
- TRAIL (FORMER RAILROAD)
- ▲ SURFACE WATER SAMPLING LOCATION
- ⊕ BENCHMARK/MONITORING WELL LOCATIONS WITH MAY 2023 LITHIUM RESULT (µg/L)
- QUARRY CAP

NOTES

1. ALL LOCATIONS ARE APPROXIMATE.

Cch CHICKIES FORMATION
Ce ELBROOK FORMATION
Cl LEDGER FORMATION
Cah ANTIETAM–HARPERS FORMATION
OCc CONESTOGA FORMATION
Cv VINTAGE FORMATION
Ck KINZERS FORMATION
Xwc OCTORARO FORMATION

— 800 — LITHIUM ISOCONCENTRATION CONTOUR (µg/L)

SITE SOURCE CONCENTRATION IS REPRESENTED BY MW–22

BENCHMARK AND WELL LOCATIONS

BENCHMARK DESCRIPTION:
1.7 MILES SOUTHWEST OF FRAZER ALONG PENNSYLVANIA RAILROAD BRIDGE AT THE GLENLOCH STATION, AT NORTHERLY–MOST RAILROAD BRIDGE OVER PHOENIXVILLE PIKE AT THE SOUTHWEST WING WALL. STANDARD DISK STAMPED K 106 1935, ELEVATION=431.93, DATUM: NGVD 1929

STATE PLANE SURVEY BENCHMARK:

POINT_ID	NORTHING	EASTING	ELEVATION
IP FND	264,889.817	2575468.331	386.96

WELL COORDINATES:

POINT_ID	NORTHING	EASTING	ELEVATION
GMZ–1	269034.1757	2583081.8555	283.54
GMZ–2	267219.3652	2581883.5308	347.11
GMZ–3	266474.3748	2577472.4082	336.41
GMZ–4	267579.1973	25/9263.1050	333.75

REFERENCE

1. BASE MAP INFORMATION FROM "AS–BUILT GROUNDWATER MANAMENT ZONE PLAN" FROM EDWARD B. WALSH AND ASSOCIATES, INC., MAY 6,2015.
2. INFORMATION INITIALLY PRESENTED IN FIGURE 1 OF TERRANEAR PMC DECEMBER 2021 GROUNDWATER AND SURFACE ANALYSIS REPORT DATED DECEMBER 13, 2021.

0' 500' 1000' 2000'
SCALE 1"=1000'

FOOTE MINERAL SUPERFUND SITE
EAST WHITELAND TOWNSHIP, CHESTER COUNTY, PA

SHALLOW GROUNDWATER LITHIUM ISOCONCENTRATION - NOVEMBER 2023

MONTROSE ENVIRONMENTAL
MONTROSE ENVIRONMENTAL SOLUTIONS, INC.
1140 VALLEY FORGE ROAD,
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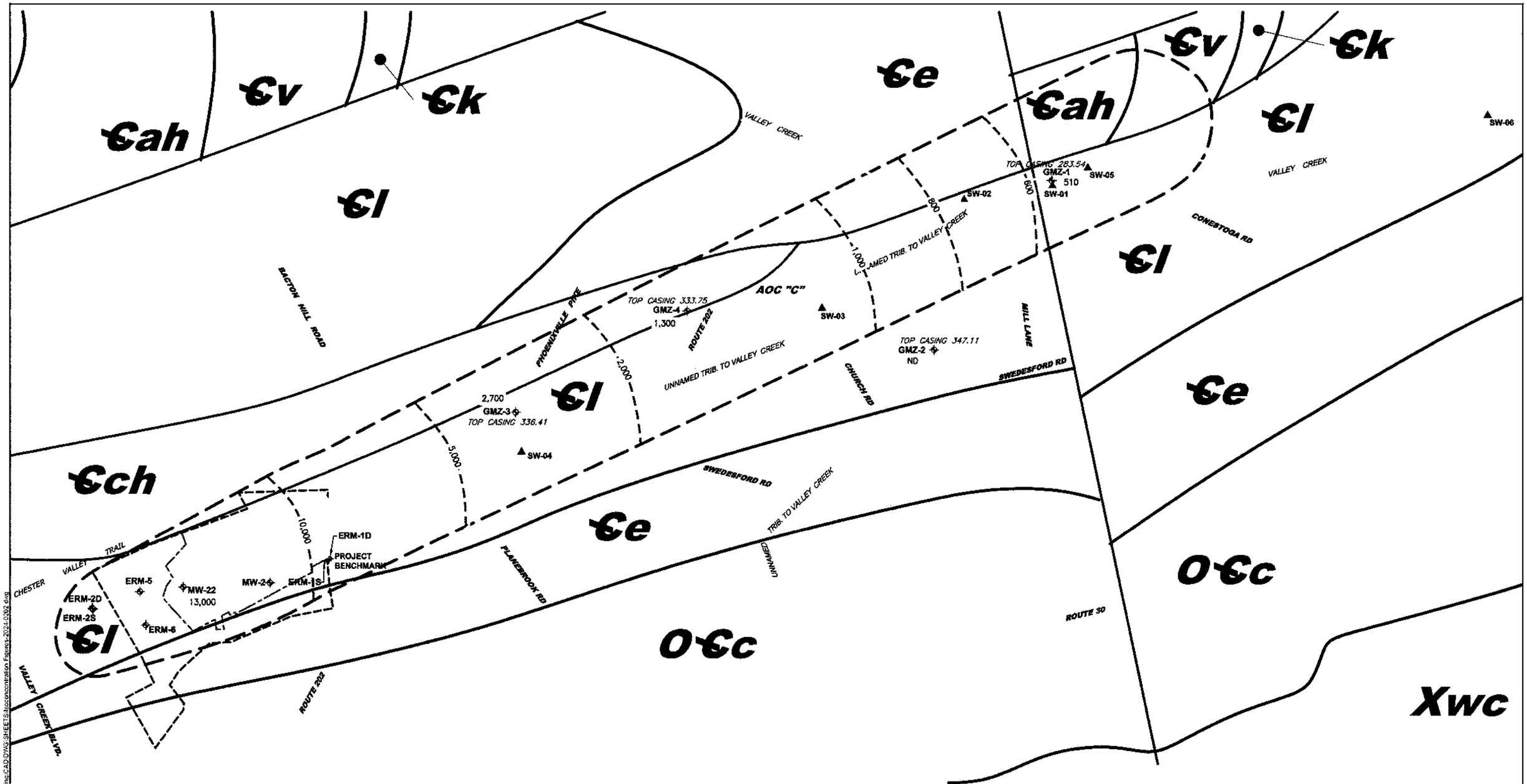
Checked By	CTR
Project Mgr.	CTR
Originated By	KHF
Project No.	2023–4439
Drawing Date	FEBRUARY 2024
Sheet No.	1 OF 1
Revision Number	0

FIGURE 4

G:\Projects\2023\20234439 - Green Fig - Foote Mineral\GW - SW Sampling\CAD\DWG\SHEETS\Isoconcentration Figures_2024.02.02.dwg



LEGEND

- PROPERTY BOUNDARY
- SUPERFUND SITE BOUNDARY
- PROPOSED GROUNDWATER AREA OF CONCERN (AOC) AS DEFINED IN ROD
- GEOLOGIC FORMATION CONTACT LINE
- FAULT LINE
- EAST VALLEY CREEK AND UNNAMED TRIBUTARIES
- TRAIL (FORMER RAILROAD)
- SURFACE WATER SAMPLING LOCATION
- BENCHMARK/MONITORING WELL LOCATIONS WITH MAY 2023 LITHIUM RESULT (µg/L)
- QUARRY CAP

NOTES

1. ALL LOCATIONS ARE APPROXIMATE.

Cch CHICKIES FORMATION
Ce ELBROOK FORMATION
Cl LEDGER FORMATION
Cah ANTIETAM-HARPERS FORMATION
O-Cc CONESTOGA FORMATION
Cv VINTAGE FORMATION
Ck KINZERS FORMATION
Xwc OCTORARO FORMATION

800 LITHIUM ISOCONCENTRATION CONTOUR (µg/L)

SITE SOURCE CONCENTRATION IS REPRESENTED BY MW-22

BENCHMARK AND WELL LOCATIONS

BENCHMARK DESCRIPTION:
1.7 MILES SOUTHWEST OF FRAZER ALONG PENNSYLVANIA RAILROAD BRIDGE AT THE GLENLOCH STATION, AT NORTHERLY-MOST RAILROAD BRIDGE OVER PHOENIXVILLE PIKE AT THE SOUTHWEST WING WALL. STANDARD DISK STAMPED K 106 1935, ELEVATION=437.93, DATUM: NGVD 1929

STATE PLANE SURVEY BENCHMARK:

POINT ID	NORTHING	EASTING	ELEVATION
IP FND	264,889.817	2575468.331	386.96

WELL COORDINATES:

POINT ID	NORTHING	EASTING	ELEVATION
GMZ-1	269034.1737	2583081.8555	283.54
GMZ-2	267219.3652	2581883.5308	347.11
GMZ-3	266474.3748	2577472.4082	336.41
GMZ-4	267579.1973	2579263.1050	333.75

REFERENCE

1. BASE MAP INFORMATION FROM "AS-BUILT GROUNDWATER MANAMENT ZONE PLAN" FROM EDWARD B. WALSH AND ASSOCIATES, INC., MAY 6,2015.
2. INFORMATION INITIALLY PRESENTED IN FIGURE 1 OF TERRANEAR PMC DECEMBER 2021 GROUNDWATER AND SURFACE ANALYSIS REPORT DATED DECEMBER 13, 2021.

0' 500' 1000' 2000'

SCALE 1"=1000'

FOOTE MINERAL SUPERFUND SITE

EAST WHITELAND TOWNSHIP, CHESTER COUNTY, PA

INTERMEDIATE GROUNDWATER LITHIUM ISOCONCENTRATION - NOVEMBER 2023

MONTROSE ENVIRONMENTAL

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1140 VALLEY FORGE ROAD,
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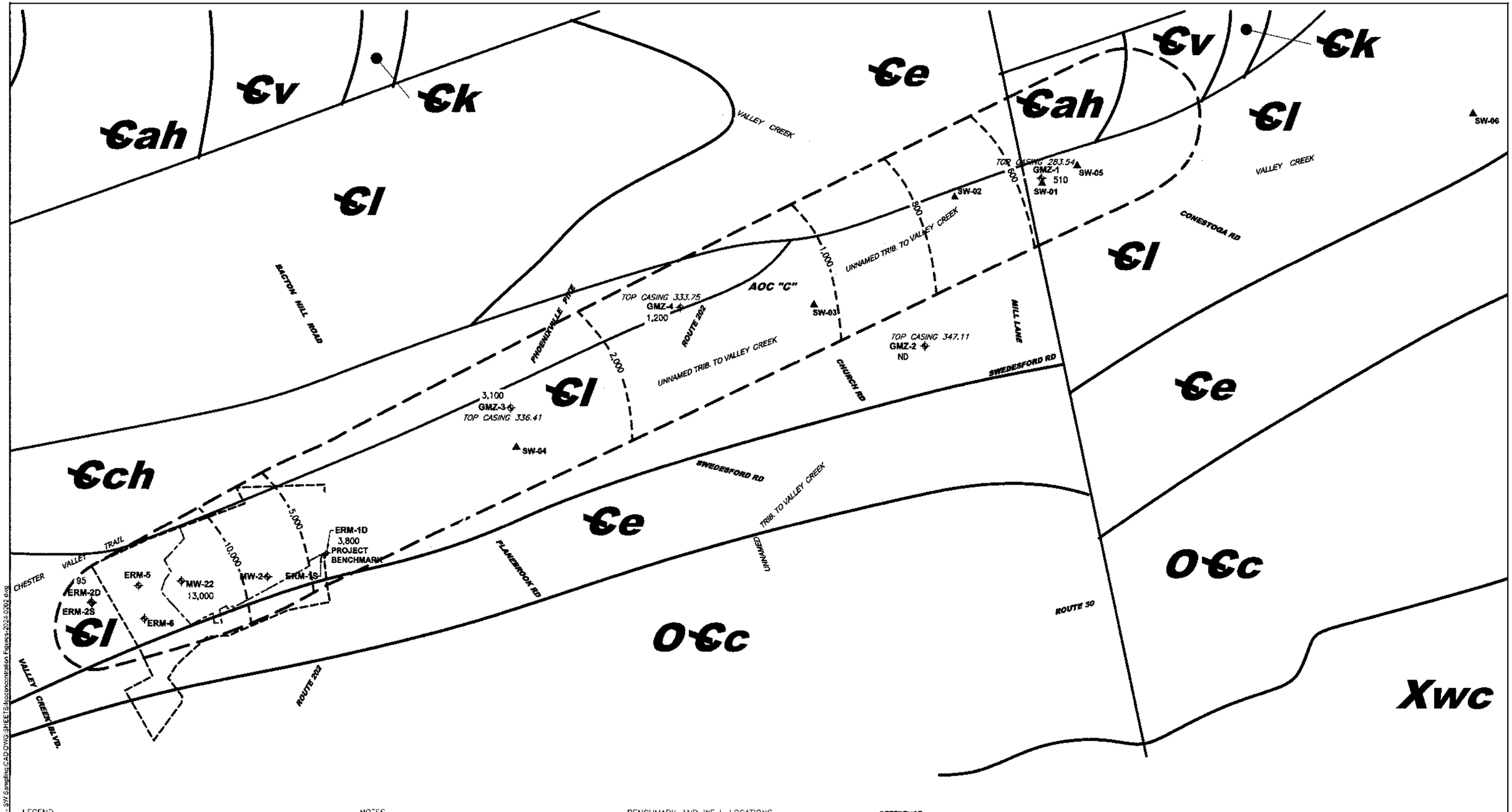
Scale:	1" = 1000'
Drawn By:	KHF
Checked By:	CTR
Project Mgr.:	CTR
Originated By:	KHF
Project No.:	2023-4439
Drawing Date:	FEBRUARY 2024
Sheet No.:	1 OF 1
Revision Number:	0

FIGURE 5

G:\Projects\2023\20234439 - Green Fig - Foote Mineral GW - SW Sampling\CAD\DWG\SHEETS\Isoconcentration Figures_2024-0202.dwg



LEGEND

- PROPERTY BOUNDARY
- SUPERFUND SITE BOUNDARY
- PROPOSED GROUNDWATER AREA OF CONCERN (AOC) AS DEFINED IN ROD
- GEOLOGIC FORMATION CONTACT LINE
- FAULT LINE
- EAST VALLEY CREEK AND UNNAMED TRIBUTARIES
- TRAIL (FORMER RAILROAD)
- ▲ SURFACE WATER SAMPLING LOCATION
- ⌖ BENCHMARK/MONITORING WELL LOCATIONS WITH MAY 2023 LITHIUM RESULT (µg/L)
- QUARRY CAP

NOTES

1. ALL LOCATIONS ARE APPROXIMATE.

Ech CHICKIES FORMATION
Ee ELBROOK FORMATION
El LEDGER FORMATION
Eah ANTIETAM–HARPERS FORMATION
OEc CONESTOGA FORMATION
Ev VINTAGE FORMATION
Ek KINZERS FORMATION
Xwc OCTORARO FORMATION

— 800 — LITHIUM ISOCONCENTRATION CONTOUR (µg/L)

SITE SOURCE CONCENTRATION IS REPRESENTED BY MW–22

BENCHMARK AND WELL LOCATIONS

BENCHMARK DESCRIPTION:
1.7 MILES SOUTHWEST OF FRAZER ALONG PENNSYLVANIA RAILROAD BRIDGE AT THE GLENLOCH STATION, AT NORTHERLY–MOST RAILROAD BRIDGE OVER PHOENIXVILLE PIKE AT THE SOUTHWEST WING WALL. STANDARD DISK STAMPED K 106 1935, ELEVATION=437.93, DATUM: NGVD 1929

STATE PLANE SURVEY BENCHMARK:

POINT ID	NORTHING	EASTING	ELEVATION
IP FND	264,889.817	2575468.331	386.96

WELL COORDINATES:

POINT ID	NORTHING	EASTING	ELEVATION
GMZ-1	269034.1737	2583091.8555	283.54
GMZ-2	267219.3652	2581883.5308	347.11
GMZ-3	266474.3748	2577472.4082	336.41
GMZ-4	267579.1975	25/9263.1050	333.75

REFERENCE

1. BASE MAP INFORMATION FROM "AS–BUILT GROUNDWATER MANAMENT ZONE PLAN" FROM EDWARD B. WALSH AND ASSOCIATES, INC., MAY 6,2015.
2. INFORMATION INITIALLY PRESENTED IN FIGURE 1 OF TERRANEAR PMC DECEMBER 2021 GROUNDWATER AND SURFACE ANALYSIS REPORT DATED DECEMBER 13, 2021.

0' 500' 1000' 2000'
SCALE 1"=1000'

FOOTE MINERAL SUPERFUND SITE
EAST WHITELAND TOWNSHIP, CHESTER COUNTY, PA

DEEP GROUNDWATER LITHIUM ISOCONCENTRATION - NOVEMBER 2023

MONTROSE ENVIRONMENTAL
MONTROSE ENVIRONMENTAL SOLUTIONS, INC.
1140 VALLEY FORGE ROAD,
PHOENIXVILLE, PENNSYLVANIA 19460–2696
T: 610.840.9100 F: 610.840.9199 montrose–env.com

Scale	1" = 1000'
Drawn By	KHF
Checked By	CTR
Project Mgr.	CTR
Originated By	KHF
Project No.	2023–4439
Drawing Date	FEBRUARY 2024
Sheet No.	1 OF 1
Revision Number	0

FIGURE 6

G:\Projects\2023\20234439 - Green Fig - Foote Mineral GW - SW Sampling\CAD\GIS\SHEETS\Isoconcentration Figures-2024-0202.dwg

Historical Conditions and Site Remediation

The Site is located on a 79-acre property mostly in East Whiteland Township, Pennsylvania and is bordered by public roads, mixed commercial and agricultural properties, an electric utility substation, and a former railroad right-of-way that has been converted to the Chester Valley Trail. According to the EPA project close-out report, "[I]n 1932 and earlier, prior to Foote Mineral's ownership, the northeastern portion of the Site was quarried for limestone." Starting in 1941, the Foote Mineral Company built and operated a variety of process buildings on the property for the manufacture of lithium metal, lithium chemicals, and inorganic fluxes for the metals industry. Ores and minerals were crushed and sized during process operations. When the plant closed in 1991, the Site included two quarries, more than 50 buildings and several lithium process areas.

The remediation, defined in the *March 31, 2006 Record of Decision—Foote Mineral Co. Superfund Site* (ROD), included excavation and off-site removal of radiation-contaminated soils; stabilization of process tailings located in one of the two on-site quarries; and consolidation of other site wastes, debris, and contaminated soils into the quarries, followed by capping of the quarries. Additional downgradient wells were installed and routine monitoring of downgradient groundwater and surface water was initiated in December 2010. A summary of the Site Conditions is provided below.

Regional Geology, Hydrology and Site Conceptual Model

The Site is located in the Chester Valley, a topographic basin, as shown on Figure 1. The Chester Valley bedrock is broken by many geologic faults. These faults mostly parallel the east-west axis of the Valley. Dolomite of the Ledger formation directly underlies the Property. Directly north of the Property, the ground surface is underlain by a wedge of the harder Chickies Formation quartzite. The boundary between these two rock types is a highly fractured thrust fault zone. This fault zone forms a linear feature that is oriented roughly east-northeast. The fault almost coincides with the Property's northern boundary.

The Second Five Year Review Report states the specific groundwater and contaminant flow characteristics in the area of the Site were described by the United States Geological Survey (USGS) in an August 2005 report entitled *Evaluation of Hydrogeology and Ground-water flow and Transport at the Foote Mineral Company Superfund Site*, East and West Whiteland Townships, Chester County, Pennsylvania. The USGS report was commissioned by the EPA in December 2004.

The Second Five Year Review also states that the local groundwater is flowing in a direction that is primarily west to east through the fractured Ledger dolomite. Contaminants leaching from sources on the Property enter the groundwater and are carried along the same path. The resulting contaminant plume has been found to be very long and narrow and is found in higher concentrations in the deeper zone monitored under the Site and downgradient from the Site, which is located under an unnamed tributary to Valley Creek, at the base of the Valley. The plume of contaminants was described in the Second Five Year Review to extend approximately 10,000 feet east-northeast from the quarries. The contaminant plume was believed to be relatively narrow in width as a result of the fault zone from both the south and north sides of the Valley, which directs the plume to the identified Area of Concern (AOC) for groundwater at the base of the Valley, underneath an unnamed tributary to Valley Creek and eventually Valley Creek, as shown on Figure 1.

Elevated lithium was not observed in the near-site unnamed tributary to Valley Creek (i.e., historical sampling in SW-03 and SW-04 in an area of the Site where the Valley Creek tributary is believed to be a losing stream), but was identified in a section of Valley Creek along a fault line, near Mill Lane, about a mile and a half from the Property. This section of Valley Creek near Mill Lane is believed to be a gaining stream, where the groundwater from the Site vicinity discharges. As described further below, this understanding is supported by the results of monitoring conducted in the intermediate and the deep groundwater near the Property and downgradient of the Property that have the highest concentrations of lithium and the downstream surface water sampling at locations SW-01 SW-05, SW-06, where the concentrations of lithium are found to be consistently elevated at very similar concentrations. This is supported by Figure B-6 in Appendix B, which shows the similar concentrations of lithium in the stream and Figure B-7, which shows similar concentrations between the surface water and groundwater at the co-located surface water (SW-01)/groundwater(GMZ-01) sampling locations.

Site Characterizations

The conceptual Site Model of groundwater developed by USGS, which includes groundwater from the deeper zone monitored at the Site, moving through the ledger formation fractures under Valley Creek and discharging into Valley Creek, is supported by characterizations completed both prior to and after completion remediation at the Site.

To understand and characterize the groundwater conditions described above, eight monitoring wells were installed on the Site prior to the remediation work. These on- site wells are labeled ERM-1S, ERM-1D (shallow and deep, respectively), ERM-2S, ERM-2D, ERM-5, ERM-6, MW-22, and MW-2. The locations of these wells are shown in Figures 1 and 2. The metals lithium, chromium, arsenic, and antimony were found to be elevated and volatile organic compounds(VOCs) in one location. Lithium, boron and chromium were detected in off-site public and private wells. In November 2001, a newly regulated contaminant, bromate, was also detected in groundwater downgradient of the Site. Additional sampling showed bromate to be present in some nearby public and private drinking water wells and in water on the Site. Wells found to be impacted are no longer used for drinking water, and nearby residents were connected to the public water supply.

Ten off-site monitoring wells were installed downgradient of the Site, after the remediation of the Site. The more recently installed wells, GMZ-2, GMZ-3, and GMZ-4, which were first sampled in September of 2013, have a nested design to draw groundwater from three depths: shallow, intermediate, and deep. The shallow depths range between 80 and 126 feet below ground surface (bgs); the intermediate depths range between 115 and 225 feet bgs; and the deep wells range between 240 and 303 feet bgs. Well screen depths are shown on Table 1. Monitoring well GMZ-1 draws water from only one depth range, 126 to 136 feet bgs, because of the poor quality of the bedrock at its location, which along with the presumed upward gradient in the area, is believed to make this sample more representative of groundwater conditions in the immediate vicinity of the groundwater discharge zone into Valley Creek. GMZ-1 is also co-located in close proximity to surface water sampling point SW-01, providing a comparison of groundwater and surface water conditions in this discharge area and the groundwater and surface water results have historically been very similar (See Figure B-7). GMZ-2 (Shallow (S), Intermediate (I) and Deep(D)) wells are outside the plume and during the 13 years of monitoring elevated lithium has never been observed in these wells. As described further below and shown on Figure B-2 and B-3, GMZ-3 and

GMZ-4 show the consistent downward trend in the plume concentrations during the period of monitoring. The wells also show nearly identical concentrations in the intermediate and deep unit, suggesting the shallow and deep groundwater wells monitor the same unit.

Following remediation, the Groundwater Monitoring Program began in December 2010 with the baseline groundwater sampling event which utilized permanent, dedicated low-flow sampling pumps in the ERM, MW-22 and GMZ wells. Based on the sampling completed, the originally proposed GMZ boundary was extended upgradient southwestward to include monitoring wells ERM-2S and ERM-2D, which originally were intended to monitor background concentrations, but ERM-2S was found to have elevated concentrations of lithium above the Groundwater PRG established for lithium in the ROD.

The groundwater monitoring wells, the Site boundary, the groundwater area of concern (AOC) with elevated lithium and the geological formations in the area and fault lines are shown in Figure 1. A summary of the Lithium data collected is provided in Appendix B along with an analysis of this information. It may be noted that the initial sampling was quarterly and the frequency of sampling has been less frequent in recent years, which should be considered when interpreting the Figures provided in Appendix B. The historical monitoring data in Appendix B was provided by the EPA and has not been independently validated. The historical monitoring data tables for lithium were updated with the information from the March 2020, November 2021, May 2023, and November 2023 events and the events were renumbered as shown on the Table in Appendix B. It should also be noted the November 2021 data was developed by Montrose from the actual laboratory supplied data provided in Appendix C, and not the data provided in Table 4 and 5 of that report, which did not appear to have been updated (i.e., Tables 4 and 5 in the November 2021 report presented the exact same data as Tables 4 and 5 from the March 2020 report).

