FINAL

United States Army Corps of Engineers
New England District

2023 Annual Operations, Maintenance, and Monitoring Report

Area of Contamination 50
Former Fort Devens Army Installation
Devens, Massachusetts

Contract No. W912WJ-19-D-0014

Contract Delivery Order No. W912WJ-23-F-0055

July 2024

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CERTIFICATION

I hereby certify that the enclosed Report, shown and marked in this submittal, is that proposed to be incorporated with Contract Number W912WJ-19-D-0014. This document was prepared in accordance with the United States Army Corps of Engineers (USACE) Scope of Work and is hereby submitted for Government approval.

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NOTICE

The United States Department of Defense, Department of Army, funded wholly or in part the preparation of this document and work described herein under Contract No. W912WJ-19-D-0014. Mention of trade names or commercial products does not constitute endorsement or recommendation for use.

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Acronyms and Abbreviations

µg/L	microgram per liter
ABC®	Anoxic BioChem®
ABC® Ole’	Anoxic BioChem® plus oleic acid
ABC® Ole’+	Anoxic BioChem® plus oleic acid plus zero valent iron
AFCEE	Air Force Center for Environmental Excellence
AOC	area of contamination
Arcadis	Arcadis U.S., Inc.
Army	United States Army
BCT	Base Realignment and Closure Cleanup Team
bgs	below ground surface
BRAC	Base Realignment and Closure
CCV	continuing calibration verification
cis-1,2-DCE	cis-1,2-dichloroethene
CL	cleanup level
COC	contaminant of concern
CVOC	chlorinated volatile organic compound
DO	dissolved oxygen
DoD	Department of Defense
DOE	Department of Energy
DPT	direct-push technology
DRFTA	Devens Reserve Forces Training Area
ERD	enhanced reductive dechlorination
ESTCP	Environmental Security Technology Certification Program
Fort Devens	Former Fort Devens Army Installation
ICV	initial calibration verification
IWS	in-well stripping
KGS	KOMAN Government Solutions, LLC
LTM	long-term monitoring
LTMMP	Long-Term Monitoring and Maintenance Plan
LUC	land-use control

MAAF	Moore Army Airfield
MassDevelopment	Massachusetts Development and Finance Agency
mg/L	milligram per liter
MiHPT	membrane interface probe-hydraulic profiling tool
MS	matrix spike
MSD	matrix spike duplicate
mV	millivolt
NAVFAC	Naval Facilities Engineering Service Center
O&M	operation and maintenance
ORP	oxidation-reduction potential
PCE	tetrachloroethene
QAPP	Quality Assurance Project Plan
Quality Systems Manual	Department of Defense and Department of Energy Consolidated Quality Systems Manual for Environmental Laboratories, Version 5.4
RAWP	Remedial Action Work Plan
ROD	Record of Decision
S-A JV	SERES-Arcadis 8(a) Joint Venture 2, LLC
site	Area of Contamination 50
Sovereign	Sovereign Consulting Inc.
SU	standard unit
SVE	soil vapor extraction
TCE	trichloroethene
TOC	total organic carbon
USEPA	United States Environmental Protection Agency
USFWS	United States Fish & Wildlife Service
VC	vinyl chloride
VOC	volatile organic compound

1 Introduction

SERES-Arcadis 8(a) Joint Venture 2, LLC (hereafter referred to as the S-A JV) prepared this 2023 Annual Operations, Maintenance, and Monitoring Report for the United States Army Corps of Engineers – New England District under Contract Number W912WJ-19-D-0014. This report details the operation and performance of ongoing remediation activities and groundwater monitoring results at Area of Contamination (AOC) 50 (the site) at the former Fort Devens Army Installation (Fort Devens) located in Devens, Massachusetts. Field activities were performed in accordance with the Long-Term Monitoring and Maintenance Plan (LTMMP; KOMAN Government Solutions, LLC [KGS] 2017) and the Quality Assurance Project Plan (QAPP) for the Annual Long-Term Monitoring and Maintenance Program (S-A JV 2020a). The purpose of this report is to document the operation and maintenance (O&M) activities conducted at the site and to summarize the results of long-term monitoring (LTM) of groundwater conducted by the S-A JV in 2023.

1.1 Site Description and History

The site is located on the northeastern boundary of the former Moore Army Airfield (MAAF), within the former North Post of the former Fort Devens, in the town of Ayer, Massachusetts (Figure 1). Fort Devens was identified for cessation of operations and closure under Public Law 101-510, the Defense Base Realignment and Closure (BRAC) Act of 1990 and was officially closed in March 1996. A portion of the property formerly occupied by Fort Devens was retained by the United States Army (Army) for reserve forces training and was renamed as the Devens Reserve Forces Training Area (DRFTA). Areas not retained as part of the DRFTA were transferred to new owners (the Massachusetts Development and Finance Agency [MassDevelopment] and the United States Fish & Wildlife Service [USFWS]) for reuse and redevelopment. In 2009, the DRFTA was renamed the United States Army Garrison Fort Devens.

All but approximately 13.4 acres of the former MAAF (approximately 246 acres total) were transferred to MassDevelopment for reuse in 1997; the Devens Army Installation retained approximately 9.1 acres of the former airfield for vehicle storage and maintenance and approximately 4.3 acres for remediation activities. Currently, the airfield is closed to aircraft traffic and is used by the Massachusetts State Police for training purposes and vehicle storage. The former MAAF is zoned for Special Use II and Innovation and Technology Business by MassDevelopment. Under the Devens Reuse Plan (Vanasse Hangen Brustlin, Inc. 1994), Special Use II and Innovation and Technology Business includes a broad range of industrial, light industrial, office, and research and development use. MassDevelopment is considering repairs and upgrades for the Massachusetts State Police's use of the airfield, but the plans are still under development.

Sources of groundwater contamination at AOC 50 include two World War II fueling systems, a dry well formerly connected to the parachute shakeout tower, and the former tetrachloroethene (PCE) drum storage area; these sources are collectively referred to as the source area (aka, Area 1, displayed on Figures 2 and 3). The source area comprises less than two acres and surrounds Building 3803 (the former parachute shop), Building 3840 (the former parachute shakeout tower), Building 3824 (a gazebo), and Building 3801 (the former 10th Special Forces airplane parachute simulation building). The groundwater contamination of concern at this site is a chlorinated volatile organic compound (CVOC) plume that formerly extended from the source area (Area 1) approximately 3,000 feet downgradient southwest towards the Nashua River. Although the sources of contamination have been removed or taken out of commission, groundwater underlying the site contains residual concentrations of CVOCs,

including PCE, and the degradation products of PCE: trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), and vinyl chloride (VC). The site layout with existing monitoring wells is shown on Figures 2 and 3.

The Record of Decision (ROD) for AOC 50 (United States Environmental Protection Agency [USEPA] 2004) identified the groundwater contaminants of concern (COCs) and their interim cleanup levels (CLs), as shown in Table 1, below.

Table 1 AOC 50 Interim Cleanup Levels

Chemical	CL (µg/L)	Chemical	CL (µg/L)
Arsenic	10	Lead	15
Benzene	5	Manganese	1,460
1,2-dichloroethane	5	Methylene chloride	5
1,1-dichloroethene	7	Nitrate	10,000
cis-1,2-DCE	70	PCE	5
1,2-dichloropropane	5	TCE	5
Iron	3,129	VC	2

Note:
µg/L = microgram per liter

Some of the contaminants were designated as COCs because they were present at concentrations above the applicable USEPA maximum contaminant level or state groundwater quality standard (i.e., cis-1,2-DCE, 1,2-dichloropropane, iron, methylene chloride, PCE, TCE, and VC). Benzene was designated as a COC due to past releases, cis-1,2-DCE and nitrate were identified as COCs due to their contribution to risk, and lead was identified as a COC due to its potential to pose ecological risks. In 2006, lead analysis was required as part of the Long-Term Monitoring Plan (Arcadis Geraghty & Miller, Inc. 2006); however, as of 2008, lead monitoring is no longer a requirement (Arcadis 2008). Arsenic was designated as a COC because it may be solubilized (mobilized) by the selected remediation technology (enhanced reductive dechlorination [ERD]), even though it was not predicted to pose significant risks under baseline (i.e., oxic) conditions.

1.2 Site Hydrogeology

An unconfined groundwater aquifer is present within the overburden deposits at the site. Restrictions to vertical groundwater flow, such as silty clay layers, were noted to be present, but not prevalent or continuous, in soil borings drilled in the area during the remedial investigations.

Depth-to-groundwater measurements have been collected from a network of monitoring wells and sampling points routinely since 1997. In 2023, the average depth to groundwater ranged from approximately 10-12 feet below ground surface (bgs) in the upgradient (northern) portion of Area 1 to over 60 feet bgs in Area 5 (Tables 2 and 3). Hydraulic conductivities at the site range from one foot per day to more than 50 feet per day, with seepage velocities ranging from 0.024 to 1.19 feet per day (USEPA 2004). As shown on Figure 4 (Spring 2023) and Figure 5 (Fall 2023), groundwater migrates from the source area southwest below the MAAF, and discharges to the Nashua River.

1.3 Summary of Historical Groundwater Remediation

The selected remedy for the site, as documented in the ROD (USEPA 2004), was Alternative 6: Soil Vapor Extraction (SVE), ERD with solubilized inorganic controls, In-Well Stripping (IWS)/Oxic Bioremediation, Monitoring, Institutional Controls, and Five-Year Site Reviews. In addition, geochemical additives and in-situ chemical oxidation were included as contingencies to address inorganic compounds and CVOCs, respectively, if monitoring data indicate that implementation of these contingencies is warranted.

Portions of the CVOC plume are referred to as Areas 1 through 5 as indicated in Figure 2. These area designations are based on the locations of the initial five ERD injection well transects, beginning with Area 1 in the source area and ending with Area 5 to the southwest, upgradient of the Nashua River, with Areas 2 through 4 spanning the MAAF.

The SVE system was operated from September 2004 until November 2005, when operational monitoring indicated that the recoverable mass of CVOCs had been removed from the vadose zone (KGS 2020). The IWS system was operated in/near Area 5 from September 2004 until March 2013. The IWS system was shut down once it was clear that it was not needed to treat dissolved arsenic or to “polish” the CVOC plume (Sovereign Consulting Inc. [Sovereign] 2013). In 2017, an assessment of the IWS system was performed and revealed corrosion of pumps and blowers. While the IWS system is not needed at this time, it is likely the central processing unit along with various pumps, blowers, and other system components would need to be replaced if there is need to reactivate it in the future. At the Base Realignment and Closure Cleanup Team (BCT) meeting on January 18, 2018, the Army and USEPA agreed that the system could be repaired in the future if needed.

The first ERD injection event was conducted in October 2004, using molasses as the ERD substrate. HydroGeoLogic, Inc. revised the ERD injection program in November 2008 by changing the substrate from molasses to Anoxic BioChem® (ABC®). Semi-annual injections of ABC® continued through 2014. In 2015, the substrate injection strategy was optimized based on review of the historical data and 2013 and 2014 source area investigation results (Sovereign 2015). Optimization included modification of the substrate used at some locations as well as use of direct push technology (DPT) for injection at some locations to supplement the injections that are performed in permanent wells. The July 2015 injection event used ABC® at some locations, and ABC® plus oleic acid (ABC® Ole’) and ABC® Ole’ plus zero valent iron (ABC® Ole’+), substrate mixtures that persist longer in the aquifer, at some locations. ABC® was injected into existing injection wells in Areas 4 and 5; ABC® Ole’ was injected into existing injection wells in Areas 1, 2, and 3; and ABC® Ole’+ was injected using DPT via Geoprobe® into targeted locations in Area 1. Additional injection events in July 2017, August to September 2018, and July to August 2019 also used ABC® Ole’ and ABC® Ole’+, which were injected throughout the CVOC plume using injection wells and DPT injection points, respectively. The details of these injection events are presented in the 2017, 2018, and 2019 Annual O&M and Monitoring Reports (KGS 2018, 2019, 2020).

When the ROD was filed for the site in 2004 (USEPA 2004), it was estimated that ERD injections would be phased out after approximately 10 to 15 years. While some CL exceedances of PCE remain, the following has been observed as a result of performing ERD at the site since 2004:

- The total area of exceedances of the CL for PCE has decreased in size, from an estimated 15.5 acres in Fall 2004 (Figure 6) to approximately 1.5 acres in Fall 2023 (Figure 7).
- The maximum observed PCE concentration at source area well G6M-07-02X has decreased by three orders of magnitude, from 14,000 µg/L in 2014 to non-detect in Fall 2023.
- The number of monitoring wells exceeding the CL for PCE has decreased from 35 of 41 wells (85%) in 2004 to 3 of 36 wells (8%) in Fall 2023.

2 Long-Term Monitoring Event Methodology

The LTM program at the site was conducted by the S-A JV in Spring 2023 (June) and Fall 2023 (October and November) in accordance with the most recent update of the LTMMP (KGS 2017).

2.1 Water Level Measurements

Before conducting groundwater sampling, static water level measurements were collected from site wells using an electronic water level meter. Water level measurements were collected from a total of 53 wells during the Spring 2023 monitoring event and 51 wells during the Fall 2023 monitoring event, with measurements recorded within one field day to the extent possible. Before gauging, the monitoring wells were allowed to equilibrate to atmospheric pressure. Water level elevations were calculated by subtracting depth-to-water measurements from the surveyed top-of-casing elevations and used to prepare potentiometric surface maps.

2.2 Groundwater Sampling and Analysis

Groundwater sampling was performed in accordance with the QAPP (S-A JV 2020a) and low-flow procedures documented in USEPA (2017) guidance. Groundwater samples from each well sampled were analyzed for VOCs. In addition, a subset of wells were sampled for geochemical analytes, including total organic carbon (TOC), dissolved gases (methane, ethane, and ethene), alkalinity, nitrate, sulfide, sulfate, and dissolved metals (manganese, iron, and arsenic). Dissolved metals samples were field-filtered using 0.45-micron filters before being containerized for laboratory analysis. The frequency, sampling locations, and analytical parameters for LTM sampling conducted in 2023 are summarized in Table 4. Information on the analytical methods, sample containers, preservatives, and holding times for the parameters sampled are presented in Table 5. Completed groundwater low-flow sampling forms and equipment calibration records for the 2023 groundwater monitoring events are presented in Appendix A.

2.3 Decontamination Procedures and Waste Management

In accordance with the QAPP (S-A JV 2020a), all non-disposable sampling and field equipment (such as bladder pumps and water level meters) were decontaminated between wells by using a non-phosphate detergent solution (Alconox) and rinsing with distilled water. Dedicated bladders were used at each location.

Investigation-derived waste generated during groundwater sampling activities consisted of purge water from wells, equipment decontamination water, and disposable supplies such as nitrile gloves and paper towels. Purge water and equipment decontamination water were discharged back to the ground at the site of generation after sampling was completed, in accordance with the LTMMP (KGS 2017). Used disposable supplies were bagged and disposed of as general solid waste.

3 Groundwater Monitoring Results

Sampling and analysis of chemical and geochemical parameters in groundwater was performed in accordance with the LTMMP (KGS 2017). Monitoring well inspection, water level elevation, and groundwater analytical results for the Spring 2023 (June) and Fall 2023 (October and November) monitoring events are discussed in the following subsections.

3.1 Monitoring Well Inspection and Maintenance

Before sampling, the following procedures were used to inspect the LTM wells at the site:

- The monitoring well location was identified, and the well identification number was confirmed.
- The wellhead was inspected for signs of damage and any damage was noted.
- The monitoring well gripper seal was removed, and the wellhead was allowed to vent.
- Water levels and total well depth readings were collected and compared to historical measurements.

Several wells had missing protective casing locks or missing bolts, which were replaced before completing the monitoring events.

During the Fall 2023 monitoring event, the dedicated bladder pump in well XSA-12-97X was not purging water and became lodged in the well casing upon removal. Numerous efforts were made via manual and mechanical methods to extract the pump but were unsuccessful. The S-A JV will assess whether an alternative monitoring well can be substituted for this location in 2024.

3.2 Groundwater Level Measurements

A summary of the groundwater level measurements and the corresponding groundwater elevation data are presented in Tables 2 and 3 for the Spring and Fall 2023 monitoring events, respectively. Groundwater elevation contours for Spring and Fall 2023 are presented on Figures 4 and Figure 5, respectively.

Consistent with previous monitoring events, the observed groundwater flow direction was toward the Nashua River, from northeast to southwest. In general, groundwater elevations were higher in Fall 2023 compared to Spring 2023. The groundwater hydraulic gradient between Area 1 well G6M 07-02X and downgradient well XSA-12-96X (southwest edge of the CVOC plume downgradient of Area 5) was calculated to be 0.0029 feet per foot in Spring 2023 and 0.0042 feet per foot in Fall 2023. In general, the horizontal hydraulic gradient is steeper between Area 1 and Area 3, and the hydraulic gradient decreases downgradient of Area 3. Vertical gradients are indicated in some well pairs. Area 1 well pair G6M-96-22A and G6M-96-22B indicated a downward gradient, in an area of recharge, during the Spring 2023 monitoring event. These wells were not measured in Fall 2023 due to flooded ground around the wells. A slight downward gradient was noted in Area 1 well pair G6M-04-10A and G6M-04-10X in both the Spring and Fall 2023 monitoring events. A slight downward gradient was observed during the Spring 2023 monitoring event in Area 5 well pair G6M-04-06X and G6M-04-07X, with a slight upward gradient observed in this well pair during the Fall 2023 monitoring event.

3.3 Groundwater Chemistry

The Spring and Fall 2023 monitoring events consisted of sampling 10 wells and 37 wells, respectively. Thirty-six wells were sampled during the Fall 2023 monitoring event for VOC analysis; one additional well (G6M-97-28X) was sampled for dissolved metals only in Fall 2023. This differs from the 9 wells and 45 wells in Spring and Fall 2022, respectively, for the following reasons:

One additional monitoring well (XSA-12-97X, downgradient of Area 5) was added to the Spring 2023 monitoring event to assess increases in arsenic/iron/manganese concentrations observed in this well since the Fall 2020 monitoring event. The same monitoring well could not be sampled due to pump failure and then well blockage during the Fall 2023 monitoring event (Section 3.1) and was not sampled in Fall 2023.

- Seven monitoring wells (G6M-02-12X, G6M-03-08X, G6M-13-03X, G6M-04-05X, G6M-04-11X, G6M-04-22X, and G6M-04-31X) are sampled on a biennial basis during the Fall events, and were not sampled in Fall 2023 in accordance with the LTMMP (KGS 2017).

The frequency, sampling locations, and analytical parameters for LTM sampling conducted in 2023 are summarized in Table 4. The Spring and Fall 2023 LTM analytical results and field parameters are presented in Tables 6 and 7, respectively. The laboratory analytical reports for the 2023 monitoring events are included as Appendix B. The data validation reports for the 2023 data are presented in Appendix C. Historical analytical results and groundwater field parameters, including the 2023 sampling results, are presented in Appendix D.

3.3.1 Field Parameters

The current well sampling program is detailed in the 2017 Long-Term Monitoring and Maintenance Plan prepared by KGS. The annual LTM sampling is conducted in the Fall to evaluate the extent of plume as part of the annual monitoring. Fewer wells are sampled in the Spring as this event is used to assess if injections are warranted. The Spring 2023 field parameters were generally consistent with conditions in Fall 2023. Field parameter measurements collected during the Fall 2023 monitoring event are summarized below.

- pH levels in groundwater were within the optimal pH range for ERD bioremediation (pH of 6 to 8 standard units [SU]) (Interstate Technology and Regulatory Council 2008) in all but two locations (Table 7): G6M-04-02X (5.69 SU) in Area 3, and G6M-95-19X (5.53 SU) in Area 1. While below the optimal range in some wells, ERD is still capable of proceeding at pH values less than 6 SU.
- Dissolved oxygen (DO) concentrations less than 1 milligram per liter (mg/L) indicate anoxic conditions, while negative oxidation-reduction potential (ORP) values indicate generally reducing conditions. In general, anoxic and/or reducing conditions were observed within and downgradient of the in situ reactive zones (areas/zones where substrate injections have occurred in the past) due to organic carbon addition, allowing for ERD of CVOCs. Oxic or moderately reducing conditions are present outside of areas affected by ERD treatment.
    - In Area 1, anoxic conditions (i.e., DO less than 1 mg/L) were observed at eight of 11 wells sampled, with DO ranging from 0.27 to 0.85 mg/L in those eight wells. Negative ORP was recorded at all 11 wells sampled, with ORP ranging from -151 to -0.2 millivolts (mV).
    - In Area 2, anoxic conditions were observed at two of four wells sampled, with DO concentrations of 0.13 and 0.80 mg/L. Negative ORP was recorded at three of the four wells sampled, with ORP ranging from -160 to -78.8 mV in those three wells.

- In Area 3, anoxic and reducing conditions were observed in all three wells sampled, with DO ranging from 0.13 to 0.20 mg/L and ORP ranging from -107 to -41.8 mV in those three wells.
- In Area 4, anoxic conditions were observed in all four wells sampled, with DO ranging from 0.13 to 0.64 mg/L. Negative ORP was recorded at three of the four wells sampled, with ORP ranging from -160 to -98.4 mV in those three wells.
- In Area 5, anoxic conditions were observed in eight of the 14 wells sampled, with DO ranging from 0.04 to 0.96 mg/L at those eight wells. Negative ORP was recorded at 10 of the 14 wells sampled, with ORP ranging from -217 to -30.9 mV in those 10 wells.
- Adjacent to the Nashua River, the one monitoring well sampled (G6M-04-14X) had anoxic and mildly reducing conditions (0.26 mg/L DO and ORP value of -25.3 mV).

3.3.2 Volatile Organic Compounds

Groundwater samples were collected from 10 wells during the Spring 2023 monitoring event and 36 wells during the Fall 2023 monitoring event for VOC analysis; one additional well (G6M-97-28X) was sampled for dissolved metals only in Fall 2023. Benzene, PCE, TCE, cis-1,2-DCE, and VC were the only VOCs detected above the established AOC 50 CLs during the Spring and Fall 2023 monitoring events. Concentrations of these CVOCs in Spring and Fall 2023 are shown in Tables 6 and 7, respectively. Historical concentrations are included in Appendix D and concentration trends at select monitoring wells are provided in Appendix E. PCE results from the Fall 2023 monitoring event and the associated PCE plume are shown on Figure 7 (plan view) and Figure 8 (cross-section view). VOC results from the Spring and Fall 2023 monitoring events are discussed in the following subsections; Fall monitoring results are described in greater detail than Spring results because more wells were sampled in Fall (37 wells) than Spring (10 wells).

3.3.2.1 Spring 2023

Results of the Spring 2023 sampling event indicate that the injections performed in 2019 and prior years continue to have the intended impact on CVOC concentrations at the targeted wells. Historically, locations where PCE was greater than 100 µg/L had been targeted for ERD treatment. As shown in Table 6, all PCE detections were below the historical target level of 100 µg/L. Two of 10 sampled locations had PCE detections greater than the CL; the two samples were collected from well G6M-04-02X in Area 3 (26.0 J µg/L) and well G6M-13-05X in Area 1 (39 µg/L). Benzene was detected above the CL of 5 µg/L in one of 10 sampled locations at a concentration of 5.5 µg/L (well XSA-12-97X in Area 5), and TCE and VC were detected above their respective CLs in four of 10 sampled locations in Areas 1, 3, 4, and 5. Table 6 summarizes these detections.

3.3.2.2 Fall 2023

Similar to Spring 2023, the Fall 2023 groundwater monitoring results indicate that the injections performed in 2019 and prior years continue to have the intended impact on CVOC concentrations within the targeted areas. Analytical results are included in Table 7 and on Figure 9 (Area 1), Figure 10 (Areas 2, 3, and 4), and Figure 11 (Area 5). Figure 7 includes the results for PCE and depicts the associated area where PCE exceeds the CL. Area-specific summaries of locations that exceeded the CL for PCE, TCE, cis-1,2-DCE, and VC in Fall 2023 are included in Table 8, below.

A summary of results for each CVOC is provided below:

- PCE was detected above the CL of 5 µg/L at three of 36 sampled locations, compared to four of the 44 sampled locations during the Fall 2022 monitoring event. Three sampled locations with CL exceedances also exceeded the CL in Fall 2022 (wells G6M-04-02X, G6M-07-01X, and G6M-13-05X). The maximum detection of PCE in Fall 2023 was 11 µg/L at well G6M-07-01X (Area 2).
- TCE was detected above the CL of 5 µg/L at five of 36 sampled locations, compared to four of 44 locations during the Fall 2022 monitoring event. Three sampled locations with CL exceedances also exceeded the CL in Fall 2022 (wells G6M-02-01X, G6M-04-02X, and G6M-04-07X). The maximum detection of TCE in Fall 2023 was 26 µg/L at well G6M-04-02X (Area 3).
- cis-1,2-DCE was detected above the CL of 70 µg/L at one of 36 sampled locations (compared to two of 44 locations in the Fall 2022 monitoring event). The sampled location with a CL exceedance also exceeded the CL in Fall 2022 (well G6M-04-07X). The maximum detection of cis-1,2-DCE in Fall 2023 was 74 µg/L at well G6M-04-07X (Area 5).
- VC was detected above the CL of 2 µg/L at five of 36 sampled locations, compared to 7 of 44 locations in the Fall 2022 monitoring event. Four sampled locations with CL exceedances also exceeded the CL in Fall 2022 (wells G6M-04-02X, G6M-04-07X, G6M-13-05X, and XSA-12-96X). The maximum detection of VC in Fall 2023 was 42 µg/L at well G6M-13-05X (Area 1).

When compared to historical CVOC concentrations at the site, these results continue to indicate significant improvements to groundwater quality because of ERD remediation performed to date.

Table 8 Area-Specific Summary of Cleanup Level Exceedances

Area	Number of Locations Sampled for VOCs	Number of Locations Exceeding the CL for PCE, TCE, cis-1,2-DCE, and/or VC	Wells and Compounds that Exceeded the Interim CL
1	11	2	G6M-13-05X: PCE, VC G6M-04-10A: TCE, VC
2	4	2	G6M-02-01X: TCE G6M-07-01X: PCE
3	3	1	G6M-04-02X: PCE, TCE, VC
4	3	0	None
5	14	2	G6M-04-07X: cis-1,2-DCE, TCE, VC XSA-12-96X: TCE, VC
Nashua River	1	0	None

3.3.2.3 Concentration Trends

Trend graphs showing PCE and associated daughter products (TCE, cis-1,2-DCE, VC, and ethene) for 14 key performance monitoring wells are included as Appendix E. These wells are representative of conditions at different locations within the CVOC plume and help illustrate the effects of the ERD injection program. Long-term

CVOC trends support the conclusion that the July/August 2019 ERD injections continue to be effective. PCE degradation products are detected throughout the extent of the CVOC plume, and concentrations appear to be generally decreasing or stable in most wells. CVOC trends are described below.

