

July 13, 2023

Electronic Mail Delivery Only
DeBonis.Michael101@epa.gov

Mr. Michael DeBonis
Remedial Project Manager
U. S. Environmental Protection Agency, Region 3
1650 Arch Street
Philadelphia, PA 19103-2029

RE: GROUNDWATER AND SURFACE WATER ANALYSIS REPORT
May 2023 SAMPLING EVENT
FOOTE MINERAL SUPERFUND SITE
FRAZER, PENNSYLVANIA (EPA ID # PA D077087989)

Dear Mr. DeBonis:

This letter report provides the May 2023 groundwater monitoring and surface water sampling event results for the Foote Mineral Superfund Site (the Site). The laboratory analytical results are for groundwater samples collected from monitoring wells on-site and downgradient (northeast) of the Site, as well as surface water samples collected from locations downgradient of the Site. The samples were collected from May 15 through May 17, 2023. The sampling approach was based on the information provided in the November 2021 monitoring event 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.

1.0 Background

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.

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, a pit used to burn solvents, a lined basin and more than 50 buildings and process areas. It included three unlined lagoons that had been leveled and backfilled, and an area where a small amount of neutralized lithium arsenite was buried and later removed.

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 down gradient wells were installed and routine monitoring of downgradient groundwater and surface water was initiated in December 2010. A brief summary of the Site conditions, Site conceptual model, and the recent results is provided below. Historical sampling results for lithium, the primary contaminant of concern, are also described below to provide context for the results of this most recent round of sampling.

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. In the area of the Property the fault almost coincides with the Property's northern boundary.

Groundwater in the Chester Valley flows primarily through the fractures in the bedrock. These fractures may be oriented in many directions so that flow direction in specific locations is variable. But overall, the predominant orientation of the fractures is east-northeast, which corresponds to the general orientation of regional groundwater flow.

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 EPA in December 2004.

The Second Five Year Review states 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, and the width of the contaminant plume was believed to be relatively narrow as a result of the fault zone from both the south and north sides of the Valley, which direct 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 discharge to the unnamed tributary to Valley Creek (i.e., historical sampling in SW-03 and SW-04), but was identified in discharges to a section of Valley Creek along a fault line, near Mill Lane, about a mile and a half from the Property, where the groundwater from the Site vicinity is believed to discharge. 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 which have the highest concentrations of lithium and the downstream surface water sampling at locations SW-01 SW-05, SW-06, where the lithium is found to be consistently elevated.

Site Characterizations

The conceptual Site Model of groundwater, and in particularly groundwater from the deeper zone monitored at the Site, moving through the ledger formation fractures under Valley Creek and discharging into Valley Creek, is consistent with characterizations completed both prior to and after completion remediation at the Site. Prior to remediation, to understand groundwater conditions, eight monitoring wells (mentioned above) 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. Volatile organic compounds (VOC) and the metals lithium, chromium, arsenic, and antimony were found to be elevated. 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 during the second half of 2010. 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 A-7).

Following remediation, the Groundwater Monitoring Program began in December 2010 with the baseline sampling event with the sampling of the groundwater from permanent, dedicated low-flow sampling pumps in the GMZ, ERM, and MW-22 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 were found to have elevated concentrations of lithium.

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 A along with an analysis of this information. It may be noted the initial sampling was quarterly and frequency of sampling has been less frequent in recent years, which should be considered when interpreting the Figures provided in Appendix A. The historical monitoring data in Appendix A was provided by 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 and May 2023 events and the events were renumbered as shown on the Table in Appendix A. It should also be noted the November 2021 data was developed by Montrose from the actual laboratory supplied data provided in Appendix A, and not the data provided in Table 4 and 5, 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).

2.0 May 2023 Sampling Event

As part of the May 2023 sampling event groundwater samples were collected from 16 monitoring wells. Table 1 summarizes the details of the groundwater wells along with the analytical target compounds and water elevations collected during the sampling event. Surface water samples were also 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 and 2.

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
- 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 as it was collected are presented in Table 4. A Heron oil/water interface probe was used to detect and measure the thickness of any LNAPL layer in MW-22. Surface water flow rate was measured with a Global Water Flow Probe #BA1100 portable flow meter.

All water samples were analyzed by Eurofins Lancaster Laboratories Environment Testing, LLC, a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory. The samples were analyzed for trace metals by EPA SW-846 Method 6020B and 6010D, for bromide, bromate, and fluoride anions by EPA Method 300.1. Samples from MW-22 were also 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 B. Data validation was performed by Montrose Environmental. The validator's report is included in Appendix C.

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. As previously noted, Table 2 lists the remediation goals from Table III of the ROD for reference. No LNAPL was observed in MW-2 during this sampling event.

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 GMZ-2, which is outside the identified project fracture flow AOC. Boron was found above the PRG of 1340 ug/l in the onsite well of MW-22. It may be noted the detection limit for bromate was above the Remediation Goal so the level of bromate could not be quantified. For future sampling events the drinking water method of analysis (EPA Method 300.1) will be used to provide a lower detection limit.

A complete summary of historical groundwater and surface water results was not available to Montrose to compare recent sampling results. As noted above, EPA provided a tabular summary of lithium results which was used to compare the monitoring results and understand groundwater conditions. Lithium is the Site-related contaminant that is most persistent in the groundwater; therefore, the sample results for lithium offer the best indication as to the extent of Site-related compounds in the groundwater plume.

The following observations can be made based on the available data.

- **On Site Source and Near Site Conditions Declining** – As shown on Figure A-1, the on-site source-area deep well MW-22 shows a consistent source area with three of the lower concentrations documented over the last three sampling events, which cover a period of three years (as previously noted the initial sampling events were done much more frequently). The concentration in the highest on-site well, MW-22, has declined from 24,198 ug/l in 2010 to 14,000 ug/l in the most recent sampling event. Although not definitive, this suggests stabilization to a lower source area concentration may be occurring. 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 4,000 ug/l, as shown on Figure A-1. It may also be noted on Figure A-1, that prior to this sampling event ERM 1S had not been sampled since June 2015. The most recent November 2021 report notes ERM-1S had insufficient water in the well and it is presumed this is the reason the well had not been previously sampled.
- **Downgradient Groundwater Concentrations are Declining** – As shown on Figure A-2 and A-3 lithium concentrations are declining in cluster GM-3, located 2,200 feet downgradient, and well cluster GMZ-4 located 4,400 ft downgradient. All three zones being monitored have a consistently downward trend. In each of these clusters it was noted that the deepest monitored units had the highest concentrations.
- **Shallow and Intermediate Wells Show Similar Concentrations and Trends** – As shown on Figure A-2 and A-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.
- **Deep Aquifer Plume is Decreasing** – Figure A-4 shows the deep aquifer conditions in each of the downgradient well clusters are decreasing. The results from well GMZ-1, shown on Figure A-7, are also decreasing over the last three monitored intervals, but the degradation is not as significant since 2010. This may be due to the location being further downgradient which has delayed the reaction of the source and source flux stabilization.
- **Surface Water Trends are Declining** – Figure A-5 and A-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 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 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 A-6 and A-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 A-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 upgradient wells. The highest concentrations of lithium in the most recent sampling event was 600 ug/l at SW-01. It is believed that this location is at the end of the groundwater discharge area; water samples taken further downstream had lower measured concentrations believed to be a result of dilution. As shown on Figure A-6, the surface water sample results for the last six monitoring events are suggesting a downward trend of the contaminant concentrations. 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 decrease with time, resulting in lower contamination levels in the stream. It was also noted the monitoring

results at locations SW-01, SW-05, SW-01 showed a very similar pattern and were nearly identical, as shown on Figure A-6. Sampling all of these wells 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.

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. Surface water data from June and October 2018 were available. As discussed above, 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 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 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.

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 Pensacola, Florida, facility for analysis of the anions. The laboratory report contains summary forms for the laboratory quality control analysis.

The data validation summary was performed on the Eurofins Data utilizing the guidance from 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 included 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.

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, and anions; bromide, fluoride, and bromate by EPA Method 300.0. Additional volumes of sample MW-22 were also submitted for analysis of ten site-specific volatile organic compounds (VOCs) by EPA method 8260D. A field duplicate and a trip blank were also included with the samples for analysis of VOCs only.

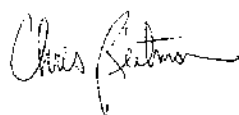
It was noted during the data review that the reporting limit or the method detection limit reported under EPA Method 300.0 used for the bromate analysis did not meet the Remediation Goal of 10 ug/l. The EPA Method 300.1 Determination of Inorganic Anions in Drinking Water by Ion Chromatography does meet the Remediation goal with a reporting limit of 5 ug/l. The next sampling event will request Bromate analysis by EPA method 300.1 to ensure the remediation goal is met.

In general, the data are valid as reported and may be used for decision making purposes. The laboratory report is provided as Appendix B and the validation report is provided in Appendix C.

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 A-2 and A-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. Based on the information collected to date, Montrose would like the opportunity 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.
Principal



Gregory P. Smoot, P.G.
Principal Geologist

CTR:GPS:mm

Attachments

Tables

- Table 1 – Groundwater Analytical Targets and Water Elevations
- Table 2 – Remediation Goals
- Table 3 – Surface Water Analytical Targets and Water Flow Rates
- Table 4 – Groundwater Properties at Time of Sampling
- Table 5 – Analytical Results for Inorganic Anions and Metals in Surface Water Samples
- Table 6 – Analytical Results for Inorganic Anions and Metals in Groundwater Samples
- Table 7 – Analytical Results for Volatile Groundwater Samples

Figures

- Figure 1 – Foote Mineral GMP Groundwater AOC, Site Boundary, GMZ Well Coordinates, and Geological Formations
- Figure 2 – Foote Mineral GMP Sample Site Locations

Appendices

- Appendix A – Analysis of Historical Lithium Results
- Appendix B – Laboratory Analytical Data Report
- Appendix C – Data Validator's Report

References

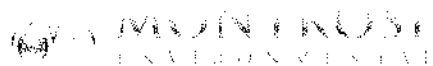
Montrose notes these references were provided in the December 13, 2021 Terranear Groundwater and Surface Water Analysis Report for the Site. References 4, and 5 were not available to Montrose in preparation of this report. Reference 6 was added by Montrose and the USGS report cited in the Reference 6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

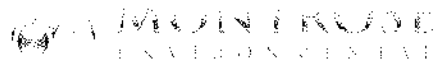
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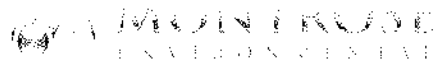
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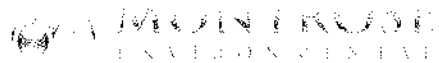
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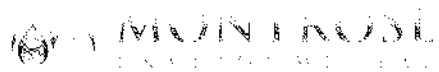
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Groundwater and Surface Water Analysis Report
December 2021 Sampling Event
Foote Mineral Superfund Site
Frazer, Pennsylvania (EPA ID # PA D077087989)
Project No. 2023-4439
July 13, 2023

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

Well ID	Well Elevation¹	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	5/15/2023	64.28	323.19	Total Metals and Inorganic Anions
ERM-1S	387.62	60	40-60	50.9	5/15/2023	51.93	335.69	Total Metals and Inorganic Anions
ERM-2D	357.75	247	230-247	238.6	5/15/2023	39.78	317.97	Total Metals and Inorganic Anions
ERM-2S	357.71	140	120-140	130.2	5/15/2023	38.48	319.23	Total Metals and Inorganic Anions
ERM-5	373.37	200	40-200	120.3	5/15/2023	54.49	318.88	Total Metals and Inorganic Anions
MW-2	383.76	150	30-150	NA	5/15/2023	64.85	318.91	LNAPL layer thickness (No Measurable Thickness)
MW-22	370.45	152	50-152	99.4	5/15/2023	56.25	314.2	VOC, Total Metals and Inorganic Anions
GMZ-1	283.54	149	126-136	131.4	5/16/2023	10.06	273.48	Total Metals and Inorganic Anions
GMZ-2S	347.11	295	80-110	95.4	5/17/2023	18.42	328.69	Total Metals and Inorganic Anions
GMZ-2I	347.11	295	167-197	182.4	5/17/2023	23.78	323.33	Total Metals and Inorganic Anions
GMZ-2D	347.11	295	240-270	255.4	5/17/2023	26.60	320.51	Total Metals and Inorganic Anions
GMZ-3S	336.1	296	50-60	55.3	5/16/2023	25.47	310.63	Total Metals and Inorganic Anions
GMZ-3I	336.1	296	115-125	120.3	5/16/2023	25.75	310.35	Total Metals and Inorganic Anions
GMZ-3D	336.1	296	245-255	250.4	5/16/2023	24.90	311.2	Total Metals and Inorganic Anions
GMZ-4S	333.75	303	116-126	121.3	5/16/2023	54.62	279.13	Total Metals and Inorganic Anions
GMZ-4I	333.75	303	215-225	230.3	5/16/2023	54.62	279.13	Total Metals and Inorganic Anions
GMZ-4D	333.75	303	288-303	294.3	5/16/2023	54.65	279.1	Total Metals and Inorganic Anions

¹ Top of casing, ft above NGVD 1929 datum

²TAL Metals and Inorganic Anions (Sb, As, B, Cr, Li, Ti; 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
May 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	228	26	6	5/17/2023	0.2	15.1	8.09	0.860	74.4	6.12	1.44
SW-02	132	15	6	5/17/2023	0.4	16.1	8.03	0.861	76.2	5.92	1.80
SW-2A	132	15	6	5/17/2023	0.4	16.1	8.03	0.861	76.2	5.92	1.80
SW-05	132	20	6	5/17/2023	1.3	16.5	8.42	0.849	62.8	6.94	1.35
SW-06	156	13	5	5/17/2023	0.8	16.6	8.45	0.839	15.5	7.87	1.96

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

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

Well ID	Sample Date	Sample Time	Purge Rate (mL/min)	Temp (°C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)
ERM-1D	5/15/2023	1552	120	19.62	1.074	0.44	8.26	59.8	0.92
ERM-1S	5/15/2023	1642	110	19.80	0.783	2.89	7.18	131.7	4.68
ERM-2D	5/15/2023	1042	150	14.49	0.896	0.78	12.01	-86.4	17.59
ERM-2S	5/15/2023	0947	110	13.12	3.045	2.05	12.73	-145.8	1.87
ERM-5	5/15/2023	1222	120	16.80	0.457	3.45	7.64	96.1	5.65
MW-22	5/15/2023	1433	120	16.05	0.753	0.37	8.03	-33.1	14.25
GMZ-1	5/16/2023	1552	120	17.50	0.862	1.69	9.01	-116.4	2.83
GMZ-2S	5/17/2023	1027	110	14.05	0.539	0.63	6.99	-74.2	5.90
GMZ-2I	5/17/2023	0942	120	19.95	0.520	0.80	7.51	-149.1	1.08
GMZ-2D	5/17/2023	0857	120	12.25	0.574	1.75	7.36	-62.3	2.01
GMZ-3S	5/16/2023	1017	120	14.95	1.049	1.95	8.62	108.2	4.58
GMZ-3I	5/16/2023	0937	120	14.89	1.110	1.80	8.45	111.2	8.31
GMZ-3D	5/16/2023	0852	120	14.97	1.135	1.70	7.62	120.0	1.38
GMZ-4S	5/16/2023	1447	120	16.29	0.871	2.83	9.06	90.7	1.51
GMZ-4I	5/16/2023	1402	120	14.94	0.833	2.50	8.92	78.7	7.50
GMZ-4D	5/16/2023	1312	140	14.90	0.830	2.46	8.91	95.2	6.11

Table 5
Analytical Results for Inorganic Anions and Metals in Surface Water
Foote Mineral Superfund Site, Frazer PA
May 2023 Sampling Event

Sample Location		SW-01			SW-02			SW-2A			SW-05			SW-06		
Lab ID		410-127243-21			410-127243-22			410-127243-23			410-127243-20			410-127243-19		
Sample Date		5/17/2023			5/17/2023			5/17/2023			5/17/2023			5/17/2023		
Matrix		Surface water			Surface water			Surface water			Surface water			Surface water		
Remarks																
Parameter	Units	Result	Q	RL	Result	Q	RL	Result	Q	RL	Result	Q	RL	Result	Q	RL
Total Metals																
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	190		50	74		50	75		50	160		50	160		50
Bromate	ug/L		U	1000		U	1000		U	1000		U	1000		U	1000
Bromide	mg/L	0.73	J	1		U	1		U	1	0.62	J	1	0.57	J	1
Chromium	ug/L	9		2	2		2	2.1		2	6.6		2	6		2
Fluoride	mg/L		U	1		U	1		U	1		U	1		U	1
Lithium	ug/L	600		50	160		50	170		50	510		50	480		50
Thallium	ug/L		U	0.5		U	0.5		U	0.5		U	0.5		U	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
May 2023 Sampling Event

Sample Location Lab ID			ERM-1S 410-127243-06 5/15/2023 Groundwater			ERM-1D 410-127243-07 5/15/2023 Groundwater			ERM-2S 410-127243-01 5/15/2023 Groundwater			ERM-2D 410-127243-02 5/15/2023 Groundwater			ERM-5 410-127243-03 5/15/2023 Groundwater			GMZ-1 410-127243-14 5/16/2023 Groundwater			GMZ-2S 410-127243-17 5/17/2023 Groundwater			GMZ-2I 410-127243-16 5/17/2023 Groundwater			GMZ-2D 410-127243-15 5/17/2023 Groundwater			GMZ-2SD 410-127243-18 5/17/2023 Groundwater FD of GMZ-2S			
Sample Date	Remediation Goals (ROD 2006)																																
Matrix																																	
Remarks																																	
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	Result	Q	RL	
Total Metals																																	
Antimony	6	ug/L	0.68	J	1	0.86	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		U	2		U	2	0.74	J	2		U	2		U	2	
Boron	1340	ug/L	590		50	230		50		U	50		U	50	73		50		U	50		U	50		U	50	16	J	50		U	50	
Bromate	10	ug/L		U	1000		U	1000		U	1000		U	1000		U	1000		U	1000		U	1000		U	1000		U	1000		U	1000	
Bromide	NS	mg/L		U	1	8.5		1		U	1		U	1		U	1	1.2		U	1		U	1		U	1		U	1		U	1
Chromium	100	ug/L	2.6		2	24		2	0.57	J	2		U	2		U	2	9.8		U	2		U	2		U	2		U	2		U	2
Fluoride	4	mg/L	0.18	J	1	0.27	J	1	0.25	J	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1	
Lithium	260	ug/L	100		50	4000		50	350		50	79		50	26	J	50	550		U	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	0.21	J	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			410-127243-10			410-127243-09			410-127243-08			410-127243-13			410-127243-12			410-127243-11			410-127243-04			
Sample Date	Remediation Goals (ROD 2006)		5/16/2023			5/16/2023			5/16/2023			5/16/2023			5/16/2023			5/16/2023			5/15/2023			
Matrix			Groundwater			Groundwater			Groundwater			Groundwater			Groundwater			Groundwater						
Remarks																								
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	5.2		U	2
Boron	1340	ug/L	460		50	690		50	710		50	290		50	400		50	360		50	3700		50	
Bromate	10	ug/L		U	1000		U	1000		U	1000		U	1000		U	1000		U	1000		U	1000	
Bromide	NS	mg/L	1.6		1	2.3		1	2.8		1	0.68	J	1	1.5		1	1.3		1		U	1	
Chromium	100	ug/L	18		2	27		2	27		2	13		2	20		2	21		2	0.48	J	2	
Fluoride	4	mg/L		U	1		U	1		U	1		U	1		U	1		U	1	1		U	1
Lithium	260	ug/L	1900		50	2800		50	3000		50	900		50	1400		50	1300		50	14000		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	

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
Foot Mineral Superfund Site, Frazer PA
May 2023 Sampling Event

Sample Location Lab ID Sample Date Matrix Remarks	Remediation Goal (ROD 2006)		MW-22 410-127243-04 5/15/2023 Groundwater			MW-22D 410-127243-05 5/15/2023 Groundwater FD of MW-22		
Parameter		Units	Result	Q	RL	Result	Q	RL
1,2-Dichloroethane	5	ug/L		U	1		U	1
Benzene	5	ug/L	1.6		1	1.7		1
Bromoform	80	ug/L		U	4		U	4
Carbon tetrachloride	5	ug/L		U	1		U	1
Chloroform	70	ug/L		U	1		U	1
cis-1,2-Dichloroethene	70	ug/L	5.6		1	5.6		1
Ethylbenzene	700	ug/L		U	1		U	1
Tetrachloroethene	5	ug/L	120		1	120		1
trans-1,2-Dichloroethene	100	ug/L		U	2		U	2
Trichloroethene	5	ug/L	8.1		1	7.6		1