Figure B -1
Lithium In Source (MW -22) and Near Source Wells (MW 1D/1S)

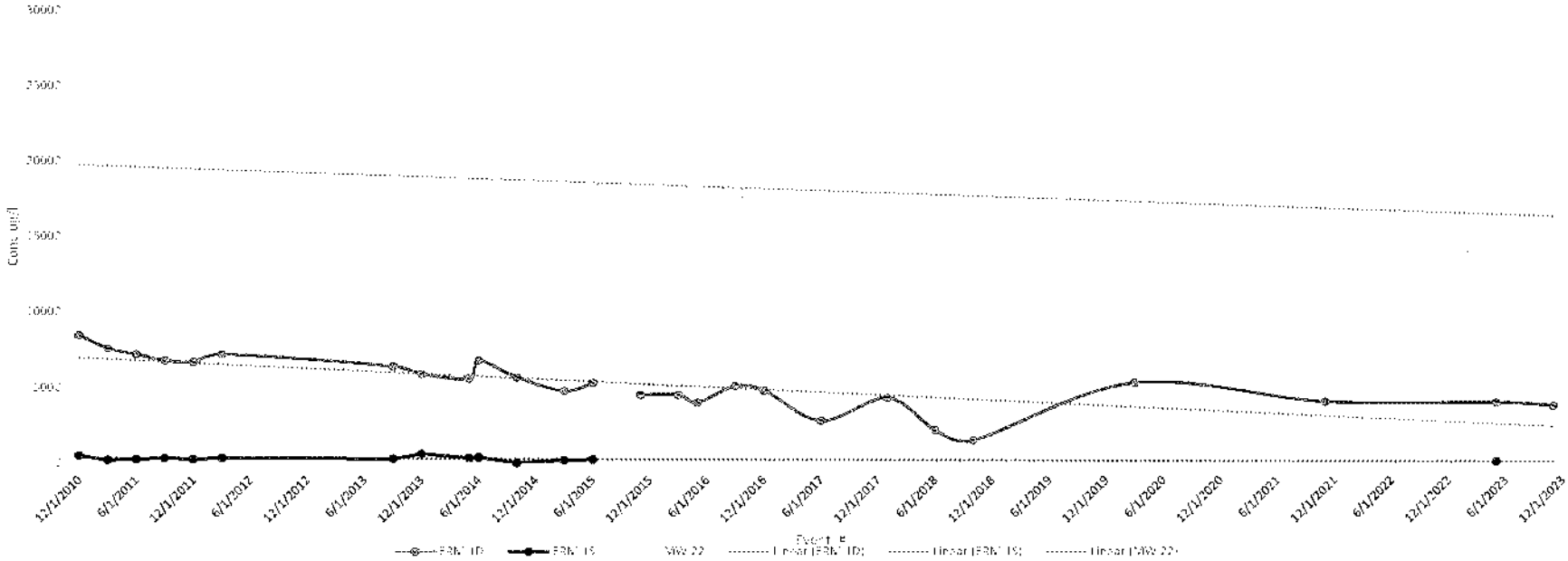


Figure B-2
Lithium in GMZ-3S, 3I and 3D
(2,200 ft downgradient)

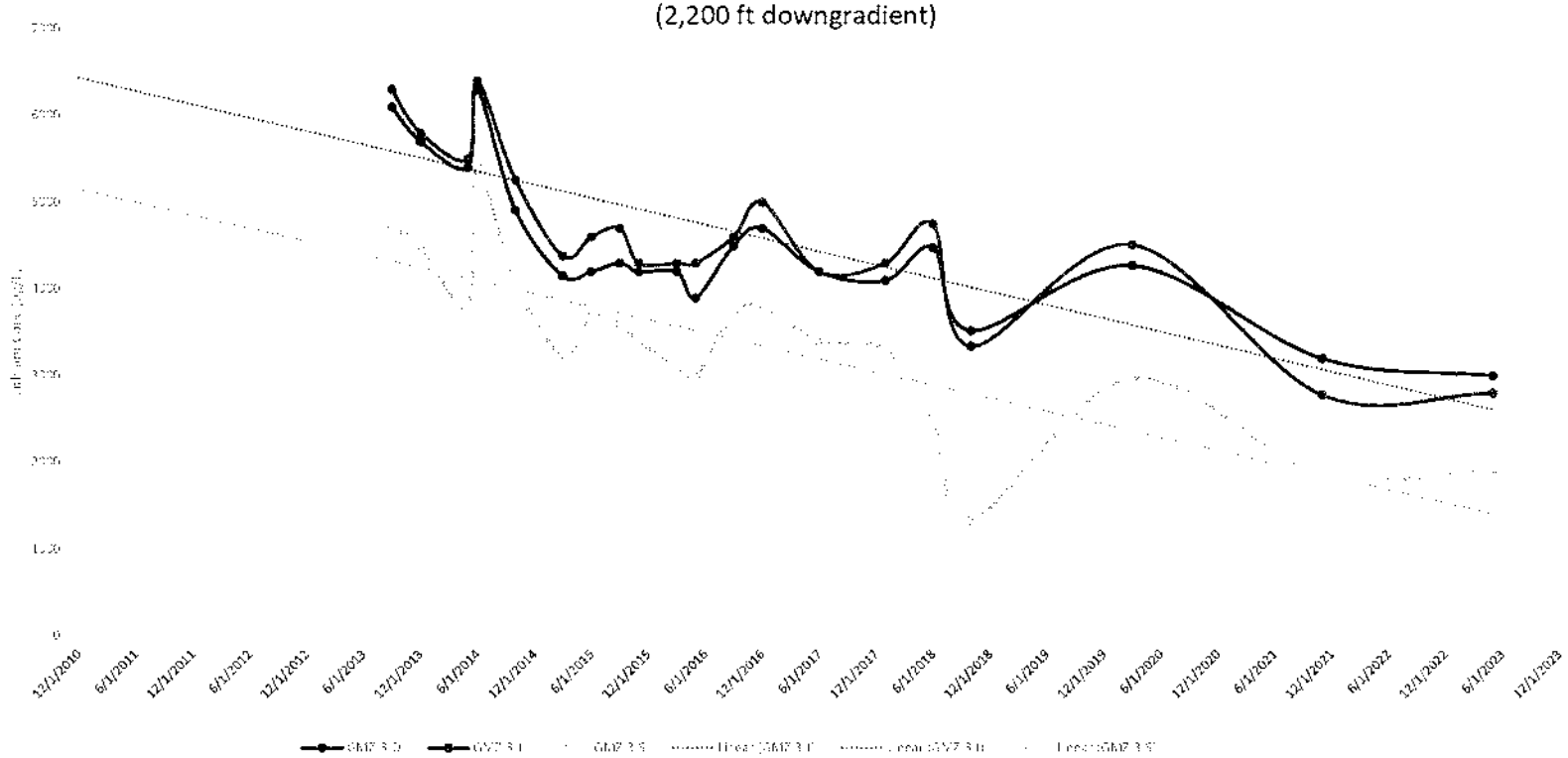


Figure B-3
Lithium in GMZ-4S, 4I, and 4D
(4,400 ft Downgradient)

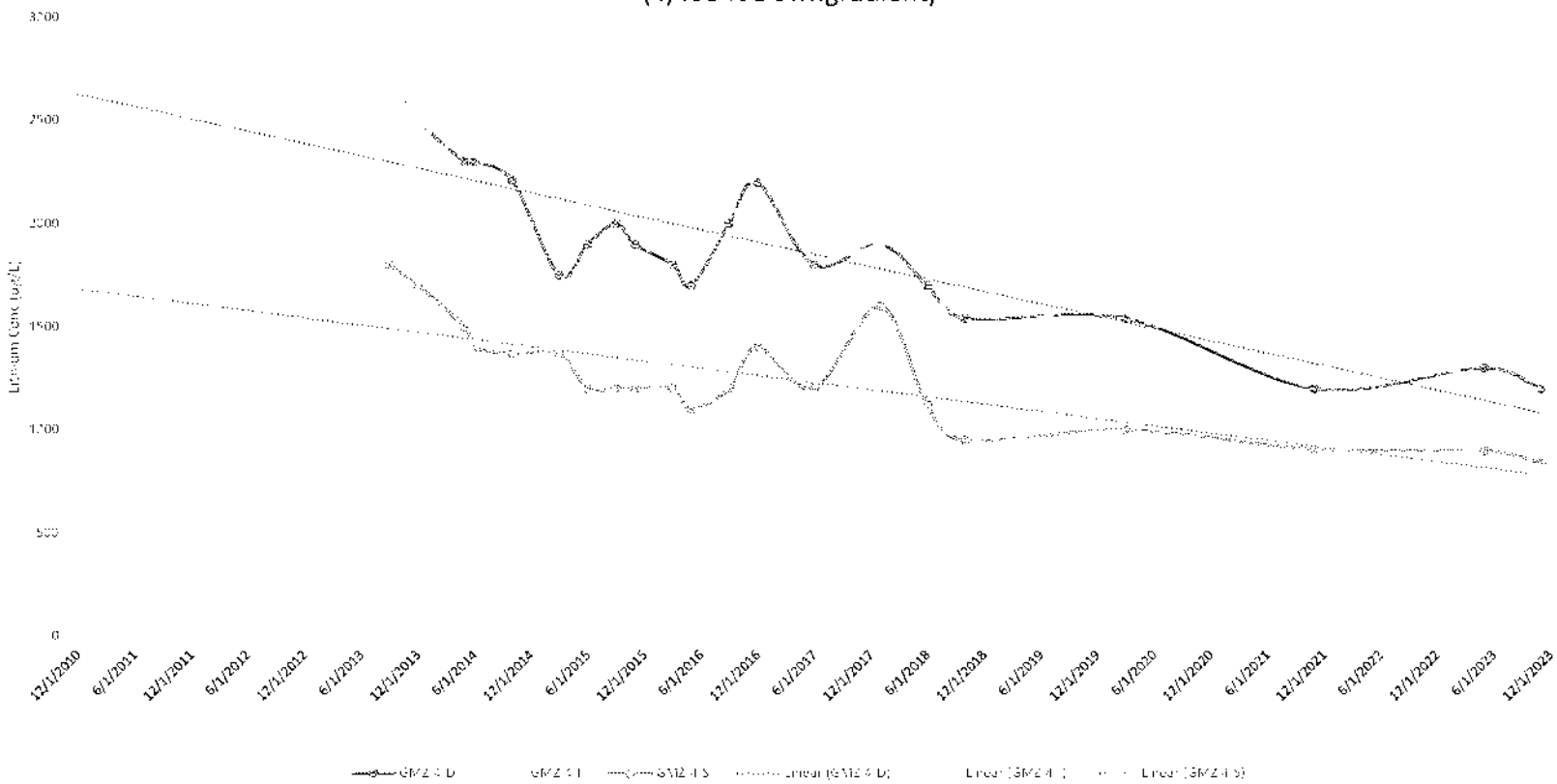


Figure B-4
Lithium In Deep Downgradient Wells

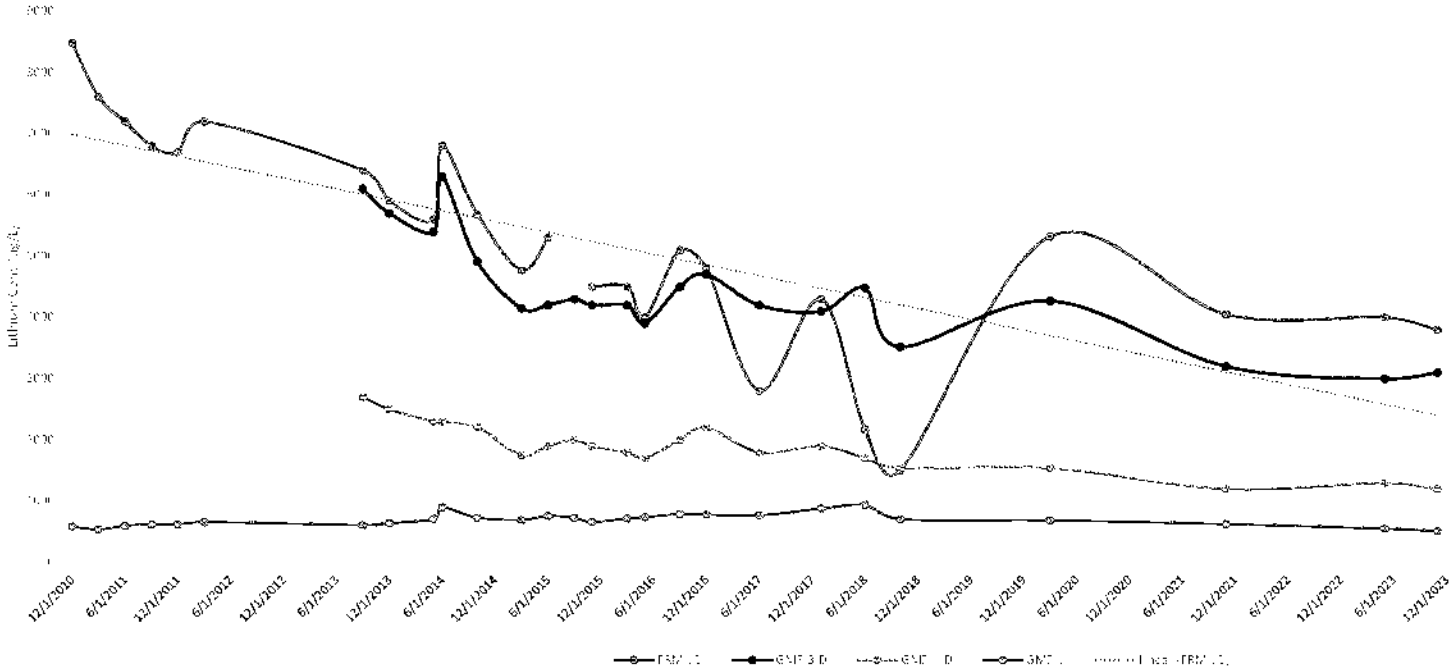


Figure B-5
Lithium In Downgradient Surface Water Locations and GMZ-1

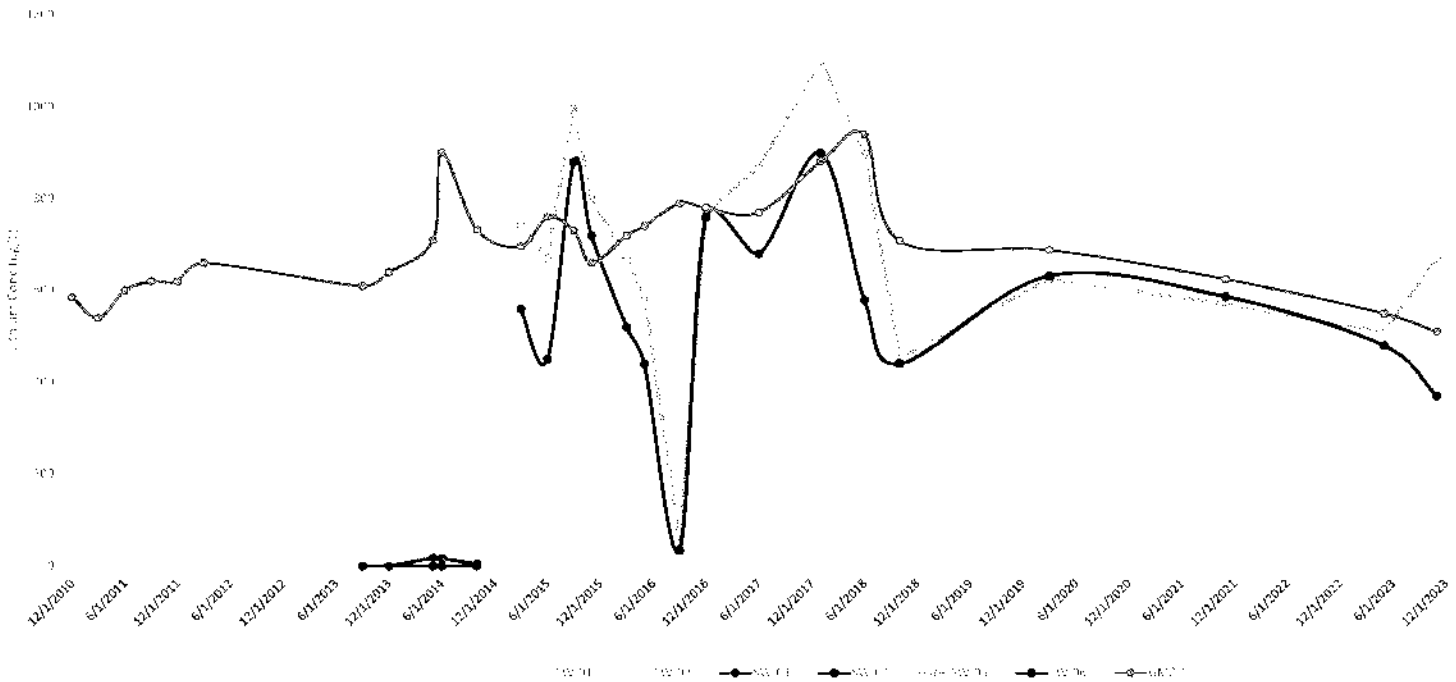


Figure B-6
Lithium in Select Downgradient Surface Water Locations

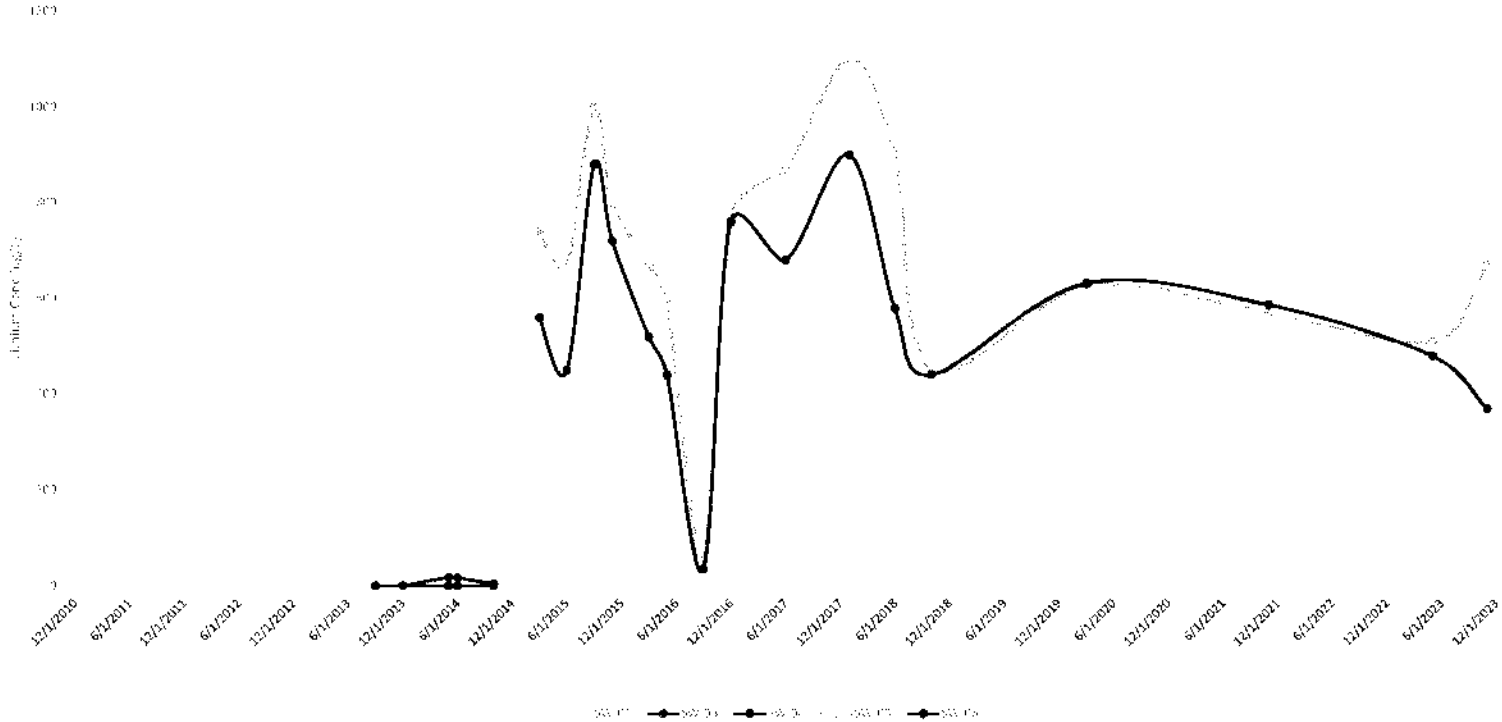
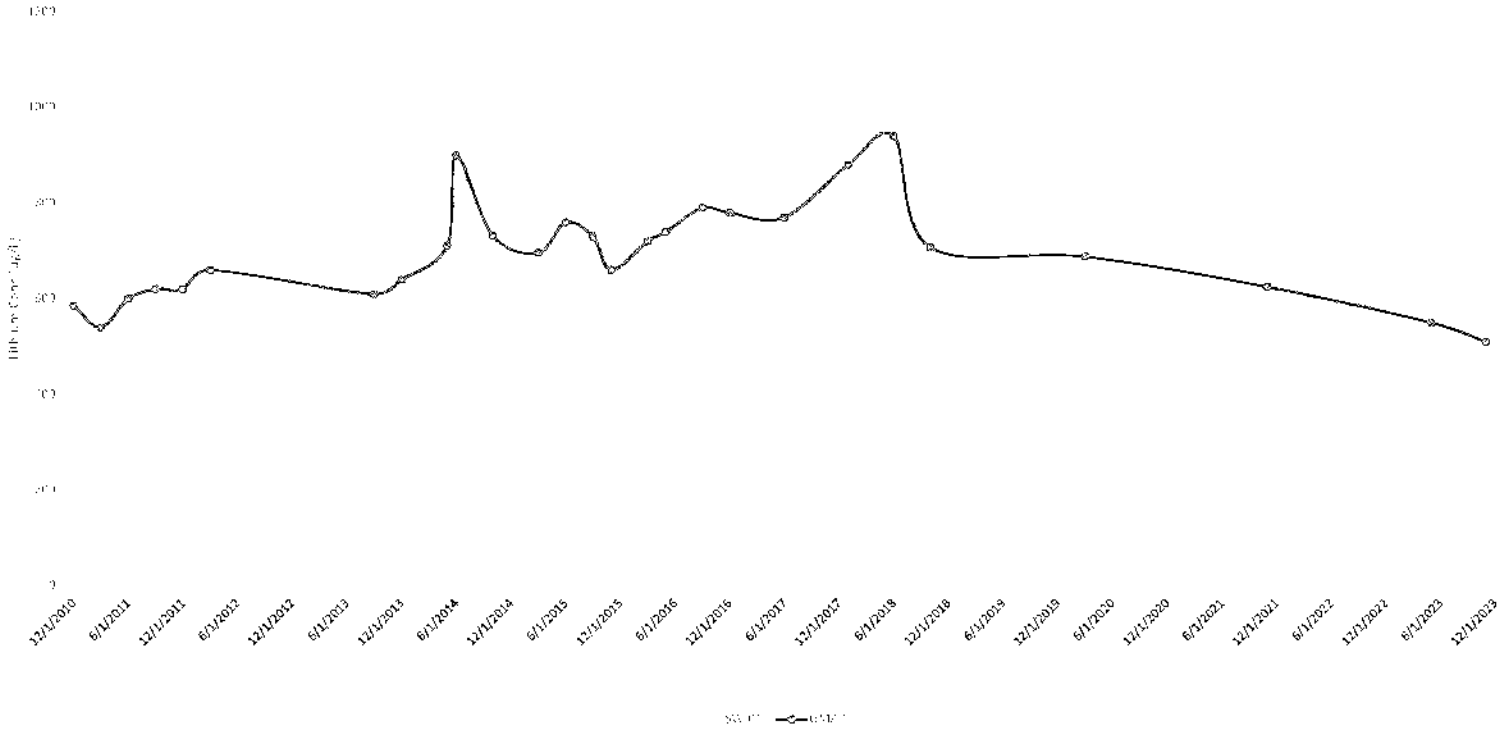


Figure B-7
Comparison of SW-01 and GMZ-1 (~Colocated Samples)



B-8

Comparison of Recent Data

	Round	26	27				
		5/1/2023	**11/20/2023**	**RPD**		**Higher**	**Lower**
(on-site)	ERM 1D	**4000**	**3800**	-1.28%			1
(on-site)	ERM 1S	100					
(on-site)	ERM 2D	79	95	4.60%		1	
(on-site)	ERM 2S	**350**	**360**	0.70%		1	
(on-site)	ERM 5	26	33	5.93%		1	
(on-site)	MW 22	**14000**	**13000**	-1.85%			1
Down Gra	GMZ-1	**550**	**510**	-1.89%			1
Down Gra	GMZ-2-D	50U	50U				
Down Gra	GMZ-2-I	50U	50U				
Down Gra	GMZ-2-S	50U	50U				
Down Gra	GMZ-3-D	**3000**	**3100**	0.82%		1	
Down Gra	GMZ-3-I	**2800**	**2700**	-0.91%			1
Down Gra	GMZ-3-S	**1900**	**2100**	2.50%		1	
Down Gra	GMZ-4-D	**1300**	**1200**	-2.00%			1
Down Gra	GMZ-4-I	**1400**	**1300**	-1.85%			1
Down Gra	GMZ-4-S	**900**	**840**	-1.72%			1
Surf Wate	SW-01	**600**	**680**	3.13%		1	
Surf Wate	SW-02	**160**	**170**	1.52%		1	
Surf Wate	SW-03						
Surf Wate	SW-04						
Surf Wate	SW-05	**510**	**670**	6.78%		1	
Surf Wate	SW-06	**480**	**370**	-6.47%			1
			Avg RPD	**0.50%**	**Total**	**8**	**8**

Lithium Data Summary
FOOTE MINERAL SAMPLE POINTS
GROUNDWATER MONITORING WELLS

LITHIUM

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
		12/1/2010	3/1/2011	6/1/2011	9/1/2011	12/1/2011	3/1/2012	########	12/1/2013	########	6/1/2014	10/1/2014	3/1/2015	6/1/2015	9/1/2015	11/1/2015	3/1/2016	6/1/2016	9/1/2016	12/1/2016	6/1/2017	12/1/2018	6/1/2019	12/1/2020	3/1/2021	12/1/2021	12/1/2021	12/31/2021
(on site)	EMW-1D	8475.8	7600	7200	6800	6700	7200	6400	5900	5600	6800	5680	4770	5300		4500	4500	4000	5100	4800	2800	4300	2170	1500	5320	4050	4000	3800
(on site)	EMW-1S	492.6	700	740	330	710	330	270	600	330	370	VS	170	220													130	
(on site)	EMW-2D	91.8	97	99	87	81	93	91	89	84	87	71	81.3	75	ND		82	82	73	89	86	84	81	74.5	81	6	82.7	79	91
(on site)	EMW-2S	357.5	370	330	320	320	360	330	350	380	360	341	330	330	2.1J		210	350	350	350	400	340	350	372	306	337	317	350	360
(on site)	EMW-3	26.5	26	22	50	16	25	26	22	24	30	30.9	26.5	24	26	27	28	23	24	32	29	31	23.5	26.6	26.1	26.6	26	25
(on site)	MW-22	24198	20000	26000	13000	14000	12800	20000	21000	16000	15000	23100	13200	18000	19000	17000	17000	22000	17000	23000	22000	19000	27300	24800	13300	13330	14000	13000
Duran Guad	GW-1	585	540	600	620	620	660	610	640	710	900	732	696	760	730	660	720	740	790	780	770	880	940	708	688	625	550	510
Duran Guad	GW-2D							10 J	10 J	ND	ND	0.19	1.7	1.6		81	84	1.1	1.8	1.9		1.6	2.2	2.5		6	4.2	
Duran Guad	GW-2							10 J	10 J	ND	ND	2.6 J	2 J	6 J	5	6.2	6	3.7	3.5	5		4.6	4.1	4.1	3.5		4.9	5.6
Duran Guad	GW-2S							10 J	10 J	ND	ND	1.7 J	0.16 J	2 J	340	5.9	1.6	1.7	1.5		1.7	1.5	1.1		2.6	2.6		2.7
Duran Guad	GW-3D							6100	5700	5400	6300	4910	4130	4200	4300	4200	4200	3900	4500	4700	4200	4100	4480	3520	4270	3260	3000	3100
Duran Guad	GW-3							6300	5800	5500	6400	5260	4380	4600	4700	4300	4300	4300	4600	5000	4200	4300	4750	3340	4510	2780	2800	2700
Duran Guad	GW-3S							4700	4500	3800	5400	4060	3240	3700	3600	3400	3100	3000	3700	3800	3400	3300	2480	1330	2970	1870	1900	2100
Duran Guad	GW-4D							2700	2500	2300	2300	2210	1750	1900	2000	1900	1800	1700	2000	2200	1800	1900	1700	1540	1540	1200	1300	1200
Duran Guad	GW-4							2200	2500	2400	2400	2360	1990	2200	2200	2000	2100	1800	2200	2300	1900	1900	2190	1360	1710	1270	1400	1300
Duran Guad	GW-4S							1800	1700	1500	1400	1370	1370	1200	1200	1200	1200	1100	1200	1400	1200	1600	1120	949	1000	987	980	840
Stat Water	SW-01							760	900	560	730	1060	730	700	1000	790	660	610	75	750	830	1100	819	470	610	569	600	680
Stat Water	SW-02							352	500	380	490	408	350	210	300	200	220	34	21	35	21	99	124	418	600	590	160	170
Stat Water	SW-03						9 J		10 J		18	17	4.1															
Stat Water	SW-04						9 J		10 J	ND	VS	VS																
Stat Water	SW-05												740	670	1000	800	670	590	53	770	870	1100	900	453	625	571	510	670
Stat Water	SW-06												560	450	880	720	520	460	35	760	680	900	579	441	632	587	480	370
Off-site Well	GW-1	585	540	600	620	620	660	610	640	710	900	732	696	760	730	660	720	740	790	780	770	880	940	708	688	625	550	510

eurofins

Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Amy Graham
Montrose Environmental Solutions Inc
1140 Valley Forge Road
Phoenixville, Pennsylvania 19460

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JOB DESCRIPTION

Foote Mineral PA

JOB NUMBER

410-152361-1

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster PA 17601

See page two for job notes and contact information.

myEOL

Eurofins Lancaster Laboratories Environment Testing, LLC

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

Barb Weyandt

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12/21/2023 3:18:00 PM
Revision 1

Authorized for release by
Barbara Weyandt, Project Manager
Barbara.Weyandt@et.eurofinsus.com
(717)556-7264

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.
·QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
·Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
·Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Barb Weyandt

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Definitions/Glossary

Client: Montrose Environmental Solutions Inc
Project/Site: Foote Mineral PA

Job ID: 410-152361-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
cn	Refer to Case Narrative for further detail

HPLC/IC

Qualifier	Qualifier Description
cn	Refer to Case Narrative for further detail
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 410-152361-1 **Eurofins Lancaster Laboratories Environment**

Job Narrative
410-152361-1

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REVISION

The report being provided is a revision of the original report sent on 12/15/2023. The report (revision 1) is being revised due to anions being added.