Area 1

- At monitoring well G6M-07-02X, located within the 2019 DPT injection area, PCE and TCE concentrations have decreased from their historical maximums of 14,000 µg/L (Fall 2014) and 190 µg/L (Fall 2012), respectively, to non-detect for each parameter in Fall 2023. All CVOCs have been below their applicable CLs at this well since Fall 2021 (Appendix E, Figure E-1).
- At monitoring well G6M-04-10A, located adjacent to the 2019 DPT injections, PCE concentrations have decreased substantially from 6,100 µg/L in Spring 2006 to non-detect in Fall 2023. PCE and/or TCE concentrations have occasionally exceeded CLs during recent monitoring events (Spring 2019, Fall 2019, Fall 2020, and Fall 2023). TCE (9.4 µg/L) and VC (3.0 µg/L) were detected above their applicable CLs in Fall 2023 after five non-detect sampling events between Spring 2021 and Spring 2023 (Appendix E, Figure E-2).
- At monitoring well G6M-04-09X, located outside and down/cross gradient to the 2019 DPT injection area, PCE concentrations have decreased by over three orders of magnitude, from 7,400 µg/L in Spring 2004 to non-detect in Fall 2023. Similar to well G6M-04-10A, PCE and/or TCE have occasionally exceeded CLs recently (Fall 2020 and Spring 2021), but all CVOCs have been below CLs since Fall 2021 (Appendix E, Figure E-3).
- At monitoring well G6M-13-05X, located outside and cross gradient to the area influenced by 2019 injections, PCE concentrations have decreased by approximately two orders of magnitude, from 1,700 µg/L in Fall 2014 to 10 µg/L in Fall 2023. At this well, PCE and TCE concentrations have fluctuated recently, albeit at relatively low levels. From Spring 2021 to Fall 2023, PCE concentrations have ranged from 8.0 to 50 µg/L, while TCE concentrations have ranged from 2.4 to 18 µg/L (Appendix E, Figure E-4). The PCE exceedance shown on Figure 7 at this monitoring well is bounded by monitoring wells with detections below the CL of 5 µg/L and non-detect concentrations.
    - Monitoring well G6M-96-25B, sampled most recently in Fall 2012 (2 µg/L), located approximately 155 feet west of G6M-13-05X;
    - Monitoring well G6M-04-11X, sampled most recently in Fall 2022 (non-detect), located approximately 120 feet southwest of G6M-13-05X; and
    - Monitoring well G6M-04-22X, sampled in Fall 2022 (non-detect), located approximately 150 feet south of G6M-13-05X.

Area 2

- At monitoring well G6M-02-01X, PCE concentrations have decreased by over two orders of magnitude, from 1,900 µg/L in Fall 2007 to non-detect in Fall 2023. PCE, TCE, and VC concentrations have fluctuated at this location recently (at relatively low levels), with concentrations slightly greater than CLs observed in Fall 2020, Fall 2022, and Fall 2023 (Appendix E, Figure E-5). TCE was the only CVOC to exceed the CL in Fall 2023 (6.3 µg/L).
- At monitoring well G6M-07-01X, PCE concentrations have declined from 50 µg/L in Fall 2010 to 11 µg/L in Fall 2023. TCE has not exceeded the CL since Fall 2009, and cis-1,2-DCE and VC have never exceeded their applicable CLs (Appendix E, Figure E-6).

Area 3

At monitoring well G6M-04-02X, located within the 2019 DPT injection area, PCE and TCE concentrations have decreased from their historical maximums of 1,900 µg/L (Fall 2004) and 170 µg/L (Fall 2006), respectively, to 9.9 and 26 µg/L in Fall 2023, respectively. However, PCE and TCE concentrations have increased compared to Spring 2020. Daughter products cis-1,2-DCE and, to a lesser extent, VC have been generated by reductive dechlorination (Appendix E, Figure E-7). In Fall 2023, cis-1,2-DCE was detected at concentration of 46 µg/L which is below the CL of 70 µg/L, and VC was detected at a concentration of 8.1 µg/L which is above the CL of 2 µg/L.

- At monitoring well G6M-03-07X, located downgradient of the area influenced by 2019 injections, CVOC concentrations have remained below applicable CLs in 23 of 26 monitoring events completed since Spring 2010, including every event since Fall 2020 (Appendix E, Figure E-8).

Area 4

- At monitoring well G6M-13-02X, located hydraulically downgradient of permanent wells used in the 2019 injections, PCE and TCE concentrations have decreased from their historical maximums of 210 µg/L (Fall 2014) and 54 µg/L (Summer 2014), respectively, to non-detect and 3.3 µg/L in Fall 2023. All CVOCs were below their applicable CLs in Fall 2023 (Appendix E, Figure E-9).

Area 5

- At monitoring well G6M-13-04X, located immediately downgradient of the 2019 injection area, CVOC concentrations have declined since 2014 and have been below applicable CLs since Spring 2020 (Appendix E, Figure E-10).
- At monitoring well G6M-97-05B, located along the centerline of the CVOC plume and in an area treated via DPT injections in 2019, the previously increasing PCE concentration has decreased from 180 µg/L in Spring 2019 (i.e., prior to the 2019 injections) to non-detect since Fall 2021. The TCE concentration at this location decreased from 22 µg/L in Spring 2019 to 0.98 µg/L in Fall 2023, while cis-DCE and VC concentrations initially increased due to reductive dechlorination but were below their respective CLs in Fall 2023 (Appendix E, Figure E-11).
- At downgradient monitoring well XSA-12-96X, PCE concentrations continue to follow a long-term decreasing trend. While injections are not performed adjacent to this well, the effect of treatment upgradient is apparent in the PCE concentration trend at this location, decreasing from 120 µg/L in Fall 2012 to 4.8 µg/L in Fall 2023. TCE, cis-1,2-DCE, and VC have been declining notably since Fall 2019; however, slight increases in concentrations of TCE and VC were noted in the Fall 2023 data when compared to Fall 2022. TCE (7.7 µg/L) and VC (7.9 J µg/L) were the only CVOCs detected at concentrations greater than CLs in Fall 2023 (Appendix E, Figure E-12).
- At downgradient monitoring well XSA-12-97X, PCE and TCE concentrations have been non-detects during the last four annual sampling events. While injections are not performed adjacent to this well, the effect of treatment upgradient is apparent, with decreasing PCE and TCE concentrations since Fall 2019 (Appendix E, Figure E-13).
- At downgradient monitoring well G6M-04-07X, PCE concentrations have decreased by approximately three orders of magnitude, from 1,100 µg/L in Winter 2004 to 4.7 µg/L in Fall 2023. While injections have not been performed adjacent to this well, the decreasing PCE concentrations and increase of daughter products TCE, cis-1,2-DCE, and VC since Fall 2012 is occurring due to reductive dechlorination (Appendix E, Figure E-14). The three daughter products exceeded the CL in Fall 2023.

3.3.3 Geochemical Analytes

As shown in Table 5, groundwater samples were submitted for analysis of dissolved gases (methane, ethane, and ethene), TOC, alkalinity, nitrate, sulfide, and sulfate for select wells during the Spring and Fall 2023 monitoring events, in accordance with the LTMMP (KGS 2017). These general chemistry parameters were analyzed to document the geochemistry of the aquifer, which can then be used to interpret whether conditions are suitable for reductive dechlorination (or, in the case of ethane and ethene as further evidence of reductive dechlorination). The key geochemical parameters for ERD include the following:

Following depletion of oxygen, alternate terminal electron acceptors are used by microorganisms, including nitrate and sulfate, which reduce to nitrite and sulfide, respectively. Concentrations of these anions are generally low across the site and, therefore, are not discussed further in this report.

- Methane is the result of metabolic reactions involving the reduction of alternate terminal electron acceptor carbon dioxide. Methane concentrations greater than 500 µg/L are indicative of favorable reducing conditions (Air Force Center for Environmental Excellence [AFCEE], Naval Facilities Engineering Service Center [NAVFAC], and Environmental Security Technology Certification Program [ESTCP] 2004). High dissolved methane concentrations are generally indicative of an ongoing reducing zone where bacteria continue to metabolize organic carbon. Dissolved methane can be used to infer proximity to locations that are conducive to promoting ERD.
- The presence of ethene/ethane indicates the microbes required for complete reductive dechlorination are active and present within site groundwater and indicate that chlorinated ethenes are being completely degraded.
- TOC is an indicator of natural organic carbon present at a site during baseline characterization and is an indicator of substrate distribution and persistence during performance monitoring.

A total of 15 monitoring wells were sampled for all general chemistry parameters during the Fall 2023 monitoring event. A summary of the results is provided below, and general chemistry parameter values are presented in Table 7 and on Figures 9 through 11.

3.3.3.1 Dissolved Gases

The presence of methane throughout the CVOC plume at the site indicates that conditions in the aquifer support continued reductive dechlorination of CVOCs. Methane concentrations were above 500 µg/L in 13 of 15 monitoring wells sampled and were highly elevated (defined as above 10,000 µg/L [AFCEE, NAVFAC, and ESTCP 2004]) in 11 of 15 monitoring wells. Methane concentrations were generally highest in wells within or adjacent to the 2019 injections (e.g., G6M-03-07X and G6M-97-05B). These elevated methane concentrations indicate conditions are sufficiently reducing to allow for continued reductive dechlorination to occur in site groundwater.

Ethene concentrations were above detection limits at 10 of 15 monitoring wells and ethane concentrations were above detection limits at 13 of 15 monitoring wells. Ethene and/or ethane were most prevalent within and immediately downgradient of injection areas. The presence of ethene and ethane throughout the site indicate the microbes required for complete reductive dechlorination are active and present within site groundwater and indicate that PCE is being completely degraded.

3.3.3.2 Organic Carbon Distribution

Concentrations of TOC measured in and downgradient of the ERD injection areas indicate that carbon is available in the aquifer to continue supporting reductive dechlorination of CVOCs at the site. TOC concentrations at wells not influenced by previous ERD injections have historically been below 10 mg/L, and typically below 5 mg/L; therefore, any concentration greater than 10 mg/L is considered elevated above background.

- Monitoring well G6M-07-02X (Area 1) located within 2019 injection area exhibited highly elevated TOC concentrations (greater than 100 mg/L) in Fall 2022. The Fall 2023 TOC concentration was 95 mg/L.
- Three monitoring wells contained moderately elevated TOC concentrations (between 18 and 52 mg/L), including two wells located within or adjacent/downgradient of the 2019 injection areas (G6M-04-10A in Area 1, G6M-03-07X in Area 3) and one well located in Area 1 to the west of where injections were most recently performed in 2018 (G6M-13-06X).

The organic carbon reagents injected in 2017, 2018, and 2019 are semi-soluble substrates designed to provide both a soluble and readily available carbon substrate (via lactate and/or alcohols) as well as a less soluble portion (vegetable oils and fatty acid esters) that more slowly release organic carbon over a period of years. Monitoring data indicate that the desired slow dissolution of TOC from the injected substrate persists and continues to promote reductive dechlorination of CVOCs in groundwater at the locations discussed above.

3.3.4 Inorganic Metals

Groundwater samples from both 2023 monitoring events were submitted for dissolved metals (arsenic, iron, and manganese) analysis (Table 5). Results for Spring 2023 and Fall 2023 are included in Tables 6 and 7, respectively. Of the three dissolved metals sampled, arsenic is of primary interest. As noted in Section 1.1, arsenic was designated as a COC in the ROD (USEPA 2004) because it may be solubilized (mobilized) by the selected remediation technology (ERD), even though it was not predicted to pose significant risks under baseline conditions. Under the reducing conditions present at the site due to substrate injections, naturally occurring arsenic associated with iron and manganese oxyhydroxide minerals is typically released into solution due to reductive dissolution (USEPA 2007). For example, ferric iron present in the oxides is reduced to ferrous iron, which is more soluble. Similarly, solid manganese minerals (Mn^{4+}) are reduced to more soluble manganese (Mn^{2+}). These dissolution processes also release arsenic associated with the minerals, and the iron, manganese, and arsenic can then be detected in dissolved metals analyses. This relationship is observed throughout site treatment areas and was an anticipated by-product of the selected remedial action.

Dissolved arsenic concentrations for the Fall 2023 monitoring event are presented on Figure 12, historical arsenic results are included in Appendix D, and historical arsenic trends at select wells throughout the plume are provided in Appendix F. Arsenic concentrations in groundwater exceeded the CL of 10 µg/L at 24 of 34 wells sampled for metals in Fall 2023. These wells are located within and downgradient of former injection locations, where geochemical conditions in groundwater are reducing.

The most noticeable increase in arsenic concentrations in recent years is at Area 5 monitoring well G6M-97-05B and downgradient monitoring well XSA-12-97X (Appendix F). These locations are within and downgradient of 2019 injections performed near G6M-97-05B (Figure 12). These increases point to the importance of balancing the desire to perform additional carbon injections to treat CVOCs with the desire to maintain groundwater quality in the downgradient area of the plume. The maximum concentration of dissolved arsenic detected in Fall 2023 was 680 µg/L at monitoring well G6M-02-11X (Area 5). In wells where conditions are primarily oxidizing and/or

locations that are outside the areas where ERD has resulted in reducing geochemical conditions in the aquifer, the Fall 2023 dissolved arsenic concentrations were generally non-detect or below the CL of 10 µg/L (Figure 12).

Once ERD injection events are suspended, it will take time for the aquifer to return to conditions that will allow for re-attenuation of arsenic. Conditions were generally oxic (DO above 1 mg/L and positive ORP) before injections were initiated at the site and are expected to return to those conditions gradually once injections are suspended. The dissolved arsenic and iron concentrations in site groundwater typically correlate with a greater than 100:1 ratio of iron to arsenic, indicating that both metals are being solubilized at the site. These metals re-precipitate when the groundwater migrates to oxic zones and when the groundwater within the treatment zone returns to oxidizing conditions. Under these conditions, arsenic attenuation occurs as iron oxides precipitate and the arsenic sorbs to and co-precipitates with the particulate iron.

3.4 Quality Assurance/Quality Control

Eurofins Savannah of Savannah, Georgia, was the primary contract laboratory used for the analysis of groundwater samples for the Spring and Fall 2023 monitoring events. This laboratory is compliant with the United States Department of Defense (DoD) and Department of Energy (DOE) Consolidated Quality Systems Manual for Environmental Laboratories, Version 5.4 (Quality Systems Manual; DoD and DOE 2021) under the DoD National Environmental Laboratory Accreditation Program (certification #L2463, expires September 22, 2024) and holds current National Environmental Laboratory Accreditation Program accreditation for all applicable analytical methods.

As part of the 2023 monitoring events, quality assurance/quality control samples were collected to confirm that the data quality objectives were met for the field sampling and laboratory analysis. Field duplicate samples were collected during monitoring events to evaluate field precision at the rate of 10% (one per 10 samples). Matrix spike (MS)/matrix spike duplicate (MSD) sample pairs were also submitted at a rate of 5% (one per 20 samples) to evaluate matrix effects on analytical precision and accuracy. Trip blank samples were submitted with VOC samples to assess the potential for contamination during sampling and shipping.

Data validation was completed on all laboratory deliverables by Laboratory Data Consultants, Inc. of Carlsbad, California. The analytical results from the 2023 monitoring events were reviewed and evaluated for data acceptability in accordance with the USEPA Region 1 Environmental Data Review Program Guidance (USEPA 2018), the QAPP (S-A JV 2020a), and the DoD General Data Validation Guidelines (DoD 2019). The method requirements from the Quality Systems Manual (QSM) Version 5.4 (DoD and DOE 2021) and the USEPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846 (USEPA 2014) were also used as supplemental information.

The data validation reports for the 2023 monitoring events are presented in Appendix C; a summary of quality control exceedances noted during data validation is also included in Appendix C. Appropriate qualifiers, if needed, have been added to the 2023 analytical data in the project database and are included in Tables 6 and 7 and Appendix C. Some values were J-qualified (analyte detected at estimated concentration) or UJ-qualified (analyte not detected, laboratory reporting limit is estimated) due to quality control exceedances. Sample results that were qualified as estimated (UJ/J) are usable with caution. The 2,2-dichloropropane results for six monitoring wells, one trip blank, and one field duplicate were qualified as rejected (R) due to gross exceedances in the continuing calibration verification results; these results are not usable. The data from the Spring and Fall 2023 monitoring events are acceptable for use, with the exception of the eight sample results that were rejected; a detailed summary is included in Appendix C.

3.5 Laboratory and Field Corrective Actions

There were no major laboratory or field corrective actions required in 2023. Laboratory analyses were performed in general compliance with the precision, accuracy, representativeness, completeness, comparability, and sensitivity requirements listed in the QAPP (S-A JV 2020a). Standard analytical practices and method requirements were followed, and the laboratory was determined to be performing properly. Although some results required qualification, as described in Section 3.4, useable analyte results are reported for nearly 100% of samples from the 2023 monitoring events, with the exception of the eight sample results that were rejected for one VOC as discussed above.

4 Remedial System Update

CVOC trends in monitoring wells sampled in Spring and Fall 2023 indicate that complete dechlorination is occurring across the site, with improvements in groundwater quality observed at most monitoring wells over time (Appendix E). Elevated concentrations of TOC (greater than 10 mg/L) remain in some wells within and adjacent to 2017, 2018, and 2019 injection areas, and elevated methane concentrations (greater than 500 µg/L) in site groundwater indicate that geochemical conditions remain conducive to complete reductive dechlorination of CVOCs. In addition, the presence of ethene and ethane throughout site groundwater indicates that complete reductive dechlorination of CVOCs to harmless gases is occurring. Based on the 2023 data and as recommended in memoranda to the USEPA and Massachusetts Department of Environmental Protection (S-A JV 2020b, 2021a), previous ERD injections are still effective and PCE concentrations are below the historical target level of 100 µg/L at all wells; therefore, additional ERD injections are not recommended in Spring 2024. The overall remedial system configuration and approach at the site will continue to be evaluated over time to achieve optimum remedial performance.

5 Land-Use Control Monitoring

Land-use controls (LUCs) are a key component of the ROD (USEPA 2004) and Remedial Action Work Plan (RAWP; Arcadis 2005) for AOC 50 and were developed to restrict or prevent potential human exposure to groundwater COCs at the site. The RAWP outlined the implementation plan for LUCs at the site. LUCs are implemented in the north plume, the source area, and the CVOC plume. LUCs in the form of institutional controls are necessary to restrict land and groundwater use at the site to mitigate unacceptable risks to human health until the site is suitable for unrestricted use and unlimited exposure.

The objectives of the LUCs for the site are imposed through legal mechanisms that establish environmental use restrictions and controls to limit activities that would interfere with the operation of the remedy. The legal mechanisms are enforced through incorporation of lease provisions into deeds and permits and through negotiations and agreements with local towns and developers. Any proposed actions that affect the property must consider the following ROD requirements:

- Provide continued access to treatment transects and monitoring wells and access to install additional injection or monitoring wells, if necessary
- Coordinate construction plans with the BCT to facilitate ongoing remediation and future access to plume areas
- No groundwater extraction or injection for any purpose
- Coordinate construction plans for modifications to stormwater systems with the BCT.

The RAWP established the LUC objectives for each area. The objectives for all areas are:

- Restricting potential residential and/or commercial/industrial receptors from ingesting contaminated groundwater
- Restricting groundwater pumping and/or stormwater discharge/recharge to avoid drawing the contaminated groundwater from the source area
- Limiting construction in specified areas over the contaminated groundwater that would interfere with the operation of the remedy and providing access to the site for the monitoring and remediation.

Additional objectives for the source area include:

- Protecting commercial/industrial workers from inhaling vapors released from groundwater used as “open” process water
- Preventing potential construction/occupation of residential dwellings, schools, and childcare facilities and inhalation of vapors released from groundwater to indoor air.

The deed notices provided at the time of property transfer to Tom Eagle of the USFWS, Jeffrey Woodle of Groton Ayer Realty Trust, and Roy Herzig of MassDevelopment inform each owner of their property use restrictions. These restrictions are reinforced annually; copies of the LUC reinforcement letters are included in Appendix G.

The September 2007 Addendum to the Real Property Master Plan included supplemental information on LUCs established under BRAC and Comprehensive Environmental Response, Compensation, and Liability Act programs that are applicable to Area G (Regional Training Site Maintenance), as well as for three other deeded areas located at the DRFTA. A copy of the Real Property Master Plan is included in Appendix G.

Property inspections and interviews with stakeholders are conducted annually to verify compliance with LUC objectives. Annual LUC compliance reports are prepared and include a summary of the interviews and inspections and identify any deficiencies to the site controls. The annual evaluation addresses whether the use restrictions and controls were communicated in the deed(s), whether the owners and state and local agencies were notified of the use restrictions and controls affecting the property, and whether use of the property has conformed to such restrictions and controls. The AOC 50 annual LUC inspection and interview results are included in Appendix G.

Monitoring activities performed for the 2023 reporting period included a review of the documentation and records, on-site inspections, and annual LUC interviews with property owners.

5.1 On-Site Inspections

LUCs were verified during an annual physical inspection of the site. The physical inspection included the checking for the following:

- Any signs of increased exposure potential to the public from groundwater contaminants
- Any evidence that groundwater extraction wells had been installed at the site
- Any evidence of site use changes
- Any site access issues related to monitoring and remediation activities.

The site was inspected by S-A JV field personnel on November 28, 2023 (Appendix G). There were no issues encountered related to site access for monitoring and remediation activities during the 2023 physical site inspection.

5.2 LUC Interview

Interviews were conducted in January and February 2024 with each property owner, manager, or other designee familiar with “day-to-day” activities of the property. During the interviews, the S-A JV inquired about the following:

- The owner’s familiarity regarding LUCs imposed upon the property and documentation of these controls
- Sources of water used at the property
- Proposed plans for property sale, future development, construction, or demolition activities at the site.

As summarized in Appendix G, each interviewee (Neil Angus of the Devens Enterprise Commission, Anne-Marie Dowd and Meg Delorier of MassDevelopment, Tom Eagle of the USFWS, and Jeffrey Woodle of Groton Ayer Realty Trust) stated that no change had occurred on the property during 2023.

5.3 LUC Monitoring Summary

Results of the annual compliance monitoring indicate that no breaches to the LUCs were evident and corrective actions were not necessary because there were no changes in site conditions or land use. There are no proposed changes to inspection and reporting frequency at this time.

6 Summary and Conclusions

LTM and O&M activities were successfully performed in 2023 in accordance with the LTMMP (KGS 2017) and QAPP (S-A JV 2020a). LTM activities included semi-annual groundwater sampling, with 10 monitoring wells sampled in Spring 2023 and 37 monitoring wells sampled in Fall 2023 (36 wells for VOC analysis and one for dissolved metals only). No additional maintenance activities were performed in 2023. The LUCs were verified through inspection and interviews.

While some CL exceedances of PCE remain, the following has been observed as a result of performing ERD at the site since 2004:

- The total area of exceedances of the CL (5 µg/L) for PCE has decreased dramatically in size, from an estimated 15.5 acres in 2004 (Figure 6) to approximately 1.5 acres in 2023 (Figure 7).

The maximum observed PCE concentration observed at source area well G6M-07-02X has decreased by three orders of magnitude, from 14,000 µg/L in 2014 to non-detect in Fall 2023.

- The number of wells exceeding the CL for PCE has decreased from 35 out of 41 wells (85%) in 2004 to 3 out of 36 wells (8.3%) in 2023.

The goal of the most recent injections performed in July/August 2019 was to provide an electron donor to support/enhance reductive dechlorination within the source area and within locations where concentrations of PCE were greater than 100 µg/L. As a result of performing these injections, significant reductions in PCE concentrations were observed at several locations from 2019 (estimated 7.74 acres of exceedances of the CL for PCE; KGS 2020) to 2023 (estimated 1.5 acres of exceedances of the CL for PCE). The generation of advanced daughter products, including ethene/ethane, provides evidence that complete reductive dechlorination and an overall reduction in CVOC contaminant mass continues to occur at the site. In addition, geochemical conditions in these areas (TOC greater than 10 mg/L, methane concentrations greater than 500 µg/L, pH between 6 and 8 SU, DO levels less than 1 mg/L, and negative ORP values) indicate that conditions throughout 2023 remained suitable to support the transformation of CVOCs into harmless by-products.

Arsenic concentrations in groundwater exceeded the CL of 10 µg/L at 24 of 34 wells sampled for metals in Fall 2023. These wells are located within and downgradient of former injection locations, where geochemical conditions in groundwater are reducing. In wells where conditions are primarily oxidizing and/or not impacted by the ERD injections, the dissolved arsenic concentrations are generally non-detect or below the CL, which indicates that once ERD injection events are suspended, the aquifer will eventually return to conditions that will allow for natural re-attenuation of arsenic.

The following activities will be performed in 2024 based on the conclusions drawn from this report:

- Continue LUC monitoring, O&M, and groundwater sampling in accordance with the LTMMP (KGS 2017).
- Continue to monitor metals (in particular, arsenic) concentrations and distribution throughout the CVOC plume.
- Evaluate if there is a suitable well replacement for well XSA-12-97X, where the pump is stuck in the well above the water table and can't be sampled.

The need for additional injection activities will be reevaluated following analysis of data from the 2024 monitoring events. The need for future substrate injections to promote ERD will continue to entail assessment of attenuation of the substrate injection in previous years and assessment of rebound of the COCs of interest (PCE, TCE, etc.). If additional injection activities are required to sustain reductive dechlorination in specific areas, injection of

additional carbon will be implemented with DPT and/or use of injection wells. At that time, an LTMMP addendum will be provided to the USEPA and Massachusetts Department of Environmental Protection outlining the type of organic carbon substrate to be injected, sample depths, and injection volumes.