Notes:

ug/L - Microgram per liter

mg/L - Milligram per liter

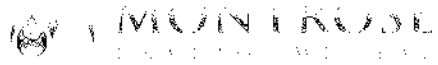
RL - Reporting Limit

Q - Qualifier

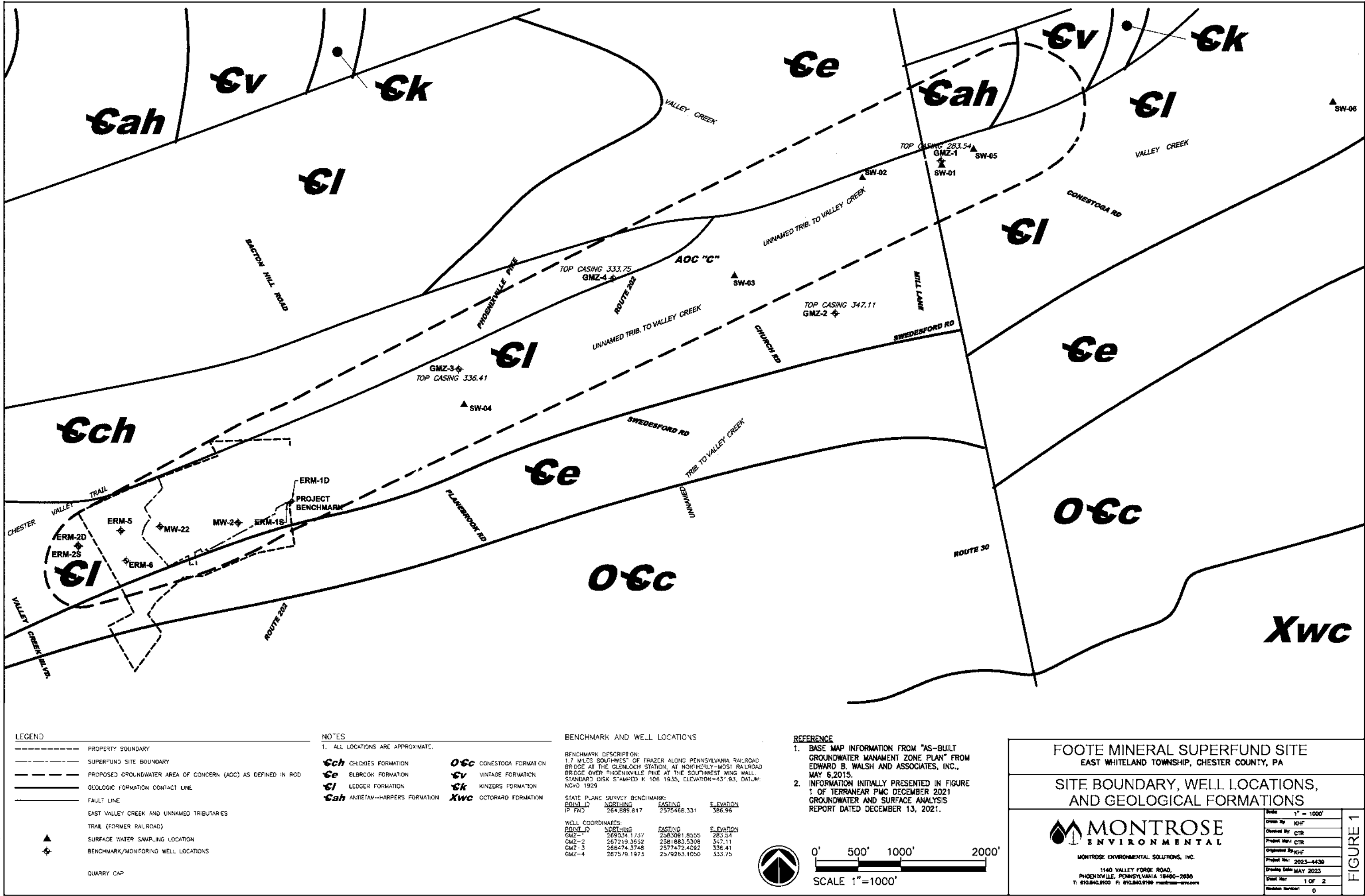
U - Non-detected

J - Estimated value

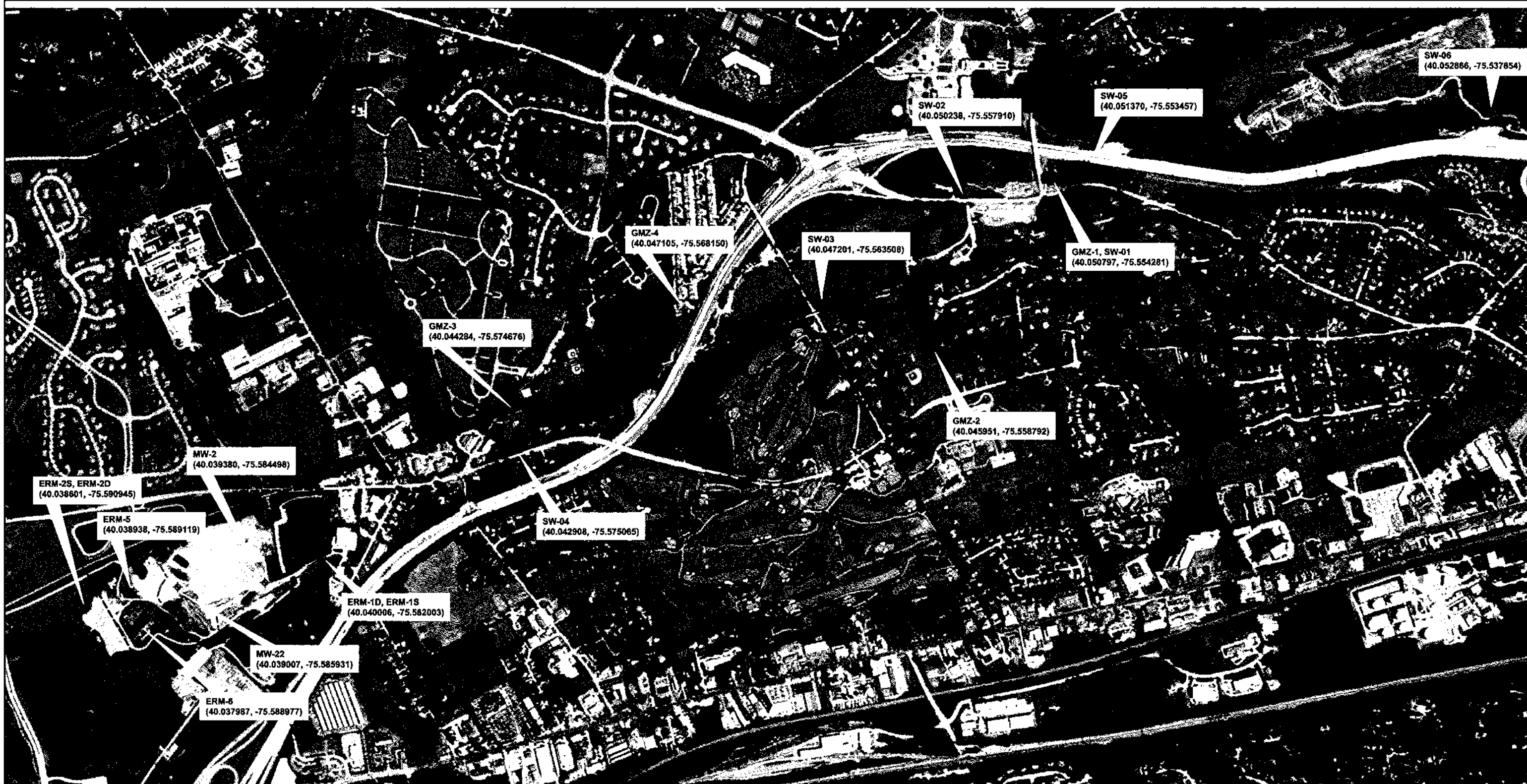
UJ - Estimated Reporting Limit



Groundwater and Surface Water Analysis Report
December 2021 Sampling Event
Foote Mineral Superfund Site
Frazer, Pennsylvania (EPA ID # PA D077087989
Project No. 2023-4439
July 13, 2023



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
- BENCH-MARK/MONITORING WELL LOCATIONS

NOTES

- ALL LOCATIONS ARE APPROXIMATE.
- 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

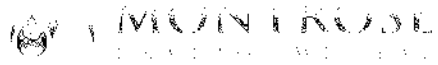


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Scale	1" = 1000'
Drawn By	KHF
Checked By	CTR
Project Mgr	CTR
Original By	KHF
Project No.	2023-4439
Drawing Date	MAY 2023
Sheet No.	2 OF 2
Revision Number	0

FIGURE 2



Groundwater and Surface Water Analysis Report
December 2021 Sampling Event
Foote Mineral Superfund Site
Frazer, Pennsylvania (EPA ID # PA D077087989)
Project No. 2023-4439
July 13, 2023

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

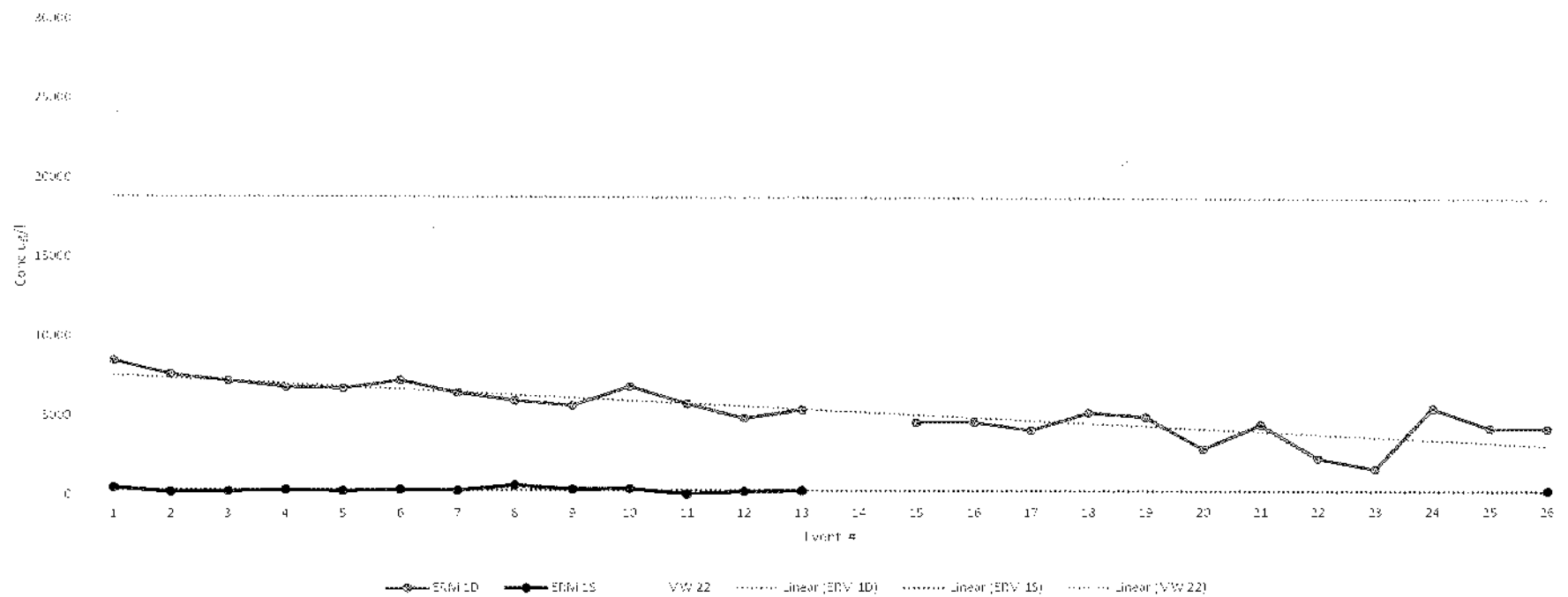


Figure A-2
Lithium in GMZ-3S, 3I, and 3D
(2,200 ft downgradient)

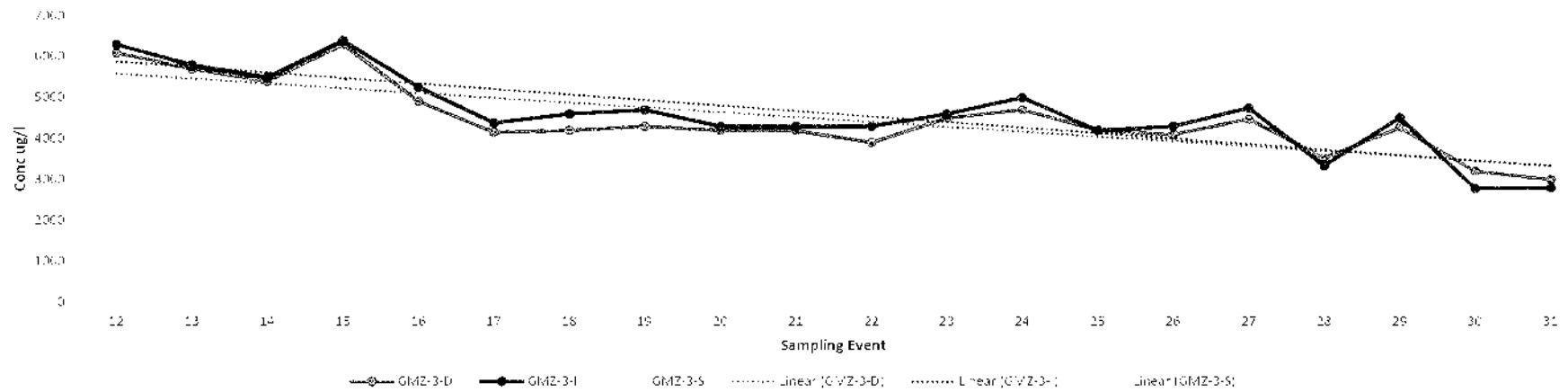


Figure A-3
Lithium in GMZ-4S, 4I, and 4D
(4,400 ft Downgradient)