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 11/22/2023 4:05 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.5°C and 2.2°C

GC/MS VOA
Method 8260D: The continuing calibration verification (CCV) associated with batch 410-449219 recovered above the upper control limit for Bromoform. Non-detections of the affected analytes are reported. Any detections are considered estimated.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
Method 300.1B_28D: The following samples were diluted due to the nature of the sample matrix having interferents : ERM-5 (410-152361-15), GMZ-2D (410-152361-16), GMZ-2I (410-152361-17) and GMZ-2S (410-152361-18). Elevated reporting limits (RLs) are provided.

Method 300.1B_28D: The following sample was diluted due to the nature of the sample matrix having interferents: GMZ-2SD (410-152361-19). Elevated reporting limits (RLs) are provided.

Method 9056A_ORGFM_28D: The following sample(s) was analyzed outside of analytical holding time due to analysis added after holding time had past. : GMZ-3S (410-152361-1), GMZ-3I (410-152361-2), GMZ-3D (410-152361-3), GMZ-1 (410-152361-4), SW-05 (410-152361-5), SW-01 (410-152361-6[MS]), SW-02 (410-152361-7) and SW-02A (410-152361-8).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: Montrose Environmental Solutions Inc
Project/Site: Foote Mineral PA

Job ID: 410-152361-1

Client Sample ID: GMZ-3S

Lab Sample ID: 410-152361-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bromate	51		50	8.8	ug/L	10		300.1B	Total/NA
Bromide	1600		500	220	ug/L	10		300.1B	Total/NA
Fluoride	0.062	J H cn	0.10	0.040	mg/L	1		9056A	Total/NA
Bromide	1.4	H cn	0.50	0.20	mg/L	1		9056A	Total/NA
Boron	490		50	12	ug/L	1		6010D	Total Recoverable
Lithium	2100		50	11	ug/L	1		6010D	Total Recoverable
Chromium	22		2.0	0.55	ug/L	1		6020B	Total Recoverable

Client Sample ID: GMZ-3I

Lab Sample ID: 410-152361-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bromate	48	J	50	8.8	ug/L	10		300.1B	Total/NA
Bromide	2000		500	220	ug/L	10		300.1B	Total/NA
Fluoride	0.071	J H cn	0.10	0.040	mg/L	1		9056A	Total/NA
Bromide	1.7	H cn	0.50	0.20	mg/L	1		9056A	Total/NA
Boron	690		50	12	ug/L	1		6010D	Total Recoverable
Lithium	2700		50	11	ug/L	1		6010D	Total Recoverable
Chromium	25		2.0	0.55	ug/L	1		6020B	Total Recoverable

Client Sample ID: GMZ-3D

Lab Sample ID: 410-152361-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bromate	67		50	8.8	ug/L	10		300.1B	Total/NA
Bromide	2300		500	220	ug/L	10		300.1B	Total/NA
Fluoride	0.090	J H cn	0.10	0.040	mg/L	1		9056A	Total/NA
Bromide	2.0	H cn	0.50	0.20	mg/L	1		9056A	Total/NA
Boron	690		50	12	ug/L	1		6010D	Total Recoverable
Lithium	3100		50	11	ug/L	1		6010D	Total Recoverable
Chromium	27		2.0	0.55	ug/L	1		6020B	Total Recoverable

Client Sample ID: GMZ-1

Lab Sample ID: 410-152361-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bromate	85		50	8.8	ug/L	10		300.1B	Total/NA
Bromide	840		500	220	ug/L	10		300.1B	Total/NA
Bromide	0.71	H cn	0.50	0.20	mg/L	1		9056A	Total/NA
Boron	140		50	12	ug/L	1		6010D	Total Recoverable
Lithium	510		50	11	ug/L	1		6010D	Total Recoverable
Chromium	8.5		2.0	0.55	ug/L	1		6020B	Total Recoverable

Client Sample ID: SW-05

Lab Sample ID: 410-152361-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bromate	48	J	50	8.8	ug/L	10		300.1B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SW-05 (Continued)

Lab Sample ID: 410-152361-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bromide	760		500	220	ug/L	10		300.1B	Total/NA
Fluoride	0.041	J H cn	0.10	0.040	mg/L	1		9056A	Total/NA
Bromide	0.64	H cn	0.50	0.20	mg/L	1		9056A	Total/NA
Boron	200		50	12	ug/L	1		6010D	Total Recoverable
Lithium	670		50	11	ug/L	1		6010D	Total Recoverable
Chromium	10		2.0	0.55	ug/L	1		6020B	Total Recoverable

Client Sample ID: SW-01

Lab Sample ID: 410-152361-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bromate	47	J	50	8.8	ug/L	10		300.1B	Total/NA
Bromide	780		500	220	ug/L	10		300.1B	Total/NA
Fluoride	0.040	J H	0.10	0.040	mg/L	1		9056A	Total/NA
Bromide	0.65	H	0.50	0.20	mg/L	1		9056A	Total/NA
Boron	200		50	12	ug/L	1		6010D	Total Recoverable
Lithium	680		50	11	ug/L	1		6010D	Total Recoverable
Chromium	9.9		2.0	0.55	ug/L	1		6020B	Total Recoverable

Client Sample ID: SW-02

Lab Sample ID: 410-152361-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bromate	12	J	50	8.8	ug/L	10		300.1B	Total/NA
Bromide	300	J	500	220	ug/L	10		300.1B	Total/NA
Fluoride	0.049	J H cn	0.10	0.040	mg/L	1		9056A	Total/NA
Bromide	0.27	J H cn	0.50	0.20	mg/L	1		9056A	Total/NA
Boron	74		50	12	ug/L	1		6010D	Total Recoverable
Lithium	170		50	11	ug/L	1		6010D	Total Recoverable
Chromium	2.3		2.0	0.55	ug/L	1		6020B	Total Recoverable

Client Sample ID: SW-02A

Lab Sample ID: 410-152361-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bromate	21	J	50	8.8	ug/L	10		300.1B	Total/NA
Bromide	300	J	500	220	ug/L	10		300.1B	Total/NA
Fluoride	0.048	J H cn	0.10	0.040	mg/L	1		9056A	Total/NA
Bromide	0.27	J H cn	0.50	0.20	mg/L	1		9056A	Total/NA
Boron	68		50	12	ug/L	1		6010D	Total Recoverable
Lithium	170		50	11	ug/L	1		6010D	Total Recoverable
Chromium	2.2		2.0	0.55	ug/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: ERM-2S

Lab Sample ID: 410-152361-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	360		50	11	ug/L	1		6010D	Total Recoverable
Chromium	0.64	J	2.0	0.55	ug/L	1		6020B	Total Recoverable

Client Sample ID: ERM-2D

Lab Sample ID: 410-152361-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.041	J	0.10	0.040	mg/L	1		9056A	Total/NA
Lithium	95		50	11	ug/L	1		6010D	Total Recoverable

Client Sample ID: ERM-1D

Lab Sample ID: 410-152361-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bromate	120		50	8.8	ug/L	10		300.1B	Total/NA
Bromide	6600		500	220	ug/L	10		300.1B	Total/NA
Fluoride	0.24		0.10	0.040	mg/L	1		9056A	Total/NA
Bromide	6.2		0.50	0.20	mg/L	1		9056A	Total/NA
Boron	210		50	12	ug/L	1		6010D	Total Recoverable
Lithium	3800		50	11	ug/L	1		6010D	Total Recoverable
Antimony	0.83	J	1.0	0.20	ug/L	1		6020B	Total Recoverable
Chromium	34		2.0	0.55	ug/L	1		6020B	Total Recoverable

Client Sample ID: GMZ-4D

Lab Sample ID: 410-152361-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bromate	58		50	8.8	ug/L	10		300.1B	Total/NA
Bromide	1100		500	220	ug/L	10		300.1B	Total/NA
Fluoride	0.043	J	0.10	0.040	mg/L	1		9056A	Total/NA
Bromide	0.89		0.50	0.20	mg/L	1		9056A	Total/NA
Boron	350		50	12	ug/L	1		6010D	Total Recoverable
Lithium	1200		50	11	ug/L	1		6010D	Total Recoverable
Chromium	20		2.0	0.55	ug/L	1		6020B	Total Recoverable

Client Sample ID: GMZ-4I

Lab Sample ID: 410-152361-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bromate	41		25	4.4	ug/L	5		300.1B	Total/NA
Bromide	1000		250	110	ug/L	5		300.1B	Total/NA
Bromide	0.89		0.50	0.20	mg/L	1		9056A	Total/NA
Boron	410		50	12	ug/L	1		6010D	Total Recoverable
Lithium	1300		50	11	ug/L	1		6010D	Total Recoverable
Chromium	21		2.0	0.55	ug/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

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Client Sample ID: GMZ-4S — Lab Sample ID: 410-152361-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bromate	35	J	50	8.8	ug/L	10		300.1B	Total/NA
Bromide	730		500	220	ug/L	10		300.1B	Total/NA
Bromide	0.60		0.50	0.20	mg/L	1		9056A	Total/NA
Boron	250		50	12	ug/L	1		6010D	Total Recoverable
Lithium	840		50	11	ug/L	1		6010D	Total Recoverable
Chromium	13		2.0	0.55	ug/L	1		6020B	Total Recoverable

Client Sample ID: ERM-5 — Lab Sample ID: 410-152361-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	74		50	12	ug/L	1		6010D	Total Recoverable
Lithium	33	J	50	11	ug/L	1		6010D	Total Recoverable

Client Sample ID: GMZ-2D — Lab Sample ID: 410-152361-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.066	J	0.10	0.040	mg/L	1		9056A	Total/NA

Client Sample ID: GMZ-2I — Lab Sample ID: 410-152361-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.093	J	0.10	0.040	mg/L	1		9056A	Total/NA

Client Sample ID: GMZ-2S — Lab Sample ID: 410-152361-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.066	J	0.10	0.040	mg/L	1		9056A	Total/NA
Arsenic	0.88	J	2.0	0.68	ug/L	1		6020B	Total Recoverable

Client Sample ID: GMZ-2SD — Lab Sample ID: 410-152361-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.075	J	0.10	0.040	mg/L	1		9056A	Total/NA
Arsenic	0.85	J	2.0	0.68	ug/L	1		6020B	Total Recoverable

Client Sample ID: MW-22 — Lab Sample ID: 410-152361-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.5		1.0	0.30	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	5.8		1.0	0.30	ug/L	1		8260D	Total/NA
Tetrachloroethene	150		1.0	0.30	ug/L	1		8260D	Total/NA
Trichloroethene	8.0		1.0	0.30	ug/L	1		8260D	Total/NA
Bromide	110	J	250	110	ug/L	5		300.1B	Total/NA
Fluoride	0.76		0.10	0.040	mg/L	1		9056A	Total/NA
Boron	3500		50	12	ug/L	1		6010D	Total Recoverable
Lithium	13000		50	11	ug/L	1		6010D	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-22 (Continued)

Lab Sample ID: 410-152361-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.2		2.0	0.68	ug/L	1		6020B	Total Recoverable
Chromium	1.0	J	2.0	0.55	ug/L	1		6020B	Total Recoverable
Thallium	0.23	J	0.50	0.13	ug/L	1		6020B	Total Recoverable

Client Sample ID: MW-22D

Lab Sample ID: 410-152361-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.4		1.0	0.30	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	5.7		1.0	0.30	ug/L	1		8260D	Total/NA
Tetrachloroethene	150		1.0	0.30	ug/L	1		8260D	Total/NA
Trichloroethene	7.7		1.0	0.30	ug/L	1		8260D	Total/NA

Client Sample ID: SW-06

Lab Sample ID: 410-152361-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bromate	23	J	25	4.4	ug/L	5		300.1B	Total/NA
Bromide	570		250	110	ug/L	5		300.1B	Total/NA
Bromide	1.1	J	2.5	1.0	mg/L	5		9056A	Total/NA
Boron	170		50	12	ug/L	1		6010D	Total Recoverable
Lithium	370		50	11	ug/L	1		6010D	Total Recoverable
Chromium	3.2		2.0	0.55	ug/L	1		6020B	Total Recoverable
Thallium	0.19	J	0.50	0.13	ug/L	1		6020B	Total Recoverable

Client Sample ID: TB-01-111923

Lab Sample ID: 410-152361-23

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: GMZ-3S

Date Collected: 11/19/23 10:12
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-1

Matrix: Water

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	**51**		50	8.8	ug/L			12/12/23 18:40	10
Bromide	**1600**		500	220	ug/L			12/12/23 18:40	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*102*		*90 - 115*		*12/12/23 18:40*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.062**	**J H cn**	0.10	0.040	mg/L			12/18/23 18:26	1
Bromide	**1.4**	**H cn**	0.50	0.20	mg/L			12/18/23 18:26	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**490**		50	12	ug/L		11/29/23 12:22	12/11/23 09:37	1
Lithium	**2100**		50	11	ug/L		11/29/23 12:22	12/10/23 18:29	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/29/23 12:22	12/07/23 08:46	1
Arsenic	ND		2.0	0.68	ug/L		11/29/23 12:22	12/07/23 08:46	1
Chromium	**22**		2.0	0.55	ug/L		11/29/23 12:22	12/07/23 08:46	1
Thallium	ND		0.50	0.13	ug/L		11/29/23 12:22	12/07/23 08:46	1

Client Sample ID: GMZ-3I

Date Collected: 11/19/23 11:00
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-2

Matrix: Water

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	**48**	**J**	50	8.8	ug/L			12/12/23 19:10	10
Bromide	**2000**		500	220	ug/L			12/12/23 19:10	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*102*		*90 - 115*		*12/12/23 19:10*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.071**	**J H cn**	0.10	0.040	mg/L			12/18/23 18:36	1
Bromide	**1.7**	**H cn**	0.50	0.20	mg/L			12/18/23 18:36	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**690**		50	12	ug/L		11/29/23 12:22	12/11/23 09:15	1
Lithium	**2700**		50	11	ug/L		11/29/23 12:22	12/10/23 18:17	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/29/23 12:22	12/07/23 08:32	1

Client Sample ID: GMZ-3I

Date Collected: 11/19/23 11:00
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-2

Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		11/29/23 12:22	12/07/23 08:32	1
Chromium	**25**		2.0	0.55	ug/L		11/29/23 12:22	12/07/23 08:32	1
Thallium	ND		0.50	0.13	ug/L		11/29/23 12:22	12/07/23 08:32	1

Client Sample ID: GMZ-3D

Date Collected: 11/19/23 11:45
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-3

Matrix: Water

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	**67**		50	8.8	ug/L			12/12/23 22:07	10
Bromide	**2300**		500	220	ug/L			12/12/23 22:07	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*103*		*90 - 115*		*12/12/23 22:07*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.090**	**J H cn**	0.10	0.040	mg/L			12/18/23 18:47	1
Bromide	**2.0**	**H cn**	0.50	0.20	mg/L			12/18/23 18:47	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**690**		50	12	ug/L		11/30/23 14:41	12/02/23 04:07	1
Lithium	**3100**		50	11	ug/L		11/30/23 14:41	12/02/23 04:07	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/30/23 14:41	12/05/23 17:55	1
Arsenic	ND		2.0	0.68	ug/L		11/30/23 14:41	12/05/23 17:55	1
Chromium	**27**		2.0	0.55	ug/L		11/30/23 14:41	12/05/23 17:55	1
Thallium	ND		0.50	0.13	ug/L		11/30/23 14:41	12/05/23 17:55	1

Client Sample ID: GMZ-1

Date Collected: 11/19/23 13:08
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-4

Matrix: Water

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	**85**		50	8.8	ug/L			12/12/23 22:36	10
Bromide	**840**		500	220	ug/L			12/12/23 22:36	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*102*		*90 - 115*		*12/12/23 22:36*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND	H cn	0.10	0.040	mg/L			12/18/23 18:58	1

Client Sample ID: GMZ-1

Lab Sample ID: 410-152361-4

Date Collected: 11/19/23 13:08
Matrix: Water
Date Received: 11/22/23 16:05

Method: SW846 9056A - Anions, Ion Chromatography (Continued)
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	**0.71**	**H cn**	0.50	0.20	mg/L			12/18/23 18:58	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**140**		50	12	ug/L		11/30/23 14:41	12/02/23 03:32	1
Lithium	**510**		50	11	ug/L		11/30/23 14:41	12/02/23 03:32	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/30/23 14:41	12/05/23 17:35	1
Arsenic	ND		2.0	0.68	ug/L		11/30/23 14:41	12/05/23 17:35	1
Chromium	**8.5**		2.0	0.55	ug/L		11/30/23 14:41	12/05/23 17:35	1
Thallium	ND		0.50	0.13	ug/L		11/30/23 14:41	12/05/23 17:35	1

Client Sample ID: SW-05

Lab Sample ID: 410-152361-5

Date Collected: 11/19/23 14:00
Matrix: Water
Date Received: 11/22/23 16:05

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	**48**	**J**	50	8.8	ug/L			12/12/23 23:06	10
Bromide	**760**		500	220	ug/L			12/12/23 23:06	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*102*		*90 - 115*		*12/12/23 23:06*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.041**	**J H cn**	0.10	0.040	mg/L			12/18/23 19:08	1
Bromide	**0.64**	**H cn**	0.50	0.20	mg/L			12/18/23 19:08	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**200**		50	12	ug/L		11/30/23 14:41	12/02/23 03:29	1
Lithium	**670**		50	11	ug/L		11/30/23 14:41	12/02/23 03:29	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/30/23 14:41	12/05/23 17:33	1
Arsenic	ND		2.0	0.68	ug/L		11/30/23 14:41	12/05/23 17:33	1
Chromium	**10**		2.0	0.55	ug/L		11/30/23 14:41	12/05/23 17:33	1
Thallium	ND		0.50	0.13	ug/L		11/30/23 14:41	12/05/23 17:33	1

Client Sample ID: SW-01

Date Collected: 11/19/23 14:30
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-6

Matrix: Water

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	**47**	**J**	50	8.8	ug/L			12/12/23 20:38	10
Bromide	**780**		500	220	ug/L			12/12/23 20:38	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*101*		*90 - 115*		*12/12/23 20:38*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.040**	**J H**	0.10	0.040	mg/L			12/18/23 20:02	1
Bromide	**0.65**	**H**	0.50	0.20	mg/L			12/18/23 20:02	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**200**		50	12	ug/L		11/30/23 14:41	12/02/23 03:10	1
Lithium	**680**		50	11	ug/L		11/30/23 14:41	12/02/23 03:10	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/30/23 14:41	12/05/23 17:15	1
Arsenic	ND		2.0	0.68	ug/L		11/30/23 14:41	12/05/23 17:15	1
Chromium	**9.9**		2.0	0.55	ug/L		11/30/23 14:41	12/05/23 17:15	1
Thallium	ND		0.50	0.13	ug/L		11/30/23 14:41	12/05/23 17:15	1

Client Sample ID: SW-02

Date Collected: 11/19/23 15:00
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-7

Matrix: Water

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	**12**	**J**	50	8.8	ug/L			12/12/23 23:35	10
Bromide	**300**	**J**	500	220	ug/L			12/12/23 23:35	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*103*		*90 - 115*		*12/12/23 23:35*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.049**	**J H cn**	0.10	0.040	mg/L			12/18/23 19:19	1
Bromide	**0.27**	**J H cn**	0.50	0.20	mg/L			12/18/23 19:19	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**74**		50	12	ug/L		11/30/23 14:41	12/02/23 04:04	1
Lithium	**170**		50	11	ug/L		11/30/23 14:41	12/02/23 04:04	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/30/23 14:41	12/05/23 17:53	1

Client Sample ID: SW-02

Date Collected: 11/19/23 15:00
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-7

Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		11/30/23 14:41	12/05/23 17:53	1
Chromium	**2.3**		2.0	0.55	ug/L		11/30/23 14:41	12/05/23 17:53	1
Thallium	ND		0.50	0.13	ug/L		11/30/23 14:41	12/05/23 17:53	1

Client Sample ID: SW-02A

Date Collected: 11/19/23 15:15
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-8

Matrix: Water

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	**21**	**J**	50	8.8	ug/L			12/13/23 00:05	10
Bromide	**300**	**J**	500	220	ug/L			12/13/23 00:05	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*102*		*90 - 115*		*12/13/23 00:05*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.048**	**J H cn**	0.10	0.040	mg/L			12/18/23 19:30	1
Bromide	**0.27**	**J H cn**	0.50	0.20	mg/L			12/18/23 19:30	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**68**		50	12	ug/L		11/30/23 14:41	12/02/23 03:48	1
Lithium	**170**		50	11	ug/L		11/30/23 14:41	12/02/23 03:48	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/30/23 14:41	12/05/23 17:37	1
Arsenic	ND		2.0	0.68	ug/L		11/30/23 14:41	12/05/23 17:37	1
Chromium	**2.2**		2.0	0.55	ug/L		11/30/23 14:41	12/05/23 17:37	1
Thallium	ND		0.50	0.13	ug/L		11/30/23 14:41	12/05/23 17:37	1

Client Sample ID: ERM-2S

Date Collected: 11/20/23 09:02
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-9

Matrix: Water

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		50	8.8	ug/L			12/13/23 00:34	10
Bromide	ND		500	220	ug/L			12/13/23 00:34	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*102*		*90 - 115*		*12/13/23 00:34*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.10	0.040	mg/L			12/18/23 15:14	1

Client Sample ID: ERM-2S

Lab Sample ID: 410-152361-9

Date Collected: 11/20/23 09:02
Matrix: Water
Date Received: 11/22/23 16:05

Method: SW846 9056A - Anions, Ion Chromatography (Continued)
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.50	0.20	mg/L			12/18/23 15:14	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		50	12	ug/L		11/29/23 12:22	12/11/23 09:19	1
Lithium	**360**		50	11	ug/L		11/29/23 12:22	12/10/23 18:20	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/29/23 12:22	12/07/23 08:34	1
Arsenic	ND		2.0	0.68	ug/L		11/29/23 12:22	12/07/23 08:34	1
Chromium	**0.64**	**J**	2.0	0.55	ug/L		11/29/23 12:22	12/07/23 08:34	1
Thallium	ND		0.50	0.13	ug/L		11/29/23 12:22	12/07/23 08:34	1

Client Sample ID: ERM-2D

Lab Sample ID: 410-152361-10

Date Collected: 11/20/23 09:57
Matrix: Water
Date Received: 11/22/23 16:05

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		50	8.8	ug/L			12/13/23 01:04	10
Bromide	ND		500	220	ug/L			12/13/23 01:04	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*103*		*90 - 115*		*12/13/23 01:04*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.041**	**J**	0.10	0.040	mg/L			12/18/23 15:25	1
Bromide	ND		0.50	0.20	mg/L			12/18/23 15:25	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		50	12	ug/L		11/30/23 14:41	12/02/23 03:57	1
Lithium	**95**		50	11	ug/L		11/30/23 14:41	12/02/23 03:57	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/30/23 14:41	12/05/23 17:43	1
Arsenic	ND		2.0	0.68	ug/L		11/30/23 14:41	12/05/23 17:43	1
Chromium	ND		2.0	0.55	ug/L		11/30/23 14:41	12/05/23 17:43	1
Thallium	ND		0.50	0.13	ug/L		11/30/23 14:41	12/05/23 17:43	1

Client Sample ID: ERM-1D

Lab Sample ID: 410-152361-11

Date Collected: 11/20/23 11:22
Matrix: Water
Date Received: 11/22/23 16:05

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	**120**		50	8.8	ug/L			12/13/23 14:19	10
Bromide	**6600**		500	220	ug/L			12/13/23 14:19	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*103*		*90 - 115*		*12/13/23 14:19*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.24**		0.10	0.040	mg/L			12/18/23 15:35	1
Bromide	**6.2**		0.50	0.20	mg/L			12/18/23 15:35	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**210**		50	12	ug/L		11/29/23 11:56	12/01/23 20:59	1
Lithium	**3800**		50	11	ug/L		11/29/23 11:56	12/01/23 20:59	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.83**	**J**	1.0	0.20	ug/L		11/29/23 11:56	12/05/23 09:42	1
Arsenic	ND		2.0	0.68	ug/L		11/29/23 11:56	12/05/23 09:42	1
Chromium	**34**		2.0	0.55	ug/L		11/29/23 11:56	12/05/23 09:42	1
Thallium	ND		0.50	0.13	ug/L		11/29/23 11:56	12/05/23 09:42	1

Client Sample ID: GMZ-4D

Lab Sample ID: 410-152361-12

Date Collected: 11/20/23 14:57
Matrix: Water
Date Received: 11/22/23 16:05

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	**58**		50	8.8	ug/L			12/13/23 14:49	10
Bromide	**1100**		500	220	ug/L			12/13/23 14:49	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*103*		*90 - 115*		*12/13/23 14:49*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.043**	**J**	0.10	0.040	mg/L			12/18/23 15:46	1
Bromide	**0.89**		0.50	0.20	mg/L			12/18/23 15:46	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**350**		50	12	ug/L		11/29/23 12:22	12/11/23 09:31	1
Lithium	**1200**		50	11	ug/L		11/29/23 12:22	12/10/23 18:23	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/29/23 12:22	12/07/23 08:36	1

Client Sample ID: GMZ-4D

Date Collected: 11/20/23 14:57
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-12

Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		11/29/23 12:22	12/07/23 08:36	1
Chromium	**20**		2.0	0.55	ug/L		11/29/23 12:22	12/07/23 08:36	1
Thallium	ND		0.50	0.13	ug/L		11/29/23 12:22	12/07/23 08:36	1