7 References

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Tables

Table 2
Groundwater Level Data, Spring 2023
2023 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

SERES Engineering & Services, LLC
ARCADIS a joint venture

Well ID	Area	Date	Well Screen Interval (ft bgs)	MPE (NAVD88)	DTW (ft below MPE)	GW Elevation (NAVD88)
G6M-02-08X	Area 1	06/05/2023	60-70	224.23	12.00	212.23
G6M-04-09X	Area 1	06/05/2023	55-65	242.66	30.65	212.01
G6M-04-11X	Area 1	06/05/2023	35-45	229.47	18.21	211.26
G6M-04-15X	Area 1	06/05/2023	70-80	253.23	41.22	212.01
G6M-04-22X	Area 1	06/05/2023	74-84	255.89	44.78	211.11
G6M-04-31X	Area 1	06/05/2023	68-78	255.91	44.65	211.26
G6M-13-05X	Area 1	06/05/2023	45-55	225.00	13.16	211.84
G6M-13-06X	Area 1	06/05/2023	50-60	224.37	12.83	211.54
G6M-95-19X	Area 1	06/05/2023	48-58	223.89	11.36	212.53
G6M-95-20X	Area 1	06/05/2023	18-23	224.61	11.87	212.74
G6M-96-22A	Area 1	06/05/2023	40-50	217.59	4.34	213.25
G6M-96-22B	Area 1	06/05/2023	65.5-70.5	217.56	4.79	212.77
G6M-04-10A	Area 1/FDSA	06/05/2023	30-40	224.02	11.56	212.46
G6M-04-10X	Area 1/FDSA	06/05/2023	52-62	224.22	12.25	211.97*
G6M-04-13X	Area 1/FDSA	06/05/2023	30-40	225.88	13.39	212.49
G6M-07-02X	Area 1/FDSA	06/05/2023	23-28	225.10	12.52	212.58
G6M-02-01X	Area 2	06/05/2023	80-95	262.44	52.92	209.52
G6M-04-01X	Area 2	06/05/2023	82-92	261.15	51.05	210.10
G6M-04-03X	Area 2	06/05/2023	85-95	264.29	55.42	208.87
G6M-07-01X	Area 2	06/05/2023	78-98	262.10	52.39	209.71
G6P-97-05X	Area 2	06/05/2023	33-43	236.72	24.58	212.14
G6M-03-07X	Area 3	06/13/2023	80-90	262.66	55.40	207.26
G6M-04-02X	Area 3	06/05/2023	80-90	266.55	58.54	208.01
G6M-04-04X	Area 3	06/05/2023	94-104	262.66	56.50	206.16
G6M-13-03X	Area 3	06/05/2023	80-90	264.37	56.58	207.79
G6M-02-03X	Area 4	06/05/2023	90-105	263.03	57.14	205.89
G6M-02-04X	Area 4	06/05/2023	90-105	264.92	59.10	205.82
G6M-02-13X	Area 4	06/05/2023	110-120	263.61	58.16	205.45
G6M-13-02X	Area 4	06/05/2023	115-125	263.82	58.43	205.39
G6M-97-28X	Area 4	06/05/2023	100-105	265.69	59.94	205.75
G6M-02-06X	Area 5	06/05/2023	55-65	209.73	6.23	203.50
G6M-02-07X	Area 5	06/05/2023	30-40	210.72	7.53	203.19
G6M-02-11X	Area 5	06/05/2023	125-135	263.93	59.31	204.62
G6M-02-12X	Area 5	06/05/2023	125-135	262.46	57.97	204.49
G6M-03-08X	Area 5	06/05/2023	125-140	258.60	54.31	204.29
G6M-03-09X	Area 5	06/05/2023	125-140	258.89	54.56	204.33
G6M-03-10X	Area 5	06/05/2023	120-135	265.81	61.36	204.45
G6M-04-05X	Area 5	06/05/2023	100-110	258.13	53.84	204.29
G6M-04-06X	Area 5	06/05/2023	95-105	263.97	60.45	203.52
G6M-04-07X	Area 5	06/05/2023	120-130	263.82	60.40	203.42
G6M-13-01X	Area 5	06/05/2023	125-135	266.82	62.40	204.42
G6M-13-04X	Area 5	06/05/2023	125-135	266.31	61.55	204.76
G6M-18-01	Area 5	06/05/2023	116-126	264.24	59.32	204.92
G6M-18-02	Area 5	06/05/2023	123.95-133.95	268.33	64.70	203.63
G6M-97-05B	Area 5	06/05/2023	130-135	268.12	64.01	204.11
MW-3	Area 5	06/05/2023	126-136	265.75	60.93	204.82
MW-7	Area 5	06/05/2023	125-135	264.97	61.30	203.67*

Table 2
Groundwater Level Data, Spring 2023
2023 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

Well ID	Area	Date	Well Screen Interval (ft bgs)	MPE (NAVD88)	DTW (ft below MPE)	GW Elevation (NAVD88)
XSA-12-95X	Area 5	06/05/2023	121-131	269.63	65.35	204.28
XSA-12-96X	Area 5	06/05/2023	121-131	269.99	65.37	204.62
XSA-12-97X	Area 5	06/13/2023	121-131	270.78	67.80	202.98*
XSA-12-98X	Area 5	06/05/2023	60-70	209.61	6.42	203.19
G6M-04-08X	Nashua River	06/05/2023	NA	209.55	5.90	203.65**
G6M-04-14X	Nashua River	06/05/2023	80-90	210.61	7.27	203.34**

Notes:
1. * Well not used in contouring due to different vertical head compared to surrounding wells with a similar screen interval.
2. ** Well not used for contouring; well located on the opposite side of the Nashua River.

Acronyms and Abbreviations:
bgs - below ground surface
DTW = depth to water
FDSA = former drum storage area
ft = foot
GW = groundwater
ID = identification
MPE = measuring point elevation
NA = not available
NAVD88 = North American Vertical Datum of 1988

Table 3
Groundwater Level Data, Fall 2023
2023 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

SERES Engineering & Services, LLC
ARCADIS
a joint venture

Well ID	Area	Date	Well Screen Interval (ft bgs)	MPE (NAVD88)	DTW (ft below MPE)	GW Elevation (NAVD88)
G6M-02-08X	Area 1	10/16/2023	60-70	224.23	9.44	214.79
G6M-04-09X	Area 1	10/16/2023	55-65	242.66	38.10	204.56
G6M-04-11X	Area 1	10/16/2023	35-45	229.47	15.97	213.50
G6M-04-15X	Area 1	10/16/2023	70-80	253.23	38.82	214.41
G6M-04-22X	Area 1	10/16/2023	74-84	255.89	42.48	213.41
G6M-04-31X	Area 1	10/16/2023	68-78	255.91	41.34	214.57
G6M-13-05X	Area 1	10/16/2023	45-55	225.00	10.88	214.12
G6M-13-06X	Area 1	10/16/2023	50-60	224.37	10.25	214.12
G6M-95-19X	Area 1	10/16/2023	48-58	223.89	8.88	215.01
G6M-95-20X	Area 1	10/16/2023	18-23	224.61	9.29	215.32
G6M-96-22A	Area 1	10/16/2023	40-50	217.59	NM	NM***
G6M-96-22B	Area 1	10/16/2023	65.5-70.5	217.56	NM	NM***
G6M-04-10A	Area 1/FDSA	10/16/2023	30-40	224.02	9.06	214.96
G6M-04-10X	Area 1/FDSA	10/16/2023	52-62	224.22	9.89	214.33
G6M-04-13X	Area 1/FDSA	10/16/2023	30-40	225.88	10.74	215.14
G6M-07-02X	Area 1/FDSA	10/16/2023	23-28	225.10	9.99	215.11
G6M-02-01X	Area 2	10/16/2023	80-95	262.44	50.83	211.61
G6M-04-01X	Area 2	10/16/2023	82-92	261.15	48.89	212.26
G6M-04-03X	Area 2	10/16/2023	85-95	264.29	53.25	211.04
G6M-07-01X	Area 2	10/16/2023	78-98	262.10	50.27	211.83
G6P-97-05X	Area 2	10/16/2023	33-43	236.72	23.30	213.42
G6M-03-07X	Area 3	10/16/2023	80-90	262.66	53.01	209.65
G6M-04-02X	Area 3	10/16/2023	80-90	266.55	56.35	210.20
G6M-04-04X	Area 3	10/16/2023	94-104	262.66	54.30	208.36
G6M-13-03X	Area 3	10/16/2023	80-90	264.37	54.41	209.96
G6M-02-03X	Area 4	10/16/2023	90-105	263.03	53.98	209.05
G6M-02-04X	Area 4	10/16/2023	90-105	264.92	56.98	207.94
G6M-02-13X	Area 4	10/16/2023	110-120	263.61	56.10	207.51
G6M-13-02X	Area 4	10/16/2023	115-125	263.82	56.46	207.36
G6M-97-28X	Area 4	10/16/2023	100-105	265.69	57.80	207.89
G6M-02-06X	Area 5	10/16/2023	55-65	209.73	4.93	204.80
G6M-02-07X	Area 5	10/16/2023	30-40	210.72	6.21	204.51
G6M-02-11X	Area 5	10/16/2023	125-135	263.93	57.43	206.50
G6M-02-12X	Area 5	10/16/2023	125-135	262.46	56.18	206.28
G6M-03-08X	Area 5	10/16/2023	125-140	258.60	52.52	206.08
G6M-03-09X	Area 5	10/16/2023	125-140	258.89	52.77	206.12
G6M-03-10X	Area 5	10/16/2023	120-135	265.81	59.56	206.25
G6M-04-05X	Area 5	10/16/2023	100-110	258.13	52.11	206.02
G6M-04-06X	Area 5	10/16/2023	95-105	263.97	59.00	204.97
G6M-04-07X	Area 5	10/16/2023	120-130	263.82	58.61	205.21
G6M-13-01X	Area 5	10/16/2023	125-135	266.82	60.69	206.13
G6M-13-04X	Area 5	10/16/2023	125-135	266.31	59.82	206.49
G6M-18-01	Area 5	10/16/2023	116-126	264.24	57.25	206.99
G6M-18-02	Area 5	10/16/2023	123.95-133.95	268.33	62.95	205.38
G6M-97-05B	Area 5	10/17/2023	130-135	268.12	62.45	205.67
MW-3	Area 5	10/16/2023	126-136	265.75	59.00	206.75
MW-7	Area 5	10/16/2023	125-135	264.97	58.20	206.77
XSA-12-95X	Area 5	10/16/2023	121-131	269.63	64.61	205.02
XSA-12-96X	Area 5	10/16/2023	121-131	269.99	66.47	203.52*
XSA-12-97X	Area 5	10/16/2023	121-131	270.78	66.34	204.44
XSA-12-98X	Area 5	10/18/2023	60-70	209.61	5.90	203.71

Table 3
Groundwater Level Data, Fall 2023
2023 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

Well ID	Area	Date	Well Screen Interval (ft bgs)	MPE (NAVD88)	DTW (ft below MPE)	GW Elevation (NAVD88)
G6M-04-08X	Nashua River	10/16/2023	NA	209.55	4.74	204.81**
G6M-04-14X	Nashua River	10/16/2023	80-90	210.61	5.84	204.77**

Notes:
* Well not used in contouring due to different vertical head compared to surrounding wells with a similar screen interval.
** Well not used for contouring; well located on the opposite side of the Nashua River.
*** Well in standing water; well was not gauged.

Acronyms and Abbreviations:
bgs = below ground surface
DTW = depth to water
FDSA = former drum storage area
ft = foot
GW = groundwater
ID = identification
MPE = measuring point elevation
NA = not available
NAVD88 = North American Vertical Datum of 1988
NM = not measured

Table 4
Monitoring Wells Sampled in 2023
2023 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

Location	Well ID	Sampling Rationale	Well Screen Interval (feet bgs)	Well Screen Elevation (NAVD88)	Sample Parameters	Sampling Frequency	LTMMP Sampling Requirements (if different)
Area 1	G6M-02-08X	Monitor VOC, metal, and geochemistry downgradient of ERD injections.	60-70	162.4-152.4	Full Suite	Annual	--
	G6M-04-09X		55-65	187.66-177.66	VOCs and Metals	Annual	--
	G6M-04-11X		35-45	193.67-183.67	VOCs and Metals	Biennial	--
	G6M-04-15X		70-80	181.65-171.65	VOCs and Metals	Annual	--
	G6M-04-22X		74-84	181.09-171.09	VOCs and Metals	Biennial	--
	G6M-04-31X		68-78	187.11-177.11	VOCs and Metals	Biennial	--
	G6M-13-05X		45-55	177.5-167.5	Full Suite	Semiannual	--
	G6M-13-06X		50-60	171.87-161.87	Full Suite	Annual	--
	G6M-95-19X		48-58	174-164	VOCs	Annual	--
	G6M-95-20X		18-23	204.2-199.2	VOCs and Metals	Annual	--
Area 1 / FDSA	G6M-04-10A	Monitor VOCs, metals, and geochemistry in the source area.	30-40	192.22-182.22	Full Suite	Semiannual	--
	G6M-04-10X		52-62	170.12-160.12	VOCs	Annual	--
	G6M-04-13X		30-40	193.91-183.91	VOCs	Annual	--
	G6M-07-02X		23-28	200.33-195.33	Full Suite	Semiannual	--
Area 2	G6M-02-01X	Monitor VOC and metal trends downgradient of ERD injections.	80-95	183-168	VOCs and Metals	Annual	--
	G6M-04-01X		82-92	179.69-169.69	VOCs and Metals	Annual	--
	G6M-04-03X	Monitor COC trends and metals where COC cleanup levels were achieved.	85-95	179.81-169.81	Full Suite	Annual	VOCs and metals only
	G6M-07-01X	Determine level of VOCs, metals, and geochemistry from a well that was last sampled in 2013.	78-98	184.1-164.1	Full Suite	Annual	Well not included in LTMMP, USEPA requested sampling of this injection well in 2020 and additional samples were collected in 2021 through 2023
Area 3	G6M-03-07X	Monitor VOCs, metals, and geochemistry downgradient of ERD injections.	80-90	182.8-172.8	Full Suite	Annual	--
	G6M-04-02X	Monitor VOC, metal, and geochemistry trends within the Area 3 plume.	80-90	183.69-174.18	Full Suite	Semiannual	--
	G6M-04-04X	Monitor VOC and metal trends downgradient of ERD injections.	94-104	158.87-168.87	VOCs and Metals	Annual	--
	G6M-13-03X	Monitor VOCs.	80-90	183.57-173.57	VOCs	Biennial	--
Area 4	G6M-02-04X	Monitor VOC and metal trends downgradient of Area 3.	90-105	172.8-157.8	VOCs and Metals	Annual	--
	G6M-02-13X	Monitor VOC and metal trends within the former portion of the southwest plume in Area 4.	110-120	154-144	VOCs and Metals	Annual	--
	G6M-13-02X	Monitor VOC, metal, and geochemistry trends within the Area 4 portion of the southwest plume.	115-125	148.82-138.82	Full Suite	Semiannual	--
	G6M-97-28X	Monitor VOC, metal, and geochemistry trends within the Area 4 portion of the southwest plume.	100-105	164.89-159.89	VOCs and Metals	Annual	Metals only, annual

Table 4
Monitoring Wells Sampled in 2023
2023 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

Location	Well ID	Sampling Rationale	Well Screen Interval (feet bgs)	Well Screen Elevation (NAVD88)	Sample Parameters	Sampling Frequency	LTMMP Sampling Requirements (if different)
Area 5	G6M-02-06X	Monitor VOCs and metals along east bank of the Nashua River.	55-65	153.5-143.5	VOCs and Metals	Annual	--
	G6M-02-07X	Monitor VOCs and metals along east bank of the Nashua River.	30-40	178.7-168.7	VOCs and Metals	Annual	--
	G6M-02-11X	Monitor VOC and metal trends within the former portion of the southwest plume in Area 5.	125-135	139.2-129.2	VOCs and Metals	Annual	--
	G6M-02-12X	Monitor VOC and metal trends within the former portion of the southwest plume in Area 5.	125-135	136.66-126.66	VOCs and Metals	Biennial	--
	G6M-03-08X	Monitor VOC and metal trends within the former portion of the southwest plume in Area 5.	125-140	132.80-117.80	VOCs and Metals	Biennial	--
	G6M-03-10X	Monitor VOC and metal trends within the former portion of the southwest plume in Area 5.	120-135	143.4-128.4	VOCs and Metals	Annual	--
	G6M-04-05X	Monitor VOC trends within the former portion of the southwest plume in Area 5.	100-110	157.33-147.33	VOCs	Biennial	--
	G6M-04-06X	Monitor VOCs and metals in the shallow overburden within the southwestern portion of the plume in Area 5.	95-105	167.27-157.27	VOCs and Metals	Annual	--
	G6M-04-07X	Monitor VOCs and metals with in Area 5.	120-130	141.88-131.88	VOCs and Metals	Semiannual	--
	G6M-13-01X	Monitor VOCs, metals, and geochemistry along the western border of the plume in Area 5.	125-135	139.35-129.35	Full Suite	Semiannual	--
	G6M-13-04X	Monitor VOCs and metals downgradient and adjacent to ERD injection wells.	125-135	138.81-128.81	VOCs and Metals	Annual	--
	G6M-97-05B	Monitor VOCs, metals, and geochemistry within the Area 5 plume.	130-135	135.94-130.94	Full Suite	Semiannual	--
	MW-3	Monitor VOC and metal trends within the former portion of the southwest plume in Area 5.	126-136	137.9-127.9	VOCs and Metals	Annual	--
	MW-7	Monitor VOC and metal trends within the former portion of the southwest plume in Area 5.	125-135	138.9-128.9	VOCs and Metals	Annual	--
	XSA-12-95X	Monitor VOCs and metals along the downgradient portion of the plume before the Nashua River at Area 5.	121-131	146.63-136.63	VOCs and Metals	Annual	--
	XSA-12-96X	Monitor VOCs and metals along the downgradient portion of the plume before the Nashua River at Area 5.	121-131	147.02-137.02	Full Suite	Semiannual	VOCs and metals only
	XSA-12-97X	Monitor VOCs and metals along the downgradient portion of the plume before the Nashua River at Area 5.	121-131	148.16-138.16	VOCs and Metals	Annual	--
	XSA-12-98X		60-70	146.64-136.64	VOCs and Metals	Annual	--
Nashua River	G6M-04-14X	Monitor VOCs and metals along the west bank of the Nashua River.	80-90	130.76-120.76	VOCs and Metals	Annual	--

Table 4
Monitoring Wells Sampled in 2023
2023 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

Location	Well ID	Sampling Rationale	Well Screen Interval (feet bgs)	Well Screen Elevation (NAVD88)	Sample Parameters	Sampling Frequency	LTMMP Sampling Requirements (if different)

Notes:
1. Semiannual locations are sampled in the spring and fall; annual and biennial locations are sampled in the fall only.
2. "Metals" analyses include dissolved arsenic, iron, and manganese.
3. "Full Suite" analyses include VOCs, metals, nitrate/nitrite, sulfate, sulfide, alkalinity (fall only), methane, ethane, ethene, and total organic carbon.
4. Field parameters include pH, dissolved oxygen, oxidation-reduction potential, specific conductivity, turbidity, and temperature.

Acronyms and Abbreviations:
bgs = below ground surface
COC = contaminant of concern
ERD = enhanced reductive dechlorination
FDSA = former drum storage area
ID = identification
LTMMP = Long-Term Maintenance and Monitoring Plan (KOMAN Government Solutions, LLC 2017)
NAVD88 = North American Vertical Datum of 1988
TOC = total organic carbon
USEPA = United States Environmental Protection Agency
VOC = volatile organic compound

Reference:
KOMAN Government Solutions, LLC. 2017. Final Long-Term Monitoring and Maintenance Plan (LTMMP) Area of Contamination 50, Former Fort Devens Army Installation, Devens, Massachusetts. November.

Table 5
Sample Preparation and Analysis Methods, Containers, Holding Times, and Preservation
2023 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

Parameter	Analytical Method	Analytes	Sample Container	Preservative	Holding Time
Organic					
Volatile Organic Compounds	SW8260B	Target Compound List	3 x 40-mL VOA vials with Teflon® septa screw caps; no headspace	HCl to pH < 2; 4° ± 2°C	14 Days
Dissolved Gases	RSK-175	Methane, Ethane, and Ethene	3 x 40-mL VOA vials	HCl to pH < 2; 4°± 2°C	14 Days
Metals					
Dissolved Metals (field filtered)	SW6010B/ 6020A (As)	Arsenic, Iron, and Manganese	1 x 250-mL polyethylene	HNO_3 to pH < 2; 4° ± 2°C	180 Days
Wet Chemistry					
Alkalinity	SM2320B	None	1 x 250-mL polyethylene	Store at 4° ± 2°C	14 Days
Nitrate/Nitrite	E353.2	Nitrate/Nitrite (as Nitrogen)	1 x 500-mL amber glass	H_2SO_4 to pH < 2; 4° ± 2°C	28 Days
Sulfate	SW9056A	Sulfate	1 x 500-mL polyethylene	Store at 4° ± 2°C	28 Days
Sulfide	SW9034	Sulfide	1 x 250-mL polyethylene	Zinc acetate + NaOH to pH > 9, 4 °C	7 Days
Total Organic Carbon	SW9060A	TOC	1 x 250-mL amber glass	H_2SO_4 to pH < 2; 4° ± 2°C	28 Days

Acronyms and Abbreviations:
°C = degree Celsius
H_2SO_4 = sulfuric acid
HCl = hydrochloric acid
HNO_3 = nitric acid
mL = milliliter
NaOH = sodium hydroxide
TOC = total organic carbon
VOA = volatile organic analysis

Table 6
Groundwater Analytical Results, Spring 2023
2023 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

		Area	Area 1	Area 1/FDSA			Area 3	Area 4	Area 5				
		Location	G6M-13-05X	G6M-04-10A	G6M-07-02X	G6M-07-02X	G6M-04-02X	G6M-13-02X	G6M-04-07X	G6M-13-01X	G6M-97-05B	XSA-12-96X	XSA-12-97X
		Sample ID	G6M-13-05X-SPR23	G6M-04-10A-SPR23	G6M-07-02X-SPR23	G6M-DUP01-SPR23	G6M-04-02X-SPR23	G6M-13-02X-SPR23	G6M-04-07X-SPR23	G6M-13-01X-SPR23	G6M-97-05B-SPR23	XSA-12-96X-SPR23	XSA-12-97X-SPR23
Analyte	Units	Cleanup Goal[1]	06/07/2023	06/06/2023	06/06/2023	06/06/2023	6/7/2023	06/07/2023	06/06/2023	06/06/2023	06/06/2023	06/06/2023	06/15/2023
Dissolved Gases													
Ethane	µg/L	--	18	6.5	6.70 J	1.60 J	6	0.760 U	0.550 J	0.760 U	27	---	---
Ethene	µg/L	--	8.1	3.8	7.60 J	1.90 J	21	0.71 U	0.480 J	0.470 J	7	---	---
Methane	µg/L	--	4,000	18,000	16,000	15,000	20,000 J	780	230	750	34,000	---	---
General Chemistry													
Alkalinity, Total (as CaCO3)	mg/L	--	61	170	95	93	130	93	250	81	160	---	---
Nitrate-Nitrite (as N)	mg/L	10,000	0.12	0.0250 UJ	0.0250 U	0.0250 U	0.0250 UJ	0.0250 U	0.0250 U	0.0250 U	0.0250 U	---	---
Sulfate	mg/L	--	1.00 U	0.490 J	1.00 U	1.00 U	6	8.8	6.2	15	1	---	---
Sulfide	mg/L	--	1.50 UJ	1.50 U	1.50 U	1.50 U	1.50 UJ	1.50 UJ	1.50 U	1.50 U	1.50 U	---	---
Total Organic Carbon	mg/L	--	3.7	18.0 J	100	99	4.7	2	0.990 J	0.970 J	18	---	---
Metals													
Arsenic	µg/L	10	**160**	**380 J**	7.3	7.3	**73**	**20**	6.9	**230**	**320**	1.80 J	**83**
Iron	µg/L	3,129	**72,000**	**81,000**	**100,000**	**110,000**	**35,000**	600	1,200	**6,000**	**77,000**	2,300	**4,100**
Manganese	µg/L	1,460	**6,400**	810	**3,300**	**3,400**	**12,000**	**12,000**	**3,700**	**3,900**	**7,600**	**5,700**	**4,400**
Volatile Organic Compounds													
1,1,1,2-Tetrachloroethane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,1,1-Trichloroethane	µg/L	--	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
1,1,2,2-Tetrachloroethane	µg/L	--	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,1,2-Trichloroethane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,1-Dichloroethane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,1-Dichloroethene	µg/L	7	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,1-Dichloropropene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2,3-Trichlorobenzene	µg/L	--	2.00 U	2.00 U	2.00 U	2.00 U	2.00 UJ	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
1,2,3-Trichloropropane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	µg/L	--	2.00 U	2.00 U	2.00 U	2.00 U	2.00 UJ	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
1,2,4-Trimethylbenzene	µg/L	--	0.470 J	0.980 J	1.10 J	1.10 J	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dibromo-3-chloropropane	µg/L	--	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
1,2-Dibromoethane (EDB)	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichlorobenzene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichloroethane	µg/L	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichloroethene	µg/L	--	14	0.710 J	0.940 J	0.980 J	61.0 J	12	68	0.610 J	0.580 J	8.6	1.00 U
1,2-Dichloropropane	µg/L	5	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
1,3,5-Trimethylbenzene	µg/L	--	1.00 U	0.470 J	0.350 J	0.360 J	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,3-Dichlorobenzene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,3-Dichloropropane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,4-Dichlorobenzene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
2,2-Dichloropropane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
2-Butanone (MEK)	µg/L	--	20.0 U	20.0 U	20.0 U	20.0 U	20.0 UJ	20.0 U	20.0 U	20.0 U	20.0 U	20.0 U	20.0 U
2-Chlorotoluene	µg/L	--	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
2-Hexanone	µg/L	--	10.0 U	10.0 U	10.0 U	10.0 U	10.0 UJ	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
4-Chlorotoluene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
4-Methyl-2-pentanone (MIBK)	µg/L	--	10.0 U	10.0 U	10.0 U	10.0 U	10.0 UJ	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Acetone	µg/L	--	5.00 J	10.0 U	10.0 UJ	10.0 UJ	10.0 UJ	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Benzene	µg/L	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	0.300 J	**5.5**
Bromobenzene	µg/L	--	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Bromochloromethane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Bromodichloromethane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Bromoform	µg/L	--	2.00 U	2.00 U	2.00 UJ	2.00 UJ	2.00 UJ	2.00 U	2.00 UJ	2.00 UJ	2.00 UJ	2.00 UJ	2.00 U
Bromomethane	µg/L	--	10.0 U	10.0 U	10.0 UJ	10.0 UJ	10.0 UJ	10.0 U	10.0 UJ	10.0 UJ	10.0 UJ	10.0 UJ	10.0 U
Carbon disulfide	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Carbon tetrachloride	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
Chlorobenzene	µg/L	--	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U