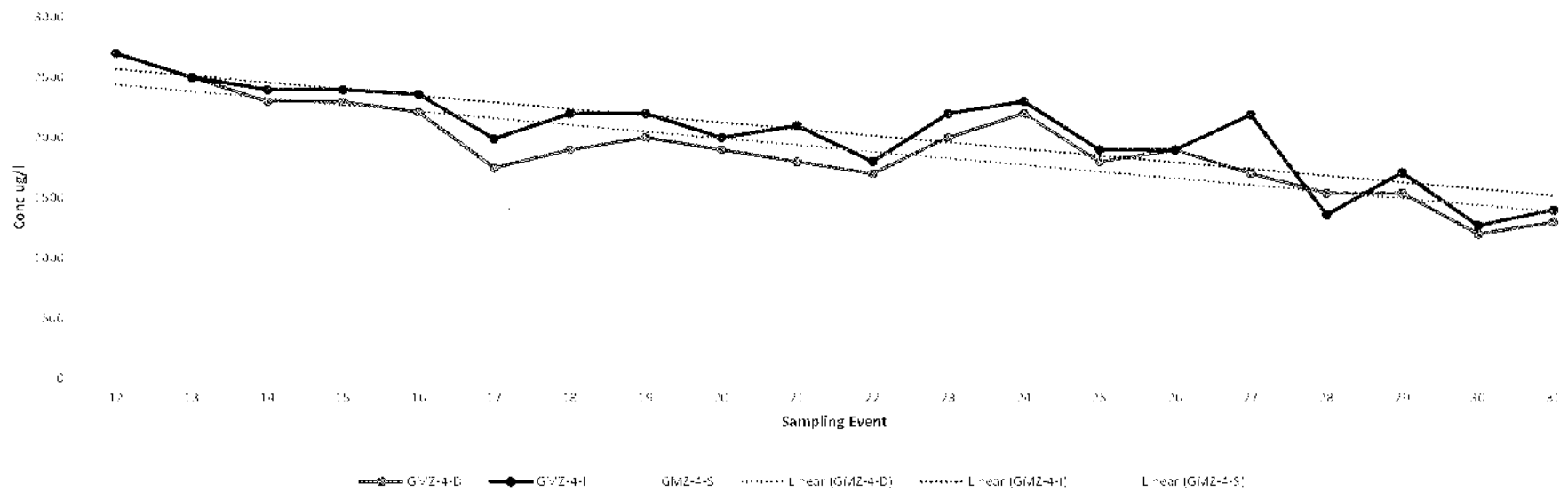


Figure A-4
Lithium in deep wells

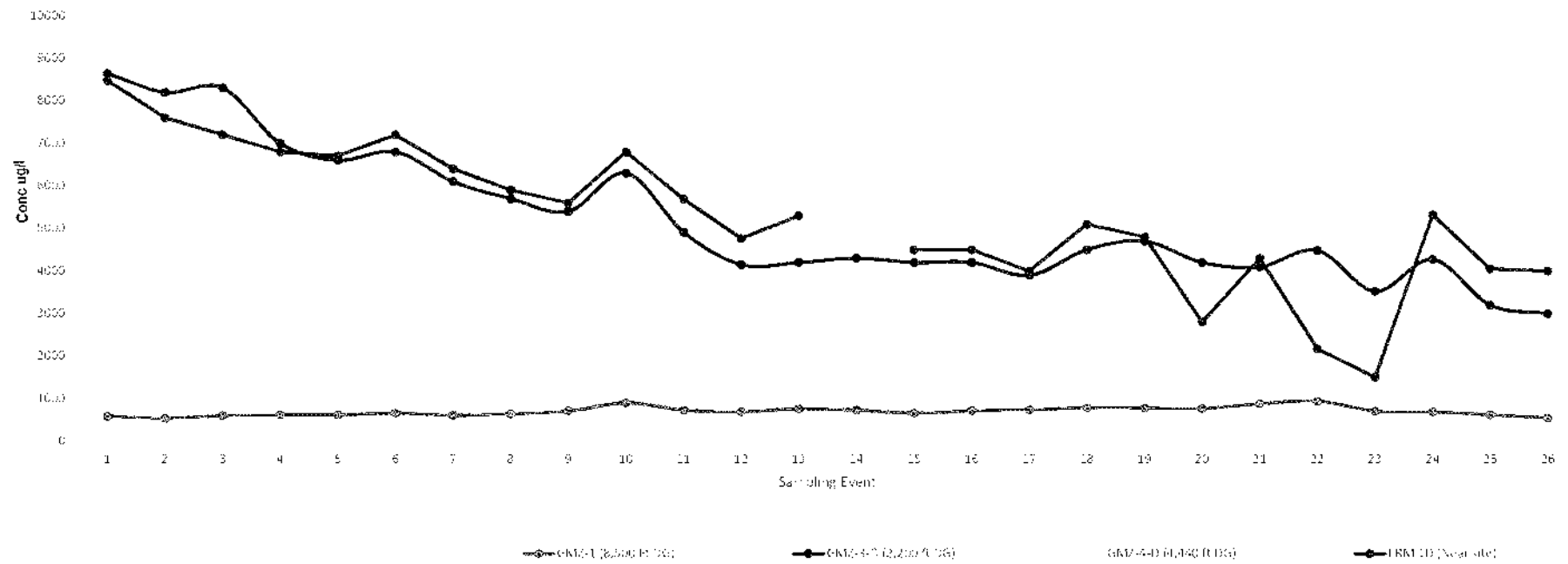


Figure A-5
Lithium in All Downgradient Surface Water Locations and GMZ-1

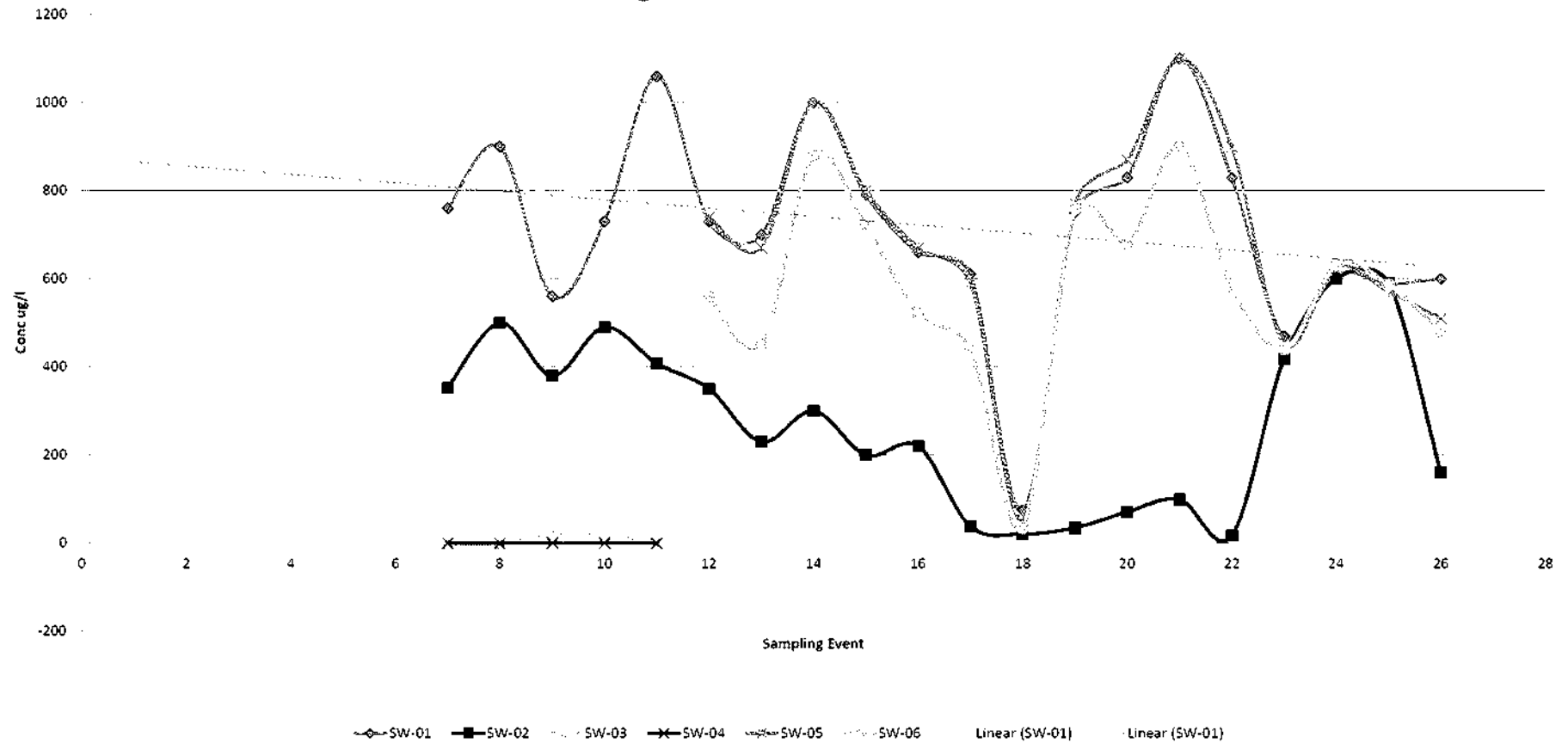


Figure A-6
Lithium in Select Downgradient Surface Water Locations

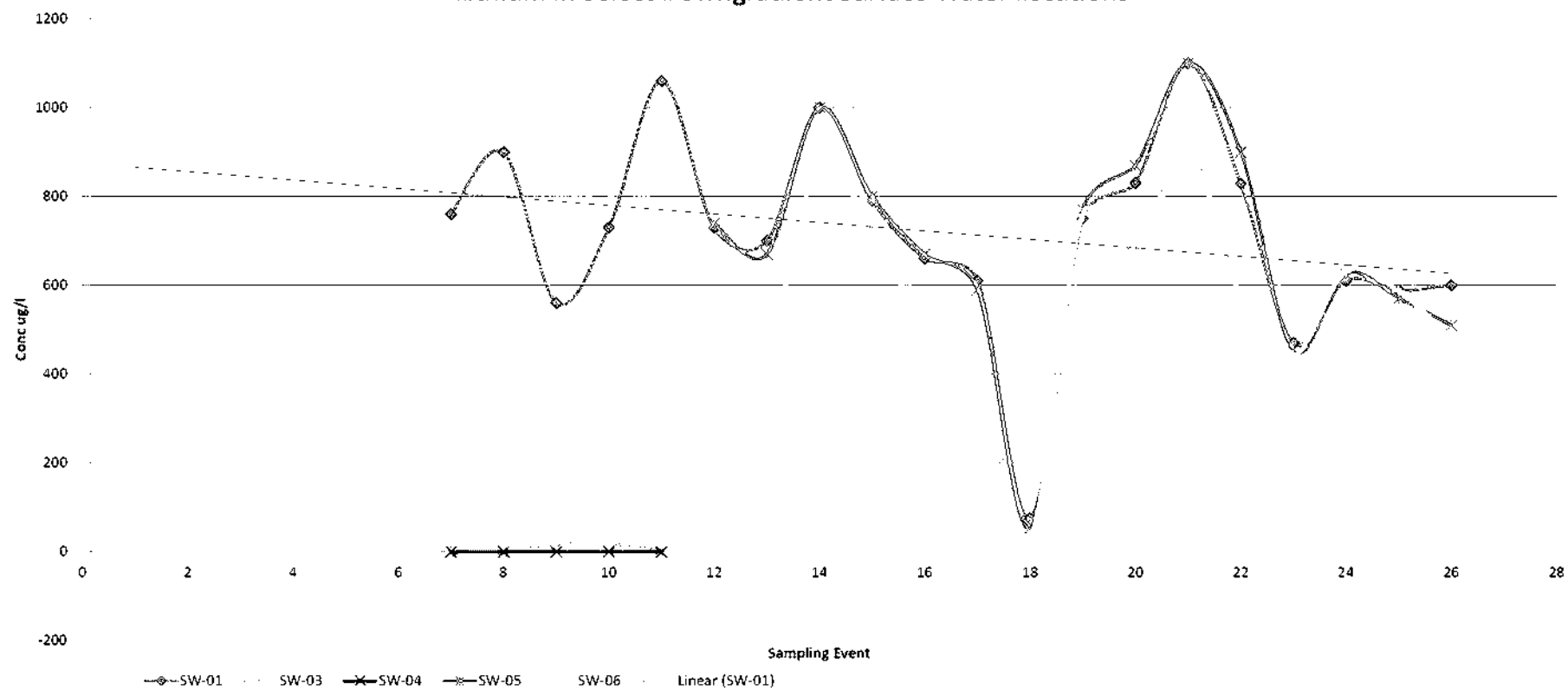
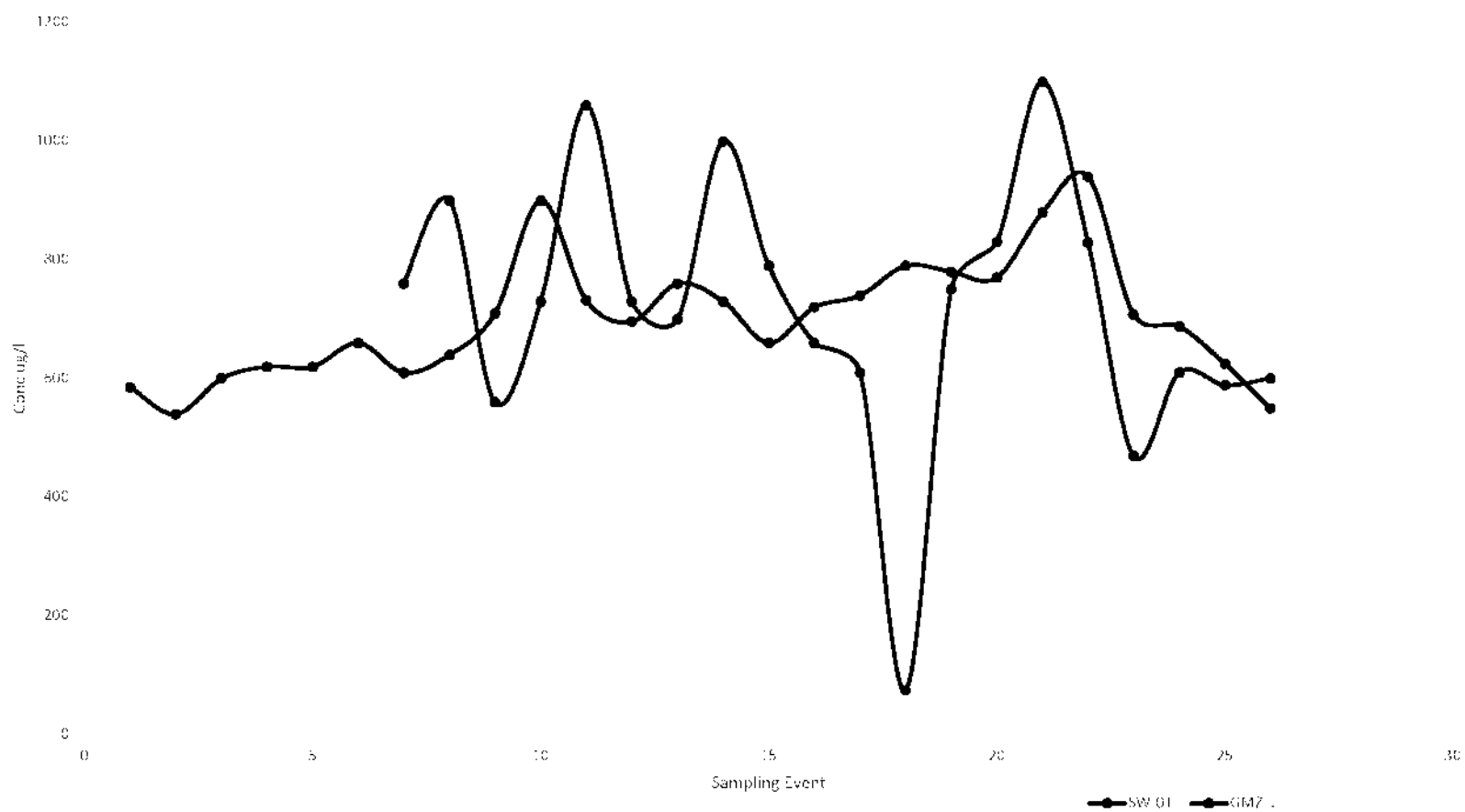
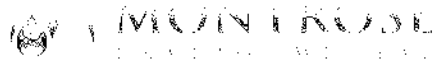


Figure A-7
Comparison of Data from SW-01 and GMZ-1 (~Co-located Sampling Stations)

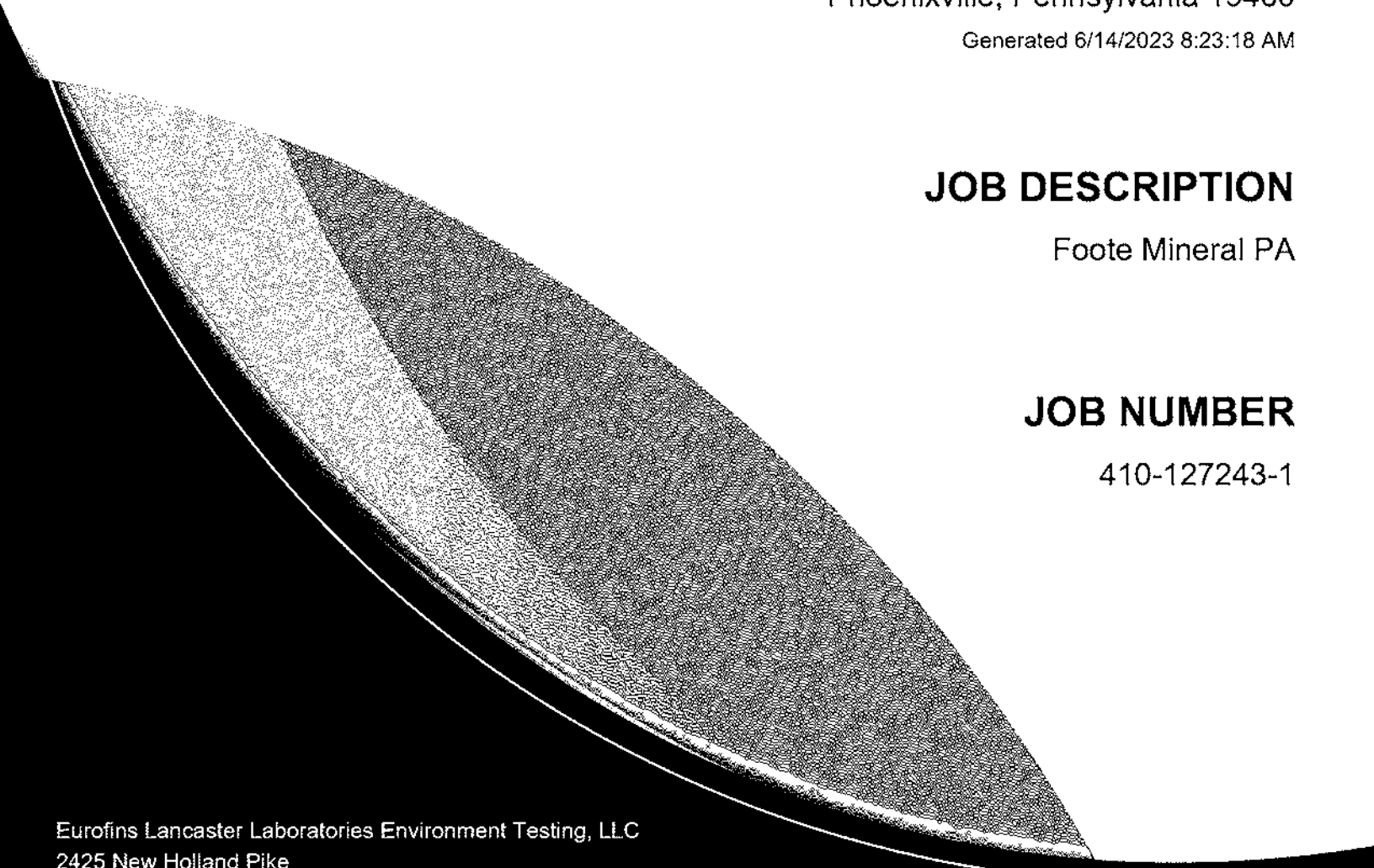


FOOTE MINERAL SUPERFUND SITE
GROUNDWATER MONITORING RESULTS

LITHIUM	(STD-260)																									
	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
(on-site)	2010 DI	2011 MAR	2011 JUN	2011 SEP	2011 DEC	2012 MAR	2013SEP	2013DEC	2014MAR	2014JUN	2014OCT	2015MAR	2015JUN	2015SEP	2015NOV	2016MAR	2016MAY	2016SEP	2016DEC	2017JUN	2018JAN	2018JUN	2018OCT	2020Mar	2021 Nov	2023May
ERM 1D	8476	7600	7200	6800	6700	7200	6400	5900	5600	6800	5680	4770	5300		4500	4500	4000	5100	4800	2800	4300	2170	1500	5320	4050	4000
ERM 1S	492.6	200	240	330	250	330	270	600	330	370	NS	170	220													100
ERM 2D	91.8	92	99	87	81	90	91	89	84	87	75	81.3	75	ND	83	83	73	89	85	84	81	74.5	8.1	6	82.7	79
ERM 2S	357.5	370	330	320	320	360	330	350	380	360	341	330	330	2.1J	310	350	350	350	400	340	350	372	306	337	317	350
ERM 5	26.5	28	27	30	16	25	24	27	24	30	30.8	285	24	24	27	21	23	24	32	29	31	23.5	24.6	26.1	26.4	26
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
(plume)	2010 DI	2011 MAR	2011 JUN	2011 SEP	2011 DEC	2012 MAR	2013SEP	2013DEC	2014MAR	2014JUN	2014OCT	2015MAR	2015JUN	2015SEP	2015NOV	2016MAR	2016MAY	2016SEP	2016DEC	2017JUN	2018JAN	2018JUN	2018OCT			
GMZ-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
GMZ-2-D							10 U	10 U	ND	ND	0.59 j	1.7J	1.6j		81 8.4j	1.1J	1.8J	1.9j	1.6	2.2	2.5j		6 4.2j	85.8	82.7	50U
GMZ-2-I							10 U	10 U	ND	ND	2.8 j	2.5J	4.1j	5j	6.7j	4J	3.2J	3.5j	3.5	4	4.1j	4.1j	3.3j	4.9	3.8J	79
GMZ-2-S							10 U	10 U	ND	ND	1.2 j	0.56J	2.0j	340j	5.9j	1.6J	1.7J	1.5j	1.2	1.3	1.1j	2.6j	2.6j	5.2	317	50U
GMZ-3-D							6100	5700	5400	6300	4910	4150	4200	4300	4200	4200	3900	4500	4700	4200	4100	4480	3520	4270	3200	3000
GMZ-3-I							6300	5800	5500	6400	5260	4380	4600	4700	4300	4300	4300	4600	5000	4200	4300	4750	3340	4510	2780	2800
GMZ-3-S							4700	4500	3800	5400	4060	3240	3700	3600	3400	3100	3000	3700	3800	3400	3300	2480	1330	2970	1870	1900
GMZ-4-D							2700	2500	2300	2300	2210	1750	1900	2000	1900	1800	1700	2000	2200	1800	1900	1700	1540	1540	1200	1300
GMZ-4-I							2700	2500	2400	2400	2360	1990	2200	2200	2000	2100	1800	2200	2300	1900	1900	2190	1360	1710	1270	1400
GMZ-4-S							1800	1700	1500	1400	1370	1370	1200	1200	1200	1200	1100	1200	1400	1200	1600	1120	949	1000	907	900
(Surf Wtr)	2010 DI	2011 MAR	2011 JUN	2011 SEP	2011 DEC	2012 MAR	2013SEP	2013DEC	2014MAR	2014JUN	2014OCT	2015MAR	2015JUN	2015SEP	2015NOV	2016MAR	2016MAY	2016SEP	2016DEC	2017JUN	2018JAN	2018JUN	2018OCT	2020Mar	2021 Nov	2023May
	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
SW-01							760	900	560	730	1060	730	700	1000	790	660	610	75	750	830	1100	829	470	610	589	600
SW-02							352	500	380	490	408	350	230	300	200	220	38	21	35	71	99	17.4	418	600	590	160
SW-03							5 U	10 U	18	17	4.1															
SW-04							5 U	10 U	ND	NS	NS															
SW-05												740	670	1000	800	670	590	53	770	870	1100	900	453	625	571	510
SW-06												560	450	880	720	520	440	35	760	680	900	579	441	632	587	480
GMZ-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



Groundwater and Surface Water Analysis Report
December 2021 Sampling Event
Foote Mineral Superfund Site
Frazer, Pennsylvania (EPA ID # PA D077087989)
Project No. 2023-4439
July 13, 2023



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

410-127243-1

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



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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: 410-127243-1

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.

HPLC/IC

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
cn	Refer to Case Narrative for further detail
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL, and the absolute difference between results is < the upper reporting limits for both.
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
E	Result exceeded calibration range.
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

Case Narrative

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

Job ID: 410-127243-1

Job ID: 410-127243-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Narrative

Job Narrative
410-127243-1

Receipt

The samples were received on 5/18/2023 4:20 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 1.1°C and 1.3°C

Receipt Exceptions

The container label for the following samples did not match the information listed on the Chain-of-Custody (COC): GMZ-1 (410-127243-14), GMZ-1 (410-127243-14[DU]), GMZ-1 (410-127243-14[MS]) and GMZ-1 (410-127243-14[MSD]). The container labels list 15:53, while the COC lists 15:52. Entered per COC.

GC/MS VOA

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

HPLC/IC

Method 300_ORGFM_28D: The continuing calibration verification (CCV) associated with batch 400-626525 recovered above the upper control limit for Bromide. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 300_ORGFM_28D: The continuing calibration verification (CCV) associated with batch 400-626525 recovered above the upper control limit for Bromate and Bromide. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 300_ORGFM_28D: The laboratory control sample duplicate (LCSD) for analytical batch 400-626525 recovered outside control limits for the following analytes: Fluoride. These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

Method 300_ORGFM_28D: The continuing calibration verification (CCV) associated with batch 400-626605 recovered above the upper control limit for Bromate and Bromide. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 300_ORGFM_28D: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 400-626605 recovered outside control limits for the following analytes: Fluoride. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 300_ORGFM_28D: The continuing calibration blank (CCB) for analytical batch 400-626700 contained Bromide above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 300_ORGFM_28D: The continuing calibration blank (CCB) for analytical batch 400-627108 contained Bromide above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 300_ORGFM_28D: The continuing calibration blank (CCB) for analytical batch 400-628929 contained Bromide above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 300_ORGFM_28D: The sample duplicate (DUP) precision for analytical batch 400-628929 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

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

Case Narrative

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

Job ID: 410-127243-1

Job ID: 410-127243-1 (Continued)

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)



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: 410-127243-1

Client Sample ID: ERM-2S

Lab Sample ID: 410-127243-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Fluoride	0.25	J **	1.0	0.14	mg/L	1			300.0	Total/NA
Lithium	0.35		0.050	0.011	mg/L	1			6010D	Total
										Recoverable
Chromium	0.57	J	2.0	0.33	ug/L	1			6020B	Total
										Recoverable

Client Sample ID: ERM-2D

Lab Sample ID: 410-127243-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Lithium	0.079		0.050	0.011	mg/L	1			6010D	Total
										Recoverable

Client Sample ID: ERM-5

Lab Sample ID: 410-127243-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Boron	0.073		0.050	0.012	mg/L	1			6010D	Total
										Recoverable
Lithium	0.026	J	0.050	0.011	mg/L	1			6010D	Total
										Recoverable

Client Sample ID: MW-22

Lab Sample ID: 410-127243-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Benzene	1.6		1.0	0.30	ug/L	1			8260D	Total/NA
cis-1,2-Dichloroethene	5.6		1.0	0.30	ug/L	1			8260D	Total/NA
Tetrachloroethene	120		1.0	0.30	ug/L	1			8260D	Total/NA
Trichloroethene	8.1		1.0	0.30	ug/L	1			8260D	Total/NA
Fluoride	1.0		1.0	0.14	mg/L	1			300.0	Total/NA
Boron	3.7		0.050	0.012	mg/L	1			6010D	Total
										Recoverable
Lithium	14		0.050	0.011	mg/L	1			6010D	Total
										Recoverable
Arsenic	5.2		2.0	0.68	ug/L	1			6020B	Total
										Recoverable
Chromium	0.48	J	2.0	0.33	ug/L	1			6020B	Total
										Recoverable

Client Sample ID: MW-22D

Lab Sample ID: 410-127243-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Benzene	1.7		1.0	0.30	ug/L	1			8260D	Total/NA
cis-1,2-Dichloroethene	5.6		1.0	0.30	ug/L	1			8260D	Total/NA
Tetrachloroethene	120		1.0	0.30	ug/L	1			8260D	Total/NA
Trichloroethene	7.6		1.0	0.30	ug/L	1			8260D	Total/NA

Client Sample ID: ERM-1S

Lab Sample ID: 410-127243-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Fluoride	0.18	J **	1.0	0.14	mg/L	1			300.0	Total/NA
Boron	0.59		0.050	0.012	mg/L	1			6010D	Total
										Recoverable
Lithium	0.10		0.050	0.011	mg/L	1			6010D	Total
										Recoverable
Antimony	0.68	J	1.0	0.20	ug/L	1			6020B	Total
										Recoverable
Chromium	2.6		2.0	0.33	ug/L	1			6020B	Total
										Recoverable

This Detection Summary does not include radiochemical test results.