Client Sample ID: GMZ-4I

Date Collected: 11/20/23 15:52
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-13

Matrix: Water

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	**41**		25	4.4	ug/L			12/15/23 03:09	5
Bromide	**1000**		250	110	ug/L			12/15/23 03:09	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*101*		*90 - 115*		*12/15/23 03:09*	*5*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.10	0.040	mg/L			12/18/23 15:57	1
Bromide	**0.89**		0.50	0.20	mg/L			12/18/23 15:57	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**410**		50	12	ug/L		11/29/23 12:22	12/11/23 09:12	1
Lithium	**1300**		50	11	ug/L		11/29/23 12:22	12/10/23 18:14	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/29/23 12:22	12/07/23 08:30	1
Arsenic	ND		2.0	0.68	ug/L		11/29/23 12:22	12/07/23 08:30	1
Chromium	**21**		2.0	0.55	ug/L		11/29/23 12:22	12/07/23 08:30	1
Thallium	ND		0.50	0.13	ug/L		11/29/23 12:22	12/07/23 08:30	1

Client Sample ID: GMZ-4S

Date Collected: 11/20/23 16:37
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-14

Matrix: Water

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	**35**	**J**	50	8.8	ug/L			12/13/23 05:29	10
Bromide	**730**		500	220	ug/L			12/13/23 05:29	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*103*		*90 - 115*		*12/13/23 05:29*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.10	0.040	mg/L			12/18/23 17:33	1

Client Sample ID: GMZ-4S

Lab Sample ID: 410-152361-14

Date Collected: 11/20/23 16:37
Matrix: Water
Date Received: 11/22/23 16:05

Method: SW846 9056A - Anions, Ion Chromatography (Continued)
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	**0.60**		0.50	0.20	mg/L			12/18/23 17:33	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**250**		50	12	ug/L		11/30/23 14:41	12/02/23 04:32	1
Lithium	**840**		50	11	ug/L		11/30/23 14:41	12/02/23 04:32	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/30/23 14:41	12/05/23 18:14	1
Arsenic	ND		2.0	0.68	ug/L		11/30/23 14:41	12/05/23 18:14	1
Chromium	**13**		2.0	0.55	ug/L		11/30/23 14:41	12/05/23 18:14	1
Thallium	ND		0.50	0.13	ug/L		11/30/23 14:41	12/05/23 18:14	1

Client Sample ID: ERM-5

Lab Sample ID: 410-152361-15

Date Collected: 11/21/23 08:00
Matrix: Water
Date Received: 11/22/23 16:05

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND	D cn	50	8.8	ug/L			12/13/23 08:56	10
Bromide	ND	D cn	500	220	ug/L			12/13/23 08:56	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*102*	*cn*	*90 - 115*		*12/13/23 08:56*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.10	0.040	mg/L			12/18/23 16:07	1
Bromide	ND		0.50	0.20	mg/L			12/18/23 16:07	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**74**		50	12	ug/L		11/30/23 14:41	12/02/23 04:00	1
Lithium	**33**	**J**	50	11	ug/L		11/30/23 14:41	12/02/23 04:00	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/30/23 14:41	12/05/23 17:45	1
Arsenic	ND		2.0	0.68	ug/L		11/30/23 14:41	12/05/23 17:45	1
Chromium	ND		2.0	0.55	ug/L		11/30/23 14:41	12/05/23 17:45	1
Thallium	ND		0.50	0.13	ug/L		11/30/23 14:41	12/05/23 17:45	1

Client Sample ID: GMZ-2D

Date Collected: 11/21/23 09:22
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-16

Matrix: Water

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND	D cn	50	8.8	ug/L			12/13/23 09:25	10
Bromide	ND	D cn	500	220	ug/L			12/13/23 09:25	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*103*	*cn*	*90 - 115*		*12/13/23 09:25*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.066	J	0.10	0.040	mg/L			12/18/23 16:18	1
Bromide	ND		0.50	0.20	mg/L			12/18/23 16:18	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		50	12	ug/L		11/29/23 12:22	12/11/23 09:34	1
Lithium	ND		50	11	ug/L		11/29/23 12:22	12/10/23 18:26	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/29/23 12:22	12/07/23 08:38	1
Arsenic	ND		2.0	0.68	ug/L		11/29/23 12:22	12/07/23 08:38	1
Chromium	ND		2.0	0.55	ug/L		11/29/23 12:22	12/07/23 08:38	1
Thallium	ND		0.50	0.13	ug/L		11/29/23 12:22	12/07/23 08:38	1

Client Sample ID: GMZ-2I

Date Collected: 11/21/23 09:57
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-17

Matrix: Water

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND	D cn	50	8.8	ug/L			12/13/23 09:54	10
Bromide	ND	D cn	500	220	ug/L			12/13/23 09:54	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*104*	*cn*	*90 - 115*		*12/13/23 09:54*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.093	J	0.10	0.040	mg/L			12/18/23 16:29	1
Bromide	ND		0.50	0.20	mg/L			12/18/23 16:29	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		50	12	ug/L		11/29/23 12:22	12/11/23 09:44	1
Lithium	ND		50	11	ug/L		11/29/23 12:22	12/10/23 18:45	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/29/23 12:22	12/07/23 08:50	1

Client Sample ID: GMZ-2I

Date Collected: 11/21/23 09:57
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-17

Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		11/29/23 12:22	12/07/23 08:50	1
Chromium	ND		2.0	0.55	ug/L		11/29/23 12:22	12/07/23 08:50	1
Thallium	ND		0.50	0.13	ug/L		11/29/23 12:22	12/07/23 08:50	1

Client Sample ID: GMZ-2S

Date Collected: 11/21/23 10:37
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-18

Matrix: Water

Method: EPA 300.1B - Disinfection By-Products, (IC)

Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND	D cn	50	8.8	ug/L			12/13/23 10:24	10
Bromide	ND	D cn	500	220	ug/L			12/13/23 10:24	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*102*	*cn*	*90 - 115*		*12/13/23 10:24*	*10*

Method: SW846 9056A - Anions, Ion Chromatography

Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.066**	**J**	0.10	0.040	mg/L			12/18/23 16:39	1
Bromide	ND		0.50	0.20	mg/L			12/18/23 16:39	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		50	12	ug/L		11/30/23 14:41	12/02/23 03:51	1
Lithium	ND		50	11	ug/L		11/30/23 14:41	12/02/23 03:51	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/30/23 14:41	12/05/23 17:39	1
Arsenic	**0.88**	**J**	2.0	0.68	ug/L		11/30/23 14:41	12/05/23 17:39	1
Chromium	ND		2.0	0.55	ug/L		11/30/23 14:41	12/05/23 17:39	1
Thallium	ND		0.50	0.13	ug/L		11/30/23 14:41	12/05/23 17:39	1

Client Sample ID: GMZ-2SD

Date Collected: 11/21/23 11:07
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-19

Matrix: Water

Method: EPA 300.1B - Disinfection By-Products, (IC)

Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND	D cn	25	4.4	ug/L			12/15/23 04:37	5
Bromide	ND	D cn	250	110	ug/L			12/15/23 04:37	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*102*	*cn*	*90 - 115*		*12/15/23 04:37*	*5*

Method: SW846 9056A - Anions, Ion Chromatography

Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.075**	**J**	0.10	0.040	mg/L			12/18/23 18:05	1

Client Sample ID: GMZ-2SD

Date Collected: 11/21/23 11:07
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-19

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography (Continued)
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.50	0.20	mg/L			12/18/23 18:05	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		50	12	ug/L		11/30/23 14:41	12/02/23 03:54	1
Lithium	ND		50	11	ug/L		11/30/23 14:41	12/02/23 03:54	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/30/23 14:41	12/05/23 17:41	1
Arsenic	**0.85**	**J**	2.0	0.68	ug/L		11/30/23 14:41	12/05/23 17:41	1
Chromium	ND		2.0	0.55	ug/L		11/30/23 14:41	12/05/23 17:41	1
Thallium	ND		0.50	0.13	ug/L		11/30/23 14:41	12/05/23 17:41	1

Client Sample ID: MW-22

Date Collected: 11/21/23 11:37
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-20

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		1.0	0.30	ug/L			12/01/23 20:15	1
Benzene	**1.5**		1.0	0.30	ug/L			12/01/23 20:15	1
Bromoform	ND	cn	4.0	1.0	ug/L			12/01/23 20:15	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			12/01/23 20:15	1
Chloroform	ND		1.0	0.30	ug/L			12/01/23 20:15	1
cis-1,2-Dichloroethene	**5.8**		1.0	0.30	ug/L			12/01/23 20:15	1
Ethylbenzene	ND		1.0	0.40	ug/L			12/01/23 20:15	1
Tetrachloroethene	**150**		1.0	0.30	ug/L			12/01/23 20:15	1
trans-1,2-Dichloroethene	ND		2.0	0.70	ug/L			12/01/23 20:15	1
Trichloroethene	**8.0**		1.0	0.30	ug/L			12/01/23 20:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*80 - 120*		*12/01/23 20:15*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*12/01/23 20:15*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 120*		*12/01/23 20:15*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*12/01/23 20:15*	*1*

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		25	4.4	ug/L			12/15/23 05:07	5
Bromide	**110**	**J**	250	110	ug/L			12/15/23 05:07	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*102*		*90 - 115*		*12/15/23 05:07*	*5*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.76**		0.10	0.040	mg/L			12/18/23 18:15	1

Client Sample ID: MW-22

Date Collected: 11/21/23 11:37
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-20

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography (Continued)

Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.50	0.20	mg/L			12/18/23 18:15	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**3500**		50	12	ug/L		12/01/23 14:13	12/05/23 21:00	1
Lithium	**13000**		50	11	ug/L		12/01/23 14:13	12/05/23 21:00	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		12/01/23 14:13	12/05/23 16:29	1
Arsenic	**2.2**		2.0	0.68	ug/L		12/01/23 14:13	12/05/23 16:29	1
Chromium	**1.0**	**J**	2.0	0.55	ug/L		12/01/23 14:13	12/05/23 16:29	1
Thallium	**0.23**	**J**	0.50	0.13	ug/L		12/01/23 14:13	12/05/23 16:29	1

Client Sample ID: MW-22D

Date Collected: 11/21/23 12:07
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-21

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		1.0	0.30	ug/L			12/01/23 22:14	1
Benzene	**1.4**		1.0	0.30	ug/L			12/01/23 22:14	1
Bromoform	ND	cn	4.0	1.0	ug/L			12/01/23 22:14	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			12/01/23 22:14	1
Chloroform	ND		1.0	0.30	ug/L			12/01/23 22:14	1
cis-1,2-Dichloroethene	**5.7**		1.0	0.30	ug/L			12/01/23 22:14	1
Ethylbenzene	ND		1.0	0.40	ug/L			12/01/23 22:14	1
Tetrachloroethene	**150**		1.0	0.30	ug/L			12/01/23 22:14	1
trans-1,2-Dichloroethene	ND		2.0	0.70	ug/L			12/01/23 22:14	1
Trichloroethene	**7.7**		1.0	0.30	ug/L			12/01/23 22:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*		*12/01/23 22:14*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*12/01/23 22:14*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*12/01/23 22:14*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*12/01/23 22:14*	*1*

Client Sample ID: SW-06

Date Collected: 11/21/23 12:30
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-22

Matrix: Water

Method: EPA 300.1B - Disinfection By-Products, (IC)

Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	**23**	**J**	25	4.4	ug/L			12/15/23 05:36	5
Bromide	**570**		250	110	ug/L			12/15/23 05:36	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*104*		*90 - 115*		*12/15/23 05:36*	*5*

Client Sample ID: SW-06

Date Collected: 11/21/23 12:30
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-22

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.50	0.20	mg/L			12/08/23 13:02	5
Bromide	**1.1**	**J**	2.5	1.0	mg/L			12/08/23 13:02	5

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**170**		50	12	ug/L		11/29/23 12:22	12/11/23 09:41	1
Lithium	**370**		50	11	ug/L		11/29/23 12:22	12/10/23 18:33	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/29/23 12:22	12/07/23 08:48	1
Arsenic	ND		2.0	0.68	ug/L		11/29/23 12:22	12/07/23 08:48	1
Chromium	**3.2**		2.0	0.55	ug/L		11/29/23 12:22	12/07/23 08:48	1
Thallium	**0.19**	**J**	0.50	0.13	ug/L		11/29/23 12:22	12/07/23 08:48	1

Client Sample ID: TB-01-111923

Date Collected: 11/19/23 00:00
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-23

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		1.0	0.30	ug/L			12/01/23 00:50	1
Benzene	ND		1.0	0.30	ug/L			12/01/23 00:50	1
Bromoform	ND		4.0	1.0	ug/L			12/01/23 00:50	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			12/01/23 00:50	1
Chloroform	ND		1.0	0.30	ug/L			12/01/23 00:50	1
cis-1,2-Dichloroethene	ND		1.0	0.30	ug/L			12/01/23 00:50	1
Ethylbenzene	ND		1.0	0.40	ug/L			12/01/23 00:50	1
Tetrachloroethene	ND		1.0	0.30	ug/L			12/01/23 00:50	1
trans-1,2-Dichloroethene	ND		2.0	0.70	ug/L			12/01/23 00:50	1
Trichloroethene	ND		1.0	0.30	ug/L			12/01/23 00:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*80 - 120*		*12/01/23 00:50*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*12/01/23 00:50*	*1*
Dibromofluoromethane (Surr)	*109*		*80 - 120*		*12/01/23 00:50*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*12/01/23 00:50*	*1*

Surrogate Summary

Client: Montrose Environmental Solutions Inc
Project/Site: Foote Mineral PA

Job ID: 410-152361-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-120)	(80-120)	(80-120)	(80-120)
410-152361-20	MW-22	107	96	107	101
410-152361-20 MS	MW-22	105	94	104	101
410-152361-20 MSD	MW-22	106	94	105	102
410-152361-21	MW-22D	105	96	106	101
410-152361-23	TB-01-111923	104	96	109	97
LCS 410-448794/4	Lab Control Sample	100	98	107	98
LCS 410-449219/4	Lab Control Sample	106	95	104	101
LCSD 410-448794/5	Lab Control Sample Dup	101	100	99	99
MB 410-448794/7	Method Blank	103	97	98	95
MB 410-449219/6	Method Blank	107	97	105	101

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 300.1B - Disinfection By-Products, (IC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
		DCAA
Lab Sample ID	Client Sample ID	(90-115)
410-152361-1	GMZ-3S	102
410-152361-2	GMZ-3I	102
410-152361-3	GMZ-3D	103
410-152361-4	GMZ-1	102
410-152361-5	SW-05	102
410-152361-6	SW-01	101
410-152361-6 MS	SW-01	101
410-152361-6 MSD	SW-01	100
410-152361-7	SW-02	103
410-152361-8	SW-02A	102
410-152361-9	ERM-2S	102
410-152361-10	ERM-2D	103
410-152361-11	ERM-1D	103
410-152361-12	GMZ-4D	103
410-152361-13	GMZ-4I	101
410-152361-13 MS	GMZ-4I	103
410-152361-13 MSD	GMZ-4I	103
410-152361-14	GMZ-4S	103
410-152361-14 MS	GMZ-4S	103
410-152361-14 MSD	GMZ-4S	102
410-152361-15	ERM-5	102 cn
410-152361-16	GMZ-2D	103 cn
410-152361-17	GMZ-2I	104 cn
410-152361-18	GMZ-2S	102 cn
410-152361-19	GMZ-2SD	102 cn
410-152361-20	MW-22	102
410-152361-22	SW-06	104

Surrogate Summary

Client: Montrose Environmental Solutions Inc
Project/Site: Foote Mineral PA

Job ID: 410-152361-1

Method: 300.1B - Disinfection By-Products, (IC) (Continued)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
		DCAA
Lab Sample ID	**Client Sample ID**	**(90-115)**
LCS 550-312655/6	Lab Control Sample	101
LCS 550-312657/5	Lab Control Sample	102
LCS 550-312758/6	Lab Control Sample	102
LCSD 550-312655/7	Lab Control Sample Dup	102
LCSD 550-312657/6	Lab Control Sample Dup	102
LCSD 550-312758/7	Lab Control Sample Dup	102
MB 550-312655/5	Method Blank	102
MB 550-312657/4	Method Blank	102
MB 550-312758/5	Method Blank	101

Surrogate Legend

DCAA = Dichloroacetic acid(Surr)

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 410-448794/7
Matrix: Water
Analysis Batch: 448794

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		1.0	0.30	ug/L			11/30/23 21:55	1
Benzene	ND		1.0	0.30	ug/L			11/30/23 21:55	1
Bromoform	ND		4.0	1.0	ug/L			11/30/23 21:55	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			11/30/23 21:55	1
Chloroform	ND		1.0	0.30	ug/L			11/30/23 21:55	1
cis-1,2-Dichloroethene	ND		1.0	0.30	ug/L			11/30/23 21:55	1
Ethylbenzene	ND		1.0	0.40	ug/L			11/30/23 21:55	1
Tetrachloroethene	ND		1.0	0.30	ug/L			11/30/23 21:55	1
trans-1,2-Dichloroethene	ND		2.0	0.70	ug/L			11/30/23 21:55	1
Trichloroethene	ND		1.0	0.30	ug/L			11/30/23 21:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*		*11/30/23 21:55*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*11/30/23 21:55*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*11/30/23 21:55*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*11/30/23 21:55*	*1*

Lab Sample ID: LCS 410-448794/4
Matrix: Water
Analysis Batch: 448794

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dichloroethane	20.0	16.9		ug/L		85	73 - 124
Benzene	20.0	19.7		ug/L		99	80 - 120
Bromoform	20.0	18.5		ug/L		92	51 - 120
Carbon tetrachloride	20.0	21.1		ug/L		105	64 - 134
Chloroform	20.0	20.6		ug/L		103	80 - 120
cis-1,2-Dichloroethene	20.0	21.8		ug/L		109	80 - 125
Ethylbenzene	20.0	18.7		ug/L		94	80 - 120
Tetrachloroethene	20.0	19.6		ug/L		98	80 - 120
trans-1,2-Dichloroethene	20.0	21.5		ug/L		107	80 - 126
Trichloroethene	20.0	18.5		ug/L		92	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*80 - 120*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*
Dibromofluoromethane (Surr)	*107*		*80 - 120*
Toluene-d8 (Surr)	*98*		*80 - 120*

Lab Sample ID: LCSD 410-448794/5
Matrix: Water
Analysis Batch: 448794

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Dichloroethane	20.0	17.3		ug/L		86	73 - 124	2	30
Benzene	20.0	19.5		ug/L		98	80 - 120	1	30
Bromoform	20.0	18.3		ug/L		92	51 - 120	1	30
Carbon tetrachloride	20.0	18.6		ug/L		93	64 - 134	13	30

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 410-448794/5
Matrix: Water
Analysis Batch: 448794

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloroform	20.0	18.5		ug/L		92	80 - 120	11	30
cis-1,2-Dichloroethene	20.0	19.2		ug/L		96	80 - 125	13	30
Ethylbenzene	20.0	18.8		ug/L		94	80 - 120	0	30
Tetrachloroethene	20.0	18.4		ug/L		92	80 - 120	6	30
trans-1,2-Dichloroethene	20.0	19.1		ug/L		96	80 - 126	12	30
Trichloroethene	20.0	18.5		ug/L		92	80 - 120	0	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*80 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*

Lab Sample ID: MB 410-449219/6
Matrix: Water
Analysis Batch: 449219

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		1.0	0.30	ug/L			12/01/23 18:37	1
Benzene	ND		1.0	0.30	ug/L			12/01/23 18:37	1
Bromoform	ND		4.0	1.0	ug/L			12/01/23 18:37	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			12/01/23 18:37	1
Chloroform	ND		1.0	0.30	ug/L			12/01/23 18:37	1
cis-1,2-Dichloroethene	ND		1.0	0.30	ug/L			12/01/23 18:37	1
Ethylbenzene	ND		1.0	0.40	ug/L			12/01/23 18:37	1
Tetrachloroethene	ND		1.0	0.30	ug/L			12/01/23 18:37	1
trans-1,2-Dichloroethene	ND		2.0	0.70	ug/L			12/01/23 18:37	1
Trichloroethene	ND		1.0	0.30	ug/L			12/01/23 18:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*80 - 120*		*12/01/23 18:37*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*12/01/23 18:37*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*12/01/23 18:37*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*12/01/23 18:37*	*1*

Lab Sample ID: LCS 410-449219/4
Matrix: Water
Analysis Batch: 449219

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dichloroethane	20.0	16.4		ug/L		82	73 - 124
Benzene	20.0	17.8		ug/L		89	80 - 120
Bromoform	20.0	21.6		ug/L		108	51 - 120
Carbon tetrachloride	20.0	18.4		ug/L		92	64 - 134
Chloroform	20.0	17.9		ug/L		89	80 - 120
cis-1,2-Dichloroethene	20.0	18.7		ug/L		94	80 - 125
Ethylbenzene	20.0	18.2		ug/L		91	80 - 120
Tetrachloroethene	20.0	18.9		ug/L		94	80 - 120

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 410-449219/4
Matrix: Water
Analysis Batch: 449219

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
trans-1,2-Dichloroethene	20.0	18.0		ug/L		90	80 - 126
Trichloroethene	20.0	18.0		ug/L		90	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*80 - 120*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*80 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*

Lab Sample ID: 410-152361-20 MS
Matrix: Water
Analysis Batch: 449219

Client Sample ID: MW-22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dichloroethane	ND		20.0	17.0		ug/L		85	69 - 120
Benzene	1.5		20.0	21.0		ug/L		97	81 - 120
Bromoform	ND	cn	20.0	22.3		ug/L		112	64 - 125
Carbon tetrachloride	ND		20.0	20.3		ug/L		102	63 - 128
Chloroform	ND		20.0	19.2		ug/L		96	74 - 120
cis-1,2-Dichloroethene	5.8		20.0	25.9		ug/L		101	81 - 121
Ethylbenzene	ND		20.0	19.6		ug/L		98	78 - 120
Tetrachloroethene	150		20.0	175	4	ug/L		102	68 - 125
trans-1,2-Dichloroethene	ND		20.0	20.5		ug/L		103	74 - 120
Trichloroethene	8.0		20.0	28.0		ug/L		100	76 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*80 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*

Lab Sample ID: 410-152361-20 MSD
Matrix: Water
Analysis Batch: 449219

Client Sample ID: MW-22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Dichloroethane	ND		20.0	17.5		ug/L		87	69 - 120	3	30
Benzene	1.5		20.0	21.1		ug/L		98	81 - 120	1	30
Bromoform	ND	cn	20.0	22.9		ug/L		114	64 - 125	2	30
Carbon tetrachloride	ND		20.0	20.6		ug/L		103	63 - 128	1	30
Chloroform	ND		20.0	19.3		ug/L		97	74 - 120	1	30
cis-1,2-Dichloroethene	5.8		20.0	26.1		ug/L		102	81 - 121	1	30
Ethylbenzene	ND		20.0	20.0		ug/L		100	78 - 120	2	30
Tetrachloroethene	150		20.0	183	4	ug/L		142	68 - 125	4	30
trans-1,2-Dichloroethene	ND		20.0	21.0		ug/L		105	74 - 120	2	30
Trichloroethene	8.0		20.0	28.0		ug/L		100	76 - 120	0	30

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 410-152361-20 MSD
Matrix: Water
Analysis Batch: 449219

Client Sample ID: MW-22
Prep Type: Total/NA

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*80 - 120*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*
Dibromofluoromethane (Surr)	*105*		*80 - 120*
Toluene-d8 (Surr)	*102*		*80 - 120*

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Method: 300.1B - Disinfection By-Products, (IC)

Lab Sample ID: MB 550-312655/5
Matrix: Water
Analysis Batch: 312655

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		5.0	0.88	ug/L			12/12/23 13:16	1
Bromide	ND		50	22	ug/L			12/12/23 13:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*102*		*90 - 115*		*12/12/23 13:16*	*1*

Lab Sample ID: LCS 550-312655/6
Matrix: Water
Analysis Batch: 312655

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromate	25.0	22.5		ug/L		90	75 - 125
Bromide	250	239		ug/L		96	75 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Dichloroacetic acid(Surr)	*101*		*90 - 115*

Lab Sample ID: LCSD 550-312655/7
Matrix: Water
Analysis Batch: 312655

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromate	25.0	24.7		ug/L		99	75 - 125	9	25
Bromide	250	238		ug/L		95	75 - 125	0	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Dichloroacetic acid(Surr)	*102*		*90 - 115*

Lab Sample ID: 410-152361-6 MS
Matrix: Water
Analysis Batch: 312655

Client Sample ID: SW-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Bromate	47	J	250	289		ug/L		97	75 - 125
Bromide	780		2500	3080		ug/L		92	75 - 125

Method: 300.1B - Disinfection By-Products, (IC) (Continued)

Lab Sample ID: 410-152361-6 MS
Matrix: Water
Analysis Batch: 312655

Client Sample ID: SW-01
Prep Type: Total/NA

Surrogate	MS %Recovery	MS Qualifier	Limits
Dichloroacetic acid(Surr)	*101*		*90 - 115*

Lab Sample ID: 410-152361-6 MSD
Matrix: Water
Analysis Batch: 312655

Client Sample ID: SW-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromate	47	J	250	304		ug/L		103	75 - 125	5	25
Bromide	780		2500	3070		ug/L		92	75 - 125	0	25

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Dichloroacetic acid(Surr)	*100*		*90 - 115*

Lab Sample ID: MB 550-312657/4
Matrix: Water
Analysis Batch: 312657

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		5.0	0.88	ug/L			12/13/23 04:01	1
Bromide	ND		50	22	ug/L			12/13/23 04:01	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dichloroacetic acid(Surr)	*102*		*90 - 115*		*12/13/23 04:01*	*1*

Lab Sample ID: LCS 550-312657/5
Matrix: Water
Analysis Batch: 312657

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromate	25.0	24.9		ug/L		99	75 - 125
Bromide	250	241		ug/L		96	75 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dichloroacetic acid(Surr)	*102*		*90 - 115*

Lab Sample ID: LCSD 550-312657/6
Matrix: Water
Analysis Batch: 312657

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromate	25.0	24.5		ug/L		98	75 - 125	1	25
Bromide	250	241		ug/L		97	75 - 125	0	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dichloroacetic acid(Surr)	*102*		*90 - 115*

Method: 300.1B - Disinfection By-Products, (IC) (Continued)

Lab Sample ID: 410-152361-14 MS
Matrix: Water
Analysis Batch: 312657

Client Sample ID: GMZ-4S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Bromate	35	J	250	288		ug/L		102	75 - 125
Bromide	730		2500	3040		ug/L		93	75 - 125

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Dichloroacetic acid(Surr)	*103*		*90 - 115*

Lab Sample ID: 410-152361-14 MSD
Matrix: Water
Analysis Batch: 312657

Client Sample ID: GMZ-4S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromate	35	J	250	274		ug/L		96	75 - 125	5	25
Bromide	730		2500	3030		ug/L		92	75 - 125	1	25

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Dichloroacetic acid(Surr)	*102*		*90 - 115*

Lab Sample ID: MB 550-312758/5
Matrix: Water
Analysis Batch: 312758

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		5.0	0.88	ug/L			12/15/23 01:41	1
Bromide	ND		50	22	ug/L			12/15/23 01:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*101*		*90 - 115*		*12/15/23 01:41*	*1*