Table 6
Groundwater Analytical Results, Spring 2023
2023 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

		Area	Area 1	Area 1/FDSA			Area 3	Area 4	Area 5				
		Location	G6M-13-05X	G6M-04-10A	G6M-07-02X	G6M-07-02X	G6M-04-02X	G6M-13-02X	G6M-04-07X	G6M-13-01X	G6M-97-05B	XSA-12-96X	XSA-12-97X
		Sample ID	G6M-13-05X-SPR23	G6M-04-10A-SPR23	G6M-07-02X-SPR23	G6M-DUP01-SPR23	G6M-04-02X-SPR23	G6M-13-02X-SPR23	G6M-04-07X-SPR23	G6M-13-01X-SPR23	G6M-97-05B-SPR23	XSA-12-96X-SPR23	XSA-12-97X-SPR23
Analyte	Units	Cleanup Goal[1]	06/07/2023	06/06/2023	06/06/2023	06/06/2023	6/7/2023	06/07/2023	06/06/2023	06/06/2023	06/06/2023	06/06/2023	06/15/2023
Chloroethane	µg/L	--	10.0 U	10.0 U	10.0 U	10.0 U	10.0 UJ	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Chloroform	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Chloromethane	µg/L	--	2.00 U	2.00 U	2.00 U	2.00 U	2.00 UJ	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
cis-1,2-Dichloroethene	µg/L	70	14	0.710 J	0.940 J	0.980 J	60.0 J	11	67	0.610 J	0.580 J	5.3	1.00 U
cis-1,3-Dichloropropene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Dibromochloromethane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Dibromomethane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Dichlorodifluoromethane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Ethylbenzene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
Hexachlorobutadiene	µg/L	--	0.500 U	0.500 U	0.210 J	0.210 J	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Isopropylbenzene (Cumene)	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
m,p-Xylene	µg/L	--	1.00 U	1.00 U	0.540 J	0.540 J	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Methyl tert-butyl ether (MTBE)	µg/L	--	2.00 U	2.00 U	2.00 U	2.00 U	2.00 UJ	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Methylene chloride	µg/L	5	10.0 U	10.0 U	10.0 U	10.0 U	10.0 UJ	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
n-Butylbenzene	µg/L	--	2.00 U	2.00 U	0.530 J	0.530 J	2.00 UJ	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
n-Propylbenzene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Naphthalene	µg/L	--	3.20 J	5.00 U	4.30 J	4.50 J	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
o-Xylene	µg/L	--	0.290 J	1.00 U	0.270 J	0.290 J	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
p-Cymene (p-Isopropyltoluene)	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
sec-Butylbenzene	µg/L	--	2.00 U	2.00 U	2.00 U	2.00 U	2.00 UJ	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Styrene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
tert-Butylbenzene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Tetrachloroethene (PCE)	µg/L	5	**39**	1.00 U	1.00 U	1.00 U	**26.0 J**	1.00 U	2.1	1.00 U	1.00 U	1.70 J	1.00 U
Toluene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
trans-1,2-Dichloroethene	µg/L	--	0.420 J	1.00 U	1.00 U	1.00 U	0.510 J	0.650 J	0.660 J	1.00 U	1.00 U	3.3	1.00 U
trans-1,3-Dichloropropene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Trichloroethene (TCE)	µg/L	5	**6.3**	0.500 U	0.500 U	0.500 U	**50.0 J**	**7.2**	**20**	0.310 J	0.500 U	4.4	0.280 J
Trichlorofluoromethane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
Vinyl acetate	µg/L	--	2.00 UJ	2.00 UJ	2.00 U	2.00 U	2.00 UJ	2.00 UJ	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Vinyl chloride	µg/L	2	**27**	1.00 U	1.00 U	1.00 U	**9.30 J**	0.450 J	**11**	1.00 U	1.00 U	**4.2**	1.00 U
Xylenes, Total	µg/L	--	1.00 U	1.00 U	0.810 J	0.830 J	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Field Parameters													
pH	SU	--	6.63	6.37	6.47	6.47	5.8	6.38	6.24	6.59	6.86	6.54	7.23
Specific Conductivity	mS/cm	--	1.02	0.7	0.43	0.43	1.42	1.61	0.61	0.88	1.02	1.27	0.76
Turbidity	NTU	--	7.68	11.4	21.3	21.3	15.1	1.74	1.25	3.1	6.41	138	147
Dissolved Oxygen	mg/L	--	0.7	0.61	0.69	0.69	0.01	0.72	0.29	1.08	0.56	0.37	1.3
Temperature	°C	--	13	13.3	13.9	13.9	14.1	21.2	11.6	16.1	13.7	12.8	17.7
Oxidation Reduction Potential	mV	--	-135	-129	-115	-115	-142	20.1	12.4	-36.3	-154	-91.3	-179

Notes:

[1]Area of Contamination (AOC) 50 cleanup levels are from the Record of Decision (United States Environmental Protection Agency 2004).

Shading = Above Cleanup Goal

--- = not sampled

Acronyms and Abbreviations:

°C = degree Celsius
µg/L = microgram per liter
µS/cm = microSiemen per centimeter
FDSA = former drum storage area
ID = identification
J = The analyte was positively identified, the quantitation is an estimation.
mg/L = milligram per liter
mV = millivolt
NTU = nephelometric turbidity unit
SU = standard unit
U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the limit of detection.
UJ = The analyte was not detected and was reported as less than the limit of detection. However, the associated numerical value is approximate.

Reference:

United States Environmental Protection Agency. 2004. Final Record of Decision, AOC 50, Devens, Massachusetts. January 22.
Available online at: https://semspub.epa.gov/work/01/201577.pdf.

Table 7
Groundwater Analytical Results, Fall 2023
2023 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

		Area	Area 1								Area 1/FDSA					Area 2				Area 3			
		Location	G6M-04-09X	G6M-02-08X	G6M-04-15X	G6M-13-05X	G6M-13-06X	G6M-95-19X	G6M-95-20X	G6M-95-20X	G6M-04-10A	G6M-04-10X	G6M-07-02X	G6M-07-02X	G6M-04-13X	G6M-02-01X	G6M-04-01X	G6M-04-03X	G6M-07-01X	G6M-03-07X	G6M-04-02X	G6M-04-04X	G6M-04-04X
		Sample ID	G6M-04-09X-FAL23	G6M-02-08X-FAL23	G6M-04-15X-FAL23	G6M-13-05X-FAL23	G6M-13-06X-FAL23	G6M-95-19X-FAL23	G6M-95-20X-FAL23	AOC50-DUP04-FAL23	G6M-04-10A-FAL23	G6M-04-10X-FAL23	AOC50-DUP03-FAL23	G6M-07-02X-FAL23	G6M-04-13X-FAL23	G6M-02-01X-FAL23	G6M-04-01X-FAL23	G6M-04-03X-FAL23	G6M-07-01X-FAL23	G6M-03-07X-FAL23	G6M-04-02X-FAL23	G6M-04-04X-FAL23	AOC50-DUP01-FAL23
Analyte	**Units**	**Cleanup Goal[1]**	10/19/2023	10/19/2023	10/19/2023	10/17/2023	10/17/2023	10/18/2023	10/17/2023	10/17/2023	10/19/2023	10/18/2023	10/18/2023	10/18/2023	10/18/2023	10/19/2023	10/20/2023	10/18/2023	10/20/2023	10/19/2023	10/20/2023	10/23/2023	10/23/2023
Dissolved Gases																							
Ethane	µg/L	--	4.8	9.5	---	26	15	---	---	---	6.2	---	1.7	1.7	---	0.400 J	---	4.6	0.760 U	4	7.3	---	---
Ethene	µg/L	--	3.7	2.8	---	20	5.6	---	---	---	9.5	---	1.7	1.7	---	9	---	0.710 U	0.710 U	0.710 U	17	---	---
Methane	µg/L	--	26,000	29,000	---	23,000	24,000	---	---	---	18,000	---	14,000	14,000	---	19,000	---	33,000	41	25,000	26,000	---	---
General Chemistry																							
Alkalinity, Total (as CaCO3)	mg/L	--	150	41	---	64	260	---	---	---	200	---	80	81	---	130	---	140	49	150	120	---	---
Nitrate-Nitrite (as N)	mg/L	10,000	0.0250 U	0.0250 U	---	0.086 J	0.072 J	---	---	---	0.0250 UJ	---	0.0250 U	0.0250 U	---	0.0250 U	---	0.0230 J	1	0.0250 U	0.0250 U	---	---
Sulfate	mg/L	--	1.00 U	1.00 U	---	2.00 U	2.00 U	---	---	---	1.00 UJ	---	1.00 U	1.00 U	---	8	---	7.1	14	1.00 U	5.1	---	---
Sulfide	mg/L	--	1.70 U	1.70 U	---	--	--	---	---	---	1.60 U	---	1.70 U	1.60 U	---	1.80 U	---	1.80 U	1.70 U	1.70 U	1.70 U	---	---
Total Organic Carbon	mg/L	--	8.3	8.7	---	5.9	52	---	---	---	18	---	93	95	---	2.9	---	5.5	0.770 J	19	5.7	---	---
Metals																							
Arsenic	µg/L	10	**410**	**150**	**55**	**150**	**390**	---	8.5	9	**310**	---	**29**	**25**	---	**250**	**600**	**410**	1.60 J	**570**	**48**	**380**	**380**
Iron	µg/L	3,129	**83,000**	**23,000**	2,000	**70,000**	**180,000**	---	1,800	1,800	**85,000**	---	**88,000**	**93,000**	---	**19,000**	**33,000**	**50,000**	23.0 J	**99,000**	**24,000**	**62,000**	**59,000**
Manganese	µg/L	1,460	**5,400**	540	570	**6,000**	1,300	---	120	130	860	---	**2,700**	**2,800**	---	**1,900**	**8,100**	**3,900**	34	**2,300**	**13,000**	**15,000**	**15,000**
Volatile Organic Compounds																							
1,1,1,2-Tetrachloroethane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,1,1-Trichloroethane	µg/L	--	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
1,1,2,2-Tetrachloroethane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,1,2-Trichloroethane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,1-Dichloroethane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,1-Dichloroethene	µg/L	7	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,1-Dichloropropene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2,3-Trichlorobenzene	µg/L	--	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	4.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
1,2,3-Trichloropropane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	µg/L	--	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	4.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
1,2,4-Trimethylbenzene	µg/L	--	1.10 J	0.610 J	1.00 U	0.50 J	2.4	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	0.880 J	1.10 J	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dibromo-3-chloropropane	µg/L	--	5.00 UJ	5.00 UJ	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	10.0 U	5.00 UJ	5.00 UJ	5.00 U	5.00 U	5.00 UJ	5.00 UJ	5.00 UJ	5.00 U	5.00 UJ	5.00 UJ	5.00 U	5.00 U
1,2-Dibromoethane (EDB)	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichlorobenzene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichloroethane	µg/L	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichloroethene	µg/L	--	0.790 J	0.600 J	0.660 J	33	1.1 J	1.00 U	1.00 U	1.00 U	11	1.00 U	0.940 J	1.10 J	1.00 U	2.2	0.400 J	0.420 J	1.00 U	0.510 J	47	1.00 U	1.00 U
1,2-Dichloropropane	µg/L	5	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
1,3,5-Trimethylbenzene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	0.65 J	1.00 U	1.00 U	1.00 U	1.90 J	1.00 U	1.00 U	0.930 J	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,3-Dichlorobenzene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,3-Dichloropropane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,4-Dichlorobenzene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
2,2-Dichloropropane	µg/L	--	1.00 U	1.00 U	1.00 U	R	R	1.00 U	R	R	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
2-Butanone (MEK)	µg/L	--	20.0 U	20.0 U	20.0 U	20.0 U	7.7 J	20.0 UJ	20.0 U	20.0 U	40.0 UJ	20.0 U	20.0 U	20.0 UJ	20.0 UJ	20.0 U	20.0 U	20.0 U	20.0 UJ	20.0 U	20.0 U	20.0 UJ	20.0 UJ
2-Chlorotoluene	µg/L	--	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
2-Hexanone	µg/L	--	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	20.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	3.80 J	10.0 U	10.0 U
4-Chlorotoluene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
4-Methyl-2-pentanone (MIBK)	µg/L	--	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	20.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Acetone	µg/L	--	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	20.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	9.80 J	10.0 U	10.0 U
Benzene	µg/L	5	1.00 U	1.00 U	0.410 J	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Bromobenzene	µg/L	--	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Bromochloromethane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Bromodichloromethane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Bromoform	µg/L	--	2.00 U	2.00 U	2.00 U	2.00 UJ	2.00 UJ	2.00 U	2.00 UJ	2.00 UJ	4.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Bromomethane	µg/L	--	10.0 U	10.0 U	10.0 UJ	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	20.0 U	10.0 UJ	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Carbon disulfide	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 UJ	1.00 UJ	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ
Carbon Tetrachloride	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Chlorobenzene	µg/L	--	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Chloroethane	µg/L	--	10.0 UJ	10.0 UJ	10.0 UJ	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	20.0 U	10.0 UJ	10.0 UJ	10.0 U	10.0 U	10.0 UJ	10.0 UJ	10.0 UJ	10.0 U	10.0 U	10.0 UJ	10.0 UJ	10.0 U
Chloroform	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Chloromethane	µg/L	--	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	4.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
cis-1,2-Dichloroethene	µg/L	70	0.540 J	0.600 J	0.660 J	33	1.1 J	1.00 U	1.00 U	1.00 U	11	1.00 U	0.940 J	1.10 J	1.00 U	2	0.400 J	1.00 U	1.00 U	0.340 J	46	0.300 J	0.350 J
cis-1,3-Dichloropropene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Cumene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Dibromochloromethane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Dibromomethane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Dichlorodifluoromethane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Ethylbenzene	µg/L	--	0.500 U	0.500 U	0.500 U	0.24 J	0.97 J	0.500 U	0.500 U	0.500 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Hexachlorobutadiene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
m,p-Xylene	µg/L	--	1.00 U	1.00 U	1.00 U	0.55 J	0.65 J	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	0.780 J	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Methyl tert-butyl ether (MTBE)	µg/L	--	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	4.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Methylene chloride	µg/L	5	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	20.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
n-Butylbenzene	µg/L	--	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	4.00 U	2.00 U	2.00 U	1.10 J	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
n-Propylbenzene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	0.42 J	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Naphthalene	µg/L	--	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	10.0 U	5.00 U	3.50 J	3.20 J	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
o-Xylene	µg/L	--	1.00 U	1.00 U	1.00 U	0.34 J	0.53 J	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
p-Cymene (p-Isopropyltoluene)	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
sec-Butylbenzene	µg/L	--	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	4.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Styrene	µg/L	--	1.00 U	1.00 U	1.00 U	0.32 J	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
tert-Butylbenzene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Tetrachloroethene (PCE)	µg/L	5	1.00 U	1.00 U	1.80 J	**10**	1.00 U	1.00 J	0.48 J	0.49 J	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	**11**	1.00 U	**9.9**	1.00 U	1.00 U
Toluene	µg/L	--	1.00 U	1.00 U	1.00 U	0.37 J	6.6	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	0.450 J	1.00 U	1.00 U	1.00 U
trans-1,2-Dichloroethene	µg/L	--	1.00 U	1.00 U	1.00 U	0.49 J	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	0.620 J	1.00 U	1.00 U
trans-1,3-Dichloropropene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Trichloroethene (TCE)	µg/L	5	0.290 J	0.500 U	0.600 J	3.2	0.500 U	0.500 U	0.29 J	0.29 J	**9.4**	0.290 J	0.500 U	0.500 U	0.500 U	**6.3**	0.470 J	0.500 U	0.670 J	0.500 U	**26**	0.500 U	0.500 U
Trichlorofluoromethane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Vinyl acetate	µg/L	--	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	4.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Vinyl chloride	µg/L	2	0.770 J	1.00 U	1.00 U	**42**	0.54 J	1.00 U	1.00 U	1.00 U	**3**	1.00 U	1.00 U	1.00 U	1.00 U	1.40 J	1.00 U	1.00 U	1.00 U	1.00 U	**8.1**	1.00 U	1.00 U
Xylenes, Total	µg/L	--	1.00 U	1.00 U	1.00 U	0.89 J	1.2 J	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U	0.780 J	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Field Parameters																							
pH	pH Units	--	6.47	6.65	6.24	6.78	6.17	5.53	6.1	--	6.5	6.34	--	6.87	6.78	6.8	6.33	6.59	6.11	6.18	5.69	6.45	---
Specific Conductivity	mS/cm	--	0.55	0.19	0.5	0.784	0.973	2.99	0.159	--	0.36	1.96	--	0.28	0.11	2.66	3.57	1.19	1.15	0.77	1.31	1.83	---
Turbidity	NTU	--	15.2	3.76	9.2	3.69	2.95	0.72	2.12	--	1.36	0.09	--	2.56	3.31	16.2	15.2	600	13.2	143	181	3.2	---
Dissolved Oxygen	mg/L	--	0.85	0.27	1.14	0.45	0.36	4.17	0.68	--	0.33	1.49	--	0.45	0.51	0.8	1.07	0.13	1.26	0.2	0.16	0.13	---
Temperature	°C	--	13.6	13.9	11.8	13.1	13	12.8	13.4	--	15.5	16.1	--	12.2	13.8	15.3	13.8	14.4	13.6	15	13	15	---
Oxidation Reduction Potential	mV	--	-151	-65.3	-27.1	-74.4	-52.5	-0.2	-13.7	--	-67.4	-74.5	--	-90.2	-58.7	-160	-78.8	-135	125	-87	-41.8	-107	---

Table 7
Groundwater Analytical Results, Fall 2023
2023 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

		Area	Area 4					Area 5														Nashua River
		Location	G6M-02-04X	G6M-02-13X	G6M-13-02X	G6M-13-02X	G6M-97-28X	G6M-02-06X	G6M-02-07X	G6M-02-11X	G6M-03-10X	G6M-04-06X	G6M-04-07X	G6M-13-01X	G6M-13-04X	G6M-97-05B	MW-3	MW-7	XSA-12-95X	XSA-12-96X	XSA-12-98X	G6M-04-14X
		Sample ID	G6M-02-04X-FAL23	G6M-02-13X-FAL23	AOC50-DUP02-FAL23	G6M-13-02X-FAL23	G6M-97-28X-FAL23	G6M-02-06X-FAL23	G6M-02-07X-FAL23	G6M-02-11X-FAL23	G6M-03-10X-FAL23	G6M-04-06X-FAL23	G6M-04-07X-FAL23	G6M-13-01X-FAL23	G6M-13-04X-FAL23	G6M-97-05B-FAL23	MW-3-FAL23	MW-7-FAL23	XSA-12-95X-FAL23	XSA-12-96X-FAL23	XSA-12-98X-FAL23	G6M-04-14X-FAL23
Analyte	**Units**	**Cleanup Goal[1]**	**10/20/2023**	**10/23/2023**	**10/20/2023**	**10/20/2023**	**10/19/2023**	**11/02/2023**	**10/18/2023**	**10/17/2023**	**10/17/2023**	**11/02/2023**	**11/02/2023**	**10/18/2023**	**11/02/2023**	**10/17/2023**	**10/18/2023**	**10/18/2023**	**10/18/2023**	**11/13/2023**	**10/18/2023**	**10/18/2023**
Dissolved Gases																						
Ethane	µg/L	--	---	---	0.630 J	0.870 J	---	---	---	---	---	---	0.560 J	0.760 U	---	16	---	---	---	---	---	---
Ethene	µg/L	--	---	---	0.730 J	0.710 U	---	---	---	---	---	---	0.460 J	0.710 U	---	4.5	---	---	---	---	---	---
Methane	µg/L	--	---	---	6,200 J	8,800	---	---	---	---	---	---	160	680	---	31,000	---	---	---	---	---	---
General Chemistry																						
Alkalinity, Total (as CaCO3)	mg/L	--	---	---	96	83	---	---	---	---	---	---	250	79	---	120	---	---	---	---	---	---
Nitrate-Nitrite (as N)	mg/L	10,000	---	---	0.0250 U	0.0250 U	---	---	---	---	---	---	0.0250 U	0.0250 U	---	0.074 J	---	---	---	---	---	---
Sulfate	mg/L	--	---	---	8.4	8.9	---	---	---	---	---	---	5	14	---	2.00 U	---	---	---	---	---	---
Sulfide	mg/L	--	---	---	1.70 U	1.70 U	---	---	---	---	---	---	1.80 U	1.70 U	---	--	---	---	---	---	---	---
Total Organic Carbon	mg/L	--	---	---	1.10 J	1.00 J	---	---	---	---	---	---	1.30 J	1.5	---	4.1	---	---	---	---	---	---
Metals																						
Arsenic	µg/L	10	**530**	**310**	**25**	**27**	**120**	1.50 J	1.30 J	**680**	**310**	3.00 U	7.4	**220**	**480**	**140**	**650**	**570**	3.10 J	1.80 J	1.40 J	8.7
Iron	µg/L	3,129	**43,000**	**11,000**	1,300	1,500	**9,300**	50.0 U	50.0 U	**35,000**	**43,000**	50.0 U	1,200	**6,500**	**58,000**	**41,000**	**52,000**	**33,000**	1,500	2,000	160	50.0 U
Manganese	µg/L	1,460	**1,900**	**15,000**	**12,000**	**12,000**	**6,200**	5.00 U	14	**5,700**	1,300	88	**3,800**	**3,900**	**6,600**	**3,600**	**11,000**	**15,000**	**15,000**	**5,100**	14	4.90 J
Volatile Organic Compounds																						
1,1,1,2-Tetrachloroethane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,1,1-Trichloroethane	µg/L	--	0.500 U	0.500 U	0.500 U	0.500 U	---	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
1,1,2,2-Tetrachloroethane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,1,2-Trichloroethane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,1-Dichloroethane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,1-Dichloroethene	µg/L	7	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,1-Dichloropropene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2,3-Trichlorobenzene	µg/L	--	2.00 U	2.00 U	2.00 U	2.00 U	---	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
1,2,3-Trichloropropane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	µg/L	--	2.00 U	2.00 U	2.00 U	2.00 U	---	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
1,2,4-Trimethylbenzene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dibromo-3-chloropropane	µg/L	--	5.00 UJ	5.00 U	5.00 UJ	5.00 U	---	5.00 U	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 UJ	5.00 U	5.00 UJ	5.00 U	5.00 U
1,2-Dibromoethane (EDB)	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichlorobenzene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichloroethane	µg/L	5	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichloroethene	µg/L	--	1.00 U	1.00 U	8.50 J	13.0 J	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	74	0.600 J	1.00 U	3.9	1.00 U	0.560 J	2.8	11	1.00 U	1.00 U
1,2-Dichloropropane	µg/L	5	0.500 U	0.500 U	0.500 U	0.500 U	---	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
1,3,5-Trimethylbenzene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,3-Dichlorobenzene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,3-Dichloropropane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,4-Dichlorobenzene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
2,2-Dichloropropane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	R	R	1.00 U	1.00 U	1.00 U	1.00 U	R	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
2-Butanone (MEK)	µg/L	--	20.0 U	20.0 UJ	20.0 U	20.0 UJ	---	20.0 U	20.0 U	20.0 U	20.0 U	20.0 U	20.0 U	20.0 UJ	20.0 U	20.0 U	20.0 U	20.0 U	20.0 UJ	20.0 U	20.0 UJ	20.0 UJ
2-Chlorotoluene	µg/L	--	0.500 U	0.500 U	0.500 U	0.500 U	---	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
2-Hexanone	µg/L	--	10.0 U	10.0 U	10.0 U	10.0 U	---	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
4-Chlorotoluene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
4-Methyl-2-pentanone (MIBK)	µg/L	--	10.0 U	10.0 U	10.0 U	10.0 U	---	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Acetone	µg/L	--	10.0 U	10.0 U	10.0 U	10.0 U	---	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Benzene	µg/L	5	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Bromobenzene	µg/L	--	0.500 U	0.500 U	0.500 U	0.500 U	---	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Bromochloromethane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Bromodichloromethane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Bromoform	µg/L	--	2.00 U	2.00 U	2.00 U	2.00 U	---	2.00 U	2.00 U	2.00 UJ	2.00 UJ	2.00 U	2.00 U	2.00 U	2.00 U	2.00 UJ	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Bromomethane	µg/L	--	10.0 U	10.0 U	10.0 U	10.0 U	---	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 UJ	10.0 UJ	10.0 U	10.0 UJ	10.0 U	10.0 U
Carbon disulfide	µg/L	--	1.00 U	1.00 UJ	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Carbon Tetrachloride	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Chlorobenzene	µg/L	--	0.500 U	0.500 U	0.500 U	0.500 U	---	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Chloroethane	µg/L	--	10.0 UJ	10.0 U	10.0 UJ	10.0 U	---	10.0 U	10.0 UJ	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 UJ	10.0 UJ	10.0 U	10.0 U	10.0 U	10.0 U
Chloroform	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Chloromethane	µg/L	--	2.00 U	2.00 U	2.00 U	2.00 U	---	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
cis-1,2-Dichloroethene	µg/L	70	1.00 U	0.320 J	7.50 J	11.0 J	---	1.00 U	1.00 U	0.25 J	1.00 U	1.00 U	**74**	0.600 J	1.00 U	3.9	1.00 U	0.560 J	2.2	7.5	1.00 U	1.00 U
cis-1,3-Dichloropropene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Cumene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Dibromochloromethane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Dibromomethane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Dichlorodifluoromethane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Ethylbenzene	µg/L	--	0.500 U	0.500 U	0.500 U	0.500 U	---	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Hexachlorobutadiene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
m,p-Xylene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Methyl tert-butyl ether (MTBE)	µg/L	--	2.00 U	1.50 J	2.00 U	2.00 U	---	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Methylene chloride	µg/L	5	10.0 U	10.0 U	10.0 U	10.0 U	---	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
n-Butylbenzene	µg/L	--	2.00 U	2.00 U	2.00 U	2.00 U	---	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
n-Propylbenzene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Naphthalene	µg/L	--	5.00 U	5.00 U	5.00 U	5.00 U	---	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
o-Xylene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
p-Cymene (p-Isopropyltoluene)	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
sec-Butylbenzene	µg/L	--	2.00 U	2.00 U	2.00 U	2.00 U	---	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Styrene	µg/L	--	1.00 U	1.00 U	0.280 J	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
tert-Butylbenzene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Tetrachloroethene (PCE)	µg/L	5	1.00 U	1.00 U	0.440 J	1.00 U	---	1.00 U	0.440 J	1.00 U	1.00 U	1.00 U	4.7	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.50 J	4.8	1.00 J	0.350 J
Toluene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
trans-1,2-Dichloroethene	µg/L	--	1.00 U	1.00 U	1.00 J	1.40 J	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	0.610 J	3.7	1.00 U	1.00 U
trans-1,3-Dichloropropene	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Trichloroethene (TCE)	µg/L	5	0.500 U	0.500 U	3	3.3	---	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	**24**	0.420 J	0.500 U	0.98 J	0.500 U	0.500 U	0.740 J	**7.7**	0.500 U	0.500 U
Trichlorofluoromethane	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Vinyl acetate	µg/L	--	2.00 U	2.00 U	2.00 U	2.00 U	---	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Vinyl chloride	µg/L	2	1.00 U	1.00 U	0.540 J	0.580 J	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	**10**	1.00 U	0.770 J	1.1 J	1.00 U	1.00 U	1.00 U	**7.90 J**	1.00 U	1.00 U
Xylenes, Total	µg/L	--	1.00 U	1.00 U	1.00 U	1.00 U	---	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Field Parameters																						
pH	pH Units	--	6.89	6.6	--	6.18	6.6	7.2	7.17	6.9	6.93	6.36	6.25	6.49	6.58	6.75	6.58	6.14	6.53	6.48	7.48	7.54
Specific Conductivity	mS/cm	--	0.59	1.3	--	1.1	0.71	0.15	1.86	0.753	0.976	0.195	0.54	0.86	1.52	0.869	1.04	1.065	1.13	1.4	1.31	0.87
Turbidity	NTU	--	96.5	8.89	--	96.1	62.7	0.8	7.2	3.2	2.85	0.1	0.9	2.6	5.4	7.5	17.9	8.4	13.9	8.7	7.9	1.78
Dissolved Oxygen	mg/L	--	0.13	0.64	--	0.3	0.17	6.95	1	0.41	0.42	1.47	1.17	0.39	1.58	0.06	0.29	0.16	0.04	1.17	0.96	0.26
Temperature	°C	--	14	16	--	15.7	14.9	11.2	13.1	12.1	12.1	9.3	10.6	13.8	9.7	15.6	12.8	12.6	11.9	9.7	12.6	13.4
Oxidation Reduction Potential	mV	--	-160	-99.1	--	6.8	-98.4	51.1	18.2	-140.9	-130	184.5	3.2	-46.6	-119	-121.4	-115	-54.8	-30.9	-31.7	-217	-25.3