Eurolins Lancaster Laboratories Environment Testing, LLC

Detection Summary

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

Job ID: 410-127243-1

Client Sample ID: ERM-1D

Lab Sample ID: 410-127243-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Bromide	8.5		1.0	0.26	mg/L	1			300.0	Total/NA
Fluoride	0.27	J **	1.0	0.14	mg/L	1			300.0	Total/NA
Boron	0.23		0.050	0.012	mg/L	1			6010D	Total Recoverable
Lithium	4.0		0.050	0.011	mg/L	1			6010D	Total Recoverable
Antimony	0.86	J	1.0	0.20	ug/L	1			6020B	Total Recoverable
Chromium	24		2.0	0.33	ug/L	1			6020B	Total Recoverable

Client Sample ID: GMZ-3D

Lab Sample ID: 410-127243-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Bromide	2.8		1.0	0.26	mg/L	1			300.0	Total/NA
Boron	0.71		0.050	0.012	mg/L	1			6010D	Total Recoverable
Lithium	3.0		0.050	0.011	mg/L	1			6010D	Total Recoverable
Chromium	27		2.0	0.33	ug/L	1			6020B	Total Recoverable

Client Sample ID: GMZ-3I

Lab Sample ID: 410-127243-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Bromide	2.3		1.0	0.26	mg/L	1			300.0	Total/NA
Boron	0.69		0.050	0.012	mg/L	1			6010D	Total Recoverable
Lithium	2.8		0.050	0.011	mg/L	1			6010D	Total Recoverable
Chromium	27		2.0	0.33	ug/L	1			6020B	Total Recoverable

Client Sample ID: GMZ-3S

Lab Sample ID: 410-127243-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Bromide	1.6		1.0	0.26	mg/L	1			300.0	Total/NA
Boron	0.46		0.050	0.012	mg/L	1			6010D	Total Recoverable
Lithium	1.9		0.050	0.011	mg/L	1			6010D	Total Recoverable
Chromium	18		2.0	0.33	ug/L	1			6020B	Total Recoverable

Client Sample ID: GMZ-4D

Lab Sample ID: 410-127243-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Bromide	1.3		1.0	0.26	mg/L	1			300.0	Total/NA
Boron	0.36		0.050	0.012	mg/L	1			6010D	Total Recoverable
Lithium	1.3		0.050	0.011	mg/L	1			6010D	Total Recoverable
Chromium	21		2.0	0.33	ug/L	1			6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurolins Lancaster Laboratories Environment Testing, LLC

Detection Summary

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

Job ID: 410-127243-1

Client Sample ID: GMZ-4I

Lab Sample ID: 410-127243-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Bromide	1.5		1.0	0.26	mg/L	1			300.0	Total/NA
Boron	0.40		0.050	0.012	mg/L	1			6010D	Total Recoverable
Lithium	1.4		0.050	0.011	mg/L	1			6010D	Total Recoverable
Chromium	20		2.0	0.33	ug/L	1			6020B	Total Recoverable

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Client Sample ID: GMZ-4S

Lab Sample ID: 410-127243-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Bromide	0.68	J	1.0	0.26	mg/L	1			300.0	Total/NA
Boron	0.29		0.050	0.012	mg/L	1			6010D	Total Recoverable
Lithium	0.90		0.050	0.011	mg/L	1			6010D	Total Recoverable
Chromium	13		2.0	0.33	ug/L	1			6020B	Total Recoverable

Client Sample ID: GMZ-1

Lab Sample ID: 410-127243-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Bromide	1.2		1.0	0.26	mg/L	1			300.0	Total/NA
Boron	0.16		0.050	0.012	mg/L	1			6010D	Total Recoverable
Lithium	0.55		0.050	0.011	mg/L	1			6010D	Total Recoverable
Chromium	9.8		2.0	0.33	ug/L	1			6020B	Total Recoverable
Thallium	0.21	J	0.50	0.13	ug/L	1			6020B	Total Recoverable

Client Sample ID: GMZ-2D

Lab Sample ID: 410-127243-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Boron	0.016	J	0.050	0.012	mg/L	1			6010D	Total Recoverable

Client Sample ID: GMZ-2I

Lab Sample ID: 410-127243-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	0.74	J	2.0	0.68	ug/L	1			6020B	Total Recoverable

Client Sample ID: GMZ-2S

Lab Sample ID: 410-127243-17

No Detections.

Client Sample ID: GMZ-2SD

Lab Sample ID: 410-127243-18

No Detections.

Client Sample ID: SW-06

Lab Sample ID: 410-127243-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Bromide	0.57	J	1.0	0.26	mg/L	1			300.0	Total/NA
Boron	0.16		0.050	0.012	mg/L	1			6010D	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurolins Lancaster Laboratories Environment Testing, LLC

Detection Summary

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

Job ID: 410-127243-1

Client Sample ID: SW-06 (Continued)

Lab Sample ID: 410-127243-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.48		0.050	0.011	mg/L	1		6010D	Total
									Recoverable
Chromium	6.0		2.0	0.33	ug/L	1		6020B	Total
									Recoverable

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Client Sample ID: SW-05

Lab Sample ID: 410-127243-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bromide	0.62	J	1.0	0.26	mg/L	1		300.0	Total/NA
Boron	0.16		0.050	0.012	mg/L	1		6010D	Total
									Recoverable
Lithium	0.51		0.050	0.011	mg/L	1		6010D	Total
									Recoverable
Chromium	6.6		2.0	0.33	ug/L	1		6020B	Total
									Recoverable

Client Sample ID: SW-01

Lab Sample ID: 410-127243-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bromide	0.73	J	1.0	0.26	mg/L	1		300.0	Total/NA
Boron	0.19		0.050	0.012	mg/L	1		6010D	Total
									Recoverable
Lithium	0.60		0.050	0.011	mg/L	1		6010D	Total
									Recoverable
Chromium	9.0		2.0	0.33	ug/L	1		6020B	Total
									Recoverable

Client Sample ID: SW-02

Lab Sample ID: 410-127243-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.074		0.050	0.012	mg/L	1		6010D	Total
									Recoverable
Lithium	0.16		0.050	0.011	mg/L	1		6010D	Total
									Recoverable
Chromium	2.0		2.0	0.33	ug/L	1		6020B	Total
									Recoverable

Client Sample ID: SW-2A

Lab Sample ID: 410-127243-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.075		0.050	0.012	mg/L	1		6010D	Total
									Recoverable
Lithium	0.17		0.050	0.011	mg/L	1		6010D	Total
									Recoverable
Chromium	2.1		2.0	0.33	ug/L	1		6020B	Total
									Recoverable

Client Sample ID: TB-01-051523

Lab Sample ID: 410-127243-24

No Detections.

This Detection Summary does not include radiochemical test results.

Eurolins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

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

Job ID: 410-127243-1

Client Sample ID: ERM-2S

Lab Sample ID: 410-127243-1

Date Collected: 05/15/23 09:47

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 16:31	1
Bromide	ND		1.0	0.26	mg/L			05/25/23 16:31	1
Fluoride	0.25	J *+	1.0	0.14	mg/L			05/25/23 16:31	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.050	0.012	mg/L		05/25/23 07:06	05/25/23 18:55	1
Lithium	0.35		0.050	0.011	mg/L		05/25/23 07:06	05/25/23 18:55	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		05/25/23 07:06	06/02/23 10:22	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 07:06	06/02/23 10:22	1
Chromium	0.57	J	2.0	0.33	ug/L		05/25/23 07:06	06/02/23 10:22	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 07:06	06/02/23 10:22	1

Client Sample ID: ERM-2D

Lab Sample ID: 410-127243-2

Date Collected: 05/15/23 10:42

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 16:50	1
Bromide	ND		1.0	0.26	mg/L			05/25/23 16:50	1
Fluoride	ND	*+	1.0	0.14	mg/L			05/25/23 16:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 21:19	1
Lithium	0.079		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 21:19	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		05/25/23 03:23	06/01/23 17:36	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 17:36	1
Chromium	ND		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:36	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:36	1

Client Sample ID: ERM-5

Lab Sample ID: 410-127243-3

Date Collected: 05/15/23 12:22

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 17:10	1
Bromide	ND		1.0	0.26	mg/L			05/25/23 17:10	1
Fluoride	ND	*+	1.0	0.14	mg/L			05/25/23 17:10	1

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

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

Job ID: 410-127243-1

Client Sample ID: ERM-5

Lab Sample ID: 410-127243-3

Date Collected: 05/15/23 12:22

Matrix: Water

Date Received: 05/18/23 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.073		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 21:28	1
Lithium	0.026	J	0.050	0.011	mg/L		05/25/23 03:23	05/25/23 21:28	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		05/25/23 03:23	06/01/23 17:48	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 17:48	1
Chromium	ND		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:48	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:48	1

Client Sample ID: MW-22

Lab Sample ID: 410-127243-4

Date Collected: 05/15/23 14:33

Matrix: Water

Date Received: 05/18/23 16:20

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			05/25/23 22:06	1
Benzene	1.6		1.0	0.30	ug/L			05/25/23 22:06	1
Bromoform	ND		4.0	1.0	ug/L			05/25/23 22:06	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			05/25/23 22:06	1
Chloroform	ND		1.0	0.30	ug/L			05/25/23 22:06	1
cis-1,2-Dichloroethene	5.6		1.0	0.30	ug/L			05/25/23 22:06	1
Ethylbenzene	ND		1.0	0.40	ug/L			05/25/23 22:06	1
Tetrachloroethene	120		1.0	0.30	ug/L			05/25/23 22:06	1
trans-1,2-Dichloroethene	ND		2.0	0.70	ug/L			05/25/23 22:06	1
Trichloroethene	8.1		1.0	0.30	ug/L			05/25/23 22:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		80 - 120		05/25/23 22:06	1
4-Bromofluorobenzene (Surr)	94		80 - 120		05/25/23 22:06	1
Dibromofluoromethane (Surr)	99		80 - 120		05/25/23 22:06	1
Toluene-d8 (Surr)	103		80 - 120		05/25/23 22:06	1

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 17:30	1
Bromide	ND		1.0	0.26	mg/L			05/25/23 17:30	1
Fluoride	1.0		1.0	0.14	mg/L			05/26/23 20:51	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.7		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 21:34	1
Lithium	14		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 21:34	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		05/25/23 03:23	06/01/23 17:52	1
Arsenic	5.2		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 17:52	1
Chromium	0.48	J	2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:52	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:52	1

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

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

Job ID: 410-127243-1

Client Sample ID: MW-22D

Lab Sample ID: 410-127243-5

Date Collected: 05/15/23 15:03

Matrix: Water

Date Received: 05/18/23 16:20

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			05/26/23 01:23	1
Benzene	1.7		1.0	0.30	ug/L			05/26/23 01:23	1
Bromoform	ND		4.0	1.0	ug/L			05/26/23 01:23	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			05/26/23 01:23	1
Chloroform	ND		1.0	0.30	ug/L			05/26/23 01:23	1
cis-1,2-Dichloroethene	5.6		1.0	0.30	ug/L			05/26/23 01:23	1
Ethylbenzene	ND		1.0	0.40	ug/L			05/26/23 01:23	1
Tetrachloroethene	120		1.0	0.30	ug/L			05/26/23 01:23	1
trans-1,2-Dichloroethene	ND		2.0	0.70	ug/L			05/26/23 01:23	1
Trichloroethene	7.6		1.0	0.30	ug/L			05/26/23 01:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		80 - 120		05/26/23 01:23	1
4-Bromofluorobenzene (Surr)	93		80 - 120		05/26/23 01:23	1
Dibromofluoromethane (Surr)	98		80 - 120		05/26/23 01:23	1
Toluene-d8 (Surr)	103		80 - 120		05/26/23 01:23	1

Client Sample ID: ERM-1S

Lab Sample ID: 410-127243-6

Date Collected: 05/15/23 16:42

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 18:30	1
Bromide	ND		1.0	0.26	mg/L			05/25/23 18:30	1
Fluoride	0.18	J *+	1.0	0.14	mg/L			05/25/23 18:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.59		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 20:41	1
Lithium	0.10		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 20:41	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.68	J	1.0	0.20	ug/L		05/25/23 03:23	06/01/23 17:14	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 17:14	1
Chromium	2.6		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:14	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:14	1

Client Sample ID: ERM-1D

Lab Sample ID: 410-127243-7

Date Collected: 05/15/23 15:52

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 18:50	1
Bromide	8.5		1.0	0.26	mg/L			05/26/23 21:11	1
Fluoride	0.27	J *+	1.0	0.14	mg/L			05/25/23 18:50	1

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

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

Job ID: 410-127243-1

Client Sample ID: ERM-1D

Lab Sample ID: 410-127243-7

Date Collected: 05/15/23 15:52

Matrix: Water

Date Received: 05/18/23 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.23		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 20:38	1
Lithium	4.0		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 20:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.86	J	1.0	0.20	ug/L		05/25/23 03:23	06/01/23 17:12	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 17:12	1
Chromium	24		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:12	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:12	1

Client Sample ID: GMZ-3D

Lab Sample ID: 410-127243-8

Date Collected: 05/16/23 08:52

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 19:09	1
Bromide	2.8		1.0	0.26	mg/L			05/26/23 21:31	1
Fluoride	ND	+	1.0	0.14	mg/L			05/25/23 19:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.71		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 21:22	1
Lithium	3.0		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 21:22	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		05/25/23 03:23	06/01/23 17:38	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 17:38	1
Chromium	27		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:38	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:38	1

Client Sample ID: GMZ-3I

Lab Sample ID: 410-127243-9

Date Collected: 05/16/23 09:37

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 19:29	1
Bromide	2.3		1.0	0.26	mg/L			05/30/23 20:42	1
Fluoride	ND	+	1.0	0.14	mg/L			05/25/23 19:29	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.69		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 21:25	1
Lithium	2.8		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 21:25	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		05/25/23 03:23	06/01/23 17:40	1

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

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

Job ID: 410-127243-1

Client Sample ID: GMZ-3I

Lab Sample ID: 410-127243-9

Date Collected: 05/16/23 09:37

Matrix: Water

Date Received: 05/18/23 16:20

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		05/25/23 03:23	06/01/23 17:40	1
Chromium	27		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:40	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:40	1

Client Sample ID: GMZ-3S

Lab Sample ID: 410-127243-10

Date Collected: 05/16/23 10:17

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 19:49	1
Bromide	1.6		1.0	0.26	mg/L			05/30/23 21:02	1
Fluoride	ND	+	1.0	0.14	mg/L			05/25/23 19:49	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.46		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 20:54	1
Lithium	1.9		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 20:54	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		05/25/23 03:23	06/01/23 17:22	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 17:22	1
Chromium	18		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:22	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:22	1

Client Sample ID: GMZ-4D

Lab Sample ID: 410-127243-11

Date Collected: 05/16/23 13:12

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 21:08	1
Bromide	1.3		1.0	0.26	mg/L			05/30/23 22:02	1
Fluoride	ND	+	1.0	0.14	mg/L			05/25/23 21:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.36		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 20:51	1
Lithium	1.3		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 20:51	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		05/25/23 03:23	06/01/23 17:20	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 17:20	1
Chromium	24		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:20	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:20	1

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

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

Job ID: 410-127243-1

Client Sample ID: GMZ-4I

Lab Sample ID: 410-127243-12

Date Collected: 05/16/23 14:02

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 21:28	1
Bromide	1.5		1.0	0.26	mg/L			05/30/23 22:21	1
Fluoride	ND	*+	1.0	0.14	mg/L			05/25/23 21:28	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.40		0.050	0.012	mg/L		05/25/23 07:06	05/25/23 18:52	1
Lithium	1.4		0.050	0.011	mg/L		05/25/23 07:06	05/25/23 18:52	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		05/25/23 07:06	06/02/23 10:20	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 07:06	06/02/23 10:20	1
Chromium	20		2.0	0.33	ug/L		05/25/23 07:06	06/02/23 10:20	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 07:06	06/02/23 10:20	1

Client Sample ID: GMZ-4S

Lab Sample ID: 410-127243-13

Date Collected: 05/16/23 14:47

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 22:28	1
Bromide	0.68	J	1.0	0.26	mg/L			05/25/23 22:28	1
Fluoride	ND	*+	1.0	0.14	mg/L			05/25/23 22:28	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.29		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 20:48	1
Lithium	0.90		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 20:48	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		05/25/23 03:23	06/01/23 17:18	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 17:18	1
Chromium	13		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:18	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:18	1

Client Sample ID: GMZ-1

Lab Sample ID: 410-127243-14

Date Collected: 05/16/23 15:52

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 20:09	1
Bromide	1.2		1.0	0.26	mg/L			05/30/23 22:41	1
Fluoride	ND	*+	1.0	0.14	mg/L			05/25/23 20:09	1

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

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

Job ID: 410-127243-1

Client Sample ID: GMZ-1

Lab Sample ID: 410-127243-14

Date Collected: 05/16/23 15:52

Matrix: Water

Date Received: 05/18/23 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.16		0.050	0.012	mg/L		05/25/23 07:06	05/25/23 18:21	1
Lithium	0.55		0.050	0.011	mg/L		05/25/23 07:06	05/25/23 18:21	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		05/25/23 07:06	06/02/23 10:02	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 07:06	06/02/23 10:02	1
Chromium	9.8		2.0	0.33	ug/L		05/25/23 07:06	06/02/23 10:02	1
Thallium	0.21	J	0.50	0.13	ug/L		05/25/23 07:06	06/02/23 10:02	1

Client Sample ID: GMZ-2D

Lab Sample ID: 410-127243-15

Date Collected: 05/17/23 08:57

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 22:48	1
Bromide	ND		1.0	0.26	mg/L			05/25/23 22:48	1
Fluoride	ND	+	1.0	0.14	mg/L			05/25/23 22:48	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.016	J	0.050	0.012	mg/L		05/25/23 03:23	05/25/23 21:37	1
Lithium	ND		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 21:37	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		05/25/23 03:23	06/01/23 17:54	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 17:54	1
Chromium	ND		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:54	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:54	1

Client Sample ID: GMZ-2I

Lab Sample ID: 410-127243-16

Date Collected: 05/17/23 09:42

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 23:08	1
Bromide	ND		1.0	0.26	mg/L			05/25/23 23:08	1
Fluoride	ND	+	1.0	0.14	mg/L			05/25/23 23:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 20:57	1
Lithium	ND		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 20:57	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		05/25/23 03:23	06/01/23 17:30	1

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

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

Job ID: 410-127243-1

Client Sample ID: GMZ-2I

Lab Sample ID: 410-127243-16

Date Collected: 05/17/23 09:42

Matrix: Water

Date Received: 05/18/23 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.74	J	2.0	0.68	ug/L		05/25/23 03:23	06/01/23 17:30	1
Chromium	ND		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:30	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:30	1

Client Sample ID: GMZ-2S

Lab Sample ID: 410-127243-17

Date Collected: 05/17/23 10:27

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 23:28	1
Bromide	ND		1.0	0.26	mg/L			05/25/23 23:28	1
Fluoride	ND	+	1.0	0.14	mg/L			05/25/23 23:28	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 21:16	1
Lithium	ND		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 21:16	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		05/25/23 03:23	06/01/23 17:34	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 17:34	1
Chromium	ND		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:34	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:34	1

Client Sample ID: GMZ-2SD

Lab Sample ID: 410-127243-18

Date Collected: 05/17/23 10:57

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 23:47	1
Bromide	ND		1.0	0.26	mg/L			05/25/23 23:47	1
Fluoride	ND	+	1.0	0.14	mg/L			05/25/23 23:47	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 20:22	1
Lithium	ND		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 20:22	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		05/25/23 03:23	06/01/23 17:10	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 17:10	1
Chromium	ND		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:10	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:10	1

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

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

Job ID: 410-127243-1

Client Sample ID: SW-06

Lab Sample ID: 410-127243-19

Date Collected: 05/17/23 11:50

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/26/23 00:07	1
Bromide	0.57	J	1.0	0.26	mg/L			05/26/23 00:07	1
Fluoride	ND	*+	1.0	0.14	mg/L			05/26/23 00:07	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.16		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 20:19	1
Lithium	0.48		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 20:19	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		05/25/23 03:23	06/01/23 17:08	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 17:08	1
Chromium	6.0		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:08	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:08	1

Client Sample ID: SW-05

Lab Sample ID: 410-127243-20

Date Collected: 05/17/23 12:20

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/26/23 00:27	1
Bromide	0.62	J	1.0	0.26	mg/L			05/26/23 00:27	1
Fluoride	ND	*+	1.0	0.14	mg/L			05/26/23 00:27	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.16		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 20:44	1
Lithium	0.51		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 20:44	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		05/25/23 03:23	06/01/23 17:16	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 17:16	1
Chromium	6.6		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:16	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:16	1

Client Sample ID: SW-01

Lab Sample ID: 410-127243-21

Date Collected: 05/17/23 12:55

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/26/23 07:04	1
Bromide	0.73	J	1.0	0.26	mg/L			05/26/23 07:04	1
Fluoride	ND	*+	1.0	0.14	mg/L			05/26/23 07:04	1

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

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

Job ID: 410-127243-1

Client Sample ID: SW-01

Lab Sample ID: 410-127243-21

Date Collected: 05/17/23 12:55

Matrix: Water

Date Received: 05/18/23 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.19		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 20:01	1
Lithium	0.60		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 20:01	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		05/25/23 03:23	06/01/23 16:49	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 16:49	1
Chromium	9.0		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 16:49	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 16:49	1