Lab Sample ID: LCS 550-312758/6
Matrix: Water
Analysis Batch: 312758

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromate	25.0	24.7		ug/L		99	75 - 125
Bromide	250	241		ug/L		96	75 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Dichloroacetic acid(Surr)	*102*		*90 - 115*

Lab Sample ID: LCSD 550-312758/7
Matrix: Water
Analysis Batch: 312758

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromate	25.0	24.3		ug/L		97	75 - 125	1	25
Bromide	250	238		ug/L		95	75 - 125	1	25

Method: 300.1B - Disinfection By-Products, (IC) (Continued)

Lab Sample ID: LCSD 550-312758/7
Matrix: Water
Analysis Batch: 312758

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dichloroacetic acid(Surr)	102		90 - 115

Lab Sample ID: 410-152361-13 MS
Matrix: Water
Analysis Batch: 312758

Client Sample ID: GMZ-4I
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Bromate	41		125	166		ug/L		100	75 - 125
Bromide	1000		1250	2180		ug/L		94	75 - 125

Surrogate	MS %Recovery	MS Qualifier	Limits
Dichloroacetic acid(Surr)	103		90 - 115

Lab Sample ID: 410-152361-13 MSD
Matrix: Water
Analysis Batch: 312758

Client Sample ID: GMZ-4I
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromate	41		125	165		ug/L		100	75 - 125	1	25
Bromide	1000		1250	2180		ug/L		94	75 - 125	0	25

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Dichloroacetic acid(Surr)	103		90 - 115

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-812275/2
Matrix: Water
Analysis Batch: 812275

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.10	0.040	mg/L			12/08/23 10:36	1
Bromide	ND		0.50	0.20	mg/L			12/08/23 10:36	1

Lab Sample ID: LCS 680-812275/4
Matrix: Water
Analysis Batch: 812275

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	2.00	2.07		mg/L		104	90 - 110
Bromide	10.0	10.0		mg/L		100	90 - 110

Lab Sample ID: LCSD 680-812275/5
Matrix: Water
Analysis Batch: 812275

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	2.00	2.07		mg/L		104	90 - 110	0	15
Bromide	10.0	10.0		mg/L		100	90 - 110	0	15

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: LLCS 680-812275/3
Matrix: Water
Analysis Batch: 812275

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.100	0.0934	J	mg/L		93	50 - 150
Bromide	0.500	0.528		mg/L		106	50 - 150

Lab Sample ID: MB 680-814031/2
Matrix: Water
Analysis Batch: 814031

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.10	0.040	mg/L			12/18/23 11:30	1
Bromide	ND		0.50	0.20	mg/L			12/18/23 11:30	1

Lab Sample ID: LCS 680-814031/4
Matrix: Water
Analysis Batch: 814031

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	2.00	2.02		mg/L		101	90 - 110
Bromide	10.0	10.3		mg/L		103	90 - 110

Lab Sample ID: LCSD 680-814031/5
Matrix: Water
Analysis Batch: 814031

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	2.00	2.02		mg/L		101	90 - 110	0	15
Bromide	10.0	10.3		mg/L		103	90 - 110	0	15

Lab Sample ID: MB 680-814057/79
Matrix: Water
Analysis Batch: 814057

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.10	0.040	mg/L			12/18/23 17:01	1
Bromide	ND		0.50	0.20	mg/L			12/18/23 17:01	1

Lab Sample ID: LCS 680-814057/80
Matrix: Water
Analysis Batch: 814057

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	2.00	2.07		mg/L		104	90 - 110
Bromide	10.0	10.1		mg/L		101	90 - 110

Lab Sample ID: LCSD 680-814057/81
Matrix: Water
Analysis Batch: 814057

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	2.00	2.08		mg/L		104	90 - 110	0	15
Bromide	10.0	10.1		mg/L		101	90 - 110	0	15

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: 410-152361-6 MS
Matrix: Water
Analysis Batch: 814057

Client Sample ID: SW-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.040	J H	2.00	2.01	H cn	mg/L		100	80 - 120
Bromide	0.65	H	10.0	10.3	H cn	mg/L		96	80 - 120

Lab Sample ID: 410-152361-6 MSD
Matrix: Water
Analysis Batch: 814057

Client Sample ID: SW-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	0.040	J H	2.00	2.10		mg/L		105	80 - 120	5	15
Bromide	0.65	H	10.0	10.7		mg/L		100	80 - 120	4	15

Lab Sample ID: 410-152361-14 MS
Matrix: Water
Analysis Batch: 814057

Client Sample ID: GMZ-4S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	ND		2.00	1.95		mg/L		98	80 - 120
Bromide	0.60		10.0	10.1		mg/L		95	80 - 120

Lab Sample ID: 410-152361-14 MSD
Matrix: Water
Analysis Batch: 814057

Client Sample ID: GMZ-4S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	ND		2.00	1.95		mg/L		98	80 - 120	0	15
Bromide	0.60		10.0	10.0		mg/L		94	80 - 120	1	15

Lab Sample ID: 410-152361-6 DU
Matrix: Water
Analysis Batch: 814057

Client Sample ID: SW-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.040	J H	ND	H	mg/L		NC	15
Bromide	0.65	H	0.652	H	mg/L		0	15

Lab Sample ID: 410-152361-14 DU
Matrix: Water
Analysis Batch: 814057

Client Sample ID: GMZ-4S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	ND		ND		mg/L		NC	15
Bromide	0.60		0.602		mg/L		0	15

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 410-448063/1-A
Matrix: Water
Analysis Batch: 449328

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 448063

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		50	12	ug/L		11/29/23 11:56	12/01/23 20:21	1
Lithium	ND		50	11	ug/L		11/29/23 11:56	12/01/23 20:21	1

Lab Sample ID: LCS 410-448063/2-A
Matrix: Water
Analysis Batch: 449328

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 448063

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	500	491		ug/L		98	80 - 120
Lithium	500	503		ug/L		101	80 - 120

Lab Sample ID: MB 410-448082/1-A
Matrix: Water
Analysis Batch: 452221

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 448082

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	ND		50	11	ug/L		11/29/23 12:22	12/10/23 17:40	1

Lab Sample ID: MB 410-448082/1-A
Matrix: Water
Analysis Batch: 452526

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 448082

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		50	12	ug/L		11/29/23 12:22	12/11/23 09:06	1

Lab Sample ID: LCS 410-448082/2-A
Matrix: Water
Analysis Batch: 452221

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 448082

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lithium	500	483		ug/L		97	80 - 120

Lab Sample ID: LCS 410-448082/2-A
Matrix: Water
Analysis Batch: 453010

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 448082

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	500	519		ug/L		104	80 - 120

Lab Sample ID: MB 410-448699/1-A
Matrix: Water
Analysis Batch: 449384

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 448699

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		50	12	ug/L		11/30/23 14:41	12/02/23 02:58	1
Lithium	ND		50	11	ug/L		11/30/23 14:41	12/02/23 02:58	1

Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: LCS 410-448699/2-A
Matrix: Water
Analysis Batch: 449384

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 448699

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	500	482		ug/L		96	80 - 120
Lithium	500	510		ug/L		102	80 - 120

Lab Sample ID: 410-152361-6 MS
Matrix: Water
Analysis Batch: 449384

Client Sample ID: SW-01
Prep Type: Total Recoverable
Prep Batch: 448699

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	200		500	691		ug/L		98	75 - 125
Lithium	680		500	1200		ug/L		105	75 - 125

Lab Sample ID: 410-152361-6 MSD
Matrix: Water
Analysis Batch: 449384

Client Sample ID: SW-01
Prep Type: Total Recoverable
Prep Batch: 448699

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	200		500	676		ug/L		95	75 - 125	2	20
Lithium	680		500	1170		ug/L		99	75 - 125	3	20

Lab Sample ID: 410-152361-14 MS
Matrix: Water
Analysis Batch: 449384

Client Sample ID: GMZ-4S
Prep Type: Total Recoverable
Prep Batch: 448699

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	250		500	731		ug/L		96	75 - 125
Lithium	840		500	1340		ug/L		99	75 - 125

Lab Sample ID: 410-152361-14 MSD
Matrix: Water
Analysis Batch: 449384

Client Sample ID: GMZ-4S
Prep Type: Total Recoverable
Prep Batch: 448699

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	250		500	734		ug/L		96	75 - 125	0	20
Lithium	840		500	1360		ug/L		102	75 - 125	1	20

Lab Sample ID: 410-152361-6 DU
Matrix: Water
Analysis Batch: 449384

Client Sample ID: SW-01
Prep Type: Total Recoverable
Prep Batch: 448699

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Boron	200		205		ug/L		2	20
Lithium	680		691		ug/L		2	20

Lab Sample ID: 410-152361-14 DU
Matrix: Water
Analysis Batch: 449384

Client Sample ID: GMZ-4S
Prep Type: Total Recoverable
Prep Batch: 448699

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Boron	250		269		ug/L		6	20
Lithium	840		891		ug/L		5	20

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 410-449143/1-A
Matrix: Water
Analysis Batch: 450517

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 449143

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		50	12	ug/L		12/01/23 14:13	12/05/23 20:38	1
Lithium	ND		50	11	ug/L		12/01/23 14:13	12/05/23 20:38	1

Lab Sample ID: LCS 410-449143/2-A
Matrix: Water
Analysis Batch: 450517

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 449143

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	500	498		ug/L		100	80 - 120
Lithium	500	503		ug/L		101	80 - 120

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 410-448063/1-A
Matrix: Water
Analysis Batch: 450254

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 448063

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/29/23 11:56	12/05/23 09:14	1
Arsenic	ND		2.0	0.68	ug/L		11/29/23 11:56	12/05/23 09:14	1
Chromium	ND		2.0	0.55	ug/L		11/29/23 11:56	12/05/23 09:14	1
Thallium	ND		0.50	0.13	ug/L		11/29/23 11:56	12/05/23 09:14	1

Lab Sample ID: LCS 410-448063/2-A
Matrix: Water
Analysis Batch: 450254

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 448063

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	102		ug/L		102	80 - 120
Arsenic	500	506		ug/L		101	85 - 120
Chromium	500	499		ug/L		100	90 - 115
Thallium	100	98.6		ug/L		99	80 - 120

Lab Sample ID: MB 410-448082/1-A
Matrix: Water
Analysis Batch: 451264

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 448082

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/29/23 12:22	12/07/23 07:43	1
Arsenic	ND		2.0	0.68	ug/L		11/29/23 12:22	12/07/23 07:43	1
Chromium	ND		2.0	0.55	ug/L		11/29/23 12:22	12/07/23 07:43	1
Thallium	ND		0.50	0.13	ug/L		11/29/23 12:22	12/07/23 07:43	1

Lab Sample ID: LCS 410-448082/2-A
Matrix: Water
Analysis Batch: 451264

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 448082

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	100		ug/L		100	80 - 120
Arsenic	500	503		ug/L		101	85 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 410-448082/2-A
Matrix: Water
Analysis Batch: 451264

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 448082

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium	500	500		ug/L		100	90 - 115
Thallium	100	101		ug/L		101	80 - 120

Lab Sample ID: MB 410-448699/1-A
Matrix: Water
Analysis Batch: 450486

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 448699

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Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/30/23 14:41	12/05/23 17:05	1
Arsenic	ND		2.0	0.68	ug/L		11/30/23 14:41	12/05/23 17:05	1
Chromium	ND		2.0	0.55	ug/L		11/30/23 14:41	12/05/23 17:05	1
Thallium	ND		0.50	0.13	ug/L		11/30/23 14:41	12/05/23 17:05	1

Lab Sample ID: LCS 410-448699/2-A
Matrix: Water
Analysis Batch: 450486

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 448699

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	101		ug/L		101	80 - 120
Arsenic	500	499		ug/L		100	85 - 120
Chromium	500	495		ug/L		99	90 - 115
Thallium	100	96.8		ug/L		97	80 - 120

Lab Sample ID: 410-152361-6 MS
Matrix: Water
Analysis Batch: 450486

Client Sample ID: SW-01
Prep Type: Total Recoverable
Prep Batch: 448699

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	ND		100	106		ug/L		106	75 - 125
Arsenic	ND		500	517		ug/L		103	75 - 125
Chromium	9.9		500	512		ug/L		100	75 - 125
Thallium	ND		100	99.9		ug/L		100	75 - 125

Lab Sample ID: 410-152361-6 MSD
Matrix: Water
Analysis Batch: 450486

Client Sample ID: SW-01
Prep Type: Total Recoverable
Prep Batch: 448699

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	ND		100	105		ug/L		105	75 - 125	1	20
Arsenic	ND		500	507		ug/L		101	75 - 125	2	20
Chromium	9.9		500	505		ug/L		99	75 - 125	1	20
Thallium	ND		100	100		ug/L		100	75 - 125	0	20

Lab Sample ID: 410-152361-14 MS
Matrix: Water
Analysis Batch: 450486

Client Sample ID: GMZ-4S
Prep Type: Total Recoverable
Prep Batch: 448699

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	ND		100	103		ug/L		103	75 - 125
Arsenic	ND		500	505		ug/L		101	75 - 125

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 410-152361-14 MS
Matrix: Water
Analysis Batch: 450486

Client Sample ID: GMZ-4S
Prep Type: Total Recoverable
Prep Batch: 448699

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium	13		500	502		ug/L		98	75 - 125
Thallium	ND		100	99.3		ug/L		99	75 - 125

Lab Sample ID: 410-152361-14 MSD
Matrix: Water
Analysis Batch: 450486

Client Sample ID: GMZ-4S
Prep Type: Total Recoverable
Prep Batch: 448699

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	ND		100	104		ug/L		104	75 - 125	0	20
Arsenic	ND		500	509		ug/L		102	75 - 125	1	20
Chromium	13		500	503		ug/L		98	75 - 125	0	20
Thallium	ND		100	100		ug/L		100	75 - 125	1	20

Lab Sample ID: 410-152361-6 DU
Matrix: Water
Analysis Batch: 450486

Client Sample ID: SW-01
Prep Type: Total Recoverable
Prep Batch: 448699

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	ND		ND		ug/L		NC	20
Arsenic	ND		ND		ug/L		NC	20
Chromium	9.9		10.3		ug/L		4	20
Thallium	ND		ND		ug/L		NC	20

Lab Sample ID: 410-152361-14 DU
Matrix: Water
Analysis Batch: 450486

Client Sample ID: GMZ-4S
Prep Type: Total Recoverable
Prep Batch: 448699

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	ND		ND		ug/L		NC	20
Arsenic	ND		ND		ug/L		NC	20
Chromium	13		13.6		ug/L		6	20
Thallium	ND		ND		ug/L		NC	20

Lab Sample ID: MB 410-449143/1-A
Matrix: Water
Analysis Batch: 450486

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 449143

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		12/01/23 14:13	12/05/23 15:58	1
Arsenic	ND		2.0	0.68	ug/L		12/01/23 14:13	12/05/23 15:58	1
Chromium	ND		2.0	0.55	ug/L		12/01/23 14:13	12/05/23 15:58	1
Thallium	ND		0.50	0.13	ug/L		12/01/23 14:13	12/05/23 15:58	1

Lab Sample ID: LCS 410-449143/2-A
Matrix: Water
Analysis Batch: 450486

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 449143

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	102		ug/L		102	80 - 120
Arsenic	500	502		ug/L		100	85 - 120

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 410-449143/2-A
Matrix: Water
Analysis Batch: 450486

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 449143

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium	500	501		ug/L		100	90 - 115
Thallium	100	99.9		ug/L		100	80 - 120

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GC/MS VOA

Analysis Batch: 448794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-152361-23	TB-01-111923	Total/NA	Water	8260D	
MB 410-448794/7	Method Blank	Total/NA	Water	8260D	
LCS 410-448794/4	Lab Control Sample	Total/NA	Water	8260D	
LCSD 410-448794/5	Lab Control Sample Dup	Total/NA	Water	8260D	

Analysis Batch: 449219

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-152361-20	MW-22	Total/NA	Water	8260D	
410-152361-21	MW-22D	Total/NA	Water	8260D	
MB 410-449219/6	Method Blank	Total/NA	Water	8260D	
LCS 410-449219/4	Lab Control Sample	Total/NA	Water	8260D	
410-152361-20 MS	MW-22	Total/NA	Water	8260D	
410-152361-20 MSD	MW-22	Total/NA	Water	8260D	

HPLC/IC

Analysis Batch: 312655

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-152361-1	GMZ-3S	Total/NA	Water	300.1B	
410-152361-2	GMZ-3I	Total/NA	Water	300.1B	
410-152361-3	GMZ-3D	Total/NA	Water	300.1B	
410-152361-4	GMZ-1	Total/NA	Water	300.1B	
410-152361-5	SW-05	Total/NA	Water	300.1B	
410-152361-6	SW-01	Total/NA	Water	300.1B	
410-152361-7	SW-02	Total/NA	Water	300.1B	
410-152361-8	SW-02A	Total/NA	Water	300.1B	
410-152361-9	ERM-2S	Total/NA	Water	300.1B	
410-152361-10	ERM-2D	Total/NA	Water	300.1B	
MB 550-312655/5	Method Blank	Total/NA	Water	300.1B	
LCS 550-312655/6	Lab Control Sample	Total/NA	Water	300.1B	
LCSD 550-312655/7	Lab Control Sample Dup	Total/NA	Water	300.1B	
410-152361-6 MS	SW-01	Total/NA	Water	300.1B	
410-152361-6 MSD	SW-01	Total/NA	Water	300.1B	

Analysis Batch: 312657

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-152361-11	ERM-1D	Total/NA	Water	300.1B	
410-152361-12	GMZ-4D	Total/NA	Water	300.1B	
410-152361-14	GMZ-4S	Total/NA	Water	300.1B	
410-152361-15	ERM-5	Total/NA	Water	300.1B	
410-152361-16	GMZ-2D	Total/NA	Water	300.1B	
410-152361-17	GMZ-2I	Total/NA	Water	300.1B	
410-152361-18	GMZ-2S	Total/NA	Water	300.1B	
MB 550-312657/4	Method Blank	Total/NA	Water	300.1B	
LCS 550-312657/5	Lab Control Sample	Total/NA	Water	300.1B	
LCSD 550-312657/6	Lab Control Sample Dup	Total/NA	Water	300.1B	
410-152361-14 MS	GMZ-4S	Total/NA	Water	300.1B	
410-152361-14 MSD	GMZ-4S	Total/NA	Water	300.1B	

HPLC/IC

Analysis Batch: 312758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-152361-13	GMZ-4I	Total/NA	Water	300.1B	
410-152361-19	GMZ-2SD	Total/NA	Water	300.1B	
410-152361-20	MW-22	Total/NA	Water	300.1B	
410-152361-22	SW-06	Total/NA	Water	300.1B	
MB 550-312758/5	Method Blank	Total/NA	Water	300.1B	
LCS 550-312758/6	Lab Control Sample	Total/NA	Water	300.1B	
LCSD 550-312758/7	Lab Control Sample Dup	Total/NA	Water	300.1B	
410-152361-13 MS	GMZ-4I	Total/NA	Water	300.1B	
410-152361-13 MSD	GMZ-4I	Total/NA	Water	300.1B	

Analysis Batch: 812275

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-152361-22	SW-06	Total/NA	Water	9056A	
MB 680-812275/2	Method Blank	Total/NA	Water	9056A	
LCS 680-812275/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-812275/5	Lab Control Sample Dup	Total/NA	Water	9056A	
LLCS 680-812275/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 814031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-152361-9	ERM-2S	Total/NA	Water	9056A	
410-152361-10	ERM-2D	Total/NA	Water	9056A	
410-152361-11	ERM-1D	Total/NA	Water	9056A	
410-152361-12	GMZ-4D	Total/NA	Water	9056A	
410-152361-13	GMZ-4I	Total/NA	Water	9056A	
410-152361-15	ERM-5	Total/NA	Water	9056A	
410-152361-16	GMZ-2D	Total/NA	Water	9056A	
410-152361-17	GMZ-2I	Total/NA	Water	9056A	
410-152361-18	GMZ-2S	Total/NA	Water	9056A	
MB 680-814031/2	Method Blank	Total/NA	Water	9056A	
LCS 680-814031/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-814031/5	Lab Control Sample Dup	Total/NA	Water	9056A	

Analysis Batch: 814057

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-152361-1	GMZ-3S	Total/NA	Water	9056A	
410-152361-2	GMZ-3I	Total/NA	Water	9056A	
410-152361-3	GMZ-3D	Total/NA	Water	9056A	
410-152361-4	GMZ-1	Total/NA	Water	9056A	
410-152361-5	SW-05	Total/NA	Water	9056A	
410-152361-6	SW-01	Total/NA	Water	9056A	
410-152361-7	SW-02	Total/NA	Water	9056A	
410-152361-8	SW-02A	Total/NA	Water	9056A	
410-152361-14	GMZ-4S	Total/NA	Water	9056A	
410-152361-19	GMZ-2SD	Total/NA	Water	9056A	
410-152361-20	MW-22	Total/NA	Water	9056A	
MB 680-814057/79	Method Blank	Total/NA	Water	9056A	
LCS 680-814057/80	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-814057/81	Lab Control Sample Dup	Total/NA	Water	9056A	
410-152361-6 MS	SW-01	Total/NA	Water	9056A	
410-152361-6 MSD	SW-01	Total/NA	Water	9056A	

HPLC/IC (Continued)

Analysis Batch: 814057 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-152361-14 MS	GMZ-4S	Total/NA	Water	9056A	
410-152361-14 MSD	GMZ-4S	Total/NA	Water	9056A	
410-152361-6 DU	SW-01	Total/NA	Water	9056A	
410-152361-14 DU	GMZ-4S	Total/NA	Water	9056A	

Metals

Prep Batch: 448063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-152361-11	ERM-1D	Total Recoverable	Water	3005A	
MB 410-448063/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-448063/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 448082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-152361-1	GMZ-3S	Total Recoverable	Water	3005A	
410-152361-2	GMZ-3I	Total Recoverable	Water	3005A	
410-152361-9	ERM-2S	Total Recoverable	Water	3005A	
410-152361-12	GMZ-4D	Total Recoverable	Water	3005A	
410-152361-13	GMZ-4I	Total Recoverable	Water	3005A	
410-152361-16	GMZ-2D	Total Recoverable	Water	3005A	
410-152361-17	GMZ-2I	Total Recoverable	Water	3005A	
410-152361-22	SW-06	Total Recoverable	Water	3005A	
MB 410-448082/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-448082/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 448699

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-152361-3	GMZ-3D	Total Recoverable	Water	3005A	
410-152361-4	GMZ-1	Total Recoverable	Water	3005A	
410-152361-5	SW-05	Total Recoverable	Water	3005A	
410-152361-6	SW-01	Total Recoverable	Water	3005A	
410-152361-7	SW-02	Total Recoverable	Water	3005A	
410-152361-8	SW-02A	Total Recoverable	Water	3005A	
410-152361-10	ERM-2D	Total Recoverable	Water	3005A	
410-152361-14	GMZ-4S	Total Recoverable	Water	3005A	
410-152361-15	ERM-5	Total Recoverable	Water	3005A	
410-152361-18	GMZ-2S	Total Recoverable	Water	3005A	
410-152361-19	GMZ-2SD	Total Recoverable	Water	3005A	
MB 410-448699/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-448699/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
410-152361-6 MS	SW-01	Total Recoverable	Water	3005A	
410-152361-6 MSD	SW-01	Total Recoverable	Water	3005A	
410-152361-14 MS	GMZ-4S	Total Recoverable	Water	3005A	
410-152361-14 MSD	GMZ-4S	Total Recoverable	Water	3005A	
410-152361-6 DU	SW-01	Total Recoverable	Water	3005A	
410-152361-14 DU	GMZ-4S	Total Recoverable	Water	3005A	

Prep Batch: 449143

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-152361-20	MW-22	Total Recoverable	Water	3005A	

Metals (Continued)

Prep Batch: 449143 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-449143/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-449143/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 449328

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-152361-11	ERM-1D	Total Recoverable	Water	6010D	448063
MB 410-448063/1-A	Method Blank	Total Recoverable	Water	6010D	448063
LCS 410-448063/2-A	Lab Control Sample	Total Recoverable	Water	6010D	448063

Analysis Batch: 449384

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-152361-3	GMZ-3D	Total Recoverable	Water	6010D	448699
410-152361-4	GMZ-1	Total Recoverable	Water	6010D	448699
410-152361-5	SW-05	Total Recoverable	Water	6010D	448699
410-152361-6	SW-01	Total Recoverable	Water	6010D	448699
410-152361-7	SW-02	Total Recoverable	Water	6010D	448699
410-152361-8	SW-02A	Total Recoverable	Water	6010D	448699
410-152361-10	ERM-2D	Total Recoverable	Water	6010D	448699
410-152361-14	GMZ-4S	Total Recoverable	Water	6010D	448699
410-152361-15	ERM-5	Total Recoverable	Water	6010D	448699
410-152361-18	GMZ-2S	Total Recoverable	Water	6010D	448699
410-152361-19	GMZ-2SD	Total Recoverable	Water	6010D	448699
MB 410-448699/1-A	Method Blank	Total Recoverable	Water	6010D	448699
LCS 410-448699/2-A	Lab Control Sample	Total Recoverable	Water	6010D	448699
410-152361-6 MS	SW-01	Total Recoverable	Water	6010D	448699
410-152361-6 MSD	SW-01	Total Recoverable	Water	6010D	448699
410-152361-14 MS	GMZ-4S	Total Recoverable	Water	6010D	448699
410-152361-14 MSD	GMZ-4S	Total Recoverable	Water	6010D	448699
410-152361-6 DU	SW-01	Total Recoverable	Water	6010D	448699
410-152361-14 DU	GMZ-4S	Total Recoverable	Water	6010D	448699

Analysis Batch: 450254

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-152361-11	ERM-1D	Total Recoverable	Water	6020B	448063
MB 410-448063/1-A	Method Blank	Total Recoverable	Water	6020B	448063
LCS 410-448063/2-A	Lab Control Sample	Total Recoverable	Water	6020B	448063

Analysis Batch: 450486

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-152361-3	GMZ-3D	Total Recoverable	Water	6020B	448699
410-152361-4	GMZ-1	Total Recoverable	Water	6020B	448699
410-152361-5	SW-05	Total Recoverable	Water	6020B	448699
410-152361-6	SW-01	Total Recoverable	Water	6020B	448699
410-152361-7	SW-02	Total Recoverable	Water	6020B	448699
410-152361-8	SW-02A	Total Recoverable	Water	6020B	448699
410-152361-10	ERM-2D	Total Recoverable	Water	6020B	448699
410-152361-14	GMZ-4S	Total Recoverable	Water	6020B	448699
410-152361-15	ERM-5	Total Recoverable	Water	6020B	448699
410-152361-18	GMZ-2S	Total Recoverable	Water	6020B	448699
410-152361-19	GMZ-2SD	Total Recoverable	Water	6020B	448699
410-152361-20	MW-22	Total Recoverable	Water	6020B	449143

Metals (Continued)