Table 7
Groundwater Analytical Results, Fall 2023
2023 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

		Area	Area 4					Area 5													Nashua River
		Location	G6M-02-04X	G6M-02-13X	G6M-13-02X	G6M-13-02X	G6M-97-28X	G6M-02-06X	G6M-02-07X	G6M-02-11X	G6M-03-10X	G6M-04-06X	G6M-04-07X	G6M-13-01X	G6M-13-04X	G6M-97-05B	MW-3	MW-7	XSA-12-95X	XSA-12-96X	XSA-12-98X	G6M-04-14X
		Sample ID	G6M-02-04X-FAL23	G6M-02-13X-FAL23	AOC50-DUP02-FAL23	G6M-13-02X-FAL23	G6M-97-28X-FAL23	G6M-02-06X-FAL23	G6M-02-07X-FAL23	G6M-02-11X-FAL23	G6M-03-10X-FAL23	G6M-04-06X-FAL23	G6M-04-07X-FAL23	G6M-13-01X-FAL23	G6M-13-04X-FAL23	G6M-97-05B-FAL23	MW-3-FAL23	MW-7-FAL23	XSA-12-95X-FAL23	XSA-12-96X-FAL23	XSA-12-98X-FAL23	G6M-04-14X-FAL23
Analyte	**Units**	**Cleanup Goal[1]**	**10/20/2023**	**10/23/2023**	**10/20/2023**	**10/20/2023**	**10/19/2023**	**11/02/2023**	**10/18/2023**	**10/17/2023**	**10/17/2023**	**11/02/2023**	**11/02/2023**	**10/18/2023**	**11/02/2023**	**10/17/2023**	**10/18/2023**	**10/18/2023**	**10/18/2023**	**11/13/2023**	**10/18/2023**	**10/18/2023**

Notes:

[1] Area of Contamination (AOC) 50 cleanup levels are from the Record of Decision (United States Environmental Protection Agency 2004).

Shading = Above Cleanup Goal

--- = not sampled

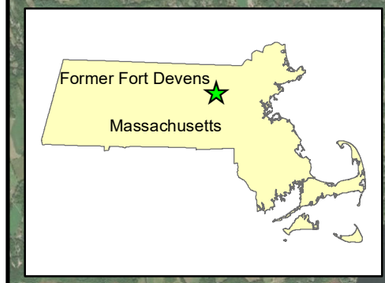
Acronyms and Abbreviations:

°C = degree Celsius
µg/L = microgram per liter
µS/cm = microSiemen per centimeter
FDSA = former drum storage area
ID = identification
J = The analyte was positively identified, the quantitation is an estimation.
mg/L = milligram per liter
mV = millivolt
NTU = nephelometric turbidity unit
U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the limit of detection.
UJ = The analyte was not detected and was reported as less than the limit of detection. However, the associated numerical value is approximate.
R = Qualified as rejected due to gross exceedances in the continuing calibration verification results; these results are not usable.

Reference:

United States Environmental Protection Agency. 2004. Final Record of Decision, AOC 50, Devens, Massachusetts. January 22.
Available online at: https://semspub.epa.gov/work/01/201577.pdf.

Figures



AOC 50

Former North Post

Former Main Post

Former Fort Devens Army Installation and Fort Devens Reserve Forces Training Area (South Post)

Downtown Ayer

Shirley

Middlesex County

Worcester County

George W Stanton Hwy

Lancaster

Harvard

N

Legend

- Former Fort Devens Boundary
- Area of Contamination (AOC)
- County Line
- Highway
- Major Road

0 1 2

Miles

Aerial Source: ESRI, ArcGIS Online, World Imagery

2023 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50
Former Fort Devens Army Installation
Devens, Massachusetts

Site Location

SERES Engineering & Services, LLC
ARCADIS
a joint venture

Figure 1



Aerial Source:
ESRI, ArcGIS Online, World Imagery

Legend

- Former Fort Devens Boundary
- Groundwater Flow Direction
- ERD LTM Well - Sampled Semi-Annually
- ERD LTM Well - Sampled Annually
- ERD LTM Well - Sampled Biennially
- Monitoring Well Converted to Injection Well
- Monitoring Well - Not Included in Approved LTM Network
- MicroWell - Sampled Annually
- MicroWell - Sampled Semi-Annually
- Injection Well Installed Prior to 01/2014
- Injection Well Installed 01/2014

Notes:
ERD = enhanced reductive dechlorination
IWS = in-well stripping
LTM = long-term monitoring

0 200 400
Feet

2023 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50
Former Fort Devens Army Installation
Devens, Massachusetts

Site Layout

SERES Engineering & Services, LLC
ARCADIS a joint venture

Figure 2

File: Figure 2 - AOC50 Site Layout.mxd



Legend

- Former Fort Devens Boundary
- ERD LTM Well - Sampled Semi-Annually
- ERD LTM Well - Sampled Annually
- ERD LTM Well - Sampled Biennially
- Monitoring Well Converted to Injection Well
- Monitoring Well - Not Included in Approved LTM Network
- Injection Well Installed Prior to 01/2014
- Vertical Groundwater Profiling Location
- Former Dry Well
- Floor Drain
- Floor Drain Piping
- Janitor Sink
- Building Footprint
- Former Feature

Notes:
ERD = enhanced reductive dechlorination
LTM = long-term monitoring
PCE = tetrachloroethene
SVE = soil vapor extraction

0 50 100
Feet

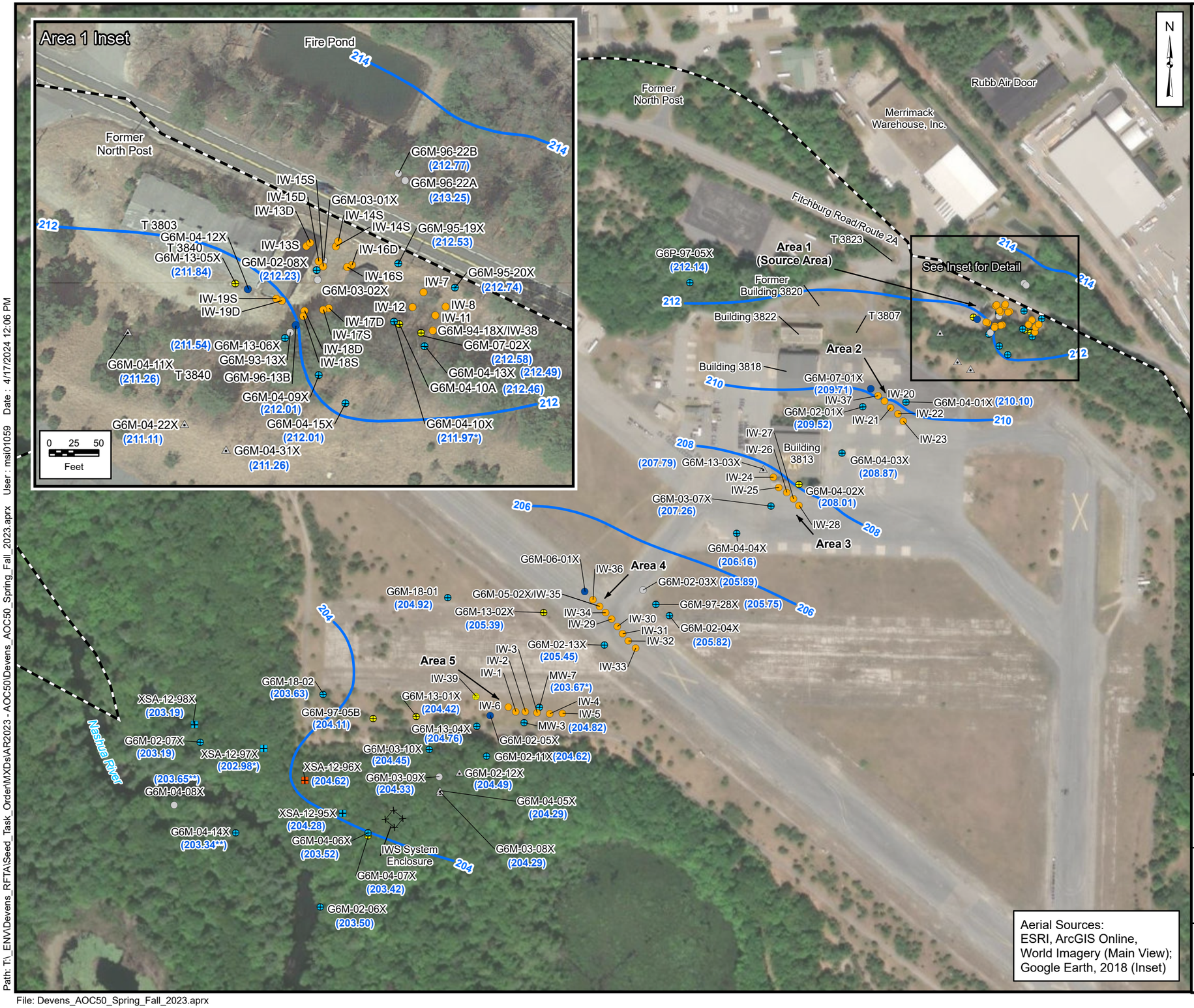
2023 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50
Former Fort Devens Army Installation
Devens, Massachusetts

Site Layout
Source Area

SERES Engineering & Services, LLC
ARCADIS a joint venture

Figure
3

File: Figure 3 - AOC50 Source Area.mxd



Legend

- Former Fort Devens Boundary
- ERD LTM Well - Sampled Semi-Annually
- ERD LTM Well - Sampled Annually
- ERD LTM Well - Sampled Biennially
- Monitoring Well Converted to Injection Well
- Monitoring Well - Not Included in Approved LTM Network
- MicroWell - Sampled Annually
- MicroWell - Sampled Semi-Annually
- Injection Well Installed Prior to 01/2014
- Injection Well Installed 01/2014
- Groundwater Contour (ft NAVD88) (Interval = 2 ft)
- Groundwater Contour (ft NAVD88) (Interval = 2 ft) (inferred)

Notes:
1. G6M-04-08X, G6M-04-10X, G6M-04-14X, XSA-12-97X, and MW-7 were not used in contouring.

ERD = enhanced reductive dechlorination
ft = feet
IWS = in-well stripping
LTM = long-term monitoring
NAVD88 = North American Vertical Datum of 1988
* Well not used in contouring due to different vertical head compared to surrounding wells with a similar screen interval.
** Well not used for contouring; wells located on the opposite side of the Nashua River.

Aerial Sources:
ESRI, ArcGIS Online, World Imagery (Main View); Google Earth, 2018 (Inset)

2023 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50
Former Fort Devens Army Installation
Devens, Massachusetts

Groundwater Contour Map - Spring 2023

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Figure 4

Path: T:_ENV\Devens_RFTA\Seed_Task_Order\MXDs\AR2023 - AOC50\Devens_AOC50_Spring_Fall_2023.aprx User : msi01059 Date : 4/17/2024 12:06 PM

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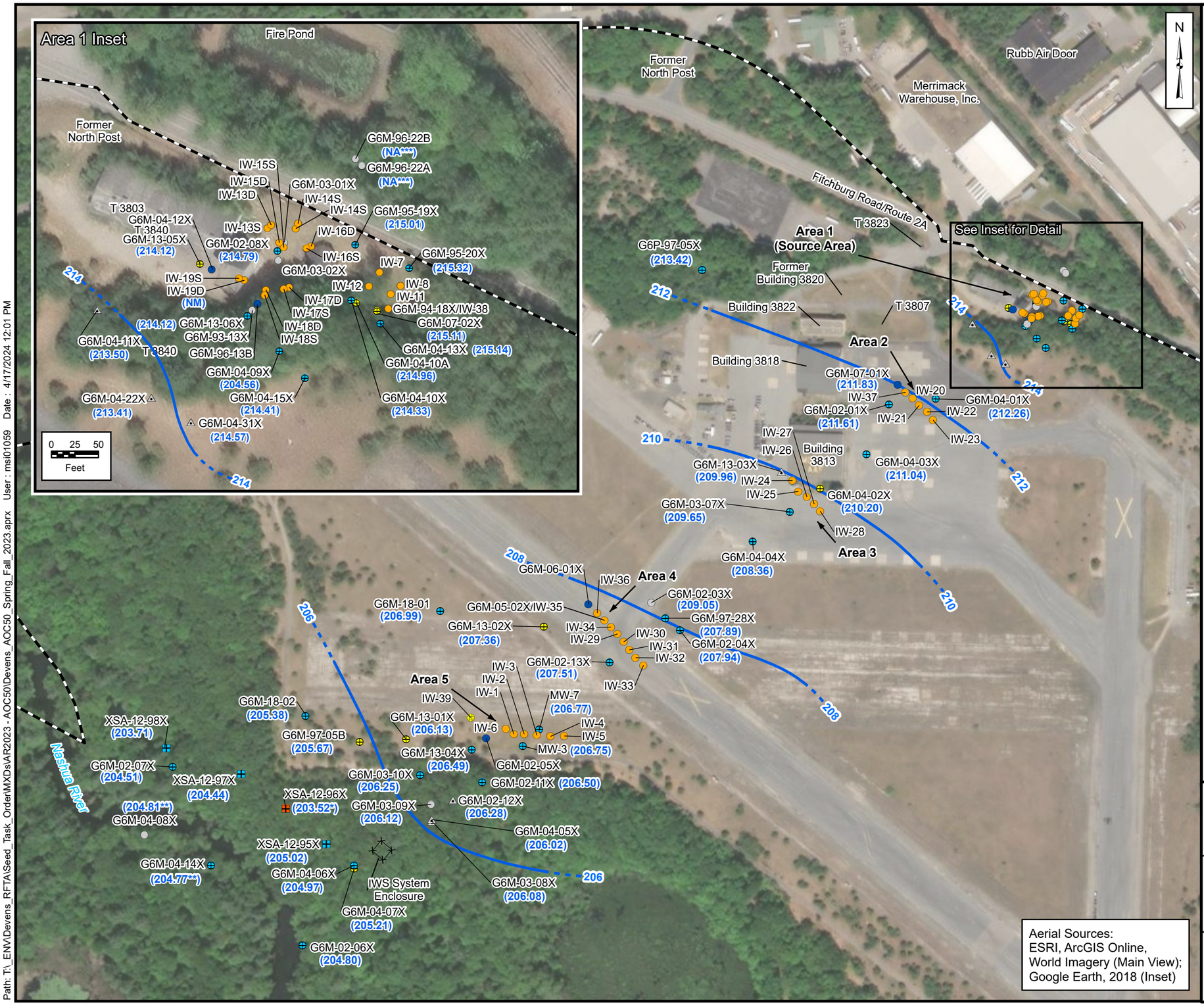

Legend

- Former Fort Devens Boundary
- ERD LTM Well - Sampled Semi-Annually
- ERD LTM Well - Sampled Annually
- ERD LTM Well - Sampled Biennially
- Monitoring Well Converted to Injection Well
- Monitoring Well - Not Included in Approved LTM Network
- MicroWell - Sampled Annually
- MicroWell - Sampled Semi-Annually
- Injection Well Installed Prior to 01/2014
- Injection Well Installed 01/2014
- Groundwater Contour (ft NAVD88) (Interval = 2 ft)
- Groundwater Contour (ft NAVD88) (Interval = 2 ft) (inferred)

Notes:
1. G6M-04-08X, G6M-04-14X, and XSA-12-96X were not used in contouring.

ERD = enhanced reductive dechlorination
ft = feet
IWS = in-well stripping
LTM = long-term monitoring
NAVD88 = North American Vertical Datum of 1988
* Well not used in contouring due to different vertical head compared to surrounding wells with a similar screen interval.
** Well not used for contouring; wells located on the opposite side of the Nashua River.
*** Well in standing water, not gauged.

Aerial Sources:
ESRI, ArcGIS Online, World Imagery (Main View); Google Earth, 2018 (Inset)

2023 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50
Former Fort Devens Army Installation
Devens, Massachusetts

Groundwater Contour Map - Fall 2023

SERES Engineering & Services, LLC
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Figure 5

Path: T:_ENV\Devens_RFTA\Seed_Task_OrderMXDs\AR2023 - AOC50\Devens_AOC50_Spring_Fall_2023.aprx User : msi01059 Date : 4/17/2024 12:01 PM

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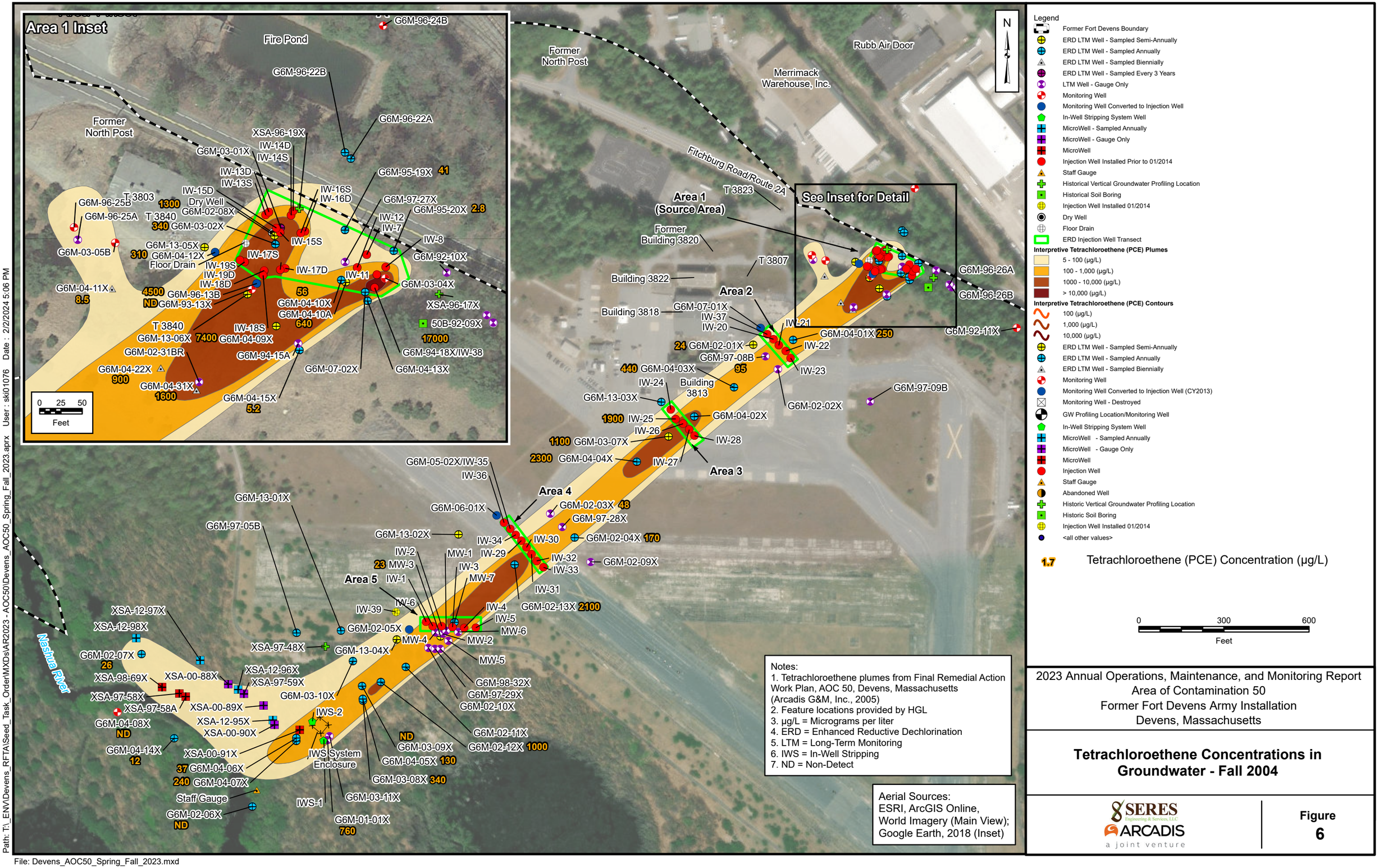

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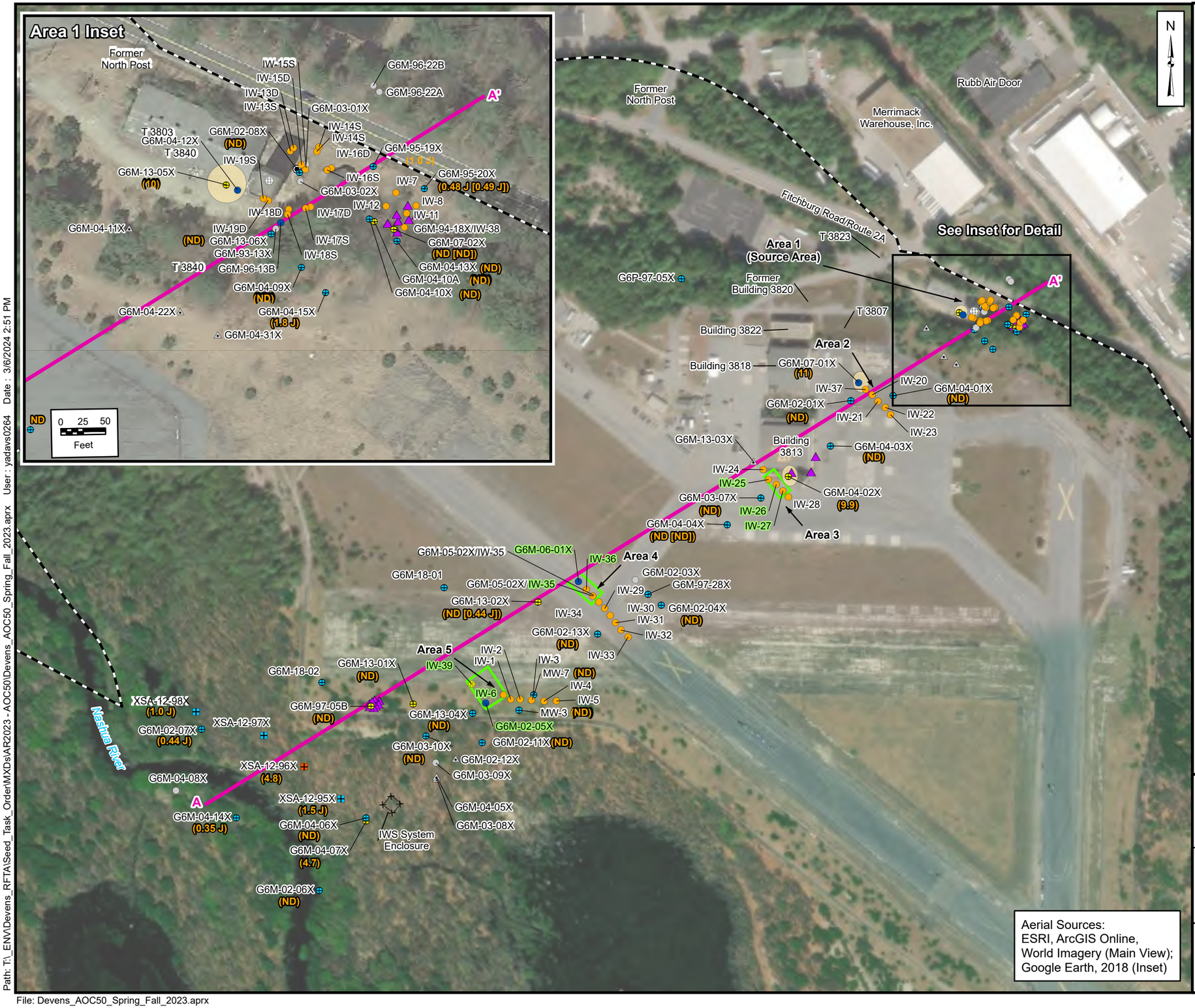