Client Sample ID: SW-02

Lab Sample ID: 410-127243-22

Date Collected: 05/17/23 13:10

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/26/23 08:04	1
Bromide	ND		1.0	0.26	mg/L			05/26/23 08:04	1
Fluoride	ND	+	1.0	0.14	mg/L			05/26/23 08:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.074		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 21:00	1
Lithium	0.16		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 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		05/25/23 03:23	06/01/23 17:32	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 17:32	1
Chromium	2.0		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:32	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:32	1

Client Sample ID: SW-2A

Lab Sample ID: 410-127243-23

Date Collected: 05/17/23 13:30

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/26/23 08:24	1
Bromide	ND		1.0	0.26	mg/L			05/26/23 08:24	1
Fluoride	ND	+	1.0	0.14	mg/L			05/26/23 08:24	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.075		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 21:31	1
Lithium	0.17		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 21:31	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		05/25/23 03:23	06/01/23 17:50	1

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

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

Job ID: 410-127243-1

Client Sample ID: SW-2A

Lab Sample ID: 410-127243-23

Date Collected: 05/17/23 13:30

Matrix: Water

Date Received: 05/18/23 16:20

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		05/25/23 03:23	06/01/23 17:50	1
Chromium	2.1		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:50	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:50	1

Client Sample ID: TB-01-051523

Lab Sample ID: 410-127243-24

Date Collected: 05/15/23 00:00

Matrix: Water

Date Received: 05/18/23 16:20

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			05/25/23 21:44	1
Benzene	ND		1.0	0.30	ug/L			05/25/23 21:44	1
Bromoform	ND		4.0	1.0	ug/L			05/25/23 21:44	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			05/25/23 21:44	1
Chloroform	ND		1.0	0.30	ug/L			05/25/23 21:44	1
cis-1,2-Dichloroethene	ND		1.0	0.30	ug/L			05/25/23 21:44	1
Ethylbenzene	ND		1.0	0.40	ug/L			05/25/23 21:44	1
Tetrachloroethene	ND		1.0	0.30	ug/L			05/25/23 21:44	1
trans-1,2-Dichloroethene	ND		2.0	0.70	ug/L			05/25/23 21:44	1
Trichloroethene	ND		1.0	0.30	ug/L			05/25/23 21:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		80 - 120		05/25/23 21:44	1
4-Bromofluorobenzene (Surr)	94		80 - 120		05/25/23 21:44	1
Dibromofluoromethane (Surr)	99		80 - 120		05/25/23 21:44	1
Toluene-d8 (Surr)	104		80 - 120		05/25/23 21:44	1

Surrogate Summary

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

Job ID: 410-127243-1

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA	BFB	DBFM	TOL
		(80-120)	(80-120)	(80-120)	(80-120)
410-127243-4	MW-22	105	94	99	103
410-127243-4 MS	MW-22	104	96	96	105
410-127243-4 MSD	MW-22	105	97	98	105
410-127243-5	MW-22D	103	93	98	103
410-127243-24	TB-01-051523	103	94	99	104
LCS 410-380166/4	Lab Control Sample	101	96	97	105
MB 410-380166/6	Method Blank	104	94	97	104

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

QC Sample Results

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

Job ID: 410-127243-1

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

Lab Sample ID: MB 410-380166/6

Matrix: Water

Analysis Batch: 380166

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2-Dichloroethane	ND		1.0	0.30	ug/L			05/25/23 20:38	1
Benzene	ND		1.0	0.30	ug/L			05/25/23 20:38	1
Bromoform	ND		4.0	1.0	ug/L			05/25/23 20:38	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			05/25/23 20:38	1
Chloroform	ND		1.0	0.30	ug/L			05/25/23 20:38	1
cis-1,2-Dichloroethene	ND		1.0	0.30	ug/L			05/25/23 20:38	1
Ethylbenzene	ND		1.0	0.40	ug/L			05/25/23 20:38	1
Tetrachloroethene	ND		1.0	0.30	ug/L			05/25/23 20:38	1
trans-1,2-Dichloroethene	ND		2.0	0.70	ug/L			05/25/23 20:38	1
Trichloroethene	ND		1.0	0.30	ug/L			05/25/23 20:38	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	104		80 - 120		05/25/23 20:38	1
4-Bromofluorobenzene (Surr)	94		80 - 120		05/25/23 20:38	1
Dibromofluoromethane (Surr)	97		80 - 120		05/25/23 20:38	1
Toluene-d8 (Surr)	104		80 - 120		05/25/23 20:38	1

Lab Sample ID: LCS 410-380166/4

Matrix: Water

Analysis Batch: 380166

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
1,2-Dichloroethane	20.0	17.8		ug/L		89	73 - 124
Benzene	20.0	19.8		ug/L		99	80 - 120
Bromoform	20.0	16.0		ug/L		80	51 - 120
Carbon tetrachloride	20.0	15.8		ug/L		79	64 - 134
Chloroform	20.0	17.8		ug/L		89	80 - 120
cis-1,2-Dichloroethene	20.0	18.5		ug/L		92	80 - 125
Ethylbenzene	20.0	18.8		ug/L		94	80 - 120
Tetrachloroethene	20.0	17.7		ug/L		88	80 - 120
trans-1,2-Dichloroethene	20.0	18.1		ug/L		91	80 - 126
Trichloroethene	20.0	17.3		ug/L		87	80 - 120

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	101		80 - 120
4-Bromofluorobenzene (Surr)	96		80 - 120
Dibromofluoromethane (Surr)	97		80 - 120
Toluene-d8 (Surr)	105		80 - 120

Lab Sample ID: 410-127243-4 MS

Matrix: Water

Analysis Batch: 380166

Client Sample ID: MW-22

Prep Type: Total/NA

Analyte	Sample Sample		Spike Added	MS MS		Unit	D	%Rec	%Rec Limits
	Result	Qualifier		Result	Qualifier				
1,2-Dichloroethane	ND		20.0	18.9		ug/L		95	73 - 124
Benzene	1.6		20.0	24.8		ug/L		116	80 - 120
Bromoform	ND		20.0	16.8		ug/L		84	51 - 120
Carbon tetrachloride	ND		20.0	19.7		ug/L		98	64 - 134

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QC Sample Results

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

Job ID: 410-127243-1

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

Lab Sample ID: 410-127243-4 MS

Matrix: Water

Analysis Batch: 380166

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
Chloroform	ND		20.0	20.3		ug/L		101	80 - 120
cis-1,2-Dichloroethene	5.6		20.0	27.1		ug/L		108	80 - 125
Ethylbenzene	ND		20.0	21.6		ug/L		108	80 - 120
Tetrachloroethene	120		20.0	137	4	ug/L		89	80 - 120
trans-1,2-Dichloroethene	ND		20.0	21.2		ug/L		106	80 - 126
Trichloroethene	8.1		20.0	28.4		ug/L		102	80 - 120

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	104		80 - 120
4-Bromofluorobenzene (Surr)	96		80 - 120
Dibromofluoromethane (Surr)	96		80 - 120
Toluene-d8 (Surr)	105		80 - 120

Lab Sample ID: 410-127243-4 MSD

Matrix: Water

Analysis Batch: 380166

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	19.1		ug/L		95	73 - 124	1	30
Benzene	1.6		20.0	25.5		ug/L		120	80 - 120	3	30
Bromoform	ND		20.0	17.2		ug/L		86	51 - 120	3	30
Carbon tetrachloride	ND		20.0	20.0		ug/L		100	64 - 134	2	30
Chloroform	ND		20.0	20.5		ug/L		102	80 - 120	1	30
cis-1,2-Dichloroethene	5.6		20.0	27.8		ug/L		111	80 - 125	3	30
Ethylbenzene	ND		20.0	21.9		ug/L		109	80 - 120	1	30
Tetrachloroethene	120		20.0	141	4	ug/L		107	80 - 120	3	30
trans-1,2-Dichloroethene	ND		20.0	22.0		ug/L		110	80 - 126	4	30
Trichloroethene	8.1		20.0	28.8		ug/L		103	80 - 120	1	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	105		80 - 120
4-Bromofluorobenzene (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	98		80 - 120
Toluene-d8 (Surr)	105		80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-626525/4

Matrix: Water

Analysis Batch: 626525

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 14:32	1
Bromide	ND		1.0	0.26	mg/L			05/25/23 14:32	1
Fluoride	ND		1.0	0.14	mg/L			05/25/23 14:32	1

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QC Sample Results

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

Job ID: 410-127243-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 400-626525/5

Matrix: Water

Analysis Batch: 626525

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec	
	Added	Result	Qualifier				Limits	
Bromate	8.98	9.53		mg/L		106	90 - 110	
Bromide	10.0	10.6		mg/L		106	90 - 110	
Fluoride	10.0	11.0		mg/L		110	90 - 110	

Lab Sample ID: LCSD 400-626525/6

Matrix: Water

Analysis Batch: 626525

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec	RPD	Limit
	Added	Result	Qualifier				Limits		
Bromate	8.98	9.53	cn	mg/L		106	90 - 110	0	15
Bromide	10.0	10.7	cn	mg/L		107	90 - 110	2	15
Fluoride	10.0	11.1	*+ cn	mg/L		111	90 - 110	1	15

Lab Sample ID: 410-127243-14 MS

Matrix: Water

Analysis Batch: 626525

Client Sample ID: GMZ-1

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	
	Result	Qualifier	Added	Result	Qualifier				Limits	
Bromate	ND		8.98	9.15		mg/L		102	80 - 120	
Bromide	1.1		10.0	12.6		mg/L		115	80 - 120	
Fluoride	ND	*+	10.0	11.9		mg/L		119	80 - 120	

Lab Sample ID: 410-127243-14 DU

Matrix: Water

Analysis Batch: 626525

Client Sample ID: GMZ-1

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	DU	DU	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits		
Bromate	ND			ND		mg/L				NC	20
Fluoride	ND	*+		ND	*+	mg/L				NC	20

Lab Sample ID: MB 400-626605/37

Matrix: Water

Analysis Batch: 626605

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Bromate	ND		1.0	0.50	mg/L			05/26/23 01:27	1
Bromide	ND		1.0	0.26	mg/L			05/26/23 01:27	1
Fluoride	ND		1.0	0.14	mg/L			05/26/23 01:27	1

Lab Sample ID: LCS 400-626605/38

Matrix: Water

Analysis Batch: 626605

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec	
	Added	Result	Qualifier				Limits	
Bromate	8.98	9.77	cn	mg/L		109	90 - 110	
Bromide	10.0	10.8	cn	mg/L		108	90 - 110	
Fluoride	10.0	11.1	*+ cn	mg/L		111	90 - 110	

QC Sample Results

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

Job ID: 410-127243-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 400-626605/39
Matrix: Water
Analysis Batch: 626605

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	8.98	9.68	cn	mg/L		108	90 - 110	1	15
Bromide	10.0	10.9	cn	mg/L		109	90 - 110	1	15
Fluoride	10.0	11.3	*+ cn	mg/L		113	90 - 110	1	15

Lab Sample ID: 410-127243-21 MS
Matrix: Water
Analysis Batch: 626605

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	ND		8.98	9.99		mg/L		111	80 - 120
Bromide	0.73	J	10.0	12.1		mg/L		113	80 - 120
Fluoride	ND	*+	10.0	11.8		mg/L		118	80 - 120

Lab Sample ID: 410-127243-21 DU
Matrix: Water
Analysis Batch: 626605

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

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Bromate	ND		ND		mg/L		NC	20
Bromide	0.73	J	0.736	J	mg/L		0.5	20
Fluoride	ND	*+	ND	*+	mg/L		NC	20

Lab Sample ID: MB 400-626700/6
Matrix: Water
Analysis Batch: 626700

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/26/23 12:16	1
Bromide	ND		1.0	0.26	mg/L			05/26/23 12:16	1
Fluoride	ND		1.0	0.14	mg/L			05/26/23 12:16	1

Lab Sample ID: LCS 400-626700/7
Matrix: Water
Analysis Batch: 626700

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromate	8.98	10.9	*+	mg/L		121	90 - 110
Bromide	10.0	10.2		mg/L		102	90 - 110
Fluoride	10.0	10.1		mg/L		101	90 - 110

Lab Sample ID: LCSD 400-626700/8
Matrix: Water
Analysis Batch: 626700

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	8.98	10.9	*+	mg/L		122	90 - 110	0	15
Bromide	10.0	9.72		mg/L		97	90 - 110	4	15
Fluoride	10.0	10.0		mg/L		100	90 - 110	1	15

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QC Sample Results

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

Job ID: 410-127243-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 400-627108/5
Matrix: Water
Analysis Batch: 627108

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Bromate	ND		1.0	0.50	mg/L			05/30/23 18:04	1
Bromide	ND		1.0	0.26	mg/L			05/30/23 18:04	1
Fluoride	ND		1.0	0.14	mg/L			05/30/23 18:04	1

Lab Sample ID: LCS 400-627108/6
Matrix: Water
Analysis Batch: 627108

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

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec	
		Result	Qualifier				Limits	
Bromate	8.98	10.6	*+	mg/L		118	90 - 110	
Bromide	10.0	9.48		mg/L		95	90 - 110	
Fluoride	10.0	10.1		mg/L		101	90 - 110	

Lab Sample ID: LCSD 400-627108/7
Matrix: Water
Analysis Batch: 627108

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

Analyte	Spike Added	LCSD LCSD		Unit	D	%Rec	%Rec		RPD	Limit
		Result	Qualifier				Limits			
Bromate	8.98	10.6	*+	mg/L		118	90 - 110	0	15	
Bromide	10.0	9.53		mg/L		95	90 - 110	0	15	
Fluoride	10.0	9.98		mg/L		100	90 - 110	1	15	

Lab Sample ID: MB 400-628929/71
Matrix: Water
Analysis Batch: 628929

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Bromide	ND		1.0	0.26	mg/L			06/13/23 09:40	1

Lab Sample ID: LCS 400-628929/72
Matrix: Water
Analysis Batch: 628929

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

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec	
		Result	Qualifier				Limits	
Bromide	10.0	9.00		mg/L		90	90 - 110	

Lab Sample ID: LCSD 400-628929/73
Matrix: Water
Analysis Batch: 628929

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

Analyte	Spike Added	LCSD LCSD		Unit	D	%Rec	%Rec		RPD	Limit
		Result	Qualifier				Limits			
Bromide	10.0	9.59		mg/L		96	90 - 110	6	15	

Lab Sample ID: 410-127243-14 DU
Matrix: Water
Analysis Batch: 628929

Client Sample ID: GMZ-1
Prep Type: Total/NA

Analyte	Sample Sample		DU DU		Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Bromide	1.1		1.93	F5 cn	mg/L		56	20

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QC Sample Results

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

Job ID: 410-127243-1

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 410-379768/1-A
Matrix: Water
Analysis Batch: 380204

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 379768

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 19:48	1
Lithium	ND		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 19:48	1

Lab Sample ID: LCS 410-379768/2-A
Matrix: Water
Analysis Batch: 380204

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 379768

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	0.500	0.496		mg/L		99	80 - 120
Lithium	0.500	0.497		mg/L		99	80 - 120

Lab Sample ID: 410-127243-21 MS
Matrix: Water
Analysis Batch: 380204

Client Sample ID: SW-01
Prep Type: Total Recoverable
Prep Batch: 379768

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	0.19		0.500	0.707		mg/L		103	75 - 125
Lithium	0.60		0.500	1.11	E	mg/L		101	75 - 125

Lab Sample ID: 410-127243-21 MSD
Matrix: Water
Analysis Batch: 380204

Client Sample ID: SW-01
Prep Type: Total Recoverable
Prep Batch: 379768

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	0.19		0.500	0.708		mg/L		103	75 - 125	0	20
Lithium	0.60		0.500	1.11	E	mg/L		102	75 - 125	0	20

Lab Sample ID: 410-127243-21 DU
Matrix: Water
Analysis Batch: 380204

Client Sample ID: SW-01
Prep Type: Total Recoverable
Prep Batch: 379768

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Boron	0.19		0.192		mg/L		0.06	20
Lithium	0.60		0.603		mg/L		0.3	20

Lab Sample ID: MB 410-379801/1-A
Matrix: Water
Analysis Batch: 380204

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 379801

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.050	0.012	mg/L		05/25/23 07:06	05/25/23 18:15	1
Lithium	ND		0.050	0.011	mg/L		05/25/23 07:06	05/25/23 18:15	1

Lab Sample ID: LCS 410-379801/2-A
Matrix: Water
Analysis Batch: 380204

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 379801

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	0.500	0.496		mg/L		99	80 - 120
Lithium	0.500	0.498		mg/L		100	80 - 120

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QC Sample Results

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

Job ID: 410-127243-1

Method: 6010D - Metals (ICP)

Lab Sample ID: 410-127243-14 MS
Matrix: Water
Analysis Batch: 380204

Client Sample ID: GMZ-1
Prep Type: Total Recoverable
Prep Batch: 379801

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	
	Result	Qualifier	Added	Result	Qualifier				Limits	
Boron	0.16		0.500	0.672		mg/L		103	75 - 125	
Lithium	0.55		0.500	1.06	E	mg/L		103	75 - 125	

Lab Sample ID: 410-127243-14 MSD
Matrix: Water
Analysis Batch: 380204

Client Sample ID: GMZ-1
Prep Type: Total Recoverable
Prep Batch: 379801

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec		RPD	
	Result	Qualifier	Added	Result	Qualifier				Limits		RPD	Limit
Boron	0.16		0.500	0.656		mg/L		100	75 - 125		2	20
Lithium	0.55		0.500	1.03	E	mg/L		96	75 - 125		3	20

Lab Sample ID: 410-127243-14 DU
Matrix: Water
Analysis Batch: 380204

Client Sample ID: GMZ-1
Prep Type: Total Recoverable
Prep Batch: 379801

Analyte	Sample	Sample	DU		Unit	D	RPD	RPD	
	Result	Qualifier	Result	Qualifier				Limit	
Boron	0.16		0.154		mg/L			0.7	20
Lithium	0.55		0.539		mg/L			1	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 410-379768/1-A
Matrix: Water
Analysis Batch: 382138

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 379768

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac
	Result	Qualifier								
Antimony	ND		1.0	0.20	ug/L		05/25/23 03:23	06/01/23 16:39		1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 16:39		1
Chromium	ND		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 16:39		1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 16:39		1

Lab Sample ID: LCS 410-379768/2-A
Matrix: Water
Analysis Batch: 382138

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 379768

Analyte	Spike	LCS		Unit	D	%Rec	%Rec	
		Result	Qualifier				Limits	
Antimony	100	102		ug/L		102	80 - 120	
Arsenic	500	507		ug/L		101	85 - 120	
Chromium	500	501		ug/L		100	90 - 115	
Thallium	100	103		ug/L		103	80 - 120	

Lab Sample ID: 410-127243-21 MS
Matrix: Water
Analysis Batch: 382138

Client Sample ID: SW-01
Prep Type: Total Recoverable
Prep Batch: 379768

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	
	Result	Qualifier	Added	Result	Qualifier				Limits	
Antimony	ND		100	107		ug/L		107	75 - 125	
Arsenic	ND		500	521		ug/L		104	75 - 125	
Chromium	9.0		500	515		ug/L		101	75 - 125	
Thallium	ND		100	106		ug/L		106	75 - 125	

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QC Sample Results

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

Job ID: 410-127243-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: 410-127243-21 MSD

Matrix: Water

Analysis Batch: 382138

Client Sample ID: SW-01

Prep Type: Total Recoverable

Prep Batch: 379768

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Antimony	ND		100	108		ug/L		108	75 - 125	1	20
Arsenic	ND		500	524		ug/L		105	75 - 125	1	20
Chromium	9.0		500	513		ug/L		101	75 - 125	0	20
Thallium	ND		100	106		ug/L		106	75 - 125	0	20

Lab Sample ID: 410-127243-21 DU

Matrix: Water

Analysis Batch: 382138

Client Sample ID: SW-01

Prep Type: Total Recoverable

Prep Batch: 379768

Analyte	Sample	Sample	DU		Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Antimony	ND		ND		ug/L		NC	20
Arsenic	ND		ND		ug/L		NC	20
Chromium	9.0		8.88		ug/L		0.9	20
Thallium	ND		ND		ug/L		NC	20

Lab Sample ID: MB 410-379801/1-A

Matrix: Water

Analysis Batch: 382417

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 379801

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	ND		1.0	0.20	ug/L		05/25/23 07:06	06/02/23 09:58	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 07:06	06/02/23 09:58	1
Chromium	ND		2.0	0.33	ug/L		05/25/23 07:06	06/02/23 09:58	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 07:06	06/02/23 09:58	1

Lab Sample ID: LCS 410-379801/2-A

Matrix: Water

Analysis Batch: 382417

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 379801

Analyte	Spike	LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
Antimony	100	104		ug/L		104	80 - 120
Arsenic	500	509		ug/L		102	85 - 120
Chromium	500	507		ug/L		101	90 - 115
Thallium	100	104		ug/L		104	80 - 120

Lab Sample ID: 410-127243-14 MS

Matrix: Water

Analysis Batch: 382417

Client Sample ID: GMZ-1

Prep Type: Total Recoverable

Prep Batch: 379801

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Antimony	ND		100	107		ug/L		107	75 - 125		
Arsenic	ND		500	523		ug/L		105	75 - 125		
Chromium	9.8		500	527		ug/L		103	75 - 125		
Thallium	0.21	J	100	106		ug/L		106	75 - 125		