Analysis Batch: 450486 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-448699/1-A	Method Blank	Total Recoverable	Water	6020B	448699
MB 410-449143/1-A	Method Blank	Total Recoverable	Water	6020B	449143
LCS 410-448699/2-A	Lab Control Sample	Total Recoverable	Water	6020B	448699
LCS 410-449143/2-A	Lab Control Sample	Total Recoverable	Water	6020B	449143
410-152361-6 MS	SW-01	Total Recoverable	Water	6020B	448699
410-152361-6 MSD	SW-01	Total Recoverable	Water	6020B	448699
410-152361-14 MS	GMZ-4S	Total Recoverable	Water	6020B	448699
410-152361-14 MSD	GMZ-4S	Total Recoverable	Water	6020B	448699
410-152361-6 DU	SW-01	Total Recoverable	Water	6020B	448699
410-152361-14 DU	GMZ-4S	Total Recoverable	Water	6020B	448699

Analysis Batch: 450517

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-152361-20	MW-22	Total Recoverable	Water	6010D	449143
MB 410-449143/1-A	Method Blank	Total Recoverable	Water	6010D	449143
LCS 410-449143/2-A	Lab Control Sample	Total Recoverable	Water	6010D	449143

Analysis Batch: 451264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-152361-1	GMZ-3S	Total Recoverable	Water	6020B	448082
410-152361-2	GMZ-3I	Total Recoverable	Water	6020B	448082
410-152361-9	ERM-2S	Total Recoverable	Water	6020B	448082
410-152361-12	GMZ-4D	Total Recoverable	Water	6020B	448082
410-152361-13	GMZ-4I	Total Recoverable	Water	6020B	448082
410-152361-16	GMZ-2D	Total Recoverable	Water	6020B	448082
410-152361-17	GMZ-2I	Total Recoverable	Water	6020B	448082
410-152361-22	SW-06	Total Recoverable	Water	6020B	448082
MB 410-448082/1-A	Method Blank	Total Recoverable	Water	6020B	448082
LCS 410-448082/2-A	Lab Control Sample	Total Recoverable	Water	6020B	448082

Analysis Batch: 452221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-152361-1	GMZ-3S	Total Recoverable	Water	6010D	448082
410-152361-2	GMZ-3I	Total Recoverable	Water	6010D	448082
410-152361-9	ERM-2S	Total Recoverable	Water	6010D	448082
410-152361-12	GMZ-4D	Total Recoverable	Water	6010D	448082
410-152361-13	GMZ-4I	Total Recoverable	Water	6010D	448082
410-152361-16	GMZ-2D	Total Recoverable	Water	6010D	448082
410-152361-17	GMZ-2I	Total Recoverable	Water	6010D	448082
410-152361-22	SW-06	Total Recoverable	Water	6010D	448082
MB 410-448082/1-A	Method Blank	Total Recoverable	Water	6010D	448082
LCS 410-448082/2-A	Lab Control Sample	Total Recoverable	Water	6010D	448082

Analysis Batch: 452526

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-152361-1	GMZ-3S	Total Recoverable	Water	6010D	448082
410-152361-2	GMZ-3I	Total Recoverable	Water	6010D	448082
410-152361-9	ERM-2S	Total Recoverable	Water	6010D	448082
410-152361-12	GMZ-4D	Total Recoverable	Water	6010D	448082
410-152361-13	GMZ-4I	Total Recoverable	Water	6010D	448082
410-152361-16	GMZ-2D	Total Recoverable	Water	6010D	448082

Metals (Continued)

Analysis Batch: 452526 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-152361-17	GMZ-2I	Total Recoverable	Water	6010D	448082
410-152361-22	SW-06	Total Recoverable	Water	6010D	448082
MB 410-448082/1-A	Method Blank	Total Recoverable	Water	6010D	448082

Analysis Batch: 453010

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 410-448082/2-A	Lab Control Sample	Total Recoverable	Water	6010D	448082

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Lab Chronicle

Client: Montrose Environmental Solutions Inc
Project/Site: Foote Mineral PA

Job ID: 410-152361-1

Client Sample ID: GMZ-3S

Date Collected: 11/19/23 10:12
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.1B		10	312655	RDC	EET PHX	12/12/23 18:40
Total/NA	Analysis	9056A		1	814057	UI	EET SAV	12/18/23 18:26
Total Recoverable	Prep	3005A			448082	NU9R	ELLE	11/29/23 12:22
Total Recoverable	Analysis	6010D		1	452221	MT26	ELLE	12/10/23 18:29
Total Recoverable	Prep	3005A			448082	NU9R	ELLE	11/29/23 12:22
Total Recoverable	Analysis	6010D		1	452526	MT26	ELLE	12/11/23 09:37
Total Recoverable	Prep	3005A			448082	NU9R	ELLE	11/29/23 12:22
Total Recoverable	Analysis	6020B		1	451264	F7JF	ELLE	12/07/23 08:46

Client Sample ID: GMZ-3I

Date Collected: 11/19/23 11:00
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.1B		10	312655	RDC	EET PHX	12/12/23 19:10
Total/NA	Analysis	9056A		1	814057	UI	EET SAV	12/18/23 18:36
Total Recoverable	Prep	3005A			448082	NU9R	ELLE	11/29/23 12:22
Total Recoverable	Analysis	6010D		1	452221	MT26	ELLE	12/10/23 18:17
Total Recoverable	Prep	3005A			448082	NU9R	ELLE	11/29/23 12:22
Total Recoverable	Analysis	6010D		1	452526	MT26	ELLE	12/11/23 09:15
Total Recoverable	Prep	3005A			448082	NU9R	ELLE	11/29/23 12:22
Total Recoverable	Analysis	6020B		1	451264	F7JF	ELLE	12/07/23 08:32

Client Sample ID: GMZ-3D

Date Collected: 11/19/23 11:45
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.1B		10	312655	RDC	EET PHX	12/12/23 22:07
Total/NA	Analysis	9056A		1	814057	UI	EET SAV	12/18/23 18:47
Total Recoverable	Prep	3005A			448699	NU9R	ELLE	11/30/23 14:41
Total Recoverable	Analysis	6010D		1	449384	MT26	ELLE	12/02/23 04:07
Total Recoverable	Prep	3005A			448699	NU9R	ELLE	11/30/23 14:41
Total Recoverable	Analysis	6020B		1	450486	UCIG	ELLE	12/05/23 17:55

Client Sample ID: GMZ-1

Date Collected: 11/19/23 13:08
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.1B		10	312655	RDC	EET PHX	12/12/23 22:36
Total/NA	Analysis	9056A		1	814057	UI	EET SAV	12/18/23 18:58
Total Recoverable	Prep	3005A			448699	NU9R	ELLE	11/30/23 14:41
Total Recoverable	Analysis	6010D		1	449384	MT26	ELLE	12/02/23 03:32

Lab Chronicle

Client: Montrose Environmental Solutions Inc
Project/Site: Foote Mineral PA

Job ID: 410-152361-1

Client Sample ID: GMZ-1
Date Collected: 11/19/23 13:08
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			448699	NU9R	ELLE	11/30/23 14:41
Total Recoverable	Analysis	6020B		1	450486	UCIG	ELLE	12/05/23 17:35

Client Sample ID: SW-05
Date Collected: 11/19/23 14:00
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.1B		10	312655	RDC	EET PHX	12/12/23 23:06
Total/NA	Analysis	9056A		1	814057	UI	EET SAV	12/18/23 19:08
Total Recoverable	Prep	3005A			448699	NU9R	ELLE	11/30/23 14:41
Total Recoverable	Analysis	6010D		1	449384	MT26	ELLE	12/02/23 03:29
Total Recoverable	Prep	3005A			448699	NU9R	ELLE	11/30/23 14:41
Total Recoverable	Analysis	6020B		1	450486	UCIG	ELLE	12/05/23 17:33

Client Sample ID: SW-01
Date Collected: 11/19/23 14:30
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.1B		10	312655	RDC	EET PHX	12/12/23 20:38
Total/NA	Analysis	9056A		1	814057	UI	EET SAV	12/18/23 20:02
Total Recoverable	Prep	3005A			448699	NU9R	ELLE	11/30/23 14:41
Total Recoverable	Analysis	6010D		1	449384	MT26	ELLE	12/02/23 03:10
Total Recoverable	Prep	3005A			448699	NU9R	ELLE	11/30/23 14:41
Total Recoverable	Analysis	6020B		1	450486	UCIG	ELLE	12/05/23 17:15

Client Sample ID: SW-02
Date Collected: 11/19/23 15:00
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.1B		10	312655	RDC	EET PHX	12/12/23 23:35
Total/NA	Analysis	9056A		1	814057	UI	EET SAV	12/18/23 19:19
Total Recoverable	Prep	3005A			448699	NU9R	ELLE	11/30/23 14:41
Total Recoverable	Analysis	6010D		1	449384	MT26	ELLE	12/02/23 04:04
Total Recoverable	Prep	3005A			448699	NU9R	ELLE	11/30/23 14:41
Total Recoverable	Analysis	6020B		1	450486	UCIG	ELLE	12/05/23 17:53

Client Sample ID: SW-02A
Date Collected: 11/19/23 15:15
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.1B		10	312655	RDC	EET PHX	12/13/23 00:05

Lab Chronicle

Client: Montrose Environmental Solutions Inc
Project/Site: Foote Mineral PA

Job ID: 410-152361-1

Client Sample ID: SW-02A

Date Collected: 11/19/23 15:15
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	814057	UI	EET SAV	12/18/23 19:30
Total Recoverable	Prep	3005A			448699	NU9R	ELLE	11/30/23 14:41
Total Recoverable	Analysis	6010D		1	449384	MT26	ELLE	12/02/23 03:48
Total Recoverable	Prep	3005A			448699	NU9R	ELLE	11/30/23 14:41
Total Recoverable	Analysis	6020B		1	450486	UCIG	ELLE	12/05/23 17:37

Client Sample ID: ERM-2S

Date Collected: 11/20/23 09:02
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.1B		10	312655	RDC	EET PHX	12/13/23 00:34
Total/NA	Analysis	9056A		1	814031	UI	EET SAV	12/18/23 15:14
Total Recoverable	Prep	3005A			448082	NU9R	ELLE	11/29/23 12:22
Total Recoverable	Analysis	6010D		1	452221	MT26	ELLE	12/10/23 18:20
Total Recoverable	Prep	3005A			448082	NU9R	ELLE	11/29/23 12:22
Total Recoverable	Analysis	6010D		1	452526	MT26	ELLE	12/11/23 09:19
Total Recoverable	Prep	3005A			448082	NU9R	ELLE	11/29/23 12:22
Total Recoverable	Analysis	6020B		1	451264	F7JF	ELLE	12/07/23 08:34

Client Sample ID: ERM-2D

Date Collected: 11/20/23 09:57
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.1B		10	312655	RDC	EET PHX	12/13/23 01:04
Total/NA	Analysis	9056A		1	814031	UI	EET SAV	12/18/23 15:25
Total Recoverable	Prep	3005A			448699	NU9R	ELLE	11/30/23 14:41
Total Recoverable	Analysis	6010D		1	449384	MT26	ELLE	12/02/23 03:57
Total Recoverable	Prep	3005A			448699	NU9R	ELLE	11/30/23 14:41
Total Recoverable	Analysis	6020B		1	450486	UCIG	ELLE	12/05/23 17:43

Client Sample ID: ERM-1D

Date Collected: 11/20/23 11:22
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.1B		10	312657	RDC	EET PHX	12/13/23 14:19
Total/NA	Analysis	9056A		1	814031	UI	EET SAV	12/18/23 15:35
Total Recoverable	Prep	3005A			448063	NU9R	ELLE	11/29/23 11:56
Total Recoverable	Analysis	6010D		1	449328	T8CQ	ELLE	12/01/23 20:59
Total Recoverable	Prep	3005A			448063	NU9R	ELLE	11/29/23 11:56
Total Recoverable	Analysis	6020B		1	450254	F7JF	ELLE	12/05/23 09:42

Client Sample ID: GMZ-4D

Date Collected: 11/20/23 14:57
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.1B		10	312657	RDC	EET PHX	12/13/23 14:49
Total/NA	Analysis	9056A		1	814031	UI	EET SAV	12/18/23 15:46
Total Recoverable	Prep	3005A			448082	NU9R	ELLE	11/29/23 12:22
Total Recoverable	Analysis	6010D		1	452221	MT26	ELLE	12/10/23 18:23
Total Recoverable	Prep	3005A			448082	NU9R	ELLE	11/29/23 12:22
Total Recoverable	Analysis	6010D		1	452526	MT26	ELLE	12/11/23 09:31
Total Recoverable	Prep	3005A			448082	NU9R	ELLE	11/29/23 12:22
Total Recoverable	Analysis	6020B		1	451264	F7JF	ELLE	12/07/23 08:36

Client Sample ID: GMZ-4I

Date Collected: 11/20/23 15:52
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.1B		5	312758	RDC	EET PHX	12/15/23 03:09
Total/NA	Analysis	9056A		1	814031	UI	EET SAV	12/18/23 15:57
Total Recoverable	Prep	3005A			448082	NU9R	ELLE	11/29/23 12:22
Total Recoverable	Analysis	6010D		1	452221	MT26	ELLE	12/10/23 18:14
Total Recoverable	Prep	3005A			448082	NU9R	ELLE	11/29/23 12:22
Total Recoverable	Analysis	6010D		1	452526	MT26	ELLE	12/11/23 09:12
Total Recoverable	Prep	3005A			448082	NU9R	ELLE	11/29/23 12:22
Total Recoverable	Analysis	6020B		1	451264	F7JF	ELLE	12/07/23 08:30

Client Sample ID: GMZ-4S

Date Collected: 11/20/23 16:37
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.1B		10	312657	RDC	EET PHX	12/13/23 05:29
Total/NA	Analysis	9056A		1	814057	UI	EET SAV	12/18/23 17:33
Total Recoverable	Prep	3005A			448699	NU9R	ELLE	11/30/23 14:41
Total Recoverable	Analysis	6010D		1	449384	MT26	ELLE	12/02/23 04:32
Total Recoverable	Prep	3005A			448699	NU9R	ELLE	11/30/23 14:41
Total Recoverable	Analysis	6020B		1	450486	UCIG	ELLE	12/05/23 18:14

Client Sample ID: ERM-5

Date Collected: 11/21/23 08:00
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.1B		10	312657	RDC	EET PHX	12/13/23 08:56
Total/NA	Analysis	9056A		1	814031	UI	EET SAV	12/18/23 16:07
Total Recoverable	Prep	3005A			448699	NU9R	ELLE	11/30/23 14:41
Total Recoverable	Analysis	6010D		1	449384	MT26	ELLE	12/02/23 04:00

Client Sample ID: ERM-5

Date Collected: 11/21/23 08:00
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			448699	NU9R	ELLE	11/30/23 14:41
Total Recoverable	Analysis	6020B		1	450486	UCIG	ELLE	12/05/23 17:45

Client Sample ID: GMZ-2D

Date Collected: 11/21/23 09:22
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-16

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.1B		10	312657	RDC	EET PHX	12/13/23 09:25
Total/NA	Analysis	9056A		1	814031	UI	EET SAV	12/18/23 16:18
Total Recoverable	Prep	3005A			448082	NU9R	ELLE	11/29/23 12:22
Total Recoverable	Analysis	6010D		1	452221	MT26	ELLE	12/10/23 18:26
Total Recoverable	Prep	3005A			448082	NU9R	ELLE	11/29/23 12:22
Total Recoverable	Analysis	6010D		1	452526	MT26	ELLE	12/11/23 09:34
Total Recoverable	Prep	3005A			448082	NU9R	ELLE	11/29/23 12:22
Total Recoverable	Analysis	6020B		1	451264	F7JF	ELLE	12/07/23 08:38

Client Sample ID: GMZ-2I

Date Collected: 11/21/23 09:57
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-17

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.1B		10	312657	RDC	EET PHX	12/13/23 09:54
Total/NA	Analysis	9056A		1	814031	UI	EET SAV	12/18/23 16:29
Total Recoverable	Prep	3005A			448082	NU9R	ELLE	11/29/23 12:22
Total Recoverable	Analysis	6010D		1	452221	MT26	ELLE	12/10/23 18:45
Total Recoverable	Prep	3005A			448082	NU9R	ELLE	11/29/23 12:22
Total Recoverable	Analysis	6010D		1	452526	MT26	ELLE	12/11/23 09:44
Total Recoverable	Prep	3005A			448082	NU9R	ELLE	11/29/23 12:22
Total Recoverable	Analysis	6020B		1	451264	F7JF	ELLE	12/07/23 08:50

Client Sample ID: GMZ-2S

Date Collected: 11/21/23 10:37
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-18

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.1B		10	312657	RDC	EET PHX	12/13/23 10:24
Total/NA	Analysis	9056A		1	814031	UI	EET SAV	12/18/23 16:39
Total Recoverable	Prep	3005A			448699	NU9R	ELLE	11/30/23 14:41
Total Recoverable	Analysis	6010D		1	449384	MT26	ELLE	12/02/23 03:51
Total Recoverable	Prep	3005A			448699	NU9R	ELLE	11/30/23 14:41
Total Recoverable	Analysis	6020B		1	450486	UCIG	ELLE	12/05/23 17:39

Lab Chronicle

Client: Montrose Environmental Solutions Inc
Project/Site: Foote Mineral PA

Job ID: 410-152361-1

Client Sample ID: GMZ-2SD

Date Collected: 11/21/23 11:07
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-19

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.1B		5	312758	RDC	EET PHX	12/15/23 04:37
Total/NA	Analysis	9056A		1	814057	UI	EET SAV	12/18/23 18:05
Total Recoverable	Prep	3005A			448699	NU9R	ELLE	11/30/23 14:41
Total Recoverable	Analysis	6010D		1	449384	MT26	ELLE	12/02/23 03:54
Total Recoverable	Prep	3005A			448699	NU9R	ELLE	11/30/23 14:41
Total Recoverable	Analysis	6020B		1	450486	UCIG	ELLE	12/05/23 17:41

Client Sample ID: MW-22

Date Collected: 11/21/23 11:37
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-20

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	449219	Y6ZN	ELLE	12/01/23 20:15
Total/NA	Analysis	300.1B		5	312758	RDC	EET PHX	12/15/23 05:07
Total/NA	Analysis	9056A		1	814057	UI	EET SAV	12/18/23 18:15
Total Recoverable	Prep	3005A			449143	NU9R	ELLE	12/01/23 14:13
Total Recoverable	Analysis	6010D		1	450517	T8CQ	ELLE	12/05/23 21:00
Total Recoverable	Prep	3005A			449143	NU9R	ELLE	12/01/23 14:13
Total Recoverable	Analysis	6020B		1	450486	UCIG	ELLE	12/05/23 16:29

Client Sample ID: MW-22D

Date Collected: 11/21/23 12:07
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-21

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	449219	Y6ZN	ELLE	12/01/23 22:14

Client Sample ID: SW-06

Date Collected: 11/21/23 12:30
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-22

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.1B		5	312758	RDC	EET PHX	12/15/23 05:36
Total/NA	Analysis	9056A		5	812275	UI	EET SAV	12/08/23 13:02
Total Recoverable	Prep	3005A			448082	NU9R	ELLE	11/29/23 12:22
Total Recoverable	Analysis	6010D		1	452221	MT26	ELLE	12/10/23 18:33
Total Recoverable	Prep	3005A			448082	NU9R	ELLE	11/29/23 12:22
Total Recoverable	Analysis	6010D		1	452526	MT26	ELLE	12/11/23 09:41
Total Recoverable	Prep	3005A			448082	NU9R	ELLE	11/29/23 12:22
Total Recoverable	Analysis	6020B		1	451264	F7JF	ELLE	12/07/23 08:48

Lab Chronicle

Client: Montrose Environmental Solutions Inc
Project/Site: Foote Mineral PA

Job ID: 410-152361-1

Client Sample ID: TB-01-111923
Date Collected: 11/19/23 00:00
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-23
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	448794	K4YF	ELLE	12/01/23 00:50

Laboratory References:

EET PHX = Eurofins Phoenix, 4625 East Cotton Center Boulevard, Suite #189, Phoenix, AZ 85040, TEL (602)437-3340

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: Montrose Environmental Solutions Inc
Project/Site: Foote Mineral PA

Job ID: 410-152361-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Pennsylvania	NELAP	36-00037	01-31-24

Laboratory: Eurofins Phoenix

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arizona	State	AZ0728	06-10-24
California	State	2941	03-09-24
Nevada	State	AZ1030	07-31-24
Oregon	NELAP	AZ100001	03-09-24

Laboratory: Eurofins Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Pennsylvania	NELAP	68-00474	06-30-24

Method Summary

Client: Montrose Environmental Solutions Inc
Project/Site: Foote Mineral PA

Job ID: 410-152361-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	ELLE
300.1B	Disinfection By-Products, (IC)	EPA	EET PHX
9056A	Anions, Ion Chromatography	SW846	EET SAV
6010D	Metals (ICP)	SW846	ELLE
6020B	Metals (ICP/MS)	SW846	ELLE
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	ELLE
5030C	Purge and Trap	SW846	ELLE

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET PHX = Eurofins Phoenix, 4625 East Cotton Center Boulevard, Suite #189, Phoenix, AZ 85040, TEL (602)437-3340

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: Montrose Environmental Solutions Inc
Project/Site: Foote Mineral PA

Job ID: 410-152361-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-152361-1	GMZ-3S	Water	11/19/23 10:12	11/22/23 16:05
410-152361-2	GMZ-3I	Water	11/19/23 11:00	11/22/23 16:05
410-152361-3	GMZ-3D	Water	11/19/23 11:45	11/22/23 16:05
410-152361-4	GMZ-1	Water	11/19/23 13:08	11/22/23 16:05
410-152361-5	SW-05	Water	11/19/23 14:00	11/22/23 16:05
410-152361-6	SW-01	Water	11/19/23 14:30	11/22/23 16:05
410-152361-7	SW-02	Water	11/19/23 15:00	11/22/23 16:05
410-152361-8	SW-02A	Water	11/19/23 15:15	11/22/23 16:05
410-152361-9	ERM-2S	Water	11/20/23 09:02	11/22/23 16:05
410-152361-10	ERM-2D	Water	11/20/23 09:57	11/22/23 16:05
410-152361-11	ERM-1D	Water	11/20/23 11:22	11/22/23 16:05
410-152361-12	GMZ-4D	Water	11/20/23 14:57	11/22/23 16:05
410-152361-13	GMZ-4I	Water	11/20/23 15:52	11/22/23 16:05
410-152361-14	GMZ-4S	Water	11/20/23 16:37	11/22/23 16:05
410-152361-15	ERM-5	Water	11/21/23 08:00	11/22/23 16:05
410-152361-16	GMZ-2D	Water	11/21/23 09:22	11/22/23 16:05
410-152361-17	GMZ-2I	Water	11/21/23 09:57	11/22/23 16:05
410-152361-18	GMZ-2S	Water	11/21/23 10:37	11/22/23 16:05
410-152361-19	GMZ-2SD	Water	11/21/23 11:07	11/22/23 16:05
410-152361-20	MW-22	Water	11/21/23 11:37	11/22/23 16:05
410-152361-21	MW-22D	Water	11/21/23 12:07	11/22/23 16:05
410-152361-22	SW-06	Water	11/21/23 12:30	11/22/23 16:05
410-152361-23	TB-01-111923	Water	11/19/23 00:00	11/22/23 16:05

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Eurofins Lancaster Laboratories Environme
2425 New Holland Pike
Lancaster PA 17601
Phone 717-656-2300 Fax 717-656-2681

Chain of Custody Record

410-152361 Chain of Custody

eurofins

Client Information	Sampler: David Benson	Lab PM: Weyandt, Barbara A	Carrier Tracking No: 410-101735-24708.1
Client Contact: Accounts Payable	Phone: 610-840-9105	E-Mail: Barbara.Weyandt@et.eurofinsus.com	State of Origin: PA	Page: Page 1 of 3
Company: Montrose Environmental Solutions Inc	PWSID:	Analysis Requested	Job #:
Address: 1140 Valley Forge Road	Due Date Requested: Standard		Preservation Codes: A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Y - Trizma; Z - other (specify); Other:
City: Phoenixville	TAT Requested (days): Standard		
State, Zip: PA, 19460	Compliance Project: Δ Yes Δ No		
Phone: 484-602-5590(Tel)	PO #: 2023-4439		
Email: mes_ap@montrose-env.com	WO #:		
Project Name: Foote Mineral	Project #: 41015209		
Site:	SSOW#:		

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (w=water, s=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010D, 6020B	9056A_DRGFM_28D - Bromide/Fluoride	8260D - 10 VOCs	300.1B_28D - Rerun	Total Number of containers	Special Instructions/Note:
			Preservation Code				D	N	A	L		
GMZ-3S	11/19/23	1012	G	W	N	N	X	X		X	3	
GMZ-3I	11/19/23	1100	G	W	N	N	X	X		X	3	
GMZ-3D	11/19/23	1145	G	W	N	N	X	X		X	3	
GMZ-1	11/19/23	1308	G	W	N	N	X	X		X	3	
SW-05	11/19/23	1400	G	W	N	N	X	X		X	3	
SW-01	11/19/23	1430	G	W	N	Y	X	X		X	4	MS/MSD
SW-02	11/19/23	1520	G	W	N	N	X	X		X	3	
SW-02A	11/19/23	1515	G	W	N	N	X	X		X	3	
ERM-2S	11/20/23	0902	G	W	N	N	X	X		X	3	
ERM-2D	11/20/23	0957	G	W	N	N	X	X		X	3	
ERM-1D	11/20/23	1122	G	W	N	N	X	X		X	3	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☑ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify): Level II

Special Instructions/QC Requirements:

Empty Kit Relinquished by	Date	Time	Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
David Benson	11/22/23 0905	Montrose	Di Anne Kelley	11/22/23 0905	Montrose
[illegible]	11/22/23 1255				
[illegible]	11/22/23 1605				ELLA

Custody Seals Intact: Δ Yes Δ No | Custody Seal No:

Cooler Temperature(s) °C and Other Remarks: 1.4-2.1 / 1.5-2.2 raw corr

Ver: 06/08/2021

12/21/2023 (Rev. 1)

ED_021284A_00000049-00099

Eurofins Lancaster Laboratories Environme
2425 New Holland Pike
Lancaster PA 17601
Phone 717-656-2300 Fax 717-656-2681

Chain of Custody Record

eurofins

Client Information	Sampler: David Benson	Lab PM: Weyandt, Barbara A	Carrier Tracking No(s):	COC No: 410-101735-24708.2
Client Contact: Accounts Payable	Phone: 610-840-9105	E-Mail: Barbara.Weyandt@et.eurofinsus.com	State of Origin: PA	Page: Page 2 of 3
Company: Montrose Environmental Solutions Inc	PWSID:	Analysis Requested		Job #:
Address: 1140 Valley Forge Road	Due Date Requested: Standard			Preservation Codes: A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; F - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - NaZSZO3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Y - Trizma; Z - other (specify); Other:
City: Phoenixville	TAT Requested (days): Standard			
State, Zip: PA 19460	Compliance Project: Δ Yes Δ No			
Phone: 484-802-5590(Tel)	PO #: 2023-4439			
Email: mes_ap@montrose-env.com	WO #:			
Project Name: Foote Mineral	Project #: 41015209			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010D, 6020B	9056A_DRGFM_28D - Bromide/Fluoride	8260D - 10 VOCs	300.1B, 28D - Bromide	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	A	2		
~~ERM-1~~ GM2-4D	11/20/23	1457	G	W	N	N	X	X		X	3	
GM2-4I	11/20/23	1552	G	W	N	N	X	X		X	3	
GM2-4S	11/20/23	1637	G	W	N	Y	X	X		X	9	MS/MSD
ERM-5	11/21/23	0800	G	W	N	N	X	X		X	3	
GM2-2D	11/21/23	0922	G	W	N	N	X	X		X	3	
GM2-2I	11/21/23	0957	G	W	N	N	X	X		X	3	
GM2-2S	11/21/23	1037	G	W	N	N	X	X		X	3	
GM2-2SD	11/21/23	1107	G	W	N	N	X	X		X	3	
MW-22	11/21/23	1137	G	W	N	Y	X	X	X	X	12	MS/MSD use only
MW-22D	11/21/23	1207	G	W	N	N			X		3	
SW-06	11/21/23	1230	G	W	N	N	X	X		X	3	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☑ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify): Level II