2023 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50
Former Fort Devens Army Installation
Devens, Massachusetts

Tetrachloroethene Concentrations in Groundwater - Fall 2023

SERES Engineering & Science, LLC
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Figure 7

Path: T:_ENV\Devens_RFTA\Seed_Task_Order\MXDs\AR2023 - AOC50\Devens_AOC50_Spring_Fall_2023.aprx User : yadavs0264 Date : 3/6/2024 2:51 PM

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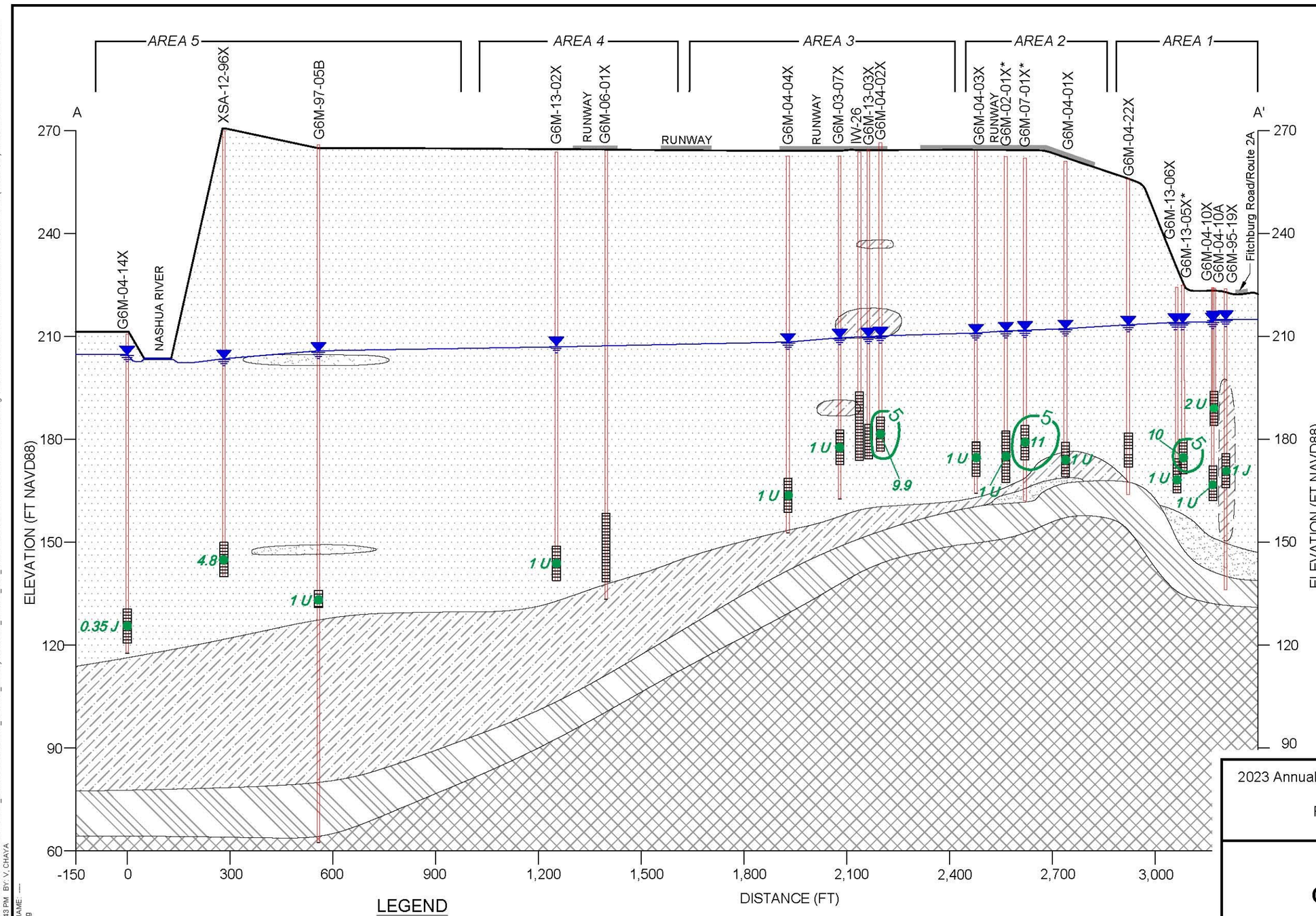
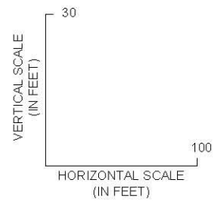


NOTES:

1. FT = Feet.
2. NAVD88 = NORTH North American Vertical Datum 1988.
3. J = The Analyte Was Detected At The Reported Concentration; The Value Is An Estimate.
4. U = The Analyte Was Not Detected
5. µg/L = Microgram Per Liter.
6. * = Well Location Projected Against Cross-Section Transect Ground Surface; Slight Differences Observed.
7. Lithology In Well G6m-95-19x Inferred Due To Projection Along Cross-Section Line; Silty Sand Was Not Observed In Logs For Adjacent Wells G6M-04-10X AND G6M-04-10A.
8. Where Stratigraphic Data Are Unavailable, Information Shown On Figure 48 Of The Final 2019 Annual Operations, Maintenance, And Monitoring Report By Koman Government Solutions, Llc. Has Been Used (KGS 2020).



LEGEND

- FINE SAND
- COARSE SAND
- SILTY SAND
- GLACIAL TILL
- BEDROCK
- GW ELEVATION (2023)
- WELL SCREEN INTERVAL
- BORING
- G6M-13-02X BORING/WELL IDENTIFICATION
- 14 TETRACHLOROETHENE SAMPLE CONCENTRATION (µg/L)
- 2023 TETRACHLOROETHENE CONTOUR (µg/L)

2023 Annual Operations, Manitenance, and Monitoring Report
Area of Contamination 50
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Devens, Massachusetts

CROSS-SECTION A-A'

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Figure 8

CITY: SYRACUSE, NY DIV/GROUP: IMDV DB: M.WASILEWSKI K.DAVIS, R. ALLEN LD: M.WASILEWSKI PIC: K.ABBOTT PM: J.GRAVENMIER TM: A.BAIRD LYR: ON=*;OFF=*REF*
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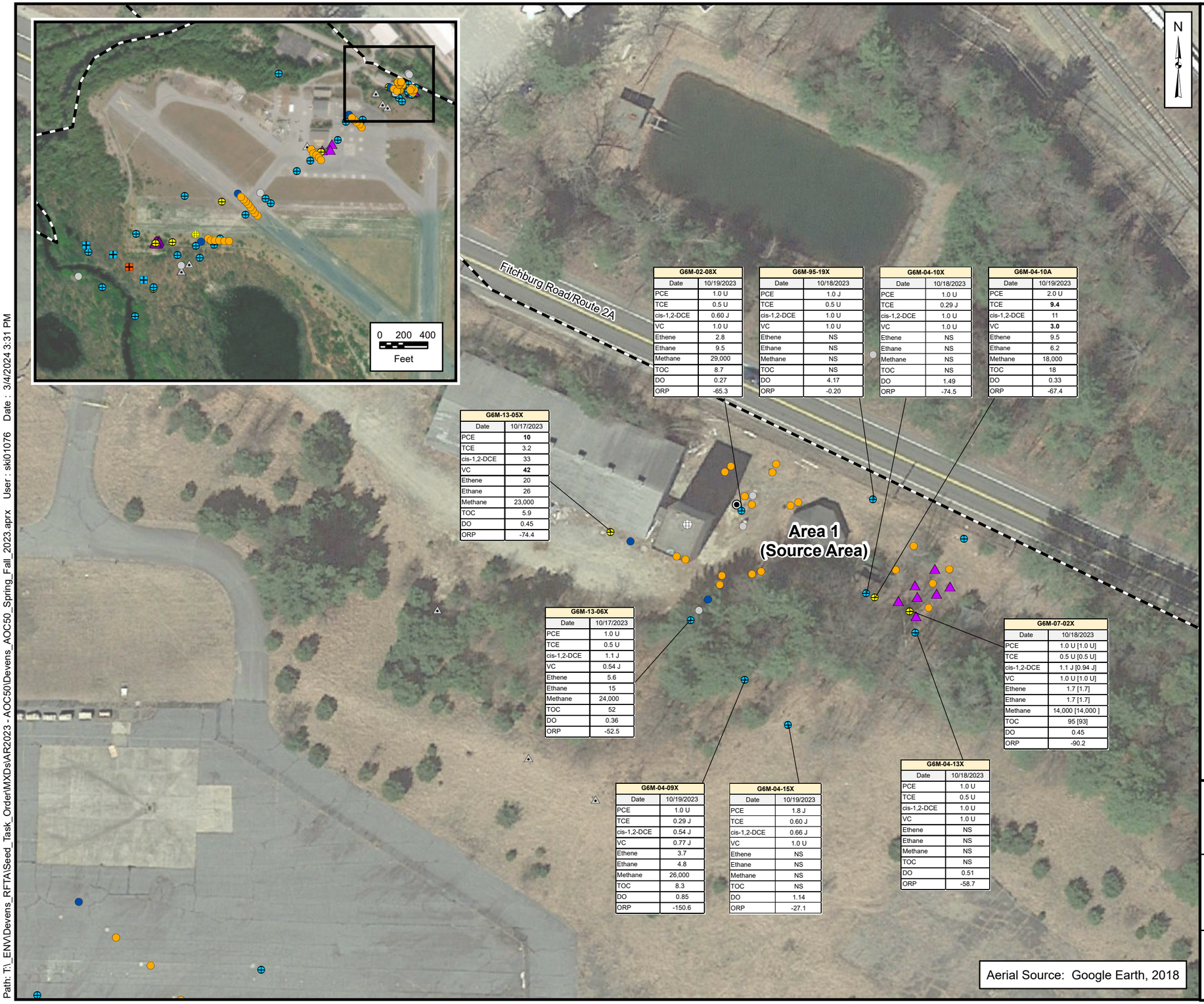

G6M-02-08X	
Date	10/19/2023
PCE	1.0 U
TCE	0.5 U
cis-1,2-DCE	0.60 J
VC	1.0 U
Ethene	2.8
Ethane	9.5
Methane	29,000
TOC	8.7
DO	0.27
ORP	-65.3

G6M-95-19X	
Date	10/18/2023
PCE	1.0 J
TCE	0.5 U
cis-1,2-DCE	1.0 U
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS
DO	4.17
ORP	-0.20

G6M-04-10X	
Date	10/18/2023
PCE	1.0 U
TCE	0.29 J
cis-1,2-DCE	1.0 U
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS
DO	1.49
ORP	-74.5

G6M-04-10A	
Date	10/19/2023
PCE	2.0 U
TCE	**9.4**
cis-1,2-DCE	11
VC	**3.0**
Ethene	9.5
Ethane	6.2
Methane	18,000
TOC	18
DO	0.33
ORP	-67.4

G6M-13-05X	
Date	10/17/2023
PCE	**10**
TCE	3.2
cis-1,2-DCE	33
VC	**42**
Ethene	20
Ethane	26
Methane	23,000
TOC	5.9
DO	0.45
ORP	-74.4

G6M-13-06X	
Date	10/17/2023
PCE	1.0 U
TCE	0.5 U
cis-1,2-DCE	1.1 J
VC	0.54 J
Ethene	5.6
Ethane	15
Methane	24,000
TOC	52
DO	0.36
ORP	-52.5

G6M-07-02X	
Date	10/18/2023
PCE	1.0 U [1.0 U]
TCE	0.5 U [0.5 U]
cis-1,2-DCE	1.1 J [0.94 J]
VC	1.0 U [1.0 U]
Ethene	1.7 [1.7]
Ethane	1.7 [1.7]
Methane	14,000 [14,000]
TOC	95 [93]
DO	0.45
ORP	-90.2

G6M-04-09X	
Date	10/19/2023
PCE	1.0 U
TCE	0.29 J
cis-1,2-DCE	0.54 J
VC	0.77 J
Ethene	3.7
Ethane	4.8
Methane	26,000
TOC	8.3
DO	0.85
ORP	-150.6

G6M-04-15X	
Date	10/19/2023
PCE	1.8 J
TCE	0.60 J
cis-1,2-DCE	0.66 J
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS
DO	1.14
ORP	-27.1

G6M-04-13X	
Date	10/18/2023
PCE	1.0 U
TCE	0.5 U
cis-1,2-DCE	1.0 U
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS
DO	0.51
ORP	-58.7

Legend

- Former Fort Devens Boundary
- ERD LTM Well - Sampled Semi-Annually
- ERD LTM Well - Sampled Annually
- ERD LTM Well - Sampled Biennially
- Monitoring Well Converted to Injection Well
- Monitoring Well - Not Included in Approved LTM Network
- MicroWell - Sampled Annually
- MicroWell - Sampled Semi-Annually
- Injection Well Installed Prior to 01/2014
- Injection Well Installed 01/2014
- Dry Well
- Floor Drain
- Geoprobe Injection Location - July/Aug. 2019

Notes:
1. All concentrations are in micrograms per liter (µg/L) except TOC (milligrams per liter [mg/L]), DO (mg/L) and ORP (millivolts [mv]).
2. J/UJ = The result is qualified as estimated (detect/nondetect).
3. U = The constituent was not detected above the given laboratory reporting limit.
4. NS = The analyte was not sampled for.
5. **BOLD** values indicate exceedances of the AOC 50 cleanup level.
6. [ ] = Results from duplicate sample.

cis-1,2-DCE = cis-1,2-dichloroethene
CVOC = chlorinated volatile organic compound
ERD = enhanced reductive dechlorination
LTM = long-term monitoring
PCE = tetrachloroethene
TCE = trichloroethene
TOC = total organic carbon
VC = vinyl chloride
DO = dissolved oxygen
ORP = oxidation reduction potential

0 100 200
Feet

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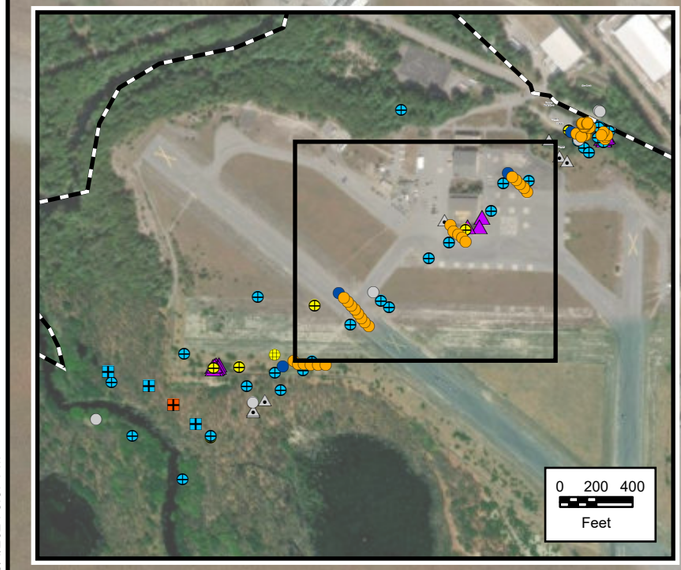
Devens, Massachusetts

CVOC and Biogeochemical Data - Fall 2023, Area 1

SERES Engineering & Services, LLC
ARCADIS a joint venture

Figure 9

Path: T:_ENV\Devens_RFTA\Seed_Task_Order\MXDs\AR2023 - AOC50\Devens_AOC50_Spring_Fall_2023.aprx User : ski01076 Date : 3/4/2024 3:31 PM



N

Building 3818

Building 3813

MOORE AAF

Area 2

Area 3

Area 4

G6M-07-01X	
Date	10/20/2023
PCE	**11**
TCE	0.67 J
cis-1,2-DCE	1.0 U
VC	1.0 U
Ethene	0.71 U
Ethane	0.76 U
Methane	41
TOC	0.77 J
DO	1.26
ORP	125.3

G6M-02-01X	
Date	10/19/2023
PCE	1.0 U
TCE	**6.3**
cis-1,2-DCE	2.0
VC	1.4 J
Ethene	9.0
Ethane	0.4 J
Methane	19,000
TOC	2.9
DO	0.80
ORP	-159.6

G6M-04-01X	
Date	10/20/2023
PCE	1.0 U
TCE	0.47 J
cis-1,2-DCE	0.4 J
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS
DO	1.07
ORP	-78.7

G6M-04-04X	
Date	10/23/2023
PCE	1.0 U
TCE	0.5 U
cis-1,2-DCE	0.30 J
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS
DO	0.13
ORP	-106.7

G6M-04-02X	
Date	10/20/2023
PCE	**9.9**
TCE	**26**
cis-1,2-DCE	46
VC	**8.1**
Ethene	17
Ethane	7.3
Methane	26,000
TOC	5.7
DO	0.16
ORP	-41.8

G6M-04-03X	
Date	10/18/2023
PCE	1.0 U
TCE	0.5 U
cis-1,2-DCE	1.0 U
VC	1.0 U
Ethene	0.71 U
Ethane	4.6
Methane	33,000
TOC	5.5
DO	0.13
ORP	-135.2

G6M-97-28X	
Date	10/19/2023
PCE	NS
TCE	NS
cis-1,2-DCE	NS
VC	NS
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS
DO	0.17
ORP	-98.4

G6M-03-07X	
Date	10/19/2023
PCE	1 U
TCE	0.5 U
cis-1,2-DCE	0.34 J
VC	1.0 U
Ethene	0.71 U
Ethane	4.0
Methane	25,000
TOC	19
DO	0.20
ORP	-87.0

G6M-13-02X	
Date	10/20/2023
PCE	1.0 U [0.44 J]
TCE	3.3 [3.0]
cis-1,2-DCE	11 J [7.5 J]
VC	0.58 J [0.54 J]
Ethene	0.71 U [0.73 J]
Ethane	0.87 J [0.63 J]
Methane	8,800 [6,200]
TOC	1.0 J [1.1 J]
DO	0.30
ORP	6.8

G6M-02-13X	
Date	10/23/2023
PCE	1.0 U
TCE	0.5 U
cis-1,2-DCE	0.32 J
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS
DO	0.64
ORP	-99.1

G6M-02-04X	
Date	10/20/2023
PCE	1.0 U
TCE	0.5 U
cis-1,2-DCE	1.0 U
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS
DO	0.13
ORP	-159.7

Aerial Source:
ESRI, ArcGIS Online,
World Imagery

Legend

- Former Fort Devens Boundary
- ERD LTM Well - Sampled Semi-Annually
- ERD LTM Well - Sampled Annually
- ERD LTM Well - Sampled Biennially
- Monitoring Well Converted to Injection Well
- Monitoring Well - Not Included in Approved LTM Network
- MicroWell - Sampled Annually
- MicroWell - Sampled Semi-Annually
- Injection Well Installed Prior to 01/2014
- Injection Well Installed 01/2014
- Geoprobe Injection Location - July/Aug. 2019
- ERD Injection Well Transect - July/Aug. 2019

Notes:
1. All concentrations are in micrograms per liter (µg/L) except TOC (milligrams per liter [mg/L]), DO (mg/L) and ORP (millivolts [mv]).
2. J/UJ = result is qualified as estimated (detect/nondetect)
3. U = The constituent was not detected above the given laboratory reporting limit.
4. NS = The analyte was not sampled for.
5. **BOLD** values indicate exceedances of the AOC 50 cleanup level.
6. [ ] = Results from duplicate sample.

cis-1,2-DCE = cis-1,2-dichloroethene
CVOC = chlorinated volatile organic compound
ERD = enhanced reductive dechlorination
LTM = long-term monitoring
PCE = tetrachloroethene
TCE = trichloroethene
TOC = total organic carbon
VC = vinyl chloride
DO = dissolved oxygen
ORP = oxidation reduction potential

0 100 200
Feet

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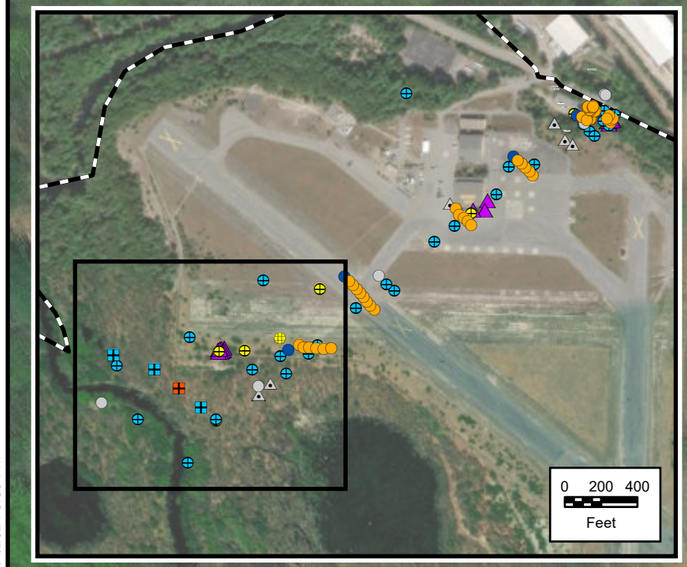
Former Fort Devens Army Installation
Devens, Massachusetts

CVOC and Biogeochemical Data - Fall 2023, Areas 2 through 4

SERES Engineering & Services, LLC
ARCADIS a joint venture

Figure 10

Path: T:_ENV\Devens_RFTA\Seed_Task_Order\MXDs\AR2023 - AOC50\Devens_AOC50_Spring_Fall_2023.aprx User : ski01076 Date : 3/4/2024 3:37 PM



N

XSA-12-98X	
Date	10/18/2023
PCE	1.0 J
TCE	0.5 U
cis-1,2-DCE	1.0 U
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS
DO	0.96
ORP	-216.6

G6M-02-07X	
Date	10/18/2023
PCE	0.44 J
TCE	0.5 U
cis-1,2-DCE	1.0 U
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS
DO	1
ORP	18.2

XSA-12-96X	
Date	11/13/2023
PCE	4.8
TCE	**7.7**
cis-1,2-DCE	7.5
VC	**7.9 J**
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS
DO	1.17
ORP	-31.7

XSA-12-95X	
Date	10/18/2023
PCE	1.5 J
TCE	0.74 J
cis-1,2-DCE	2.2
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS
DO	0.04
ORP	-30.9

G6M-04-06X	
Date	11/02/2023
PCE	1.0 U
TCE	0.5 U
cis-1,2-DCE	1.0 U
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS
DO	1.47
ORP	184.5

G6M-04-07X	
Date	11/02/2023
PCE	4.7
TCE	**24**
cis-1,2-DCE	**74**
VC	**10**
Ethene	0.46 J
Ethane	0.56 J
Methane	160
TOC	1.3 J
DO	1.17
ORP	3.2

G6M-02-06X	
Date	11/02/2023
PCE	1.0 U
TCE	0.5 U
cis-1,2-DCE	1.0 U
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS
DO	6.95
ORP	51.1

G6M-97-05B	
Date	10/17/2023
PCE	1.0 U
TCE	0.98 J
cis-1,2-DCE	3.9
VC	1.1.0 J
Ethene	4.5
Ethane	16
Methane	31,000
TOC	4.1
DO	0.06
ORP	-121.4

G6M-13-01X	
Date	10/18/2023
PCE	1.0 U
TCE	0.42 J
cis-1,2-DCE	0.60 J
VC	1.0 U
Ethene	0.71 U
Ethane	0.76 U
Methane	680
TOC	1.5
DO	0.39
ORP	-46.6

G6M-03-10X	
Date	10/17/2023
PCE	1.0 U
TCE	0.5 U
cis-1,2-DCE	1.0 U
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS
DO	0.42
ORP	-130

MW-7	
Date	10/18/2023
PCE	1.0 U
TCE	0.5 U
cis-1,2-DCE	0.56 J
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS
DO	0.16
ORP	-54.8

MW-3	
Date	10/18/2023
PCE	1.0 U
TCE	0.5 U
cis-1,2-DCE	1.0 U
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS
DO	0.29
ORP	-114.8

G6M-13-04X	
Date	11/02/2023
PCE	1.0 U
TCE	0.5 U
cis-1,2-DCE	1.0 U
VC	0.77 J
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS
DO	1.58
ORP	-118.9

G6M-02-11X	
Date	10/17/2023
PCE	1.0 U
TCE	0.5 U
cis-1,2-DCE	0.25 J
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS
DO	0.41
ORP	-140.9

Area 5

IWS System Enclosure

Aerial Source:
ESRI, ArcGIS Online, World Imagery

Legend

- Former Fort Devens Boundary
- ERD LTM Well - Sampled Semi-Annually
- ERD LTM Well - Sampled Annually
- ERD LTM Well - Sampled Biennially
- Monitoring Well Converted to Injection Well
- Monitoring Well - Not Included in Approved LTM Network
- MicroWell - Sampled Annually
- MicroWell - Sampled Semi-Annually
- Injection Well Installed Prior to 01/2014
- Injection Well Installed 01/2014
- Geoprobe Injection Location - July/Aug. 2019
- ERD Injection Well Transect - July/Aug. 2019

Notes:
1. All concentrations are in micrograms per liter (µg/L) except TOC (milligrams per liter [mg/L]), DO (mg/L) and ORP (millivolts [mv]).
2. Duplicate results are shown in brackets.
3. J/UJ = The result is qualified as estimated (detect/nondetect).
4. U = The constituent was not detected above the given laboratory reporting limit.
5. NS = The analyte was not sampled for.
6. **BOLD** values indicate exceedances of the AOC 50 cleanup level.

cis-1,2-DCE = cis-1,2-dichloroethene
CVOC = chlorinated volatile organic compound
ERD = enhanced reductive dechlorination
IWS = in-well stripping
LTM = long-term monitoring
PCE = tetrachloroethene
TCE = trichloroethene
TOC = total organic carbon
VC = vinyl chloride
DO = dissolved oxygen
ORP = oxidation reduction potential