QC Sample Results

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

Job ID: 410-127243-1

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

Lab Sample ID: 410-127243-14 MSD

Matrix: Water

Analysis Batch: 382417

Client Sample ID: GMZ-1
Prep Type: Total Recoverable
Prep Batch: 379801

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Antimony	ND		100	106		ug/L		106	75 - 125	1	20
Arsenic	ND		500	507		ug/L		101	75 - 125	3	20
Chromium	9.8		500	503		ug/L		99	75 - 125	5	20
Thallium	0.21	J	100	104		ug/L		104	75 - 125	2	20

Lab Sample ID: 410-127243-14 DU

Matrix: Water

Analysis Batch: 382417

Client Sample ID: GMZ-1
Prep Type: Total Recoverable
Prep Batch: 379801

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Antimony	ND		ND		ug/L		NC	20
Arsenic	ND		ND		ug/L		NC	20
Chromium	9.8		9.44		ug/L		3	20
Thallium	0.21	J	ND		ug/L		NC	20

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QC Association Summary

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

Job ID: 410-127243-1

GC/MS VOA

Analysis Batch: 380166

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-127243-4	MW-22	Total/NA	Water	8260D	
410-127243-5	MW-22D	Total/NA	Water	8260D	
410-127243-24	TB-01-051523	Total/NA	Water	8260D	
MB 410-380166/6	Method Blank	Total/NA	Water	8260D	
LCS 410-380166/4	Lab Control Sample	Total/NA	Water	8260D	
410-127243-4 MS	MW-22	Total/NA	Water	8260D	
410-127243-4 MSD	MW-22	Total/NA	Water	8260D	

HPLC/IC

Analysis Batch: 626525

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-127243-1	ERM-2S	Total/NA	Water	300.0	
410-127243-2	ERM-2D	Total/NA	Water	300.0	
410-127243-3	ERM-5	Total/NA	Water	300.0	
410-127243-4	MW-22	Total/NA	Water	300.0	
410-127243-6	ERM-1S	Total/NA	Water	300.0	
410-127243-7	ERM-1D	Total/NA	Water	300.0	
410-127243-8	GMZ-3D	Total/NA	Water	300.0	
410-127243-9	GMZ-3I	Total/NA	Water	300.0	
410-127243-10	GMZ-3S	Total/NA	Water	300.0	
410-127243-11	GMZ-4D	Total/NA	Water	300.0	
410-127243-12	GMZ-4I	Total/NA	Water	300.0	
410-127243-13	GMZ-4S	Total/NA	Water	300.0	
410-127243-14	GMZ-1	Total/NA	Water	300.0	
410-127243-15	GMZ-2D	Total/NA	Water	300.0	
410-127243-16	GMZ-2I	Total/NA	Water	300.0	
410-127243-17	GMZ-2S	Total/NA	Water	300.0	
410-127243-18	GMZ-2SD	Total/NA	Water	300.0	
410-127243-19	SW-06	Total/NA	Water	300.0	
410-127243-20	SW-05	Total/NA	Water	300.0	
MB 400-626525/4	Method Blank	Total/NA	Water	300.0	
LCS 400-626525/5	Lab Control Sample	Total/NA	Water	300.0	
LCS 400-626525/6	Lab Control Sample Dup	Total/NA	Water	300.0	
410-127243-14 MS	GMZ-1	Total/NA	Water	300.0	
410-127243-14 DU	GMZ-1	Total/NA	Water	300.0	

Analysis Batch: 626605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-127243-21	SW-01	Total/NA	Water	300.0	
410-127243-22	SW-02	Total/NA	Water	300.0	
410-127243-23	SW-2A	Total/NA	Water	300.0	
MB 400-626605/37	Method Blank	Total/NA	Water	300.0	
LCS 400-626605/38	Lab Control Sample	Total/NA	Water	300.0	
LCS 400-626605/39	Lab Control Sample Dup	Total/NA	Water	300.0	
410-127243-21 MS	SW-01	Total/NA	Water	300.0	
410-127243-21 DU	SW-01	Total/NA	Water	300.0	

Analysis Batch: 626700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-127243-4	MW-22	Total/NA	Water	300.0	

Eurofins Lancaster Laboratories Environment Testing, LLC

QC Association Summary

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

Job ID: 410-127243-1

HPLC/IC (Continued)

Analysis Batch: 626700 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-127243-7	ERM-1D	Total/NA	Water	300.0	
410-127243-8	GMZ-3D	Total/NA	Water	300.0	
MB 400-626700/6	Method Blank	Total/NA	Water	300.0	
LCS 400-626700/7	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-626700/8	Lab Control Sample Dup	Total/NA	Water	300.0	

Analysis Batch: 627108

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-127243-9	GMZ-3I	Total/NA	Water	300.0	
410-127243-10	GMZ-3S	Total/NA	Water	300.0	
410-127243-11	GMZ-4D	Total/NA	Water	300.0	
410-127243-12	GMZ-4I	Total/NA	Water	300.0	
410-127243-14	GMZ-1	Total/NA	Water	300.0	
MB 400-627108/5	Method Blank	Total/NA	Water	300.0	
LCS 400-627108/6	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-627108/7	Lab Control Sample Dup	Total/NA	Water	300.0	

Analysis Batch: 628929

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-628929/71	Method Blank	Total/NA	Water	300.0	
LCS 400-628929/72	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-628929/73	Lab Control Sample Dup	Total/NA	Water	300.0	
410-127243-14 DU	GMZ-1	Total/NA	Water	300.0	

Metals

Prep Batch: 379768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-127243-2	ERM-2D	Total Recoverable	Water	3005A	
410-127243-3	ERM-5	Total Recoverable	Water	3005A	
410-127243-4	MW-22	Total Recoverable	Water	3005A	
410-127243-6	ERM-1S	Total Recoverable	Water	3005A	
410-127243-7	ERM-1D	Total Recoverable	Water	3005A	
410-127243-8	GMZ-3D	Total Recoverable	Water	3005A	
410-127243-9	GMZ-3I	Total Recoverable	Water	3005A	
410-127243-10	GMZ-3S	Total Recoverable	Water	3005A	
410-127243-11	GMZ-4D	Total Recoverable	Water	3005A	
410-127243-13	GMZ-4S	Total Recoverable	Water	3005A	
410-127243-15	GMZ-2D	Total Recoverable	Water	3005A	
410-127243-16	GMZ-2I	Total Recoverable	Water	3005A	
410-127243-17	GMZ-2S	Total Recoverable	Water	3005A	
410-127243-18	GMZ-2SD	Total Recoverable	Water	3005A	
410-127243-19	SW-06	Total Recoverable	Water	3005A	
410-127243-20	SW-05	Total Recoverable	Water	3005A	
410-127243-21	SW-01	Total Recoverable	Water	3005A	
410-127243-22	SW-02	Total Recoverable	Water	3005A	
410-127243-23	SW-2A	Total Recoverable	Water	3005A	
MB 410-379768/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-379768/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
410-127243-21 MS	SW-01	Total Recoverable	Water	3005A	
410-127243-21 MSD	SW-01	Total Recoverable	Water	3005A	

Eurofins Lancaster Laboratories Environment Testing, LLC

QC Association Summary

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

Job ID: 410-127243-1

Metals (Continued)

Prep Batch: 379768 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-127243-21 DU	SW-01	Total Recoverable	Water	3005A	

Prep Batch: 379801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-127243-1	ERM-2S	Total Recoverable	Water	3005A	
410-127243-12	GMZ-4I	Total Recoverable	Water	3005A	
410-127243-14	GMZ-1	Total Recoverable	Water	3005A	
MB 410-379801/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-379801/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
410-127243-14 MS	GMZ-1	Total Recoverable	Water	3005A	
410-127243-14 MSD	GMZ-1	Total Recoverable	Water	3005A	
410-127243-14 DU	GMZ-1	Total Recoverable	Water	3005A	

Analysis Batch: 380204

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-127243-1	ERM-2S	Total Recoverable	Water	6010D	379801
410-127243-2	ERM-2D	Total Recoverable	Water	6010D	379768
410-127243-3	ERM-5	Total Recoverable	Water	6010D	379768
410-127243-4	MW-22	Total Recoverable	Water	6010D	379768
410-127243-6	ERM-1S	Total Recoverable	Water	6010D	379768
410-127243-7	ERM-1D	Total Recoverable	Water	6010D	379768
410-127243-8	GMZ-3D	Total Recoverable	Water	6010D	379768
410-127243-9	GMZ-3I	Total Recoverable	Water	6010D	379768
410-127243-10	GMZ-3S	Total Recoverable	Water	6010D	379768
410-127243-11	GMZ-4D	Total Recoverable	Water	6010D	379768
410-127243-12	GMZ-4I	Total Recoverable	Water	6010D	379801
410-127243-13	GMZ-4S	Total Recoverable	Water	6010D	379768
410-127243-14	GMZ-1	Total Recoverable	Water	6010D	379801
410-127243-15	GMZ-2D	Total Recoverable	Water	6010D	379768
410-127243-16	GMZ-2I	Total Recoverable	Water	6010D	379768
410-127243-17	GMZ-2S	Total Recoverable	Water	6010D	379768
410-127243-18	GMZ-2SD	Total Recoverable	Water	6010D	379768
410-127243-19	SW-06	Total Recoverable	Water	6010D	379768
410-127243-20	SW-05	Total Recoverable	Water	6010D	379768
410-127243-21	SW-01	Total Recoverable	Water	6010D	379768
410-127243-22	SW-02	Total Recoverable	Water	6010D	379768
410-127243-23	SW-2A	Total Recoverable	Water	6010D	379768
MB 410-379768/1-A	Method Blank	Total Recoverable	Water	6010D	379768
MB 410-379801/1-A	Method Blank	Total Recoverable	Water	6010D	379801
LCS 410-379768/2-A	Lab Control Sample	Total Recoverable	Water	6010D	379768
LCS 410-379801/2-A	Lab Control Sample	Total Recoverable	Water	6010D	379801
410-127243-14 MS	GMZ-1	Total Recoverable	Water	6010D	379801
410-127243-14 MSD	GMZ-1	Total Recoverable	Water	6010D	379801
410-127243-21 MS	SW-01	Total Recoverable	Water	6010D	379768
410-127243-21 MSD	SW-01	Total Recoverable	Water	6010D	379768
410-127243-14 DU	GMZ-1	Total Recoverable	Water	6010D	379801
410-127243-21 DU	SW-01	Total Recoverable	Water	6010D	379768

Analysis Batch: 382138

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-127243-2	ERM-2D	Total Recoverable	Water	6020B	379768

Eurolins Lancaster Laboratories Environment Testing, LLC

QC Association Summary

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

Job ID: 410-127243-1

Metals (Continued)

Analysis Batch: 382138 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-127243-3	ERM-5	Total Recoverable	Water	6020B	379768
410-127243-4	MW-22	Total Recoverable	Water	6020B	379768
410-127243-6	ERM-1S	Total Recoverable	Water	6020B	379768
410-127243-7	ERM-1D	Total Recoverable	Water	6020B	379768
410-127243-8	GMZ-3D	Total Recoverable	Water	6020B	379768
410-127243-9	GMZ-3I	Total Recoverable	Water	6020B	379768
410-127243-10	GMZ-3S	Total Recoverable	Water	6020B	379768
410-127243-11	GMZ-4D	Total Recoverable	Water	6020B	379768
410-127243-13	GMZ-4S	Total Recoverable	Water	6020B	379768
410-127243-15	GMZ-2D	Total Recoverable	Water	6020B	379768
410-127243-16	GMZ-2I	Total Recoverable	Water	6020B	379768
410-127243-17	GMZ-2S	Total Recoverable	Water	6020B	379768
410-127243-18	GMZ-2SD	Total Recoverable	Water	6020B	379768
410-127243-19	SW-06	Total Recoverable	Water	6020B	379768
410-127243-20	SW-05	Total Recoverable	Water	6020B	379768
410-127243-21	SW-01	Total Recoverable	Water	6020B	379768
410-127243-22	SW-02	Total Recoverable	Water	6020B	379768
410-127243-23	SW-2A	Total Recoverable	Water	6020B	379768
MB 410-379768/1-A	Method Blank	Total Recoverable	Water	6020B	379768
LCS 410-379768/2-A	Lab Control Sample	Total Recoverable	Water	6020B	379768
410-127243-21 MS	SW-01	Total Recoverable	Water	6020B	379768
410-127243-21 MSD	SW-01	Total Recoverable	Water	6020B	379768
410-127243-21 DU	SW-01	Total Recoverable	Water	6020B	379768

Analysis Batch: 382417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-127243-1	ERM-2S	Total Recoverable	Water	6020B	379801
410-127243-12	GMZ-4I	Total Recoverable	Water	6020B	379801
410-127243-14	GMZ-1	Total Recoverable	Water	6020B	379801
MB 410-379801/1-A	Method Blank	Total Recoverable	Water	6020B	379801
LCS 410-379801/2-A	Lab Control Sample	Total Recoverable	Water	6020B	379801
410-127243-14 MS	GMZ-1	Total Recoverable	Water	6020B	379801
410-127243-14 MSD	GMZ-1	Total Recoverable	Water	6020B	379801
410-127243-14 DU	GMZ-1	Total Recoverable	Water	6020B	379801

Lab Chronicle

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

Job ID: 410-127243-1

Client Sample ID: ERM-2S

Lab Sample ID: 410-127243-1

Date Collected: 05/15/23 09:47

Matrix: Water

Date Received: 05/18/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	626525	JAW	EET PEN	05/25/23 16:31
Total Recoverable	Prep	3005A			379801	HUH3	ELLE	05/25/23 07:06
Total Recoverable	Analysis	6010D		1	380204	T8CQ	ELLE	05/25/23 18:55
Total Recoverable	Prep	3005A			379801	HUH3	ELLE	05/25/23 07:06
Total Recoverable	Analysis	6020B		1	382417	LC3M	ELLE	06/02/23 10:22

Client Sample ID: ERM-2D

Lab Sample ID: 410-127243-2

Date Collected: 05/15/23 10:42

Matrix: Water

Date Received: 05/18/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	626525	JAW	EET PEN	05/25/23 16:50
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6010D		1	380204	T8CQ	ELLE	05/25/23 21:19
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6020B		1	382138	UCIG	ELLE	06/01/23 17:36

Client Sample ID: ERM-5

Lab Sample ID: 410-127243-3

Date Collected: 05/15/23 12:22

Matrix: Water

Date Received: 05/18/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	626525	JAW	EET PEN	05/25/23 17:10
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6010D		1	380204	T8CQ	ELLE	05/25/23 21:28
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6020B		1	382138	UCIG	ELLE	06/01/23 17:48

Client Sample ID: MW-22

Lab Sample ID: 410-127243-4

Date Collected: 05/15/23 14:33

Matrix: Water

Date Received: 05/18/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	380166	K4WN	ELLE	05/25/23 22:06
Total/NA	Analysis	300.0		1	626525	JAW	EET PEN	05/25/23 17:30
Total/NA	Analysis	300.0		1	626700	JAW	EET PEN	05/26/23 20:51
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6010D		1	380204	T8CQ	ELLE	05/25/23 21:34
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6020B		1	382138	UCIG	ELLE	06/01/23 17:52

Eurolins Lancaster Laboratories Environment Testing, LLC

Lab Chronicle

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

Job ID: 410-127243-1

Client Sample ID: MW-22D

Lab Sample ID: 410-127243-5

Date Collected: 05/15/23 15:03

Matrix: Water

Date Received: 05/18/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	380166	K4WN	ELLE	05/26/23 01:23

Client Sample ID: ERM-1S

Lab Sample ID: 410-127243-6

Date Collected: 05/15/23 16:42

Matrix: Water

Date Received: 05/18/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	626525	JAW	EET PEN	05/25/23 18:30
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6010D		1	380204	T8CQ	ELLE	05/25/23 20:41
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6020B		1	382138	UCIG	ELLE	06/01/23 17:14

Client Sample ID: ERM-1D

Lab Sample ID: 410-127243-7

Date Collected: 05/15/23 15:52

Matrix: Water

Date Received: 05/18/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	626525	JAW	EET PEN	05/25/23 18:50
Total/NA	Analysis	300.0		1	626700	JAW	EET PEN	05/26/23 21:11
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6010D		1	380204	T8CQ	ELLE	05/25/23 20:38
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6020B		1	382138	UCIG	ELLE	06/01/23 17:12

Client Sample ID: GMZ-3D

Lab Sample ID: 410-127243-8

Date Collected: 05/16/23 08:52

Matrix: Water

Date Received: 05/18/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	626525	JAW	EET PEN	05/25/23 19:09
Total/NA	Analysis	300.0		1	626700	JAW	EET PEN	05/26/23 21:31
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6010D		1	380204	T8CQ	ELLE	05/25/23 21:22
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6020B		1	382138	UCIG	ELLE	06/01/23 17:38

Client Sample ID: GMZ-3I

Lab Sample ID: 410-127243-9

Date Collected: 05/16/23 09:37

Matrix: Water

Date Received: 05/18/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	626525	JAW	EET PEN	05/25/23 19:29
Total/NA	Analysis	300.0		1	627108	RS	EET PEN	05/30/23 20:42

Eurolins Lancaster Laboratories Environment Testing, LLC

Lab Chronicle

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

Job ID: 410-127243-1

Client Sample ID: GMZ-3I

Lab Sample ID: 410-127243-9

Date Collected: 05/16/23 09:37

Matrix: Water

Date Received: 05/18/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6010D		1	380204	T8CQ	ELLE	05/25/23 21:25
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6020B		1	382138	UCIG	ELLE	06/01/23 17:40

Client Sample ID: GMZ-3S

Lab Sample ID: 410-127243-10

Date Collected: 05/16/23 10:17

Matrix: Water

Date Received: 05/18/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	626525	JAW	EET PEN	05/25/23 19:49
Total/NA	Analysis	300.0		1	627108	RS	EET PEN	05/30/23 21:02
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6010D		1	380204	T8CQ	ELLE	05/25/23 20:54
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6020B		1	382138	UCIG	ELLE	06/01/23 17:22

Client Sample ID: GMZ-4D

Lab Sample ID: 410-127243-11

Date Collected: 05/16/23 13:12

Matrix: Water

Date Received: 05/18/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	626525	JAW	EET PEN	05/25/23 21:08
Total/NA	Analysis	300.0		1	627108	RS	EET PEN	05/30/23 22:02
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6010D		1	380204	T8CQ	ELLE	05/25/23 20:51
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6020B		1	382138	UCIG	ELLE	06/01/23 17:20

Client Sample ID: GMZ-4I

Lab Sample ID: 410-127243-12

Date Collected: 05/16/23 14:02

Matrix: Water

Date Received: 05/18/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	626525	JAW	EET PEN	05/25/23 21:28
Total/NA	Analysis	300.0		1	627108	RS	EET PEN	05/30/23 22:21
Total Recoverable	Prep	3005A			379801	HUH3	ELLE	05/25/23 07:06
Total Recoverable	Analysis	6010D		1	380204	T8CQ	ELLE	05/25/23 18:52
Total Recoverable	Prep	3005A			379801	HUH3	ELLE	05/25/23 07:06
Total Recoverable	Analysis	6020B		1	382417	LC3M	ELLE	06/02/23 10:20

Lab Chronicle

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

Job ID: 410-127243-1

Client Sample ID: GMZ-4S

Lab Sample ID: 410-127243-13

Date Collected: 05/16/23 14:47

Matrix: Water

Date Received: 05/18/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	626525	JAW	EET PEN	05/25/23 22:28
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6010D		1	380204	T8CQ	ELLE	05/25/23 20:48
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6020B		1	382138	UCIG	ELLE	06/01/23 17:18

Client Sample ID: GMZ-1

Lab Sample ID: 410-127243-14

Date Collected: 05/16/23 15:52

Matrix: Water

Date Received: 05/18/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	626525	JAW	EET PEN	05/25/23 20:09
Total/NA	Analysis	300.0		1	627108	RS	EET PEN	05/30/23 22:41
Total Recoverable	Prep	3005A			379801	HUH3	ELLE	05/25/23 07:06
Total Recoverable	Analysis	6010D		1	380204	T8CQ	ELLE	05/25/23 18:21
Total Recoverable	Prep	3005A			379801	HUH3	ELLE	05/25/23 07:06
Total Recoverable	Analysis	6020B		1	382417	LC3M	ELLE	06/02/23 10:02

Client Sample ID: GMZ-2D

Lab Sample ID: 410-127243-15

Date Collected: 05/17/23 08:57

Matrix: Water

Date Received: 05/18/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	626525	JAW	EET PEN	05/25/23 22:48
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6010D		1	380204	T8CQ	ELLE	05/25/23 21:37
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6020B		1	382138	UCIG	ELLE	06/01/23 17:54

Client Sample ID: GMZ-2I

Lab Sample ID: 410-127243-16

Date Collected: 05/17/23 09:42

Matrix: Water

Date Received: 05/18/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	626525	JAW	EET PEN	05/25/23 23:08
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6010D		1	380204	T8CQ	ELLE	05/25/23 20:57
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6020B		1	382138	UCIG	ELLE	06/01/23 17:30

Lab Chronicle

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

Job ID: 410-127243-1

Client Sample ID: GMZ-2S

Date Collected: 05/17/23 10:27

Date Received: 05/18/23 16:20

Lab Sample ID: 410-127243-17

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	626525	JAW	EET PEN	05/25/23 23:28
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6010D		1	380204	T8CQ	ELLE	05/25/23 21:16
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6020B		1	382138	UCIG	ELLE	06/01/23 17:34