Special Instructions/QC Requirements:

Empty Kit Relinquished by	Date	Time	Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
David Benson	11/22/23 0905	Montrose	[illegible]	11/22/23 0905	Montrose
[illegible]	~~11/22/23 1253~~		[illegible]		
[illegible]	11/22/23 1605		[illegible]	11/22/23 1605	Eurofins

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks
		1.4 -21/1.5-22 rad

Ver: 06/08/2021

Eurofins Lancaster Laboratories Environme
2425 New Holland Pike
Lancaster, PA 17601
Phone 717-656-2300 Fax 717-656-2681

Chain of Custody Record

eurofins

Client Information	Sampler: David Benson	Lab PM: Weyandt, Barbara A	Carrier Tracking No(s):	COC No: 410-101735-24708.3
Client Contact: Accounts Payable	Phone: 610-840-4105	E-Mail: Barbara.Weyandt@et.eurofinsus.com	State of Origin: PA	Page: Page 3 of 3
Company: Montrose Environmental Solutions Inc	PWS ID:	Analysis Requested		Job #:
Address: 1140 Valley Forge Road	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify), Other:
City: Phoenixville	TAT Requested (days): Standard			
State, Zip: PA, 19460	Compliance Project: Δ Yes Δ No			
Phone: 484-802-5590(Tel)	PO #: 2023-4439			
Email: mes_ap@montrose-env.com	WO #:			
Project Name: Foote Mineral	Project #: 41015209			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (w=water, s=solid, o=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010D, 6020B	9056A_ORGFM_28D - Bromide/Fluoride	R260D - 10 VOCs	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	A		
TB-01-111923	11/19/23	-	G	W					X	2	Trip Blank

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Non-Hazard, Flammable, Skin Irritant, Poison B, Unknown, Radiological	Return To Client, Disposal By Lab, Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify): Level II	Special Instructions/QC Requirements:

Empty Kit Relinquished by	Date	Time	Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
David Benson	11/22/23 0705	Montrose	D. Cam Kelley	11/22/23 0705	Montrose
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	11/22/23 1251				
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	11/22/23 1605			11/22/23 1605	Eurofins

Custody Seals Intact: Δ Yes Δ No	Custody Seal No:	Cooler Temperature(s) °C and Other Remarks: 1.4-2.1 / 1.5-2.2 rdw

Eurofins Lancaster Laboratories Environme
2425 New Holland Pike
Lancaster, PA 17601
Phone: 717-656-2300 Fax: 717-656-2681

Chain of Custody Record

eurofins
Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Weyandt, Barbara A	Carrier Tracking No(s):	COC No: 410-2554127 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Barbara.Weyandt@et.eurofinsus.com	State of Origin: Pennsylvania	Page: Page 1 of 3
Company: Eurofins Environment Testing Southwest,		Accreditations Required (See note): NELAP - Pennsylvania		Job #: 410-152361-1
Address: 4625 East Cotton Center Boulevard, Suite #189,	Due Date Requested: 12/13/2023	Analysis Requested		Preservation Codes:
City: Phoenix	TAT Requested (days):			A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Y - Trizma; Z - other (specify); Other:
State, Zip: AZ, 85040				
Phone: 602-437-3340(Tel)	PO #:			
Email:	WO #:			
Project Name: Foote Mineral PA	Project #: 41015209			
Site:	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300.1B_14D	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
GMZ-3S (410-152361-1)	11/19/23	10:12 Eastern		Water			X	1	Client needs limit of 10 ug/l
GMZ-3I (410-152361-2)	11/19/23	11:00 Eastern		Water			X	1	
GMZ-3D (410-152361-3)	11/19/23	11:45 Eastern		Water			X	1	
GMZ-1 (410-152361-4)	11/19/23	13:08 Eastern		Water			X	1	
SW-05 (410-152361-5)	11/19/23	14:00 Eastern		Water			X	1	
SW-01 (410-152361-6)	11/19/23	14:30 Eastern		Water			X	1	
SW-01 (410-152361-6MS)	11/19/23	14:30 Eastern	MS	Water			X	1	
SW-01 (410-152361-6MSD)	11/19/23	14:30 Eastern	MSD	Water			X	1	
SW-02 (410-152361-7)	11/19/23	15:00 Eastern		Water			X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Lancaster Laboratories Environment Testing, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Lancaster Laboratories Environment Testing, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Lancaster Laboratories Environment Testing, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Lancaster Laboratories Environment Testing, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time:	Company	Received by	Date/Time	Company
Relinquished by	Date/Time:	Company	Received by	Date/Time	Company
Relinquished by	Date/Time:	Company	Received by:	Date/Time: 12/18/23 0945	Company: EETA PHX

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.3°C- ICE-FEDO

Ver: 06/08/2021

12/21/2023 (Rev. 1)

Page 62 of 70

Eurofins Lancaster Laboratories Environme
2425 New Holland Pike
Lancaster, PA 17601
Phone: 717-656-2300 Fax: 717-656-2681

Chain of Custody Record

eurofins Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Weyandt, Barbara A	Carrier Tracking No(s):	COC No: 410-2554127.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Barbara.Weyandt@et.eurofinsus.com	State of Origin: Pennsylvania	Page: Page 2 of 3
Company: Eurofins Environment Testing Southwest,		Accreditations Required (See note): NELAP - Pennsylvania		Job #: 410-152361-1
Address: 4625 East Cotton Center Boulevard, Suite #189,	Due Date Requested: 12/13/2023			
City: Phoenix	TAT Requested (days):			
State, Zip: AZ, 85040				
Phone: 602-437-3340(Tel)	PO #:			
Email:	WO #:			
Project Name: Foote Mineral PA	Project #: 41015209			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Y - Trizma; Z - other (specify); Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wastecil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300_IB_14O	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X		X	
SW-02A (410-152361-8)	11/19/23	15:15 Eastern		Water			X	1	
ERM-2S (410-152361-9)	11/20/23	09:02 Eastern		Water			X	1	
ERM-2D (410-152361-10)	11/20/23	09:57 Eastern		Water			X	1	
ERM-1D (410-152361-11)	11/20/23	11:22 Eastern		Water			X	1	
GMZ-4D (410-152361-12)	11/20/23	14:57 Eastern		Water			X	1	
GMZ-4I (410-152361-13)	11/20/23	15:52 Eastern		Water			X	1	
GMZ-4S (410-152361-14)	11/20/23	16:37 Eastern		Water			X	1	
GMZ-4S (410-152361-14MS)	11/20/23	16:37 Eastern	MS	Water			X	1	
GMZ-4S (410-152361-14MSD)	11/20/23	16:37 Eastern	MSD	Water			X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Lancaster Laboratories Environment Testing, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Lancaster Laboratories Environment Testing, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Lancaster Laboratories Environment Testing, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Lancaster Laboratories Environment Testing, LLC.

Possible Hazard Identification *Unconfirmed*	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)* ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:
Empty Kit Relinquished by:	Date: Time: Method of Shipment:

Relinquished by	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by	Date/Time	Company	Received by:	Date/Time:	Company
Relinquished by	Date/Time	Company	Received by:	Date/Time: 12/16/23 0945	Company: EETA PHX

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 1.3°C - ICE-FEDO

Ver: 06/08/2021

Eurofins Lancaster Laboratories Environme
2425 New Holland Pike
Lancaster, PA 17601
Phone 717-656-2300 Fax: 717-656-2681

Chain of Custody Record

eurofins : Environment Testing

Client Information (Sub Contract Lab)	Sampler	Lab PM: Weyandt, Barbara A	Carrier Tracking No(s):	COC No: 410-2554127.3
Client Contact: Shipping/Receiving	Phone	E-Mail: Barbara.Weyandt@et.eurofinsus.com	State of Origin: Pennsylvania	Page: Page 3 of 3
Company: Eurofins Environment Testing Southwest		Accred itations Required (See note): NELAP - Pennsylvania		Job #: 410-152361-1
Address: 4625 East Cotton Center Boulevard, Suite #189,	Due Date Requested: 12/13/2023			
City: Phoenix	TAT Requested (days):			
State, Zip: AZ, 85040				
Phone: 602-437-3340(Tel)	PO #:			
Email:	WO #:			
Project Name: Foote Mineral PA	Project #: 41015209			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify), Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Oil, Waste, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300.1B_14D	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
ERM-5 (410-152361-15)	11/21/23	08:00 Eastern		Water			X	1	
GMZ-2D (410-152361-16)	11/21/23	09:22 Eastern		Water			X	1	
GMZ-2I (410-152361-17)	11/21/23	09:57 Eastern		Water			X	1	
GMZ-2S (410-152361-18)	11/21/23	10:37 Eastern		Water			X	1	
GMZ-2SD (410-152361-19)	11/21/23	11:07 Eastern		Water			X	1	
MW-22 (410-152361-20)	11/21/23	11:37 Eastern		Water			X	1	
SW-06 (410-152361-22)	11/21/23	12:30 Eastern		Water			X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Lancaster Laboratories Environment Testing, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Lancaster Laboratories Environment Testing, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Lancaster Laboratories Environment Testing, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Lancaster Laboratories Environment Testing, LLC

Possible Hazard Identification: Unconfirmed	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 12/18/23 0745	Company: EETA PHX

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.3°C-ICE - FED

Ver: 06/08/2021

Eurofins Lancaster Laboratories Environme
2425 New Holland Pike
Lancaster PA 17601
Phone: 717-656-2300 Fax: 717-656-2681

Chain of Custody Record

eurofins

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Weyandt, Barbara A	Carrier Tracking No(s):	COC No: 410-2530737 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Barbara.Weyandt@et.eurofinsus.com	State of Origin: Pennsylvania	Page: Page 1 of 3
Company: Eurofins Environment Testing Southeast,		Accreditations Required (See note): NELAP Pennsylvania		Job #: 410-152361 1
Address: 5102 LaRoche Avenue,	Due Date Requested: 12/13/2023			
City: Savannah	TAT Requested (days):			
State, Zip: GA, 31404				
Phone: 912-354-7858(Tel) 912-352-0165(Fax)	PO #:			
Email:	WO #:			
Project Name: Foote Mineral PA	Project #: 41015209			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A HCL, B NaOH, C Zn Acetate, D Nitric Acid, E NaHSO4, F MeOH, G Amchlor, H Ascorbic Acid, I Ice, J DI Water, K EDTA, L EDA, M Hexane, N None, O AsNaO2, P Na2O4S, Q Na2SO3, R Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V MCAA, W pH 4-5, Y Trizma, Z other (specify), Other:

Sample Identification Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300.1B_28D/ Bromate	9056A_ORGFM_28D/ Bromide, Fluoride	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
GMZ-3S (410-152361-1)	11/19/23	10:12 Eastern		Water			X	X	1	
GMZ-3I (410-152361-2)	11/19/23	11:00 Eastern		Water			X	X	1	
GMZ-3D (410-152361-3)	11/19/23	11:45 Eastern		Water			X	X	1	
GMZ-1 (410-152361-4)	11/19/23	13:08 Eastern		Water			X	X	1	
SW-05 (410-152361-5)	11/19/23	14:00 Eastern		Water			X	X	1	
SW-01 (410-152361-6)	11/19/23	14.30 Eastern		Water			X	X	1	
SW-01 (410-152361-6DU)	11/19/23	14.30 Eastern	DU	Water				X	1	
SW-01 (410-152361-6MS)	11/19/23	14:30 Eastern	MS	Water			X	X	1	
SW-02 (410-152361 7)	11/19/23	15:00 Eastern		Water			X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Lancaster Laboratories Environment Testing, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Lancaster Laboratories Environment Testing, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Lancaster Laboratories Environment Testing, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Lancaster Laboratories Environment Testing, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I II III, IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Kim Deans	11/28/23 1439	ELLET	[illegible]	11-29-23	
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 10:11	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks: 0.3 - 0.6

Eurofins Lancaster Laboratories Environme
2425 New Holland Pike
Lancaster PA 17601
Phone: 717-656-2300 Fax: 717-656-2681

Chain of Custody Record

eurofins

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Weyandt, Barbara A	Carrier Tracking No(s):	COC No: 410-2530737 3
Client Contact: Shipping/Receiving	Phone:	E-Mail: Barbara.Weyandt@et.eurofinsus.com	State of Origin: Pennsylvania	Page: Page 3 of 3
Company: Eurofins Environment Testing Southeast,		Accreditations Required (See note): NELAP Pennsylvania		Job #: 410-152361-1
Address: 5102 LaRoche Avenue,	Due Date Requested: 12/13/2023	Analysis Requested		Preservation Codes:
City: Savannah	TAT Requested (days):			A HCL M Hexane B NaOH N None C Zn Acetate O AsNaO2 D Nitric Acid P Na2O4S E NaHSO4 Q Na2SO3 F MeOH R Na2S2O3 G Amchlor S H2SO4 H Ascorbic Acid T TSP Dodecahydrate I Ice U Acetone J DI Water V MCAA K EDTA W pH 4-5 L EDA Y Trizma Z other (specify)
State, Zip: GA, 31404				
Phone: 912-354-7858(Tel) 912-352-0165(Fax)	PO #:			Other:
Email:	WO #:			
Project Name: Foote Mineral PA	Project #: 41015209			
Site:	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Wastewater, Sewage, Groundwater, Tissue, Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300.1B_28D/ Bromate	9056A_ORGFM_28D/ Bromide, Fluoride	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
ERM-5 (410-152361 15)	11/21/23	08:00 Eastern		Water			X	X	1	
GMZ-2D (410-152361-16)	11/21/23	09:22 Eastern		Water			X	X	1	
GMZ-2I (410-152361 17)	11/21/23	09:57 Eastern		Water			X	X	1	
GMZ-2S (410-152361 18)	11/21/23	10:37 Eastern		Water			X	X	1	
GMZ-2SD (410-152361 19)	11/21/23	11 07 Eastern		Water			X	X	1	
MW-22 (410-152361-20)	11/21/23	11:37 Eastern		Water			X	X	1	
SW-06 (410-152361-22)	11/21/23	12:30 Eastern		Water			X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Lancaster Laboratories Environment Testing, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Lancaster Laboratories Environment Testing, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Lancaster Laboratories Environment Testing, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Lancaster Laboratories Environment Testing, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Kristin Adams	11/28/23 1439	ELLET	JH	11-29-23	
Relinquished by:	Date/Time:	Company	Received by	Date/Time:	Company
				10:11	
Relinquished by:	Date/Time:	Company	Received by	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks: 0.2 - 0.6

Login Sample Receipt Checklist

Client: Montrose Environmental Solutions Inc

Job Number: 410-152361-1

Login Number: 152361
List Number: 1
Creator: Wrye, Shaun

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	Not present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable,where thermal pres is required(</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV:Container Temp acceptable,where thermal pres is required (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	True	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	True	

Sample Preservation Checks (performed by the laboratory)

Question	Answer	Comment
Did the sample containers checked meet expected preservation conditions?	False	Refer to Job Narrative for details.

Login Sample Receipt Checklist

Client: Montrose Environmental Solutions Inc

Job Number: 410-152361-1

Login Number: 152361
List Number: 4
Creator: Vela, Jorge

List Source: Eurofins Phoenix
List Creation: 12/08/23 12:42 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	False	Check done at department level as required.

Login Sample Receipt Checklist

Client: Montrose Environmental Solutions Inc

Job Number: 410-152361-1

Login Number: 152361
List Number: 2
Creator: Stewart, Rendaisha

List Source: Eurofins Savannah
List Creation: 11/28/23 02:37 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Montrose Environmental Solutions Inc

Job Number: 410-152361-1

Login Number: 152361
List Number: 3
Creator: Harley, Tynisha

List Source: Eurofins Savannah
List Creation: 11/29/23 12:14 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

DATA VALIDATION SUMMARY
FOR
FOOTE MINERAL SITE

Montrose Project No. 2023-4439
January 2024

Prepared by:

1140 Valley Forge Road
Phoenixville, Pa 19481

1.0 Introduction

This report presents data validation findings and results for the groundwater samples collected by Montrose Environmental Solutions, Inc (MES) on November 19-21, 2023 at the Foote Mineral Site in East Whiteland Township, Pennsylvania. The data validation summary was performed with guidance utilizing the Quality Assurance Project Plan (QAPP) for the Former Cyprus Foote Minerals Site (Frazer Exton Development), East Whiteland Township, Pennsylvania, Revision 0 (July 2008), the National Functional Guidelines for Organic Superfund Data Review (November 2020) and Inorganic Superfund Data Review (November 2020), and professional judgement. All sample results were subjected to a Level II, or stage 2a reporting as defined by the U.S. Environmental Protection Agency's (USEPA's) Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use (EPA540-R-08-005). The validation includes a review of the laboratory and field quality control; including laboratory control spikes/laboratory control spike duplicates (LCS/LCSD), matrix spike/matrix spike duplicate (MS/MSD), method blanks, surrogate recoveries, cooler temperatures, sample hold times, preservatives, field duplicates, equipment blanks and trip blanks.

Eurofins Lancaster Laboratories Environment Testing, LLC (ELLE) performed the laboratory analyses for this sampling event. Subsamples were forwarded by ELLE to the Eurofins Phoenix, Arizona, facility for analysis of bromate. The laboratory report contains summary forms for the laboratory quality control analysis.

MES performed a data validation covering five surface water samples, sixteen groundwater samples and one field duplicate, for select metals by EPA Method 6010D/6020B, anions; bromide, and fluoride by EPA Method 300.0, and bromate by EPA Method 300.1B. Bromide was also analyzed by EPA method 300.1B to confirm the analysis of Bromide by method 300.0. Additional volumes of sample MW-22, the field duplicate (MW-22D), and a trip blank were submitted for analysis of ten site-specific volatile organic compounds (VOCs) by EPA method 8260D. A sample summary table is provided below.

Sample Summary Table

Sample Delivery Group	Laboratory ID	Sample Location	Volatiles 8260D	Anions 300.0	Anions 300.1B	Metals 6010D/6020B	Matrix	Sample Date
410-152361	410-152361-01	GMZ-3S		X	X	X	Groundwater	11/19/2023
410-152361	410-152361-02	GMZ-3I		X	X	X	Groundwater	11/19/2023
410-152361	410-152361-03	GMZ-3D		X	X	X	Groundwater	11/19/2023
410-152361	410-152361-04	GMZ-1		X	X	X	Groundwater	11/19/2023
410-152361	410-152361-05	SW-05		X	X	X	Surface water	11/19/2023
410-152361	410-152361-06	SW-01		X	X	X	Surface water	11/19/2023
410-152361	410-152361-07	SW-02		X	X	X	Surface water	11/19/2023
410-152361	410-152361-08	SW-02A		X	X	X	Surface water	11/19/2023
410-152361	410-152361-09	ERM-2S		X	X	X	Groundwater	11/20/2023
410-152361	410-152361-10	ERM-2D		X	X	X	Groundwater	11/20/2023
410-152361	410-152361-11	ERM-1D		X	X	X	Groundwater	11/20/2023
410-152361	410-152361-12	GMZ-4D		X	X	X	Groundwater	11/20/2023
410-152361	410-152361-13	GMZ-4I		X	X	X	Groundwater	11/20/2023
410-152361	410-152361-14	GMZ-4S		X	X	X	Groundwater	11/20/2023
410-152361	410-152361-15	ERM-5		X	X	X	Groundwater	11/21/2023
410-152361	410-152361-16	GMZ-2D		X	X	X	Groundwater	11/21/2023
410-152361	410-152361-17	GMZ-2I		X	X	X	Groundwater	11/21/2023
410-152361	410-152361-18	GMZ-2S		X	X	X	Groundwater	11/21/2023

Sample Delivery Group	Laboratory ID	Sample Location	Volatiles 8260D	Anions 300.0	Anions 300.1	Metals 6010D/6020B	Matrix	Sample Date
410-152361	410-152361-18	GMZ-2S		X	X	X	Groundwater	11/21/2023
410-152361	410-152361-19	GMZ-2SD		X	X	X	Groundwater	11/21/2023
410-152361	410-152361-20	MW-22	X	X	X	X	Groundwater	11/21/2023
410-152361	410-152361-21	MW-22D	X	X	X	X	Groundwater	11/21/2023
410-152361	410-152361-22	SW-06		X	X	X	Surface water	11/21/2023
410-152361	410-152361-23	TB-01-111923	X	X	X	X	Aqueous	11/19/2023

The following are definitions based on data qualifiers to be utilized during validation.

Qualifier	Definition
U	The analyte was not detected at or above the reporting limit
J	The analyte was positively identified and detected; however, the concentration is an estimated value because the result is less than the reporting limit or quality control criteria were not met;
UJ	The analyte was not detected and the associated reporting limit is an estimated value;
R	data are rejected due to significant exceedance of quality control criteria. The analyte may or may not be present. Additional sampling and analysis are required to determine;

2.0 Organic Analysis

ELLE utilized EPA method SW-846 8260D Volatile Organic Compounds by Gas Chromatography-Mass Spectrometry (GC/MS) for 1,2-dichloroethane, benzene, bromoform, carbon tetrachloride, chloroform, cis-1,2-dichloroethene, ethylbenzene, tetrachloroethene, trans-1,2-dichloroethene, and trichloroethene.

2.1.1 Sample Receipt/Holding Time Preservation

All samples were extracted and analyzed within the prescribed holding times. All samples had the proper preservation. Sample temperature upon receipt by the lab was acceptable as all samples were received < 6°C and "on ice".

2.1.2 Detection/Quantitation Limits

Samples were reported to the Method Detection Limit (MDL), and the Reporting Limit (RL). Samples detections below the RL and above the MDL were qualified as estimated (J).

2.1.3 Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%) were within the laboratory control limits.

2.1.4 Laboratory and Field Blanks

Method Blank

Method blanks were analyzed as required by the method. No contaminants were found in the method blanks.

Trip Blank

A trip blank was received with the sample shipment and no contaminants were found in the trip blank.

Field Blank

A field blank was not submitted.

2.1.5 Laboratory Control Standard (LCS)

An LCS was analyzed with every batch of 20 samples or less. Percent recoveries were within the laboratory control limits.

2.1.6 Matrix Spike/Matrix Spike Duplicate

Sample MW-22 was submitted and analyzed as a project specific MS/MSD. The MS/MSD recoveries and RPDs were within the laboratory control limits.

2.1.7 Field Duplicate

One field duplicate was submitted on the requirement of one per twenty samples. Relative percent differences (RPDs) were calculated when both concentrations were greater than five times the reporting limit (RL); otherwise, the difference between the two concentrations was calculated. The criteria of 35% RPD or ±RL for aqueous samples was applied. The submitted field duplicate RPDs for samples MW-22 and MW-22D were less than 35%, or the percent difference was less than the associated reporting limit concentration.

3.0 Inorganic Analysis

ELLE utilized EPA method 300.0 Determination of Inorganic Anions by Ion Chromatography for bromide and fluoride, EPA method 300.1B for Bromate, EPA SW-846 6010D Inductively Coupled Plasma – Atomic Emission Spectrometry for boron and lithium, and EPA SW-846 6010B Inductively Coupled Plasma – Mass Spectrometry for antimony, arsenic, chromium, and thallium.

The lab also analyzed samples by EPA method 300.1B for bromide for confirmation. The analysis was included as the initial analysis of EPA method 300.0 for Bromide was analyzed one day past the method hold due to a laboratory error for samples GMZ-3S, GMZ-3I, GMZ-3D, GMZ-1, SW-05, SW-01, SW-02, and SW-02A.

3.1.1 Sample Receipt/Holding Time Preservation

All samples were extracted and analyzed within the prescribed holding times with the exception of bromide and fluoride for samples GMZ-3S, GMZ-3I, GMZ-3D, GMZ-1, SW-05, SW-01, SW-02, and SW-02A by EPA method 300.0. The bromide and fluoride samples were qualified as estimated (UJ/J). The laboratory also reported the bromide analysis by EPA method 300.1B, which was analyzed within the method hold time. Sample results were comparable. All samples had the proper preservation. Sample temperature upon receipt by the lab was acceptable as all samples were received < 6°C and "on ice".

3.1.2 Detection/Quantitation Limits

Samples were reported to the Method Detection Limit (MDL), and the Reporting Limit (RL). Sample detections below the RL were qualified as estimated (J). The bromate and bromide samples analyzed by EPA method 300.1B were diluted due to the nature of the sample matrix. The qualifiers applied by the laboratory to indicate the dilution (D) and case narrative documentation (cn) were removed during validation.

3.1.3 Surrogates

Surrogates were added to all samples as required by the method 300.1B. All surrogate recoveries (%) were within the laboratory control limits.

3.1.4 Laboratory and Field Blanks

Method Blank

Method blanks were analyzed as required by the method. No contaminants were found in the method blanks.

Field Blank

A field blank was not submitted.

3.1.5 Laboratory Control Standard/Laboratory Control Standard Duplicates (LCS/LCSD)

An LCS and/or LCSD was analyzed with every batch of 20 samples or less. Percent recoveries were within the laboratory control limits and relative percent differences (RPD) were less than 20%.

3.1.6 Matrix Spike/Matrix Spike Duplicate

Samples SW-01 and GMZ-4S were submitted and analyzed as a project specific MS/MSD. The MS/MSD recoveries and RPDs were within the method control limits.

3.1.7 Laboratory Duplicate

Laboratory duplicate RPDs were within the method control limits.

3.1.8 Field Duplicate

Two field duplicates were submitted on the requirement of one per twenty samples per matrix. Relative percent differences (RPDs) are calculated when both concentrations are greater than five times the reporting limit (RL); otherwise, the difference between the two concentrations is calculated. The criteria of 35% RPD or ±RL for aqueous samples was applied. All parameter concentrations for the field duplicate pair of GMZ-2S and GMZ-2SD were non-detect, therefore the percent difference and/or RPD could not be calculated. The submitted field duplicate RPDs for samples SW-02 and SW-02A were less than 35%, or the percent difference was less than the associated reporting limit concentration except for the following.

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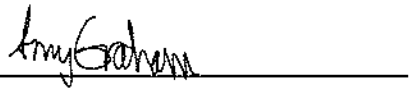
Analysis	Sample/Sample Duplicate	Sample Result	Duplicate Result	RPD	Qualified
Bromate	SW-01/SW-01A	12	21	54.5	J Both detections already qualified as J by laboratory.

4.0 Data Assessment

Data review was performed by an experienced quality assurance scientist independent of the analytical laboratory and not directly involved in the project.