Client Sample ID: GMZ-2SD

Date Collected: 05/17/23 10:57

Date Received: 05/18/23 16:20

Lab Sample ID: 410-127243-18

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	626525	JAW	EET PEN	05/25/23 23:47
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6010D		1	380204	T8CQ	ELLE	05/25/23 20:22
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6020B		1	382138	UCIG	ELLE	06/01/23 17:10

Client Sample ID: SW-06

Date Collected: 05/17/23 11:50

Date Received: 05/18/23 16:20

Lab Sample ID: 410-127243-19

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	626525	JAW	EET PEN	05/26/23 00:07
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6010D		1	380204	T8CQ	ELLE	05/25/23 20:19
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6020B		1	382138	UCIG	ELLE	06/01/23 17:08

Client Sample ID: SW-05

Date Collected: 05/17/23 12:20

Date Received: 05/18/23 16:20

Lab Sample ID: 410-127243-20

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	626525	JAW	EET PEN	05/26/23 00:27
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6010D		1	380204	T8CQ	ELLE	05/25/23 20:44
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6020B		1	382138	UCIG	ELLE	06/01/23 17:16

Client Sample ID: SW-01

Date Collected: 05/17/23 12:55

Date Received: 05/18/23 16:20

Lab Sample ID: 410-127243-21

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	626605	JAW	EET PEN	05/26/23 07:04

Eurofins Lancaster Laboratories Environment Testing, LLC

Lab Chronicle

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

Job ID: 410-127243-1

Client Sample ID: SW-01

Date Collected: 05/17/23 12:55

Date Received: 05/18/23 16:20

Lab Sample ID: 410-127243-21

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6010D		1	380204	T8CQ	ELLE	05/25/23 20:01
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6020B		1	382138	UCIG	ELLE	06/01/23 16:49

Client Sample ID: SW-02

Date Collected: 05/17/23 13:10

Date Received: 05/18/23 16:20

Lab Sample ID: 410-127243-22

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	626605	JAW	EET PEN	05/26/23 08:04
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6010D		1	380204	T8CQ	ELLE	05/25/23 21:00
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6020B		1	382138	UCIG	ELLE	06/01/23 17:32

Client Sample ID: SW-2A

Date Collected: 05/17/23 13:30

Date Received: 05/18/23 16:20

Lab Sample ID: 410-127243-23

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	626605	JAW	EET PEN	05/26/23 08:24
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6010D		1	380204	T8CQ	ELLE	05/25/23 21:31
Total Recoverable	Prep	3005A			379768	HUH3	ELLE	05/25/23 03:23
Total Recoverable	Analysis	6020B		1	382138	UCIG	ELLE	06/01/23 17:50

Client Sample ID: TB-01-051523

Date Collected: 05/15/23 00:00

Date Received: 05/18/23 16:20

Lab Sample ID: 410-127243-24

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	380166	K4WN	ELLE	05/25/23 21:44

Laboratory References:

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

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

Eurofins Lancaster Laboratories Environment Testing, LLC

Accreditation/Certification Summary

Client: Montrose Environmental Solutions Inc

Job ID: 410-127243-1

Project/Site: Foote Mineral PA

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 Pensacola

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

Authority	Program	Identification Number	Expiration Date
Alabama	State	40150	06-30-23
ANAB	ISO/IEC 17025	L2471	02-22-26
Arkansas DEQ	State	88-0689	09-01-23
California	State	2510	06-30-23
Florida	NELAP	E81010	06-30-23
Georgia	State	E81010(FL)	06-30-23
Illinois	NELAP	200041	10-09-23
Kansas	NELAP	E-10253	10-31-23
Kentucky (UST)	State	53	06-30-23
Louisiana (All)	NELAP	30976	06-30-23
Louisiana (DW)	State	LA017	12-31-23
Maryland	State	233	09-30-23
Michigan	State	9912	06-30-23
North Carolina (WW/SW)	State	314	12-31-23
Oklahoma	NELAP	9810	08-31-23
Pennsylvania	NELAP	68-00467	01-31-24
South Carolina	State	96026	06-30-23
Tennessee	State	TN02907	06-30-23
Texas	NELAP	T104704286	09-30-23
US Fish & Wildlife	US Federal Programs	A22340	06-30-23
USDA	US Federal Programs	FLGNV23001	01-08-26
USDA	US Federal Programs	P330-21-00056	05-17-24
Virginia	NELAP	460166	06-14-23
West Virginia DEP	State	136	03-31-24

Eurofins Lancaster Laboratories Environment Testing, LLC

Method Summary

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

Job ID: 410-127243-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	ELLE
300.0	Anions, Ion Chromatography	EPA	EET PEN
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 PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

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: 410-127243-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-127243-1	ERM-2S	Water	05/15/23 09:47	05/18/23 16:20
410-127243-2	ERM-2D	Water	05/15/23 10:42	05/18/23 16:20
410-127243-3	ERM-5	Water	05/15/23 12:22	05/18/23 16:20
410-127243-4	MW-22	Water	05/15/23 14:33	05/18/23 16:20
410-127243-5	MW-22D	Water	05/15/23 15:03	05/18/23 16:20
410-127243-6	ERM-1S	Water	05/15/23 16:42	05/18/23 16:20
410-127243-7	ERM-1D	Water	05/15/23 15:52	05/18/23 16:20
410-127243-8	GMZ-3D	Water	05/16/23 08:52	05/18/23 16:20
410-127243-9	GMZ-3I	Water	05/16/23 09:37	05/18/23 16:20
410-127243-10	GMZ-3S	Water	05/16/23 10:17	05/18/23 16:20
410-127243-11	GMZ-4D	Water	05/16/23 13:12	05/18/23 16:20
410-127243-12	GMZ-4I	Water	05/16/23 14:02	05/18/23 16:20
410-127243-13	GMZ-4S	Water	05/16/23 14:47	05/18/23 16:20
410-127243-14	GMZ-1	Water	05/16/23 15:52	05/18/23 16:20
410-127243-15	GMZ-2D	Water	05/17/23 08:57	05/18/23 16:20
410-127243-16	GMZ-2I	Water	05/17/23 09:42	05/18/23 16:20
410-127243-17	GMZ-2S	Water	05/17/23 10:27	05/18/23 16:20
410-127243-18	GMZ-2SD	Water	05/17/23 10:57	05/18/23 16:20
410-127243-19	SW-06	Water	05/17/23 11:50	05/18/23 16:20
410-127243-20	SW-05	Water	05/17/23 12:20	05/18/23 16:20
410-127243-21	SW-01	Water	05/17/23 12:55	05/18/23 16:20
410-127243-22	SW-02	Water	05/17/23 13:10	05/18/23 16:20
410-127243-23	SW-2A	Water	05/17/23 13:30	05/18/23 16:20
410-127243-24	TB-01-051523	Water	05/15/23 00:00	05/18/23 16:20

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[illegible]

ackling No(s)	CDC No 41D-88533-24708 1
Page	Page 1 of 3

Client Information Client Contact Accounts Payable Company Montrose Environmental Solutions Inc. Address 1140 Valley Forge Road City Phoenixville State, Zip PA, 19460 Phone 610-840-9166(Tel) Email mes_ap@montrose-env.com Project Name Foote Mineral Site		Sampler Dave Benson Phone 610-840-9105 PWSID Due Date Requested: TAT Requested (days): standard Compliance Project: ☐ Yes ☐ No PO # 2023-4439 WO # Project # 41015209 SSO#W#
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Preservation Codes:	
A - HCl	M - Hexane
B - NaOH	N - None
C - Zn Acetate	Q - 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 - Dist Water	V - MCAA
K - EDTA	W - pH 4.5
L - EDA	Y - Trizma
	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=sediment, O=other)	Field Filtered	Performs	80100, 80200	8055A, ORGFM	300, ORGFM, 2L	8260D - 10 VOCs	Total Number	Special Instructions/Notes
			Preservation Code:				D	N	N	A		
ERM-2S	5/15/23	0947	G	W	N	X	X	X	X		3	
ERM-2D	5/15/23	1042	G	W	N	X	X	X	X		3	
ERM-5	5/15/23	1322	G	W	N	X	X	X	X		3	
MW-22	5/15/23	1433	G	W	N	Y	X	X	X	X	12	MS/MS only
MW 22D	5/15/23	1503	G	W	N					X	3	
ERM-1S	5/15/23	1642	G	W	N	X	X	X	X		3	
ERM-1D	5/15/23	1552	G	W	N	X	X	X	X		3	
GM2-3D	5/16/23	0852	G	W	N	X	X	X	X		3	
GM2-3E	5/16/23	0937	G	W	N	X	X	X	X		3	
GM2-3S	5/16/23	1017	G	W	N	X	X	X	X		3	
GM2-4D	5/16/23	1312	G	W	N	X	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)				Special Instructions/QC Requirements:			
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: <u>David Benson</u>		Date/Time: <u>5/13/23 1447</u>		Company: <u>Monkrose</u>		Received by: <u>[Signature]</u>	
Date/Time: <u>5-18-23 1620</u>		Company:		Received by:		Date/Time:	
Relinquished by: <u>[Signature]</u>		Date/Time:		Company:		Received by: <u>[Signature]</u>	
Date/Time:		Company:		Received by:		Date/Time: <u>5-18-23 1620</u>	
Custody Seals Intact ☐ Yes ☐ No		Custody Seal No		Custody To (Specimen Label) To and (Chain of Custody) From As: <u>raw/corr 1.1-1.3</u>			

Chain of Custody Record

Client Information		Sampler: <u>David Benson</u>		Lab PM: <u>Weyandt, Barbara A</u>		Carrier Tracking No(s):		COC No: <u>410-88533-24708 2</u>																															
Client Contact: <u>Accounts Payable</u>		Phone: <u>610 346-9105</u>		E-Mail: <u>Barbara.Weyandt@et.eurofinsus.com</u>		State of Origin:		Page: <u>2 of 3</u>																															
Company: <u>Montrose Environmental Solutions Inc</u>		PWSID:		Analysis Requested																																			
Address: <u>1140 Valley Forge Road</u>		Due Date Requested:		<table border="1"> <tr><td>Field Filtered Sample (Yes or No)</td><td>Perform MS/MSD (Yes or No)</td><td>60100, 6020B</td><td>9055A, ORGFM, 260 - Bromide/Fluoride</td><td>300, ORGFM, 260 - Bromide</td><td>82600 - 10 VOCs</td></tr> <tr><td>TAT Requested (days): <u>Standard</u></td><td>Compliance Project: ☐ Yes ☐ No</td><td></td><td></td><td></td><td></td></tr> <tr><td>PO #: <u>2023-4439</u></td><td>WFO #:</td><td></td><td></td><td></td><td></td></tr> <tr><td>Project #: <u>41015209</u></td><td>SSOW#:</td><td></td><td></td><td></td><td></td></tr> <tr><td>SSOW#:</td><td></td><td></td><td></td><td></td><td></td></tr> </table>						Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	60100, 6020B	9055A, ORGFM, 260 - Bromide/Fluoride	300, ORGFM, 260 - Bromide	82600 - 10 VOCs	TAT Requested (days): <u>Standard</u>	Compliance Project: ☐ Yes ☐ No					PO #: <u>2023-4439</u>	WFO #:					Project #: <u>41015209</u>	SSOW#:					SSOW#:					
Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	60100, 6020B	9055A, ORGFM, 260 - Bromide/Fluoride							300, ORGFM, 260 - Bromide	82600 - 10 VOCs																												
TAT Requested (days): <u>Standard</u>	Compliance Project: ☐ Yes ☐ No																																						
PO #: <u>2023-4439</u>	WFO #:																																						
Project #: <u>41015209</u>	SSOW#:																																						
SSOW#:																																							
City: <u>Phoenixville</u>		TAT Requested (days):																																					
State, Zip: <u>PA, 19460</u>		Compliance Project: ☐ Yes ☐ No																																					
Phone: <u>610-840-9166(Tel)</u>		PO #:																																					
Email: <u>mes_ap@montrose-env.com</u>		WFO #:																																					
Project Name: <u>Foot Mineral</u>		Project #:		<table border="1"> <tr><td>Preservation Codes:</td></tr> <tr><td>A - HCL</td><td>M - Hexamine</td></tr> <tr><td>B - NaOH</td><td>N - None</td></tr> <tr><td>C - Zn Acetate</td><td>O - AsNaO2</td></tr> <tr><td>D - Nitric Acid</td><td>P - Na2O4S</td></tr> <tr><td>E - NaHSO4</td><td>Q - Na2SO3</td></tr> <tr><td>F - MeOH</td><td>R - Na2S2O3</td></tr> <tr><td>G - Amchlor</td><td>S - H2SO4</td></tr> <tr><td>H - Ascorbic Acid</td><td>T - TSP Dodecahydrate</td></tr> <tr><td>I - Ice</td><td>U - Acetone</td></tr> <tr><td>J - DI Water</td><td>V - MCAA</td></tr> <tr><td>K - EDTA</td><td>W - pH 4-5</td></tr> <tr><td>L - EDA</td><td>Y - Trizma</td></tr> <tr><td>Other:</td><td>Z - other (specify)</td></tr> </table>						Preservation Codes:	A - HCL	M - Hexamine	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	Other:	Z - other (specify)			
Preservation Codes:																																							
A - HCL	M - Hexamine																																						
B - NaOH	N - None																																						
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Other:	Z - other (specify)																																						
Site:		SSOW#:																																					
Sample Identification		Sample Date																																					
Sample Time		Sample Type (C=comp, G=grab)																																					
Matrix (W=water, S=solid, G=grab, BT=Bottom, A-Air)		Preservation Code:																																					
Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)																																					
60100, 6020B		9055A, ORGFM, 260 - Bromide/Fluoride																																					
300, ORGFM, 260 - Bromide		82600 - 10 VOCs																																					
Total Number of containers		Special Instructions/Note:																																					
GMZ-4T		5/16/23 1402																																					
GMZ-4S		5/16/23 1447																																					
GMZ-1		5/16/23 1552																																					
GMZ-2D		5/17/23 0857																																					
GMZ-2I		5/17/23 0942																																					
GMZ-2S		5/17/23 1027																																					
GMZ-2SD		5/17/23 1057																																					
SW-06		5/17/23 1150																																					
SW-05		5/17/23 1220																																					
SW-01		5/17/23 1255																																					
SW-02		5/17/23 1310																																					
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)		Special Instructions/QC Requirements																																					
Empty Kit Relinquished by:		Date:																																					
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Relinquished by: <u>David Benson</u>		Date/Time: <u>5-18-23 1620</u>																																					
Relinquished by: <u>David Benson</u>		Date/Time: <u>5-18-23 1620</u>																																					
Custody Seals Intact: ☐ Yes ☐ No		Custody Seal No.:																																					
Cooler Temperature(s) °C and Other Remarks: <u>raw/corr 1.1-1.3</u>																																							

eurofins

6/14/2023

Ver: 06/08/2021

6/14/2023

Eurofins Lancaster Laboratories Environme

2425 New Holland Pike

Lancaster, PA 17601

Phone: 717-656-2300 Fax: 717-656-2681

Chain of Custody Record



Environment Testing

Client Information (Sub Contract Lab)		Sampler:		Lab PM:		Carrier Tracking No(s):		COC No:					
Client Contact:		Phone:		E-Mail:		State of Origin:		Page:					
Shipping/Receiving				Barbara.Weyandt@et.eurofinsus.com		Pennsylvania		Page 2 of 3					
Company:				Accreditations Required (See note):				Job #:					
Eurofins Environment Testing Southeast,				NELAP - Pennsylvania				410-127243-1					
Address:		Due Date Requested:		Analysis Requested									
3355 McLeomore Drive,		6/20/2023											
City:		TAT Requested (days):		<table border="1"> <tr><td>300</td><td>ORGF#</td><td>280</td><td>Bromate</td></tr> </table>						300	ORGF#	280	Bromate
300	ORGF#	280	Bromate										
Pensacola													
State, Zip:		PO #:		<table border="1"> <tr><td>300</td><td>ORGF#</td><td>280</td><td>Bromate</td></tr> </table>						300	ORGF#	280	Bromate
300	ORGF#	280	Bromate										
FL, 32514													
Phone:		WO #:		<table border="1"> <tr><td>300</td><td>ORGF#</td><td>280</td><td>Bromate</td></tr> </table>						300	ORGF#	280	Bromate
300	ORGF#	280	Bromate										
850-474-1001(Tel) 850-478-2671(Fax)													
Email:		Project #:		<table border="1"> <tr><td>300</td><td>ORGF#</td><td>280</td><td>Bromate</td></tr> </table>						300	ORGF#	280	Bromate
300	ORGF#	280	Bromate										
		41015209											
Project Name:		SSOW#:		<table border="1"> <tr><td>300</td><td>ORGF#</td><td>280</td><td>Bromate</td></tr> </table>						300	ORGF#	280	Bromate
300	ORGF#	280	Bromate										
Foote Mineral PA													
Site:				<table border="1"> <tr><td>300</td><td>ORGF#</td><td>280</td><td>Bromate</td></tr> </table>						300	ORGF#	280	Bromate
300	ORGF#	280	Bromate										
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, Seawater, O=organic, A=air)	Field Filtered Sample (Yes or No)				Total Number of Samples			
GM2-4D (410-127243-11)		5/16/23	13:12 Eastern		Water		X						
GM2-4I (410-127243-12)		5/16/23	14:02 Eastern		Water		X						
GM2-4S (410-127243-13)		5/16/23	14:47 Eastern		Water		X						
GM2-1 (410-127243-14)		5/16/23	15:52 Eastern		Water		X						
GM2-1 (410-127243-14DU)		5/16/23	15:52 Eastern	DU	Water		X						
GM2-1 (410-127243-14MS)		5/16/23	15:52 Eastern	MS	Water		X						
GM2-2D (410-127243-15)		5/17/23	08:57 Eastern		Water		X						
GM2-2I (410-127243-16)		5/17/23	09:42 Eastern		Water		X						
GM2-2S (410-127243-17)		5/17/23	10:27 Eastern		Water		X						
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: <i>K. A. Moore</i>				Date/Time: 5/22/23 15:13		Company: ELLE				Received by: M			
Relinquished by:				Date/Time:		Company:				Received by:			
Relinquished by:				Date/Time:		Company:				Received by:			
Custody Seal Intact:		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:									
Δ Yes Δ No													

Ver: 06/08/2021

ED_021284A_00000011-00084

Environment Testing

Ver: 06/08/2021

6/14/2023

Login Sample Receipt Checklist

Client: Montrose Environmental Solutions Inc

Job Number: 410-127243-1

Login Number: 127243

List Number: 1

Creator: Jeremiah, Cory T

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
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 ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, 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.	False	Refer to Job Narrative for details.
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.	N/A	
VOA sample vials do not have headspace $> 6\text{mm}$ in diameter (none, if from WV)?	False	Headspace greater than 6mm in diameter in some but not all containers

Login Sample Receipt Checklist

Client: Montrose Environmental Solutions Inc

Job Number: 410-127243-1

Login Number: 127243

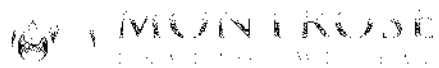
List Source: Eurofins Pensacola

List Number: 2

List Creation: 05/24/23 05:08 PM

Creator: Sirag, Josiah

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ 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.	N/A	
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	4.8°C IR10
COC is present.	False	Refer to Job Narrative for details.
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 $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Groundwater and Surface Water Analysis Report
December 2021 Sampling Event
Foote Mineral Superfund Site
Frazer, Pennsylvania (EPA ID # PA D077087989
Project No. 2023-4439
July 13, 2023

**DATA VALIDATION SUMMARY
FOR
FOOTE MINERAL SITE**

**Montrose Project No. 2023-4439
June 2023**

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 May 15-17, 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 Pensacola, Florida, facility for analysis of the anions. 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, and anions; bromide, fluoride, and bromate by EPA Method 300.0. Additional volumes of sample MW-22 and MW-22D were also submitted for analysis of ten site-specific volatile organic compounds (VOCs) by EPA method 8260D. A field duplicate and a trip blank were also included with the samples for analysis of VOCs only. A sample summary table is provided below.

Sample Summary Table

Sample Delivery Group	Laboratory ID	Sample Location	Volatiles 8260D	Anions 300.0	Metals 6010D/6020B	Matrix	Sample Date
410-127243	410-127243-01	ERM-2S		X	X	Groundwater	5/15/2023
410-127243	410-127243-02	ERM-2D		X	X	Groundwater	5/15/2023
410-127243	410-127243-03	ERM-5		X	X	Groundwater	5/15/2023
410-127243	410-127243-04	MW-22	X	X	X	Groundwater	5/15/2023
410-127243	410-127243-05	MW-22D	X	X	X	Groundwater	5/15/2023
410-127243	410-127243-06	ERM-1S		X	X	Groundwater	5/15/2023
410-127243	410-127243-07	ERM-1D		X	X	Groundwater	5/15/2023
410-127243	410-127243-08	GMZ-3D		X	X	Groundwater	5/16/2023
410-127243	410-127243-09	GMZ-3I		X	X	Groundwater	5/16/2023
410-127243	410-127243-10	GMZ-3S		X	X	Groundwater	5/16/2023
410-127243	410-127243-11	GMZ-4D		X	X	Groundwater	5/16/2023
410-127243	410-127243-12	GMZ-4I		X	X	Groundwater	5/16/2023
410-127243	410-127243-13	GMZ-4S		X	X	Groundwater	5/16/2023
410-127243	410-127243-14	GMZ-1		X	X	Groundwater	5/16/2023
410-127243	410-127243-15	GMZ-2D		X	X	Groundwater	5/17/2023
410-127243	410-127243-16	GMZ-2I		X	X	Groundwater	5/17/2023
410-127243	410-127243-17	GMZ-2S		X	X	Groundwater	5/17/2023
410-127243	410-127243-18	GMZ-2SD		X	X	Groundwater	5/17/2023
410-127243	410-127243-19	SW-06		X	X	Surface water	5/17/2023

Sample Delivery Group	Laboratory ID	Sample Location	Volatiles 8260D	Anions 300.0	Metals 6010D/6020B	Matrix	Sample Date
410-127243	410-127243-20	SW-05		X	X	Surface water	5/17/2023
410-127243	410-127243-21	SW-01		X	X	Surface water	5/17/2023
410-127243	410-127243-22	SW-02		X	X	Surface water	5/17/2023
410-127243	410-127243-23	SW-2A		X	X	Surface water	5/17/2023
410-127243	410-127243-24	TB-01-051523	X			Aqueous	5/17/2023

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 $\pm$ 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 bromate, bromide, and fluoride, 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 reporting limit or the method detection limit reported under EPA Method 300.0 for bromate did not meet the Remediation Goal of 10 ug/l. The EPA Method 300.1 Determination of Inorganic Anions in Drinking Water by Ion Chromatography does meet the Remediation goal with a reporting limit of 5 ug/l.