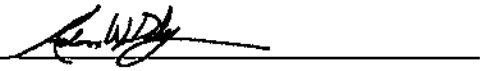
This is to certify that I have examined the analytical data and based on the information provided to me by the laboratory, in my professional judgment the data are acceptable for use except where qualified with qualifiers, which modify the usefulness of those individual values.



1/8/2024

Quality Assurance Scientist
Montrose Environmental Solutions, Inc.

Date



1/8/2024

Quality Assurance Manager
Montrose Environmental Solutions, Inc.

Date

Client Sample ID: GMZ-3S

Lab Sample ID: 410-152361-1

Date Collected: 11/19/23 10:12
Matrix: Water
Date Received: 11/22/23 16:05

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	**51**		50	8.8	ug/L			12/12/23 18:40	10
Bromide	**1600**		500	220	ug/L			12/12/23 18:40	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*102*		*90 - 115*		*12/12/23 18:40*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.062**	J ~~H on~~	0.10	0.040	mg/L			12/18/23 18:26	1
Bromide	**1.4**	~~H on~~ J	0.50	0.20	mg/L			12/18/23 18:26	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**490**		50	12	ug/L		11/29/23 12:22	12/11/23 09:37	1
Lithium	**2100**		50	11	ug/L		11/29/23 12:22	12/10/23 18:29	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/29/23 12:22	12/07/23 08:46	1
Arsenic	ND		2.0	0.68	ug/L		11/29/23 12:22	12/07/23 08:46	1
Chromium	**22**		2.0	0.55	ug/L		11/29/23 12:22	12/07/23 08:46	1
Thallium	ND		0.50	0.13	ug/L		11/29/23 12:22	12/07/23 08:46	1

Client Sample ID: GMZ-3I

Lab Sample ID: 410-152361-2

Date Collected: 11/19/23 11:00
Matrix: Water
Date Received: 11/22/23 16:05

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	**48**	J	50	8.8	ug/L			12/12/23 19:10	10
Bromide	**2000**		500	220	ug/L			12/12/23 19:10	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*102*		*90 - 115*		*12/12/23 19:10*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.071**	J ~~H on~~	0.10	0.040	mg/L			12/18/23 18:36	1
Bromide	**1.7**	~~H on~~ J	0.50	0.20	mg/L			12/18/23 18:36	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**690**		50	12	ug/L		11/29/23 12:22	12/11/23 09:15	1
Lithium	**2700**		50	11	ug/L		11/29/23 12:22	12/10/23 18:17	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/29/23 12:22	12/07/23 08:32	1

Client Sample ID: GMZ-3I

Date Collected: 11/19/23 11:00
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-2

Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		11/29/23 12:22	12/07/23 08:32	1
Chromium	**25**		2.0	0.55	ug/L		11/29/23 12:22	12/07/23 08:32	1
Thallium	ND		0.50	0.13	ug/L		11/29/23 12:22	12/07/23 08:32	1

Client Sample ID: GMZ-3D

Date Collected: 11/19/23 11:45
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-3

Matrix: Water

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	**67**		50	8.8	ug/L			12/12/23 22:07	10
Bromide	**2300**		500	220	ug/L			12/12/23 22:07	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*103*		*90 - 115*		*12/12/23 22:07*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.090**	J ~~H ca~~	0.10	0.040	mg/L			12/18/23 18:47	1
Bromide	**2.0**	~~H ca~~ J	0.50	0.20	mg/L			12/18/23 18:47	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**690**		50	12	ug/L		11/30/23 14:41	12/02/23 04:07	1
Lithium	**3100**		50	11	ug/L		11/30/23 14:41	12/02/23 04:07	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/30/23 14:41	12/05/23 17:55	1
Arsenic	ND		2.0	0.68	ug/L		11/30/23 14:41	12/05/23 17:55	1
Chromium	**27**		2.0	0.55	ug/L		11/30/23 14:41	12/05/23 17:55	1
Thallium	ND		0.50	0.13	ug/L		11/30/23 14:41	12/05/23 17:55	1

Client Sample ID: GMZ-1

Date Collected: 11/19/23 13:08
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-4

Matrix: Water

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	**85**		50	8.8	ug/L			12/12/23 22:36	10
Bromide	**840**		500	220	ug/L			12/12/23 22:36	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*102*		*90 - 115*		*12/12/23 22:36*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND	~~H ca~~ UJ	0.10	0.040	mg/L			12/18/23 18:58	1

Client Sample ID: GMZ-1

Lab Sample ID: 410-152361-4

Date Collected: 11/19/23 13:08
Matrix: Water
Date Received: 11/22/23 16:05

Method: SW846 9056A - Anions, Ion Chromatography (Continued)
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	**0.71**	~~H en~~ J	0.50	0.20	mg/L			12/18/23 18:58	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**140**		50	12	ug/L		11/30/23 14:41	12/02/23 03:32	1
Lithium	**510**		50	11	ug/L		11/30/23 14:41	12/02/23 03:32	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/30/23 14:41	12/05/23 17:35	1
Arsenic	ND		2.0	0.68	ug/L		11/30/23 14:41	12/05/23 17:35	1
Chromium	**8.5**		2.0	0.55	ug/L		11/30/23 14:41	12/05/23 17:35	1
Thallium	ND		0.50	0.13	ug/L		11/30/23 14:41	12/05/23 17:35	1

Client Sample ID: SW-05

Lab Sample ID: 410-152361-5

Date Collected: 11/19/23 14:00
Matrix: Water
Date Received: 11/22/23 16:05

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	**48**	**J**	50	8.8	ug/L			12/12/23 23:06	10
Bromide	**760**		500	220	ug/L			12/12/23 23:06	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*102*		*90 - 115*		*12/12/23 23:06*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.041**	**J** ~~H en~~	0.10	0.040	mg/L			12/18/23 19:08	1
Bromide	**0.64**	~~H en~~ J	0.50	0.20	mg/L			12/18/23 19:08	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**200**		50	12	ug/L		11/30/23 14:41	12/02/23 03:29	1
Lithium	**670**		50	11	ug/L		11/30/23 14:41	12/02/23 03:29	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/30/23 14:41	12/05/23 17:33	1
Arsenic	ND		2.0	0.68	ug/L		11/30/23 14:41	12/05/23 17:33	1
Chromium	**10**		2.0	0.55	ug/L		11/30/23 14:41	12/05/23 17:33	1
Thallium	ND		0.50	0.13	ug/L		11/30/23 14:41	12/05/23 17:33	1

Client Sample ID: SW-01

Lab Sample ID: 410-152361-6

Date Collected: 11/19/23 14:30
Matrix: Water
Date Received: 11/22/23 16:05

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	**47**	**J**	50	8.8	ug/L			12/12/23 20:38	10
Bromide	**780**		500	220	ug/L			12/12/23 20:38	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*101*		*90 - 115*		*12/12/23 20:38*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.040**	**J ~~H~~**	0.10	0.040	mg/L			12/18/23 20:02	1
Bromide	**0.65**	**H J**	0.50	0.20	mg/L			12/18/23 20:02	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**200**		50	12	ug/L		11/30/23 14:41	12/02/23 03:10	1
Lithium	**680**		50	11	ug/L		11/30/23 14:41	12/02/23 03:10	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/30/23 14:41	12/05/23 17:15	1
Arsenic	ND		2.0	0.68	ug/L		11/30/23 14:41	12/05/23 17:15	1
Chromium	**9.9**		2.0	0.55	ug/L		11/30/23 14:41	12/05/23 17:15	1
Thallium	ND		0.50	0.13	ug/L		11/30/23 14:41	12/05/23 17:15	1

Client Sample ID: SW-02

Lab Sample ID: 410-152361-7

Date Collected: 11/19/23 15:00
Matrix: Water
Date Received: 11/22/23 16:05

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	**12**	**J**	50	8.8	ug/L			12/12/23 23:35	10
Bromide	**300**	**J**	500	220	ug/L			12/12/23 23:35	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*103*		*90 - 115*		*12/12/23 23:35*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.049**	**J ~~H-cn~~**	0.10	0.040	mg/L			12/18/23 19:19	1
Bromide	**0.27**	**J ~~H-cn~~**	0.50	0.20	mg/L			12/18/23 19:19	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**74**		50	12	ug/L		11/30/23 14:41	12/02/23 04:04	1
Lithium	**170**		50	11	ug/L		11/30/23 14:41	12/02/23 04:04	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/30/23 14:41	12/05/23 17:53	1

Client Sample ID: SW-02

Date Collected: 11/19/23 15:00
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-7

Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		11/30/23 14:41	12/05/23 17:53	1
Chromium	**2.3**		2.0	0.55	ug/L		11/30/23 14:41	12/05/23 17:53	1
Thallium	ND		0.50	0.13	ug/L		11/30/23 14:41	12/05/23 17:53	1

Client Sample ID: SW-02A

Date Collected: 11/19/23 15:15
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-8

Matrix: Water

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	**21**	**J**	50	8.8	ug/L			12/13/23 00:05	10
Bromide	**300**	**J**	500	220	ug/L			12/13/23 00:05	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*102*		*90 - 115*		*12/13/23 00:05*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.048**	**J H-cn**	0.10	0.040	mg/L			12/18/23 19:30	1
Bromide	**0.27**	**J H-en**	0.50	0.20	mg/L			12/18/23 19:30	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**68**		50	12	ug/L		11/30/23 14:41	12/02/23 03:48	1
Lithium	**170**		50	11	ug/L		11/30/23 14:41	12/02/23 03:48	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/30/23 14:41	12/05/23 17:37	1
Arsenic	ND		2.0	0.68	ug/L		11/30/23 14:41	12/05/23 17:37	1
Chromium	**2.2**		2.0	0.55	ug/L		11/30/23 14:41	12/05/23 17:37	1
Thallium	ND		0.50	0.13	ug/L		11/30/23 14:41	12/05/23 17:37	1

Client Sample ID: ERM-2S

Date Collected: 11/20/23 09:02
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-9

Matrix: Water

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		50	8.8	ug/L			12/13/23 00:34	10
Bromide	ND		500	220	ug/L			12/13/23 00:34	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*102*		*90 - 115*		*12/13/23 00:34*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.10	0.040	mg/L			12/18/23 15:14	1

Client Sample ID: ERM-2S

Date Collected: 11/20/23 09:02
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-9

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography (Continued)
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.50	0.20	mg/L			12/18/23 15:14	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		50	12	ug/L		11/29/23 12:22	12/11/23 09:19	1
Lithium	**360**		50	11	ug/L		11/29/23 12:22	12/10/23 18:20	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/29/23 12:22	12/07/23 08:34	1
Arsenic	ND		2.0	0.68	ug/L		11/29/23 12:22	12/07/23 08:34	1
Chromium	**0.64**	**J**	2.0	0.55	ug/L		11/29/23 12:22	12/07/23 08:34	1
Thallium	ND		0.50	0.13	ug/L		11/29/23 12:22	12/07/23 08:34	1

Client Sample ID: ERM-2D

Date Collected: 11/20/23 09:57
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-10

Matrix: Water

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		50	8.8	ug/L			12/13/23 01:04	10
Bromide	ND		500	220	ug/L			12/13/23 01:04	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*103*		*90 - 115*		*12/13/23 01:04*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.041**	**J**	0.10	0.040	mg/L			12/18/23 15:25	1
Bromide	ND		0.50	0.20	mg/L			12/18/23 15:25	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		50	12	ug/L		11/30/23 14:41	12/02/23 03:57	1
Lithium	**95**		50	11	ug/L		11/30/23 14:41	12/02/23 03:57	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/30/23 14:41	12/05/23 17:43	1
Arsenic	ND		2.0	0.68	ug/L		11/30/23 14:41	12/05/23 17:43	1
Chromium	ND		2.0	0.55	ug/L		11/30/23 14:41	12/05/23 17:43	1
Thallium	ND		0.50	0.13	ug/L		11/30/23 14:41	12/05/23 17:43	1

Client Sample ID: ERM-1D

Lab Sample ID: 410-152361-11

Date Collected: 11/20/23 11:22
Date Received: 11/22/23 16:05

Matrix: Water

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	**120**		50	8.8	ug/L			12/13/23 14:19	10
Bromide	**6600**		500	220	ug/L			12/13/23 14:19	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*103*		*90 - 115*		*12/13/23 14:19*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.24**		0.10	0.040	mg/L			12/18/23 15:35	1
Bromide	**6.2**		0.50	0.20	mg/L			12/18/23 15:35	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**210**		50	12	ug/L		11/29/23 11:56	12/01/23 20:59	1
Lithium	**3800**		50	11	ug/L		11/29/23 11:56	12/01/23 20:59	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.83**	**J**	1.0	0.20	ug/L		11/29/23 11:56	12/05/23 09:42	1
Arsenic	ND		2.0	0.68	ug/L		11/29/23 11:56	12/05/23 09:42	1
Chromium	**34**		2.0	0.55	ug/L		11/29/23 11:56	12/05/23 09:42	1
Thallium	ND		0.50	0.13	ug/L		11/29/23 11:56	12/05/23 09:42	1

Client Sample ID: GMZ-4D

Lab Sample ID: 410-152361-12

Date Collected: 11/20/23 14:57
Date Received: 11/22/23 16:05

Matrix: Water

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	**58**		50	8.8	ug/L			12/13/23 14:49	10
Bromide	**1100**		500	220	ug/L			12/13/23 14:49	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*103*		*90 - 115*		*12/13/23 14:49*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.043**	**J**	0.10	0.040	mg/L			12/18/23 15:46	1
Bromide	**0.89**		0.50	0.20	mg/L			12/18/23 15:46	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**350**		50	12	ug/L		11/29/23 12:22	12/11/23 09:31	1
Lithium	**1200**		50	11	ug/L		11/29/23 12:22	12/10/23 18:23	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/29/23 12:22	12/07/23 08:36	1

Client Sample ID: GMZ-4D

Date Collected: 11/20/23 14:57
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-12

Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		11/29/23 12:22	12/07/23 08:36	1
Chromium	**20**		2.0	0.55	ug/L		11/29/23 12:22	12/07/23 08:36	1
Thallium	ND		0.50	0.13	ug/L		11/29/23 12:22	12/07/23 08:36	1

Client Sample ID: GMZ-4I

Date Collected: 11/20/23 15:52
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-13

Matrix: Water

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	**41**		25	4.4	ug/L			12/15/23 03:09	5
Bromide	**1000**		250	110	ug/L			12/15/23 03:09	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*101*		*90 - 115*		*12/15/23 03:09*	*5*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.10	0.040	mg/L			12/18/23 15:57	1
Bromide	**0.89**		0.50	0.20	mg/L			12/18/23 15:57	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**410**		50	12	ug/L		11/29/23 12:22	12/11/23 09:12	1
Lithium	**1300**		50	11	ug/L		11/29/23 12:22	12/10/23 18:14	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/29/23 12:22	12/07/23 08:30	1
Arsenic	ND		2.0	0.68	ug/L		11/29/23 12:22	12/07/23 08:30	1
Chromium	**21**		2.0	0.55	ug/L		11/29/23 12:22	12/07/23 08:30	1
Thallium	ND		0.50	0.13	ug/L		11/29/23 12:22	12/07/23 08:30	1

Client Sample ID: GMZ-4S

Date Collected: 11/20/23 16:37
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-14

Matrix: Water

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	**35**	**J**	50	8.8	ug/L			12/13/23 05:29	10
Bromide	**730**		500	220	ug/L			12/13/23 05:29	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*103*		*90 - 115*		*12/13/23 05:29*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.10	0.040	mg/L			12/18/23 17:33	1

Client Sample ID: GMZ-4S

Lab Sample ID: 410-152361-14

Date Collected: 11/20/23 16:37
Date Received: 11/22/23 16:05

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography (Continued)
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	**0.60**		0.50	0.20	mg/L			12/18/23 17:33	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**250**		50	12	ug/L		11/30/23 14:41	12/02/23 04:32	1
Lithium	**840**		50	11	ug/L		11/30/23 14:41	12/02/23 04:32	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/30/23 14:41	12/05/23 18:14	1
Arsenic	ND		2.0	0.68	ug/L		11/30/23 14:41	12/05/23 18:14	1
Chromium	**13**		2.0	0.55	ug/L		11/30/23 14:41	12/05/23 18:14	1
Thallium	ND		0.50	0.13	ug/L		11/30/23 14:41	12/05/23 18:14	1

Client Sample ID: ERM-5

Lab Sample ID: 410-152361-15

Date Collected: 11/21/23 08:00
Date Received: 11/22/23 16:05

Matrix: Water

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND	~~D cn~~	50	8.8	ug/L			12/13/23 08:56	10
Bromide	ND	D ~~cn~~	500	220	ug/L			12/13/23 08:56	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*102*	~~cn~~	*90 - 115*		*12/13/23 08:56*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.10	0.040	mg/L			12/18/23 16:07	1
Bromide	ND		0.50	0.20	mg/L			12/18/23 16:07	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**74**		50	12	ug/L		11/30/23 14:41	12/02/23 04:00	1
Lithium	**33**	**J**	50	11	ug/L		11/30/23 14:41	12/02/23 04:00	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/30/23 14:41	12/05/23 17:45	1
Arsenic	ND		2.0	0.68	ug/L		11/30/23 14:41	12/05/23 17:45	1
Chromium	ND		2.0	0.55	ug/L		11/30/23 14:41	12/05/23 17:45	1
Thallium	ND		0.50	0.13	ug/L		11/30/23 14:41	12/05/23 17:45	1

Client Sample ID: GMZ-2D

Date Collected: 11/21/23 09:22
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-16

Matrix: Water

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND	D cn	50	8.8	ug/L			12/13/23 09:25	10
Bromide	ND	D cn	500	220	ug/L			12/13/23 09:25	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*103*	*cn*	*90 - 115*		*12/13/23 09:25*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.066	J	0.10	0.040	mg/L			12/18/23 16:18	1
Bromide	ND		0.50	0.20	mg/L			12/18/23 16:18	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		50	12	ug/L		11/29/23 12:22	12/11/23 09:34	1
Lithium	ND		50	11	ug/L		11/29/23 12:22	12/10/23 18:26	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/29/23 12:22	12/07/23 08:38	1
Arsenic	ND		2.0	0.68	ug/L		11/29/23 12:22	12/07/23 08:38	1
Chromium	ND		2.0	0.55	ug/L		11/29/23 12:22	12/07/23 08:38	1
Thallium	ND		0.50	0.13	ug/L		11/29/23 12:22	12/07/23 08:38	1

Client Sample ID: GMZ-2I

Date Collected: 11/21/23 09:57
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-17

Matrix: Water

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND	D cn	50	8.8	ug/L			12/13/23 09:54	10
Bromide	ND	D cn	500	220	ug/L			12/13/23 09:54	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*104*	*cn*	*90 - 115*		*12/13/23 09:54*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.093	J	0.10	0.040	mg/L			12/18/23 16:29	1
Bromide	ND		0.50	0.20	mg/L			12/18/23 16:29	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		50	12	ug/L		11/29/23 12:22	12/11/23 09:44	1
Lithium	ND		50	11	ug/L		11/29/23 12:22	12/10/23 18:45	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/29/23 12:22	12/07/23 08:50	1

Client Sample ID: GMZ-2I

Date Collected: 11/21/23 09:57
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-17

Matrix: Water

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.68	ug/L		11/29/23 12:22	12/07/23 08:50	1
Chromium	ND		2.0	0.55	ug/L		11/29/23 12:22	12/07/23 08:50	1
Thallium	ND		0.50	0.13	ug/L		11/29/23 12:22	12/07/23 08:50	1

Client Sample ID: GMZ-2S

Date Collected: 11/21/23 10:37
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-18

Matrix: Water

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND	D cn	50	8.8	ug/L			12/13/23 10:24	10
Bromide	ND	D cn	500	220	ug/L			12/13/23 10:24	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*102*	*cn*	*90 - 115*		*12/13/23 10:24*	*10*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.066**	**J**	0.10	0.040	mg/L			12/18/23 16:39	1
Bromide	ND		0.50	0.20	mg/L			12/18/23 16:39	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		50	12	ug/L		11/30/23 14:41	12/02/23 03:51	1
Lithium	ND		50	11	ug/L		11/30/23 14:41	12/02/23 03:51	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/30/23 14:41	12/05/23 17:39	1
Arsenic	**0.88**	**J**	2.0	0.68	ug/L		11/30/23 14:41	12/05/23 17:39	1
Chromium	ND		2.0	0.55	ug/L		11/30/23 14:41	12/05/23 17:39	1
Thallium	ND		0.50	0.13	ug/L		11/30/23 14:41	12/05/23 17:39	1

Client Sample ID: GMZ-2SD

Date Collected: 11/21/23 11:07
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-19

Matrix: Water

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND	D cn	25	4.4	ug/L			12/15/23 04:37	5
Bromide	ND	D cn	250	110	ug/L			12/15/23 04:37	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*102*	*cn*	*90 - 115*		*12/15/23 04:37*	*5*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.075**	**J**	0.10	0.040	mg/L			12/18/23 18:05	1

Client Sample ID: GMZ-2SD

Date Collected: 11/21/23 11:07
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-19

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography (Continued)
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.50	0.20	mg/L			12/18/23 18:05	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		50	12	ug/L		11/30/23 14:41	12/02/23 03:54	1
Lithium	ND		50	11	ug/L		11/30/23 14:41	12/02/23 03:54	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/30/23 14:41	12/05/23 17:41	1
Arsenic	**0.85**	**J**	2.0	0.68	ug/L		11/30/23 14:41	12/05/23 17:41	1
Chromium	ND		2.0	0.55	ug/L		11/30/23 14:41	12/05/23 17:41	1
Thallium	ND		0.50	0.13	ug/L		11/30/23 14:41	12/05/23 17:41	1

Client Sample ID: MW-22

Date Collected: 11/21/23 11:37
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-20

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		1.0	0.30	ug/L			12/01/23 20:15	1
Benzene	**1.5**		1.0	0.30	ug/L			12/01/23 20:15	1
Bromoform	ND	~~en~~	4.0	1.0	ug/L			12/01/23 20:15	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			12/01/23 20:15	1
Chloroform	ND		1.0	0.30	ug/L			12/01/23 20:15	1
cis-1,2-Dichloroethene	**5.8**		1.0	0.30	ug/L			12/01/23 20:15	1
Ethylbenzene	ND		1.0	0.40	ug/L			12/01/23 20:15	1
Tetrachloroethene	**150**		1.0	0.30	ug/L			12/01/23 20:15	1
trans-1,2-Dichloroethene	ND		2.0	0.70	ug/L			12/01/23 20:15	1
Trichloroethene	**8.0**		1.0	0.30	ug/L			12/01/23 20:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*80 - 120*		*12/01/23 20:15*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*12/01/23 20:15*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 120*		*12/01/23 20:15*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*12/01/23 20:15*	*1*

Method: EPA 300.1B - Disinfection By-Products, (IC)
Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		25	4.4	ug/L			12/15/23 05:07	5
Bromide	**110**	**J**	250	110	ug/L			12/15/23 05:07	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*102*		*90 - 115*		*12/15/23 05:07*	*5*

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.76**		0.10	0.040	mg/L			12/18/23 18:15	1

Client Sample ID: MW-22

Date Collected: 11/21/23 11:37
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-20

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography (Continued)

Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.50	0.20	mg/L			12/18/23 18:15	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**3500**		50	12	ug/L		12/01/23 14:13	12/05/23 21:00	1
Lithium	**13000**		50	11	ug/L		12/01/23 14:13	12/05/23 21:00	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		12/01/23 14:13	12/05/23 16:29	1
Arsenic	**2.2**		2.0	0.68	ug/L		12/01/23 14:13	12/05/23 16:29	1
Chromium	**1.0**	**J**	2.0	0.55	ug/L		12/01/23 14:13	12/05/23 16:29	1
Thallium	**0.23**	**J**	0.50	0.13	ug/L		12/01/23 14:13	12/05/23 16:29	1

Client Sample ID: MW-22D

Date Collected: 11/21/23 12:07
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-21

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		1.0	0.30	ug/L			12/01/23 22:14	1
Benzene	**1.4**		1.0	0.30	ug/L			12/01/23 22:14	1
Bromoform	ND	~~cn~~	4.0	1.0	ug/L			12/01/23 22:14	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			12/01/23 22:14	1
Chloroform	ND		1.0	0.30	ug/L			12/01/23 22:14	1
cis-1,2-Dichloroethene	**5.7**		1.0	0.30	ug/L			12/01/23 22:14	1
Ethylbenzene	ND		1.0	0.40	ug/L			12/01/23 22:14	1
Tetrachloroethene	**150**		1.0	0.30	ug/L			12/01/23 22:14	1
trans-1,2-Dichloroethene	ND		2.0	0.70	ug/L			12/01/23 22:14	1
Trichloroethene	**7.7**		1.0	0.30	ug/L			12/01/23 22:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*		*12/01/23 22:14*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*12/01/23 22:14*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*12/01/23 22:14*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*12/01/23 22:14*	*1*

Client Sample ID: SW-06

Date Collected: 11/21/23 12:30
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-22

Matrix: Water

Method: EPA 300.1B - Disinfection By-Products, (IC)

Lab: Eurofins Phoenix

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	**23**	**J**	25	4.4	ug/L			12/15/23 05:36	5
Bromide	**570**		250	110	ug/L			12/15/23 05:36	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dichloroacetic acid(Surr)	*104*		*90 - 115*		*12/15/23 05:36*	*5*

Client Sample ID: SW-06

Date Collected: 11/21/23 12:30
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-22

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography
Lab: Eurofins Savannah

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.50	0.20	mg/L			12/08/23 13:02	5
Bromide	**1.1**	**J**	2.5	1.0	mg/L			12/08/23 13:02	5

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**170**		50	12	ug/L		11/29/23 12:22	12/11/23 09:41	1
Lithium	**370**		50	11	ug/L		11/29/23 12:22	12/10/23 18:33	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.20	ug/L		11/29/23 12:22	12/07/23 08:48	1
Arsenic	ND		2.0	0.68	ug/L		11/29/23 12:22	12/07/23 08:48	1
Chromium	**3.2**		2.0	0.55	ug/L		11/29/23 12:22	12/07/23 08:48	1
Thallium	**0.19**	**J**	0.50	0.13	ug/L		11/29/23 12:22	12/07/23 08:48	1

Client Sample ID: TB-01-111923

Date Collected: 11/19/23 00:00
Date Received: 11/22/23 16:05

Lab Sample ID: 410-152361-23

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		1.0	0.30	ug/L			12/01/23 00:50	1
Benzene	ND		1.0	0.30	ug/L			12/01/23 00:50	1
Bromoform	ND		4.0	1.0	ug/L			12/01/23 00:50	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			12/01/23 00:50	1
Chloroform	ND		1.0	0.30	ug/L			12/01/23 00:50	1
cis-1,2-Dichloroethene	ND		1.0	0.30	ug/L			12/01/23 00:50	1
Ethylbenzene	ND		1.0	0.40	ug/L			12/01/23 00:50	1
Tetrachloroethene	ND		1.0	0.30	ug/L			12/01/23 00:50	1
trans-1,2-Dichloroethene	ND		2.0	0.70	ug/L			12/01/23 00:50	1
Trichloroethene	ND		1.0	0.30	ug/L			12/01/23 00:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*80 - 120*		*12/01/23 00:50*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*12/01/23 00:50*	*1*
Dibromofluoromethane (Surr)	*109*		*80 - 120*		*12/01/23 00:50*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*12/01/23 00:50*	*1*