The next sampling event will request Bromate analysis by EPA method 300.1 to ensure the remediation goal is met.

3.1.1 Sample Receipt/Holding Time Preservation

All samples were extracted and analyzed within the prescribed holding times of days, respectively. 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".

Per the case narrative, sample GMZ-1 container labels documented the sample collection time as 15:53, but the COC listed 15:52. The laboratory utilized the sample collection time of 15:52 per the COC.

3.1.2 Detection/Quantitation Limits

Samples were reported to the Method Detection Limit (MDL), and the Reporting Limit (RL). Samples detections below the RL were qualified as estimated (J).

3.1.3 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.

3.1.4 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 of 90-110% and relative percent differences (RPD) were less than 20% except for the following.

Analysis	Lab ID	Batched Samples	LCS % REC	LCSD %REC	RPD	Qualified
Fluoride	LCSD 400-626525/6	ERM-2S, ERM-2D, ERM-5, MW-22, MW-22D, ERM-1S, ERM-1D, GMZ-3D, GMZ-3I, GMZ-3S, GMZ-4D, GMZ-4I, GMZ-4S, GMZ-1, GMZ-2D, GMZ-2I, GMZ-2S, GMZ-2SD, SW-06, and SW-05	110	111	1	J All detections already qualified as J by laboratory.
Fluoride	LCS 400-626605/38-39	SW-01, SW-02, and SW-2A	111	113	1	All batched samples were non-detect, therefore no qualification applied.
Bromate	LCS 400-626700/7-8	MW-22, ERM-1D, and GMZ-3D	121	121	0	
Bromate	LCS 400-627108/6-7	GMZ-3I, GMZ-3S, GMZ-4D, GMZ-4I, and GMZ-1	118	118	0	

3.1.5 Matrix Spike/Matrix Spike Duplicate

Samples SW-1 and GMZ-1 were submitted and analyzed as a project specific MS/MSD. The MS/MSD recoveries and RPDs were within the method control limits.

3.1.6 Laboratory Duplicate

Laboratory duplicate RPDs were within the method control limits.

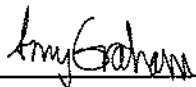
3.1.7 Field Duplicate

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 $\pm$ 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-2A were less than 35%, or the percent difference was less than the associated reporting limit concentration.

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.



Quality Assurance Scientist
Montrose Environmental Solutions, Inc.

6/10/2023

Date



Quality Assurance Manager
Montrose Environmental Solutions, Inc.

6/10/2023

Date

Client Sample Results

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

Job ID: 410-127243-1

Client Sample ID: ERM-2S

Lab Sample ID: 410-127243-1

Date Collected: 05/15/23 09:47

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 16:31	1
Bromide	ND		1.0	0.26	mg/L			05/25/23 16:31	1
Fluoride	0.25	J	1.0	0.14	mg/L			05/25/23 16:31	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.050	0.012	mg/L		05/25/23 07:06	05/25/23 18:55	1
Lithium	0.35		0.050	0.011	mg/L		05/25/23 07:06	05/25/23 18:55	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		05/25/23 07:06	06/02/23 10:22	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 07:06	06/02/23 10:22	1
Chromium	0.57	J	2.0	0.33	ug/L		05/25/23 07:06	06/02/23 10:22	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 07:06	06/02/23 10:22	1

Client Sample ID: ERM-2D

Lab Sample ID: 410-127243-2

Date Collected: 05/15/23 10:42

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 16:50	1
Bromide	ND		1.0	0.26	mg/L			05/25/23 16:50	1
Fluoride	ND		1.0	0.14	mg/L			05/25/23 16:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 21:19	1
Lithium	0.079		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 21:19	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		05/25/23 03:23	06/01/23 17:36	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 17:36	1
Chromium	ND		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:36	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:36	1

Client Sample ID: ERM-5

Lab Sample ID: 410-127243-3

Date Collected: 05/15/23 12:22

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 17:10	1
Bromide	ND		1.0	0.26	mg/L			05/25/23 17:10	1
Fluoride	ND		1.0	0.14	mg/L			05/25/23 17:10	1

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

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

Job ID: 410-127243-1

Client Sample ID: ERM-5

Lab Sample ID: 410-127243-3

Date Collected: 05/15/23 12:22

Matrix: Water

Date Received: 05/18/23 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.073		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 21:28	1
Lithium	0.026	J	0.050	0.011	mg/L		05/25/23 03:23	05/25/23 21:28	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		05/25/23 03:23	06/01/23 17:48	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 17:48	1
Chromium	ND		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:48	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:48	1

Client Sample ID: MW-22

Lab Sample ID: 410-127243-4

Date Collected: 05/15/23 14:33

Matrix: Water

Date Received: 05/18/23 16:20

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			05/25/23 22:06	1
Benzene	1.6		1.0	0.30	ug/L			05/25/23 22:06	1
Bromoform	ND		4.0	1.0	ug/L			05/25/23 22:06	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			05/25/23 22:06	1
Chloroform	ND		1.0	0.30	ug/L			05/25/23 22:06	1
cis-1,2-Dichloroethene	5.6		1.0	0.30	ug/L			05/25/23 22:06	1
Ethylbenzene	ND		1.0	0.40	ug/L			05/25/23 22:06	1
Tetrachloroethene	120		1.0	0.30	ug/L			05/25/23 22:06	1
trans-1,2-Dichloroethene	ND		2.0	0.70	ug/L			05/25/23 22:06	1
Trichloroethene	8.1		1.0	0.30	ug/L			05/25/23 22:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		80 - 120		05/25/23 22:06	1
4-Bromofluorobenzene (Surr)	94		80 - 120		05/25/23 22:06	1
Dibromofluoromethane (Surr)	99		80 - 120		05/25/23 22:06	1
Toluene-d8 (Surr)	103		80 - 120		05/25/23 22:06	1

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 17:30	1
Bromide	ND		1.0	0.26	mg/L			05/25/23 17:30	1
Fluoride	1.0		1.0	0.14	mg/L			05/26/23 20:51	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.7		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 21:34	1
Lithium	14		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 21:34	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		05/25/23 03:23	06/01/23 17:52	1
Arsenic	5.2		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 17:52	1
Chromium	0.48	J	2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:52	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:52	1

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

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

Job ID: 410-127243-1

Client Sample ID: MW-22D

Lab Sample ID: 410-127243-5

Date Collected: 05/15/23 15:03

Matrix: Water

Date Received: 05/18/23 16:20

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			05/26/23 01:23	1
Benzene	1.7		1.0	0.30	ug/L			05/26/23 01:23	1
Bromoform	ND		4.0	1.0	ug/L			05/26/23 01:23	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			05/26/23 01:23	1
Chloroform	ND		1.0	0.30	ug/L			05/26/23 01:23	1
cis-1,2-Dichloroethene	5.6		1.0	0.30	ug/L			05/26/23 01:23	1
Ethylbenzene	ND		1.0	0.40	ug/L			05/26/23 01:23	1
Tetrachloroethene	120		1.0	0.30	ug/L			05/26/23 01:23	1
trans-1,2-Dichloroethene	ND		2.0	0.70	ug/L			05/26/23 01:23	1
Trichloroethene	7.6		1.0	0.30	ug/L			05/26/23 01:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		80 - 120		05/26/23 01:23	1
4-Bromofluorobenzene (Surr)	93		80 - 120		05/26/23 01:23	1
Dibromofluoromethane (Surr)	98		80 - 120		05/26/23 01:23	1
Toluene-d8 (Surr)	103		80 - 120		05/26/23 01:23	1

Client Sample ID: ERM-1S

Lab Sample ID: 410-127243-6

Date Collected: 05/15/23 16:42

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 18:30	1
Bromide	ND		1.0	0.26	mg/L			05/25/23 18:30	1
Fluoride	0.18	J	1.0	0.14	mg/L			05/25/23 18:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.59		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 20:41	1
Lithium	0.10		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 20:41	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.68	J	1.0	0.20	ug/L		05/25/23 03:23	06/01/23 17:14	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 17:14	1
Chromium	2.6		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:14	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:14	1

Client Sample ID: ERM-1D

Lab Sample ID: 410-127243-7

Date Collected: 05/15/23 15:52

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 18:50	1
Bromide	8.5		1.0	0.26	mg/L			05/26/23 21:11	1
Fluoride	0.27	J	1.0	0.14	mg/L			05/25/23 18:50	1

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

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

Job ID: 410-127243-1

Client Sample ID: ERM-1D

Lab Sample ID: 410-127243-7

Date Collected: 05/15/23 15:52

Matrix: Water

Date Received: 05/18/23 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.23		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 20:38	1
Lithium	4.0		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 20:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.86	J	1.0	0.20	ug/L		05/25/23 03:23	06/01/23 17:12	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 17:12	1
Chromium	24		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:12	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:12	1

Client Sample ID: GMZ-3D

Lab Sample ID: 410-127243-8

Date Collected: 05/16/23 08:52

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 19:09	1
Bromide	2.8		1.0	0.26	mg/L			05/26/23 21:31	1
Fluoride	ND		1.0	0.14	mg/L			05/25/23 19:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.71		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 21:22	1
Lithium	3.0		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 21:22	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		05/25/23 03:23	06/01/23 17:38	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 17:38	1
Chromium	27		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:38	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:38	1

Client Sample ID: GMZ-3I

Lab Sample ID: 410-127243-9

Date Collected: 05/16/23 09:37

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 19:29	1
Bromide	2.3		1.0	0.26	mg/L			05/30/23 20:42	1
Fluoride	ND		1.0	0.14	mg/L			05/25/23 19:29	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.69		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 21:25	1
Lithium	2.8		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 21:25	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		05/25/23 03:23	06/01/23 17:40	1

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

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

Job ID: 410-127243-1

Client Sample ID: GMZ-3I

Lab Sample ID: 410-127243-9

Date Collected: 05/16/23 09:37

Matrix: Water

Date Received: 05/18/23 16:20

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		05/25/23 03:23	06/01/23 17:40	1
Chromium	27		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:40	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:40	1

Client Sample ID: GMZ-3S

Lab Sample ID: 410-127243-10

Date Collected: 05/16/23 10:17

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 19:49	1
Bromide	1.6		1.0	0.26	mg/L			05/30/23 21:02	1
Fluoride	ND		1.0	0.14	mg/L			05/25/23 19:49	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.46		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 20:54	1
Lithium	1.9		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 20:54	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		05/25/23 03:23	06/01/23 17:22	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 17:22	1
Chromium	18		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:22	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:22	1

Client Sample ID: GMZ-4D

Lab Sample ID: 410-127243-11

Date Collected: 05/16/23 13:12

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 21:08	1
Bromide	1.3		1.0	0.26	mg/L			05/30/23 22:02	1
Fluoride	ND		1.0	0.14	mg/L			05/25/23 21:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.36		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 20:51	1
Lithium	1.3		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 20:51	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		05/25/23 03:23	06/01/23 17:20	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 17:20	1
Chromium	24		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:20	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:20	1

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

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

Job ID: 410-127243-1

Client Sample ID: GMZ-4I

Lab Sample ID: 410-127243-12

Date Collected: 05/16/23 14:02

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 21:28	1
Bromide	1.5		1.0	0.26	mg/L			05/30/23 22:21	1
Fluoride	ND		1.0	0.14	mg/L			05/25/23 21:28	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.40		0.050	0.012	mg/L		05/25/23 07:06	05/25/23 18:52	1
Lithium	1.4		0.050	0.011	mg/L		05/25/23 07:06	05/25/23 18:52	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		05/25/23 07:06	06/02/23 10:20	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 07:06	06/02/23 10:20	1
Chromium	20		2.0	0.33	ug/L		05/25/23 07:06	06/02/23 10:20	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 07:06	06/02/23 10:20	1

Client Sample ID: GMZ-4S

Lab Sample ID: 410-127243-13

Date Collected: 05/16/23 14:47

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 22:28	1
Bromide	0.68	J	1.0	0.26	mg/L			05/25/23 22:28	1
Fluoride	ND		1.0	0.14	mg/L			05/25/23 22:28	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.29		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 20:48	1
Lithium	0.90		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 20:48	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		05/25/23 03:23	06/01/23 17:18	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 17:18	1
Chromium	13		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:18	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:18	1

Client Sample ID: GMZ-1

Lab Sample ID: 410-127243-14

Date Collected: 05/16/23 15:52

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 20:09	1
Bromide	1.2		1.0	0.26	mg/L			05/30/23 22:41	1
Fluoride	ND		1.0	0.14	mg/L			05/25/23 20:09	1

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

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

Job ID: 410-127243-1

Client Sample ID: GMZ-1

Lab Sample ID: 410-127243-14

Date Collected: 05/16/23 15:52

Matrix: Water

Date Received: 05/18/23 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.16		0.050	0.012	mg/L		05/25/23 07:06	05/25/23 18:21	1
Lithium	0.55		0.050	0.011	mg/L		05/25/23 07:06	05/25/23 18:21	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		05/25/23 07:06	06/02/23 10:02	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 07:06	06/02/23 10:02	1
Chromium	9.8		2.0	0.33	ug/L		05/25/23 07:06	06/02/23 10:02	1
Thallium	0.21	J	0.50	0.13	ug/L		05/25/23 07:06	06/02/23 10:02	1

Client Sample ID: GMZ-2D

Lab Sample ID: 410-127243-15

Date Collected: 05/17/23 08:57

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 22:48	1
Bromide	ND		1.0	0.26	mg/L			05/25/23 22:48	1
Fluoride	ND		1.0	0.14	mg/L			05/25/23 22:48	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.016	J	0.050	0.012	mg/L		05/25/23 03:23	05/25/23 21:37	1
Lithium	ND		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 21:37	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		05/25/23 03:23	06/01/23 17:54	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 17:54	1
Chromium	ND		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:54	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:54	1

Client Sample ID: GMZ-2I

Lab Sample ID: 410-127243-16

Date Collected: 05/17/23 09:42

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 23:08	1
Bromide	ND		1.0	0.26	mg/L			05/25/23 23:08	1
Fluoride	ND		1.0	0.14	mg/L			05/25/23 23:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 20:57	1
Lithium	ND		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 20:57	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		05/25/23 03:23	06/01/23 17:30	1

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

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

Job ID: 410-127243-1

Client Sample ID: GMZ-2I

Lab Sample ID: 410-127243-16

Date Collected: 05/17/23 09:42

Matrix: Water

Date Received: 05/18/23 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.74	J	2.0	0.68	ug/L		05/25/23 03:23	06/01/23 17:30	1
Chromium	ND		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:30	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:30	1

Client Sample ID: GMZ-2S

Lab Sample ID: 410-127243-17

Date Collected: 05/17/23 10:27

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 23:28	1
Bromide	ND		1.0	0.26	mg/L			05/25/23 23:28	1
Fluoride	ND		1.0	0.14	mg/L			05/25/23 23:28	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 21:16	1
Lithium	ND		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 21:16	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		05/25/23 03:23	06/01/23 17:34	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 17:34	1
Chromium	ND		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:34	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:34	1

Client Sample ID: GMZ-2SD

Lab Sample ID: 410-127243-18

Date Collected: 05/17/23 10:57

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/25/23 23:47	1
Bromide	ND		1.0	0.26	mg/L			05/25/23 23:47	1
Fluoride	ND		1.0	0.14	mg/L			05/25/23 23:47	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 20:22	1
Lithium	ND		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 20:22	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		05/25/23 03:23	06/01/23 17:10	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 17:10	1
Chromium	ND		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:10	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:10	1

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

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

Job ID: 410-127243-1

Client Sample ID: SW-06

Lab Sample ID: 410-127243-19

Date Collected: 05/17/23 11:50

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/26/23 00:07	1
Bromide	0.57	J	1.0	0.26	mg/L			05/26/23 00:07	1
Fluoride	ND		1.0	0.14	mg/L			05/26/23 00:07	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.16		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 20:19	1
Lithium	0.48		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 20:19	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		05/25/23 03:23	06/01/23 17:08	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 17:08	1
Chromium	6.0		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:08	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:08	1

Client Sample ID: SW-05

Lab Sample ID: 410-127243-20

Date Collected: 05/17/23 12:20

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/26/23 00:27	1
Bromide	0.62	J	1.0	0.26	mg/L			05/26/23 00:27	1
Fluoride	ND		1.0	0.14	mg/L			05/26/23 00:27	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.16		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 20:44	1
Lithium	0.51		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 20:44	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		05/25/23 03:23	06/01/23 17:16	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 17:16	1
Chromium	6.6		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:16	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:16	1

Client Sample ID: SW-01

Lab Sample ID: 410-127243-21

Date Collected: 05/17/23 12:55

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/26/23 07:04	1
Bromide	0.73	J	1.0	0.26	mg/L			05/26/23 07:04	1
Fluoride	ND		1.0	0.14	mg/L			05/26/23 07:04	1

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

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

Job ID: 410-127243-1

Client Sample ID: SW-01

Lab Sample ID: 410-127243-21

Date Collected: 05/17/23 12:55

Matrix: Water

Date Received: 05/18/23 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.19		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 20:01	1
Lithium	0.60		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 20:01	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		05/25/23 03:23	06/01/23 16:49	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 16:49	1
Chromium	9.0		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 16:49	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 16:49	1

Client Sample ID: SW-02

Lab Sample ID: 410-127243-22

Date Collected: 05/17/23 13:10

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/26/23 08:04	1
Bromide	ND		1.0	0.26	mg/L			05/26/23 08:04	1
Fluoride	ND		1.0	0.14	mg/L			05/26/23 08:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.074		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 21:00	1
Lithium	0.16		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 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		05/25/23 03:23	06/01/23 17:32	1
Arsenic	ND		2.0	0.68	ug/L		05/25/23 03:23	06/01/23 17:32	1
Chromium	2.0		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:32	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:32	1

Client Sample ID: SW-2A

Lab Sample ID: 410-127243-23

Date Collected: 05/17/23 13:30

Matrix: Water

Date Received: 05/18/23 16:20

Method: EPA 300.0 - Anions, Ion Chromatography

Lab: Eurofins Pensacola

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromate	ND		1.0	0.50	mg/L			05/26/23 08:24	1
Bromide	ND		1.0	0.26	mg/L			05/26/23 08:24	1
Fluoride	ND		1.0	0.14	mg/L			05/26/23 08:24	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.075		0.050	0.012	mg/L		05/25/23 03:23	05/25/23 21:31	1
Lithium	0.17		0.050	0.011	mg/L		05/25/23 03:23	05/25/23 21:31	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		05/25/23 03:23	06/01/23 17:50	1

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

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

Job ID: 410-127243-1

Client Sample ID: SW-2A

Lab Sample ID: 410-127243-23

Date Collected: 05/17/23 13:30

Matrix: Water

Date Received: 05/18/23 16:20

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		05/25/23 03:23	06/01/23 17:50	1
Chromium	2.1		2.0	0.33	ug/L		05/25/23 03:23	06/01/23 17:50	1
Thallium	ND		0.50	0.13	ug/L		05/25/23 03:23	06/01/23 17:50	1

Client Sample ID: TB-01-051523

Lab Sample ID: 410-127243-24

Date Collected: 05/15/23 00:00

Matrix: Water

Date Received: 05/18/23 16:20

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			05/25/23 21:44	1
Benzene	ND		1.0	0.30	ug/L			05/25/23 21:44	1
Bromoform	ND		4.0	1.0	ug/L			05/25/23 21:44	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			05/25/23 21:44	1
Chloroform	ND		1.0	0.30	ug/L			05/25/23 21:44	1
cis-1,2-Dichloroethene	ND		1.0	0.30	ug/L			05/25/23 21:44	1
Ethylbenzene	ND		1.0	0.40	ug/L			05/25/23 21:44	1
Tetrachloroethene	ND		1.0	0.30	ug/L			05/25/23 21:44	1
trans-1,2-Dichloroethene	ND		2.0	0.70	ug/L			05/25/23 21:44	1
Trichloroethene	ND		1.0	0.30	ug/L			05/25/23 21:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		80 - 120		05/25/23 21:44	1
4-Bromofluorobenzene (Surr)	94		80 - 120		05/25/23 21:44	1
Dibromofluoromethane (Surr)	99		80 - 120		05/25/23 21:44	1
Toluene-d8 (Surr)	104		80 - 120		05/25/23 21:44	1