0 100 200
Feet

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Former Fort Devens Army Installation
Devens, Massachusetts

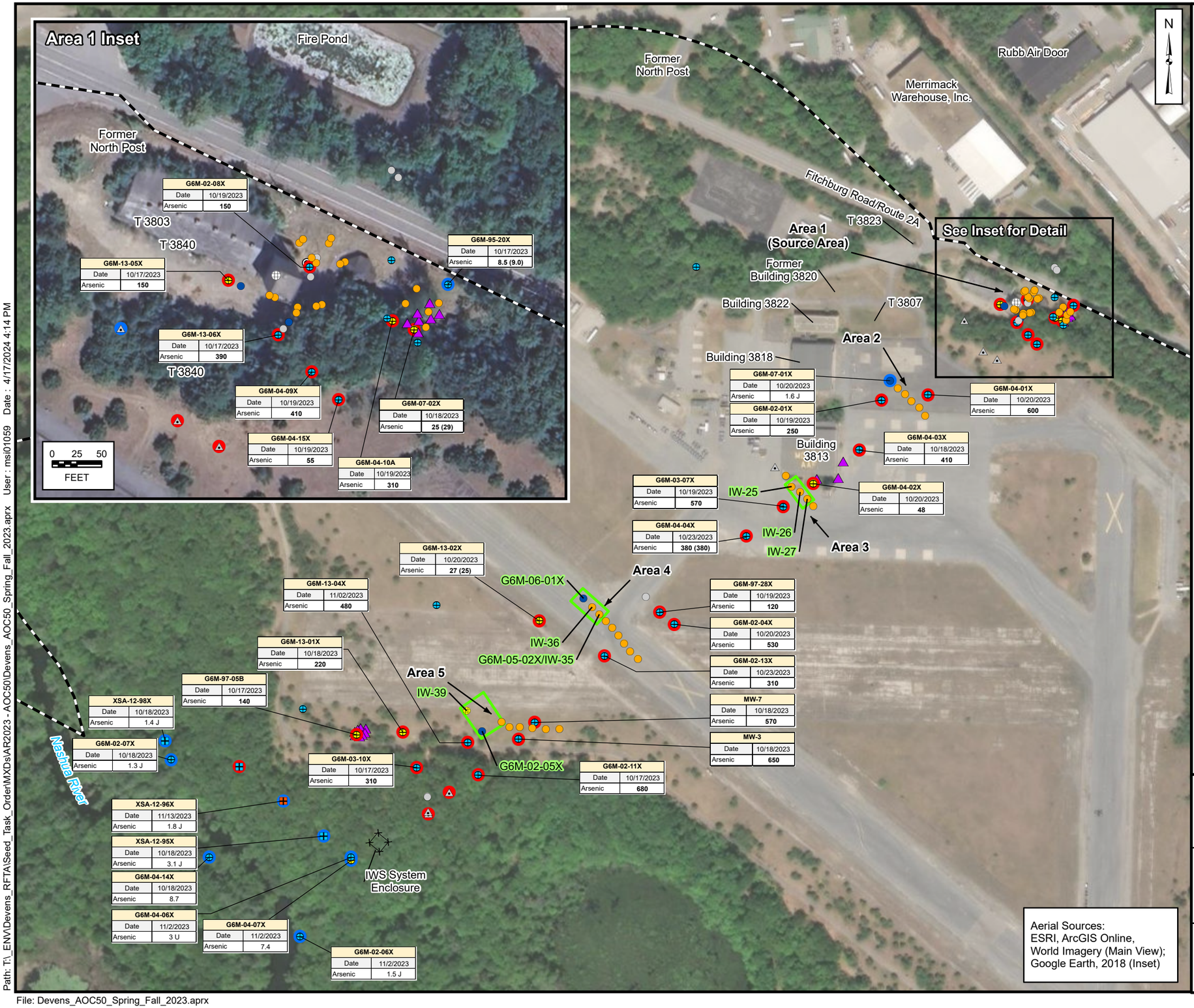
CVOC and Biogeochemical Data - Fall 2023, Area 5

SERES Engineering & Services, LLC
ARCADIS a joint venture

Figure 11

Path: T:_ENV\Devens_RFTA\Seed_Task_Order\MXDsvAR2023 - AOC50\Devens_AOC50_Spring_Fall_2023.aprx User : ski01076 Date : 3/4/2024 3:53 PM

File: Devens_AOC50_Spring_Fall_2023.aprx



Legend

- Former Fort Devens Boundary
- ERD LTM Well - Sampled Semi-Annually
- ERD LTM Well - Sampled Annually
- ERD LTM Well - Sampled Biennially
- Monitoring Well Converted to Injection Well
- Monitoring Well - Not Included in Approved LTM Network
- MicroWell - Sampled Annually
- MicroWell - Sampled Semi-Annually
- Injection Well Installed Prior to 01/2014
- Injection Well Installed 01/2014
- Dry Well
- Floor Drain
- Geoprobe Injection Location - July/Aug. 2019
- Arsenic Above Cleanup Goal
- Arsenic Below Cleanup Goal
- ERD Injection Well Transect - July/Aug. 2019
- IW-25 — Well Used for Injection in July/Aug. 2019

Notes:
1. All concentrations are in micrograms per liter (µg/L).
2. Duplicate results are shown in parentheses.
3. J = The result is qualified as estimated.
4. U = The constituent was not detected above the given laboratory reporting limit.
5. Arsenic cleanup level = 10 µg/L
6. BOLD values indicate exceedances of the AOC 50 cleanup level.
7. Wells sampled in Spring 2023 are also depicted on the figure but the data are not provided.

ERD = enhanced reductive dechlorination
IWS = in-well stripping
LTM = long-term monitoring

0 200 400
FEET

Aerial Sources:
ESRI, ArcGIS Online, World Imagery (Main View); Google Earth, 2018 (Inset)

2023 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50
Former Fort Devens Army Installation
Devens, Massachusetts

Arsenic Concentrations in Groundwater Fall 2023

SERES Engineering & Services, LLC
ARCADIS a joint venture

Figure 12

Path: T:_ENV\Devens_RFTA\Seed_Task_Order\MXDs\AR2023 - AOC50\Devens_AOC50_Spring_Fall_2023.aprx User : msi01059 Date : 4/17/2024 4:14 PM

File: Devens_AOC50_Spring_Fall_2023.aprx

Appendix A

Groundwater Monitoring Field Forms

SERES Engineering & Services, LLC

ARCADIS a joint venture

Gauging Log

Client:	USACE	**Date(s):**	6/5/2023
Facility:	Former Fort Devens	**Work Order(**	2023 Spring LTM sampling
Facility Location:	Devens, MA, USA	**Area:**	AOC 50
Field Technician:	Diane Champagne, Spencer Gust, Grace Sheckler	**Equipment:**	Water Level Meter

Location	Date	Time	Scope of Work Completed?	Depth Below Water Surface (ft bmp)	Total Depth (ft bmp)	Comments
G6M-02-01X	06-05-2023	11:31	Yes	52.92	89.23	
G6M-02-03X	06-05-2023	13:01	Yes	57.14	104.71	
G6M-02-04X	06-05-2023	13:27	Yes	59.10	106.46	
G6M-02-06X	06-05-2023	10:20	Yes	6.23	66.96	
G6M-02-07X	06-05-2023	09:54	Yes	7.53	40.45	
G6M-02-08X	06-05-2023	10:53	Yes	12.00	71.95	
G6M-02-11X	06-05-2023	11:45	Yes	59.31	136.65	
G6M-02-12X	06-05-2023	11:37	Yes	57.97	134.74	
G6M-02-13X	06-05-2023	15:05	Yes	58.16	119.54	
G6M-03-07X	06-13-2023	10:53	Yes	55.40	89.10	
G6M-03-08X	06-05-2023	13:29	Yes	54.31	140.00	Lock on well on arrival.
G6M-03-09X	06-05-2023	14:01	Yes	54.56	141.14	
G6M-03-10X	06-05-2023	14:22	Yes	61.36	136.90	
G6M-04-01X	06-05-2023	11:37	Yes	51.05	89.59	
G6M-04-02X	06-05-2023	12:21	Yes	58.54	92.26	
G6M-04-03X	06-05-2023	12:43	Yes	55.42	93.00	
G6M-04-04X	06-05-2023	12:33	Yes	56.50	104.11	
G6M-04-05X	06-05-2023	13:47	Yes	53.84	112.37	
G6M-04-06X	06-05-2023	12:20	Yes	60.45	106.04	
G6M-04-07X	06-05-2023	12:32	Yes	60.40	131.80	
G6M-04-08X	06-05-2023	15:41	Yes	5.90	92.40	
G6M-04-09X	06-05-2023	13:10	Yes	30.65	66.40	
G6M-04-10A	06-05-2023	10:41	Yes	11.56	42.06	
G6M-04-10X	06-05-2023	10:43	Yes	12.25	63.40	
G6M-04-11X	06-05-2023	11:12	Yes	18.21	46.94	
G6M-04-13X	06-05-2023	10:36	Yes	13.39	42.00	
G6M-04-14X	06-05-2023	15:17	Yes	7.27	92.80	
G6M-04-15X	06-05-2023	13:04	Yes	41.22	81.00	
G6M-04-22X	06-05-2023	12:55	Yes	44.78	85.43	
G6M-04-31X	06-05-2023	12:50	Yes	44.65	80.17	
G6M-07-01X	06-05-2023	11:47	Yes	52.39	95.02	
G6M-07-02X	06-05-2023	10:31	Yes	12.52	29.88	
G6M-13-01X	06-05-2023	14:05	Yes	62.40	136.45	
G6M-13-02X	06-05-2023	14:54	Yes	58.43	125.00	
G6M-13-03X	06-05-2023	14:00	Yes	56.58	90.20	
G6M-13-04X	06-05-2023	13:47	Yes	61.55	137.37	
G6M-13-05X	06-05-2023	11:04	Yes	13.16	56.65	
G6M-13-06X	06-05-2023	11:01	Yes	12.83	63.08	
G6M-18-01	06-05-2023	15:30	Yes	59.32	125.79	

ft-bmp = feet below measuring point

Gauging Log

Client:	USACE	**Date(s):**	6/5/2023
Facility:	Former Fort Devens	**Work Order(**	2023 Spring LTM sampling
Facility Location:	Devens, MA, USA	**Area:**	AOC 50
Field Technician:	Diane Champagne, Spencer Gust, Grace Sheckler	**Equipment:**	Water Level Meter

Location	Date	Time	Scope of Work Completed?	Depth Below Water Surface (ft bmp)	Total Depth (ft bmp)	Comments
G6M-18-02	06-05-2023	14:35	Yes	64.70	135.83	
G6M-95-19X	06-05-2023	10:24	Yes	11.36	58.66	
G6M-95-20X	06-05-2023	10:21	Yes	11.87	24.95	
G6M-96-22A	06-05-2023	10:06	Yes	4.34	53.46	
G6M-96-22B	06-05-2023	10:11	Yes	4.79	71.88	
G6M-97-05B	06-05-2023	14:21	Yes	64.01	137.06	
G6M-97-28X	06-05-2023	13:12	Yes	59.94	107.04	
G6P-97-05X	06-05-2023	14:18	Yes	24.58	29.25	
MW-3	06-05-2023	12:11	Yes	60.93	131.08	
MW-7	06-05-2023	12:41	Yes	61.30	135.77	
XSA-12-95X	06-05-2023	11:58	Yes	65.35	131.75	
XSA-12-96X	06-05-2023	10:48	Yes	65.37	131.90	
XSA-12-97X	06-13-2023	--	Yes	67.80	--	
XSA-12-98X	06-05-2023	10:26	Yes	6.42	73.13	

ft-bmp = feet below measuring point

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-04-02X	**Date(s):**	2023-06-07	**Work Order(s):**		Spring 2023 LTM	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA, USA	**Area:**	AOC 50
Weather(°F):	CLOUDS, T:59.79 °F, rH:69%, Clouds: 40%, Wind:10.36mph NW			**Field Technician:**		Diane Champagne	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	80.00-90.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	58.61	**Total Depth (ft-bmp):**	90	**Water Column(ft):**	31.39	**Gallons in Well:**	5.12
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	85	**Purge Method:**	Low Flow	**Purging Equipment:**	Portable Bladder
Purge Start Time:	09:20	**Total Volume Purged (gallons):**	4.8	**Sample ID:**	G6M-04-02X-SPR23	**Sample Time:**	11:25
Purge End Time:	11:21	**Well Volumes Purged (total):**	0.94	**Replicate Type / Replicate ID:**	NA / NA	**Water Quality Meter/ ID:**	YSI Pro DSS / 23B103383
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm^c)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
09:25	0	150	mL/min	58.61	5.8	1.515	26.89	0.58	14	-106.6	Clear	Moderate
09:30	5	150	mL/min	58.81	5.78	1.497	61.84	0.33	14.1	-110.2	Clear	Moderate
09:35	10	150	mL/min	58.81	5.77	1.489	86.11	0.25	14	-112.2	Black	Moderate
09:40	15	150	mL/min	58.81	5.77	1.471	128.73	0.16	14.1	-115.8	Clear	No Odor
09:45	20	150	mL/min	58.8	5.76	1.485	189.93	0.09	14.2	-120.3	Black	Moderate
09:50	25	150	mL/min	58.81	5.76	1.463	258.09	0.08	14.1	-121.3	Clear	No Odor
09:55	30	150	mL/min	58.81	5.76	1.456	279.85	0.04	13.8	-123.5	Clear	No Odor
10:00	35	150	mL/min	58.81	5.76	1.45	245.9	0.01	14	-126.4	Black	Moderate
10:05	40	150	mL/min	58.81	5.76	1.442	187.28	0.01	14.1	-127.3	Black	Moderate
10:10	45	150	mL/min	58.81	5.77	1.435	127.76	0.01	14.2	-129.2	Black	Moderate
10:15	50	150	mL/min	58.81	5.77	1.445	167.29	0.01	14.3	-130.9	Black	Moderate
10:20	55	150	mL/min	58.81	5.77	1.439	218.63	0.01	14.5	-132.1	Clear	No Odor
10:25	60	150	mL/min	58.81	5.77	1.433	236.3	0.01	14.7	-133.4	Black	Moderate
10:30	65	150	mL/min	58.81	5.78	1.433	100.58	0.01	14.9	-134.6	Black	Moderate
10:35	70	150	mL/min	58.81	5.78	1.433	50.27	0.01	14.7	-135.8	Black	Moderate
10:40	75	150	mL/min	58.81	5.78	1.43	52.98	0.01	14.5	-136.7	Clear	No Odor
10:45	80	150	mL/min	58.81	5.79	1.427	77.33	0.01	14.7	-137.9	Black	Moderate
10:50	85	150	mL/min	58.82	5.78	1.427	38.21	0.01	15.1	-138.7	Clear	Moderate
10:55	90	150	mL/min	58.82	5.79	1.425	10.14	0.01	15.5	-139.7	Clear	Moderate
11:00	95	150	mL/min	58.81	5.79	1.427	15.97	0.01	16.1	-140.6	Clear	No Odor
11:05	100	150	mL/min	58.81	5.8	1.423	15.93	0.01	15	-141.1	Clear	Moderate
11:10	105	150	mL/min	58.81	5.8	1.422	15.42	0.01	14.5	-141.2	Clear	No Odor
11:15	110	150	mL/min	58.81	5.8	1.418	16.02	0.01	14.1	-141.3	Clear	Moderate
11:20	115	150	mL/min	58.81	5.8	1.419	15.06	0.01	14.1	-141.9	Clear	Moderate

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3
Nitrate/Nitrite	500 mL amber	1	H2SO4
Sulfate	125 mL plastic	1	None
Sulfide	250 mL plastic	2	ZnAC/NaOH
Alkalinity	250 mL plastic	1	None
Ethane, Ethene, Methane	40 mL glass	3	HCL
Total Organic Carbon	250 mL plastic	1	HNO3

Comments: None

Well Information:

Well Labeled Properly: NA

Is Well in Good Condition? NA

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-04-07X	**Date(s):**	2023-06-06	**Work Order(s):**		Spring 2023 LTM	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA, USA	**Area:**	AOC 50
Weather(°F):	57 light rain			**Field Technician:**		Spencer Gust	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	120.00-130.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	60.3	**Total Depth (ft-bmp):**	131.8	**Water Column(ft):**	71.4	**Gallons in Well:**	11.60
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	125	**Purge Method:**	Low Flow	**Purging Equipment:**	Portable Bladder
Purge Start Time:	11:03	**Total Volume Purged (gallons):**	1.28	**Sample ID:**	G6M-04-07X-SPR23	**Sample Time:**	11:36
Purge End Time:	11:36	**Well Volumes Purged (total):**	0.11	**Replicate Type / Replicate ID:**		**Water Quality Meter/ ID:**	YSI Pro DSS / NA
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
11:09	0	150	mL/min	63	6.31	0.637	4	4.11	11.6	20	Clear	No Odor
11:15	6	150	mL/min	60.3	6.25	0.642	2.44	1.3	11.5	19.8	Clear	No Odor
11:20	11	150	mL/min	60.3	6.24	0.633	2	0.7	11.6	17.7	Clear	No Odor
11:25	16	150	mL/min	60.3	6.24	0.627	1.86	0.48	11.6	16	Clear	No Odor
11:30	21	150	mL/min	60.3	6.24	0.619	1.26	0.37	11.6	14.2	Clear	No Odor
11:35	26	150	mL/min	60.3	6.24	0.612	1.25	0.29	11.6	12.4	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3
Nitrate/Nitrite	500 mL amber	1	H2SO4
Sulfate	125 mL plastic	1	None
Sulfide	250 mL plastic	2	ZnAC/NaOH
Alkalinity	250 mL plastic	1	None
Ethane, Ethene, Methane	40 mL glass	3	HCL
Total Organic Carbon	250 mL plastic	1	HNO3

Comments: None

Well Information:

Well Labeled Properly: no

Is Well in Good Condition? good

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-04-10A	**Date(s):**	2023-06-06	**Work Order(s):**		Spring 2023 LTM	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA, USA	**Area:**	AOC 50
Weather(°F):	RAIN, T:53.94 °F, rH:90%, Clouds: 100%, Wind:3mph E			**Field Technician:**		Diane Champagne	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	30.00-40.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	11.6	**Total Depth (ft-bmp):**	42.06	**Water Column(ft):**	30.5	**Gallons in Well:**	4.96
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	38	**Purge Method:**	Low Flow	**Purging Equipment:**	Peristaltic Pump
Purge Start Time:	09:30	**Total Volume Purged (gallons):**	3.25	**Sample ID:**	G6M-04-10A-SPR23	**Sample Time:**	11:05
Purge End Time:	11:02	**Well Volumes Purged (total):**	0.66	**Replicate Type / Replicate ID:**	**MS/MSD** / G6M-04-10A-SPR23	**Water Quality Meter/ ID:**	YSI Pro DSS / NA
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
09:35	0	140	mL/min	11.6	6.18	0.654	101.4	1.01	12.2	-122.2	Clear	No Odor
09:40	5	140	mL/min	11.6	6.2	0.658	23.9	0.86	12.3	-125.7	Clear	No Odor
09:45	10	140	mL/min	11.6	6.23	0.662	8.4	0.77	12.4	-127.4	Clear	No Odor
09:50	15	140	mL/min	11.6	6.24	0.665	12.8	0.74	12.4	-127.6	Clear	No Odor
09:55	20	140	mL/min	11.6	6.26	0.666	9.75	0.71	12.5	-127.2	Clear	No Odor
10:00	25	140	mL/min	11.6	6.27	0.666	10.8	0.71	12.3	-126.9	Clear	No Odor
10:05	30	140	mL/min	11.6	6.27	0.665	11.7	0.69	12.5	-126	Clear	No Odor
10:10	35	140	mL/min	11.6	6.29	0.663	7.2	0.68	12.4	-126.4	Clear	No Odor
10:15	40	140	mL/min	11.6	6.29	0.662	10.6	0.67	12.5	-126.4	Clear	No Odor
10:20	45	140	mL/min	11.6	6.31	0.676	13.3	0.66	12.5	-127.9	Clear	No Odor
10:25	50	140	mL/min	11.6	6.33	0.678	7.89	0.64	12.8	-129.6	Clear	No Odor
10:30	55	140	mL/min	11.6	6.33	0.678	17.3	0.64	12.9	-129.4	Clear	No Odor
10:35	60	140	mL/min	11.6	6.34	0.681	9.57	0.64	12.5	-129.1	Clear	No Odor
10:40	65	140	mL/min	11.6	6.35	0.685	13	0.63	12.6	-129.7	Clear	No Odor
10:45	70	140	mL/min	11.6	6.36	0.686	11.3	0.63	12.6	-128.6	Clear	No Odor
10:50	75	140	mL/min	11.6	6.37	0.695	10.4	0.62	13.3	-129.4	Clear	No Odor
10:55	80	140	mL/min	11.6	6.36	0.699	10.6	0.61	13.2	-129.4	Clear	No Odor
11:00	85	140	mL/min	11.6	6.37	0.698	11.4	0.61	13.3	-129.2	Clear	No Odor

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3
Nitrate/Nitrite	500 mL amber	1	H2SO4
Sulfate	125 mL plastic	1	None
Sulfide	250 mL plastic	2	ZnAC/NaOH
Alkalinity	250 mL plastic	1	None
Ethane, Ethene, Methane	40 mL glass	3	HCL
Total Organic Carbon	250 mL plastic	1	HNO3

Comments: Sampled at 11:05

Well Information:

Well Labeled Properly: yes

Is Well in Good Condition? good

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-07-02X	**Date(s):**	2023-06-06	**Work Order(s):**		Spring 2023 LTM	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA, USA	**Area:**	AOC 50
Weather(°F):	RAIN, T:53.94 °F, rH:90%, Clouds: 100%, Wind:3mph E			**Field Technician:**		Diane Champagne	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	23.00-28.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	12.57	**Total Depth (ft-bmp):**	29.88	**Water Column(ft):**	17.36	**Gallons in Well:**	2.82
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	27	**Purge Method:**	Low Flow	**Purging Equipment:**	Peristaltic Pump
Purge Start Time:	13:55	**Total Volume Purged (gallons):**	1.19	**Sample ID:**	G6M-07-02X-SPR23	**Sample Time:**	14:45
Purge End Time:	14:40	**Well Volumes Purged (total):**	0.42	**Replicate Type / Replicate ID:**	**Duplicate** / G6M-DUP01-SPR23	**Water Quality Meter/ ID:**	YSI Pro DSS / NA
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm^c)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
13:55	0	135	mL/min	12.57	6.41	0.426	32.7	1.09	13.8	-105.2	Clear	No Odor
14:00	5	125	mL/min	14.16	6.43	0.427	23.8	0.92	14.1	-110.3	Clear	No Odor
14:05	10	125	mL/min	14.45	6.44	0.428	20.9	0.84	14.4	-113.3	Clear	No Odor
14:10	15	125	mL/min	14.69	6.45	0.428	20.6	0.79	14.2	-114	Clear	No Odor
14:15	20	125	mL/min	14.89	6.46	0.428	22.8	0.75	14.3	-115.3	Clear	No Odor
14:20	25	125	mL/min	14.99	6.46	0.427	22.6	0.74	14	-114.7	Clear	No Odor
14:25	30	125	mL/min	15.09	6.47	0.427	21.1	0.71	14	-115.1	Clear	No Odor
14:30	35	125	mL/min	15.19	6.47	0.426	21.3	0.69	13.9	-114.7	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3
Nitrate/Nitrite	500 mL amber	1	H2SO4
Sulfate	125 mL plastic	1	None
Sulfide	250 mL plastic	2	ZnAC/NaOH
Alkalinity	250 mL plastic	1	None
Ethane, Ethene, Methane	40 mL glass	3	HCL
Total Organic Carbon	250 mL plastic	1	HNO3

Comments: Sampled at 1445

Well Information:

Well Labeled Properly: yes

Is Well in Good Condition? good

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-13-01X	**Date(s):**	2023-06-06	**Work Order(s):**		Spring 2023 LTM	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA, USA	**Area:**	AOC 50
Weather(°F):	CLOUDS, T:59.49 °F, rH:84%, Clouds: 98%, Wind:4.59mph NE			**Field Technician:**		Grace Sheckler	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	125.00-135.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	62.4	**Total Depth (ft-bmp):**	136.45	**Water Column(ft):**	74.05	**Gallons in Well:**	12.03
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	132	**Purge Method:**	Low Flow	**Purging Equipment:**	Portable Bladder
Purge Start Time:	14:53	**Total Volume Purged (gallons):**	0.55	**Sample ID:**	G6M-13-01X-SPR23	**Sample Time:**	15:30
Purge End Time:	15:29	**Well Volumes Purged (total):**	0.05	**Replicate Type / Replicate ID:**	NA / NA	**Water Quality Meter/ ID:**	YSI Pro DSS / 18G101313
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
14:55	0	64	mL/min	62.4	7.55	0.815	5.8	4.78	17.5	54.3	Clear	No Odor
15:00	5	64	mL/min	62.4	6.8	0.842	4.1	2.5	15.5	-17.3	Clear	No Odor
15:05	10	64	mL/min	62.4	6.63	0.868	4.1	1.7	14.8	-21.1	Clear	No Odor
15:10	15	68	mL/min	62.4	6.58	0.864	3	1.37	14.9	-23.9	Clear	No Odor
15:15	20	68	mL/min	62.4	6.58	0.868	2.1	1.19	15.7	-29.1	Clear	No Odor
15:20	25	68	mL/min	62.4	6.6	0.875	2.5	1.12	15.8	-33.2	Clear	No Odor
15:25	30	68	mL/min	62.4	6.59	0.88	3.1	1.08	16.1	-36.3	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3
Nitrate/Nitrite	500 mL amber	1	H2SO4
Sulfate	125 mL plastic	1	None
Sulfide	250 mL plastic	2	ZnAC/NaOH
Alkalinity	250 mL plastic	1	None
Ethane, Ethene, Methane	40 mL glass	3	HCL
Total Organic Carbon	250 mL plastic	1	HNO3

Comments: None

Well Information:

Well Labeled Properly: yes

Is Well in Good Condition? good

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-13-02X	**Date(s):**	2023-06-07	**Work Order(s):**		Spring 2023 LTM	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA, USA	**Area:**	AOC 50
Weather(°F):	CLOUDS, T:59.31 °F, rH:86%, Clouds: 100%, Wind:1.95mph N-NE			**Field Technician:**		Grace Sheckler	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	115.00-125.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	58.47	**Total Depth (ft-bmp):**	125	**Water Column(ft):**	66.57	**Gallons in Well:**	10.82
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	120	**Purge Method:**	Low Flow	**Purging Equipment:**	Portable Bladder
Purge Start Time:	10:24	**Total Volume Purged (gallons):**	1.1	**Sample ID:**	G6M-13-02X-SPR23	**Sample Time:**	11:15
Purge End Time:	11:13	**Well Volumes Purged (total):**	0.10	**Replicate Type / Replicate ID:**	NA / NA	**Water Quality Meter/ ID:**	YSI Pro DSS / 18G101313
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
10:30	0	120	mL/min	58.47	6.28	1.508	8.3	1.51	16.4	46.9	Clear	No Odor
10:35	5	120	mL/min	58.47	6.27	1.568	11	1.1	15.9	41	Clear	No Odor
10:40	10	120	mL/min	58.47	6.28	1.581	3.21	0.96	15.5	38.4	Clear	No Odor
10:45	15	120	mL/min	58.47	6.27	1.584	2.05	0.86	16.5	35.2	Clear	No Odor
10:50	20	120	mL/min	58.47	6.28	1.592	2.1	0.78	18.2	31.6	Clear	No Odor
10:55	25	68	mL/min	58.47	6.31	1.599	1.82	0.74	19.6	27.6	Clear	No Odor
11:00	30	65	mL/min	58.47	6.33	1.604	2.1	0.72	21.4	24	Clear	No Odor
11:05	35	65	mL/min	58.47	6.36	1.611	1.9	0.72	21.3	21.4	Clear	No Odor
11:13	43	65	mL/min	58.47	6.38	1.614	1.74	0.72	21.2	20.1	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3
Nitrate/Nitrite	500 mL amber	1	H2SO4
Sulfate	125 mL plastic	1	None
Sulfide	250 mL plastic	2	ZnAC/NaOH
Alkalinity	250 mL plastic	1	None
Ethane, Ethene, Methane	40 mL glass	3	HCL
Total Organic Carbon	250 mL plastic	1	HNO3

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

Comments: None

Well Information:

Well Labeled Properly:	yes
Is Well in Good Condition?	good
Well Inspection Comments:	One bolt broken off in an eyelit

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

Location ID:	G6M-13-05X	**Date(s):**	2023-06-07	**Work Order(s):**		Spring 2023 LTM	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA, USA	**Area:**	AOC 50
Weather(°F):	RAIN, T:54.05 °F, rH:88%, Clouds: 100%, Wind:11.5mph N-NW			**Field Technician:**		Diane Champagne	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	45.00-55.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	13.6	**Total Depth (ft-bmp):**	56.65	**Water Column(ft):**	43.49	**Gallons in Well:**	7.07
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	54	**Purge Method:**	Low Flow	**Purging Equipment:**	Peristaltic Pump
Purge Start Time:	08:50	**Total Volume Purged (gallons):**	1.36	**Sample ID:**	G6M-13-05X-SPR23	**Sample Time:**	9:35
Purge End Time:	09:34	**Well Volumes Purged (total):**	0.19	**Replicate Type / Replicate ID:**		**Water Quality Meter/ ID:**	YSI Pro DSS / NA
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
08:55	0	125	mL/min	13.6	6.48	1.018	29.5	0.95	13	-121.5	Clear	No Odor
09:00	5	125	mL/min	13.6	6.52	1.016	14.3	0.86	13	-126.1	Clear	No Odor
09:05	10	125	mL/min	13.6	6.55	1.018	10.7	0.8	12.8	-129.7	Clear	No Odor
09:10	15	125	mL/min	13.6	6.58	1.019	7.05	0.77	12.9	-131.9	Clear	No Odor
09:15	20	125	mL/min	13.6	6.61	1.016	8.14	0.75	12.8	-133.2	Clear	No Odor
09:20	25	125	mL/min	13.6	6.62	1.018	7.58	0.73	12.8	-134	Clear	No Odor
09:25	30	125	mL/min	13.6	6.63	1.018	7.03	0.71	12.9	-134.4	Clear	No Odor
09:30	35	125	mL/min	13.6	6.63	1.017	7.68	0.7	13	-135.2	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3
Nitrate/Nitrite	500 mL amber	1	H2SO4
Sulfate	125 mL plastic	1	None
Sulfide	250 mL plastic	2	ZnAC/NaOH
Alkalinity	250 mL plastic	1	None
Ethane, Ethene, Methane	40 mL glass	3	HCL
Total Organic Carbon	250 mL plastic	1	HNO3

Comments: Sampled at 09:35

Well Information:

Well Labeled Properly: yes

Is Well in Good Condition? good

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-97-05B	**Date(s):**	2023-06-06	**Work Order(s):**		Spring 2023 LTM	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA, USA	**Area:**	AOC 50
Weather(°F):	CLOUDS, T:60.4 °F, rH:76%, Clouds: 100%, Wind:16.11mph N			**Field Technician:**		Grace Sheckler	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	130.00-135.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	64.18	**Total Depth (ft-bmp):**	137.06	**Water Column(ft):**	73.05	**Gallons in Well:**	11.87
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	132	**Purge Method:**	Low Flow	**Purging Equipment:**	Portable Bladder
Purge Start Time:	11:26	**Total Volume Purged (gallons):**	2.5	**Sample ID:**	G6M-97-05B-SPR23	**Sample Time:**	12:35
Purge End Time:	12:31	**Well Volumes Purged (total):**	0.21	**Replicate Type / Replicate ID:**	NA / NA	**Water Quality Meter/ ID:**	YSI Pro DSS / 18G101313
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
11:30	0	104	mL/min	64.18	6.79	0.925	119.3	2.45	11.2	-96.7	Clear	No Odor
11:35	5	104	mL/min	64.25	6.81	0.944	10.5	1.57	14.1	-108.8	Clear	No Odor
11:40	10	104	mL/min	64.22	6.83	0.969	13.1	1.11	14.1	-116.9	Gray	No Odor
11:45	15	144	mL/min	64.18	6.86	1.002	8.74	0.84	13.6	-133.2	Gray	No Odor
11:50	20	144	mL/min	64.2	6.86	1.015	7.19	0.75	13.6	-145.2	Gray	No Odor
11:55	25	144	mL/min	64.29	6.87	1.023	7.92	0.7	13.5	-149.1	Clear	No Odor
12:00	30	144	mL/min	64.23	6.87	1.023	6.44	0.68	13.7	-150	Gray	No Odor
12:06	36	144	mL/min	64.28	6.87	1.024	5.76	0.64	13.7	-153.1	Clear	No Odor
12:10	40	144	mL/min	64.17	6.87	1.024	6.59	0.62	13.6	-152.8	Clear	No Odor
12:15	45	144	mL/min	64.22	6.87	1.023	5.68	0.59	13.7	-155.1	Clear	No Odor
12:20	50	144	mL/min	64.26	6.87	1.024	6.33	0.59	13.6	-150.6	Clear	No Odor
12:25	55	144	mL/min	64.2	6.87	1.019	6.25	0.59	13.6	-152.7	Clear	No Odor
12:30	60	144	mL/min	64.3	6.86	1.017	6.41	0.56	13.7	-153.7	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3
Nitrate/Nitrite	500 mL amber	1	H2SO4
Sulfate	125 mL plastic	1	None
Sulfide	250 mL plastic	2	ZnAC/NaOH
Alkalinity	250 mL plastic	1	None
Ethane, Ethene, Methane	40 mL glass	3	HCL
Total Organic Carbon	250 mL plastic	1	HNO3

Comments: None

Well Information:

Well Labeled Properly: yes

Is Well in Good Condition? good

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	XSA-12-96X	**Date(s):**	2023-06-05	**Work Order(s):**		Spring 2023 LTM	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA, USA	**Area:**	AOC 50
Weather(°F):	55 light rain			**Field Technician:**		Spencer Gust	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	121.00-131.00	**Casing Diameter (in):**	1.00	**Well Casing Material:**	Carbon Steel
Static Water Level (ft-bmp):	65.35	**Total Depth (ft-bmp):**	131.9	**Water Column(ft):**	64.89	**Gallons in Well:**	2.64
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	NA	**Purge Method:**	Low Flow	**Purging Equipment:**	Portable Bladder
Purge Start Time:	14:08	**Total Volume Purged (gallons):**	1.1	**Sample ID:**	XSA-12-96X-SPR23	**Sample Time:**	14:51
Purge End Time:	14:51	**Well Volumes Purged (total):**	0.42	**Replicate Type / Replicate ID:**		**Water Quality Meter/ ID:**	YSI Pro DSS / NA
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm^c)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
14:12	0	100	mL/min	65.35	9.51	0.788	36.87	5.16	14.2	-154.2	Clear	No Odor
14:17	5	100	mL/min	65.35	9.51	0.805	82.44	4.11	13.2	-145.8	Clear	No Odor
14:25	13	100	mL/min	65.35	8.72	0.887	123.1	1.06	12.8	-187.8	Clear	No Odor
14:30	18	100	mL/min	65.35	7.19	1.076	169.7	0.67	12.9	-140.7	Clear	No Odor
14:35	23	100	mL/min	65.35	6.7	1.221	148.08	0.54	12	-99.6	Clear	No Odor
14:40	28	100	mL/min	65.35	6.6	1.255	145	0.49	12.5	-96	Clear	No Odor
14:45	33	100	mL/min	65.35	6.56	1.266	142.36	0.43	12.5	-92.2	Clear	No Odor
14:50	38	100	mL/min	65.35	6.54	1.27	137.9	0.37	12.8	-91.3	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3

Comments: None

Well Information:

Well Labeled Properly: yes

Is Well in Good Condition? good

Well Inspection Comments: No lock on arrival, added lock. Label needs to be rewritten.

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

Location ID:	XSA-12-97X	**Date(s):**	2023-06-15	**Work Order(s):**		Spring 2023 LTM	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA, USA	**Area:**	AOC 50
Weather(°F):	70 Mostly Cloudy 4mph W			**Field Technician:**		Spencer Gust	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	121.00-131.00	**Casing Diameter (in):**	1.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	67.8	**Total Depth (ft-bmp):**	129	**Water Column(ft):**	61.2	**Gallons in Well:**	2.49
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	NA	**Purge Method:**	Low Flow	**Purging Equipment:**	Portable Bladder
Purge Start Time:	13:39	**Total Volume Purged (gallons):**	1.07	**Sample ID:**	XSA-12-97X-SPR23	**Sample Time:**	14:22
Purge End Time:	14:22	**Well Volumes Purged (total):**	0.43	**Replicate Type / Replicate ID:**	NA / NA	**Water Quality Meter/ ID:**	YSI Pro DSS / NA
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm^c)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
13:51	0	100	mL/min	72.1	9.38	0.614	97.4	4.66	14.5	-186.4	Clear	No Odor
13:59	8	100	mL/min	71.65	9.25	0.62	156.84	2.8	15.1	-222.9	Clear	No Odor
14:05	14	100	mL/min	71.65	8.1	0.582	160.59	2.05	15.3	-199	Clear	No Odor
14:09	18	100	mL/min	71.65	7.33	0.745	145.62	1.3	17.6	-182.7	Clear	No Odor
14:15	24	100	mL/min	71.65	7.28	0.751	145.69	1.31	17.6	-180.3	Clear	No Odor
14:19	28	100	mL/min	71.65	7.23	0.755	146.7	1.3	17.7	-179.2	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3

Comments: None

Well Information:

Well Labeled Properly: no

Is Well in Good Condition? good

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	NE Devens TO LTM RAO SJV
PROJECT NUMBER	30167457
MODEL	YSI ProDSS
SERIAL NUMBER	N/A
SAMPLER	Frank Martinez
DATE	06/06/2023

SINGLE POINT CALIBRATION

LOT NUMBER	N/A
EXPIRATION DATE	N/A

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.2	7.04	yes	08:42
pH	4.05	4	yes	08:09
pH	10.1	10.05	yes	08:12
Conductivity	1.187	1.413	yes	08:15
ORP	234	231	yes	08:17
DO	96	98	yes	08:23

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

6/6/2023
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	NE Devens TO LTM RAO SJV
PROJECT NUMBER	30167457
MODEL	YSI ProDSS
SERIAL NUMBER	N/A
SAMPLER	Frank Martinez
DATE	06/07/2023

SINGLE POINT CALIBRATION

LOT NUMBER	N/A
EXPIRATION DATE	N/A

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.08	7.04	yes	07:40
pH	4	4	yes	07:42
pH	9.9	9.9	yes	07:47
Conductivity	1.352	1.415	yes	07:51
ORP	230.5	231	yes	07:57
DO	100.7	98.3	yes	08:03

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

6/7/2023
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	NE Devens TO LTM RAO SJV
PROJECT NUMBER	30167457
MODEL	YSI ProDSS
SERIAL NUMBER	4740
SAMPLER	Diane Champagne
DATE	06/07/2023

SINGLE POINT CALIBRATION

LOT NUMBER	N/A
EXPIRATION DATE	N/A

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.34	7.04	yes	08:18
pH	4.07	4.04	yes	08:20
pH	9.83	10.09	yes	08:22
Conductivity	1.024	1.025	yes	08:16
ORP	238.6	233.7	yes	08:24
DO	97.8	97.8	yes	08:11
DO	2.16	0.02	yes	08:28
Turbidity	3.39	0	yes	08:14

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

6/7/2023

DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	NE Devens TO LTM RAO SJV
PROJECT NUMBER	30167457
MODEL	YSI ProDSS
SERIAL NUMBER	18G101313
SAMPLER	Grace Sheckler
DATE	06/07/2023

SINGLE POINT CALIBRATION

LOT NUMBER	22420139
EXPIRATION DATE	2024-09-07

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	3.96	4	yes	08:16
pH	7.11	7	yes	08:18
pH	10.08	10	yes	08:23
Conductivity	0.953	1.413	no	08:37
ORP	231.3	240.49	yes	08:28
DO	94.4	99.1	yes	08:40

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

6/7/2023
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	NE Devens TO LTM RAO SJV
PROJECT NUMBER	30167457
MODEL	YSI ProDSS
SERIAL NUMBER	18G101313
SAMPLER	Grace Sheckler
DATE	06/15/2023

SINGLE POINT CALIBRATION

LOT NUMBER	M066-02
EXPIRATION DATE	2024-03-07

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	3.95	4	yes	08:21
pH	7.01	7	yes	08:25
pH	9.88	10	yes	08:30
Conductivity	1.322	1.413	yes	08:40
ORP	239.5	236	yes	08:42
DO	99.5	99	yes	08:20

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

6/15/2023
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	NE Devens TO LTM RAO SJV
PROJECT NUMBER	30167457
MODEL	YSI ProDSS
SERIAL NUMBER	N/A
SAMPLER	Frank Martinez
DATE	06/15/2023

SINGLE POINT CALIBRATION

LOT NUMBER	N/A
EXPIRATION DATE	N/A

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.2	7	yes	07:31
pH	4.03	4	yes	07:33
pH	9.9	10	yes	07:35
Conductivity	1.36	1.413	yes	07:38
ORP	231.6	231	yes	07:40
DO	98.1	98.1	yes	07:42
Turbidity	0.01	0.02	yes	07:42
Turbidity	20	21	yes	07:42
Turbidity	104	100	yes	07:43
Turbidity	808	800	yes	07:43

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

6/15/2023

DATE

SERES Engineering & Services, LLC

ARCADIS a joint venture

Gauging Log

Client:	USACE	**Date(s):**	10/16/2023
Facility:	Former Fort Devens	**Work Order(s):**	2023 Fall LTM Sampling
Facility Location:	Devens, MA, USA	**Area:**	AOC 50
Field Technician:	Diane Champagne, Ally Fenton, Nelson Martinez	**Equipment:**	Water Level Meter

Location	Date	Time	Scope of Work Completed?	Depth to Water(ft bmp)	Total Depth (ft bmp)	Comments
G6M-02-01X	10-16-2023	14:45	Yes	50.83	95	
G6M-02-03X	10-16-2023	14:30	Yes	53.98	103.66	
G6M-02-04X	10-16-2023	12:22	Yes	56.98	106.4	
G6M-02-06X	10-16-2023	14:30	Yes	4.93	66.96	
G6M-02-07X	10-18-2023	13:16	Yes	6.21	40	
G6M-02-08X	10-16-2023	11:22	Yes	9.44	72.02	
G6M-02-11X	10-16-2023	12:05	Yes	57.43	137.92	
G6M-02-12X	10-16-2023	13:23	Yes	56.18	134.83	
G6M-02-13X	10-16-2023	12:15	Yes	56.1	106.46	
G6M-03-07X	10-16-2023	14:00	Yes	53.01	87.31	
G6M-03-08X	10-16-2023	14:32	Yes	52.52	140.13	
G6M-03-09X	10-16-2023	10:05	Yes	52.77	141.89	
G6M-03-10X	10-16-2023	11:43	Yes	59.56	137.94	
G6M-04-01X	10-16-2023	13:46	Yes	48.89	90.7	
G6M-04-02X	10-16-2023	11:20	Yes	56.35	92.2	
G6M-04-03X	10-16-2023	11:30	Yes	53.25	92.95	
G6M-04-04X	10-16-2023	13:30	Yes	54.3	104	
G6M-04-05X	10-16-2023	11:35	Yes	52.11	113.15	
G6M-04-06X	10-16-2023	10:25	Yes	59	106.02	
G6M-04-07X	10-16-2023	10:33	Yes	58.61	132.76	
G6M-04-08X	10-18-2023	10:32	Yes	4.74	92.3	
G6M-04-09X	10-16-2023	14:50	Yes	38.1	66.25	
G6M-04-10A	10-16-2023	12:31	Yes	9.06	42.1	
G6M-04-10X	10-16-2023	12:23	Yes	9.89	63.5	
G6M-04-11X	10-16-2023	12:48	Yes	15.97	47.01	
G6M-04-13X	10-16-2023	12:11	Yes	10.74	42.01	
G6M-04-14X	10-16-2023	12:45	Yes	5.84	90	
G6M-04-15X	10-16-2023	14:30	Yes	38.82	81.1	
G6M-04-22X	10-16-2023	14:05	Yes	42.48	85.5	
G6M-04-31X	10-16-2023	14:23	Yes	41.34	80.3	
G6M-07-01X	10-16-2023	13:43	Yes	50.27	95	
G6M-07-02X	10-16-2023	12:34	Yes	9.99	29.11	
G6M-13-01X	10-16-2023	14:24	Yes	60.69	137.65	
G6M-13-02X	10-16-2023	12:10	Yes	56.46	124.95	
G6M-13-03X	10-16-2023	15:00	Yes	54.41	90.19	
G6M-13-04X	10-16-2023	14:10	Yes	59.82	135.05	
G6M-13-05X	10-16-2023	10:47	Yes	10.88	56.68	

ft-bmp = feet below measuring point

SERES Engineering & Services, LLC

ARCADIS a joint venture

Gauging Log

Client:	USACE	**Date(s):**	10/16/2023
Facility:	Former Fort Devens	**Work Order(s):**	2023 Fall LTM Sampling
Facility Location:	Devens, MA, USA	**Area:**	AOC 50
Field Technician:	Diane Champagne, Ally Fenton, Nelson Martinez	**Equipment:**	Water Level Meter

Location	Date	Time	Scope of Work Completed?	Depth to Water(ft bmp)	Total Depth (ft bmp)	Comments
G6M-13-06X	10-16-2023	11:05	Yes	10.25	62.1	
G6M-18-01	10-16-2023	09:20	Yes	57.25	125.9	
G6M-18-02	10-16-2023	10:40	Yes	62.95	135.8	
G6M-95-19X	10-16-2023	11:46	Yes	8.88	58.71	
G6M-95-20X	10-16-2023	11:59	Yes	9.29	24.9	
G6M-96-22A	DC	--	No	--	--	well in standing water, not gauged
G6M-96-22B	DC	--	No	--	--	well in standing water, not gauged
G6M-97-05B	10-17-2023	08:57	Yes	62.45	135	
G6M-97-28X	10-16-2023	12:42	Yes	57.8	107	
G6M-97-05X	10-16-2023	11:15	Yes	23.3	44.55	
MW-3	10-16-2023	09:10	Yes	59	130.4	
MW-7	10-16-2023	10:30	Yes	58.2	134.6	
XSA-12-95X	10-16-2023	12:45	Yes	64.61	112.75	
XSA-12-96X	10-16-2023	11:00	Yes	66.47	131.96	
XSA-12-97X	10-16-2023	11:05	Yes	66.34	133.12	
XSA-12-98X	10-18-2023	14:30	Yes	5.9	70	

ft-bmp = feet below measuring point

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-02-01X	**Date(s):**	2023-10-19	**Work Order(s):**		2023 Fall LTM Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA	**Area:**	AOC 50
Weather(°F):	CLOUDS, T:63.52 °F, rH:62%, Clouds: 16%, Wind:8.05mph S-SW			**Field Technician:**		Frank Martinez	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	80.00-95.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	50.82	**Total Depth (ft-bmp):**	95	**Water Column(ft):**	44.17	**Gallons in Well:**	7.18
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	NA	**Purge Method:**	Low Flow	**Purging Equipment:**	Portable Bladder
Purge Start Time:	13:45	**Total Volume Purged (gallons):**	2.5	**Sample ID:**	G6M-02-01X-FAL23	**Sample Time:**	14:45
Purge End Time:	15:01	**Well Volumes Purged (total):**	0.35	**Replicate Type / Replicate ID:**	none	**Water Quality Meter/ ID:**	YSI Pro DSS / NA
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
13:50	0	165	mL/min	50.82	6.65	2.868	18.6	1.27	16.9	-106.9	Clear	No Odor
13:55	5	165	mL/min	50.82	6.85	2.889	18.6	1.03	16.6	-167.4	Clear	Slight
14:00	10	165	mL/min	50.86	6.86	2.868	17.4	0.96	15.8	-146.1	Clear	No Odor
14:05	15	165	mL/min	50.86	6.83	2.823	17.2	0.91	15.5	-148.9	Clear	No Odor
14:10	20	165	mL/min	50.86	6.81	2.791	17.1	0.89	15.3	-149.4	Clear	No Odor
14:15	25	165	mL/min	50.87	6.81	2.766	16.2	0.87	15.8	-153.7	Clear	No Odor
14:20	30	165	mL/min	50.87	6.84	2.756	14.3	0.9	15.4	-156.4	Clear	No Odor
14:25	35	165	mL/min	50.87	6.81	2.73	16.2	0.84	15.7	-158.7	Clear	No Odor
14:30	40	165	mL/min	50.88	6.81	2.702	16.2	0.83	15.6	-159.6	Clear	No Odor
14:35	45	165	mL/min	50.87	6.8	2.664	16.2	0.8	15.3	-159.6	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3
Nitrate/Nitrite	500 mL amber	1	H2SO4
Sulfate	125 mL plastic	1	None
Sulfide	250 mL plastic	2	ZnAC/NaOH
Alkalinity	250 mL plastic	1	None
Ethane, Ethene, Methane	40 mL glass	3	HCL
Total Organic Carbon	250 mL plastic	1	HNO3

Comments:

Well Information:

Well Labeled Properly: yes

Is Well in Good Condition? good

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-02-04X	**Date(s):**	2023-10-20	**Work Order(s):**		2023 Fall LTM Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA	**Area:**	AOC 50
Weather(°F):	CLOUDS, T:55.44 °F, rH:96%, Clouds: 100%, Wind:5.75mph S-SE			**Field Technician:**		Allyson Fenton	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	90.00-105.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	57.1	**Total Depth (ft-bmp):**	106.4	**Water Column(ft):**	49.42	**Gallons in Well:**	8.07
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	103	**Purge Method:**	Low Flow	**Purging Equipment:**	Portable Bladder
Purge Start Time:	10:40	**Total Volume Purged (gallons):**	1.3	**Sample ID:**	G6M-02-04X-FAL23	**Sample Time:**	11:30
Purge End Time:	11:30	**Well Volumes Purged (total):**	0.16	**Replicate Type / Replicate ID:**	NA / NA	**Water Quality Meter/ ID:**	YSI Pro DSS / NA
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
10:45	0	100	mL/min	57.1	6.71	0.54	21.2	0.88	14.2	-129.9	Clear	No Odor
10:50	5	100	mL/min	57.1	6.79	0.573	27.9	0.44	14.1	-146	Clear	No Odor
10:55	10	100	mL/min	57.1	6.82	0.58	56.1	0.35	14.1	-150.5	Clear	No Odor
11:00	15	100	mL/min	57.1	6.84	0.584	124.1	0.28	14.1	-153.9	Clear	No Odor
11:05	20	100	mL/min	57.1	6.85	0.587	98.8	0.24	14	-155.4	Clear	No Odor
11:10	25	100	mL/min	57.1	6.87	0.588	152.9	0.21	14	-156.7	Clear	No Odor
11:15	30	100	mL/min	57.1	6.87	0.588	71	0.18	14	-157.7	Clear	No Odor
11:20	35	100	mL/min	57.1	6.88	0.589	126.6	0.16	14	-158.6	Clear	No Odor
11:25	40	100	mL/min	57.1	6.89	0.59	151.3	0.14	14	-159.4	Clear	No Odor
11:30	45	100	mL/min	57.1	6.89	0.591	96.5	0.13	14	-159.7	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3

Comments: None

Well Information:

Well Labeled Properly: NA

Is Well in Good Condition? NA

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-02-06X	**Date(s):**	2023-11-02	**Work Order(s):**		2023 Fall LTM Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA	**Area:**	AOC 50
Weather(°F):	CLEAR, T:39.25 °F, rH:60%, Clouds: 0%, Wind:6.91mph W-NW			**Field Technician:**		Frank Martinez	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	55.00-65.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	5.01	**Total Depth (ft-bmp):**	65.1	**Water Column(ft):**	60.09	**Gallons in Well:**	9.81
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	63	**Purge Method:**	Low Flow	**Purging Equipment:**	Peristaltic Pump
Purge Start Time:	11:20	**Total Volume Purged (gallons):**	2	**Sample ID:**	G6M-02-06X-FAL23	**Sample Time:**	12:00
Purge End Time:	11:59	**Well Volumes Purged (total):**	0.20	**Replicate Type / Replicate ID:**		**Water Quality Meter/ ID:**	YSI Pro DSS / NA
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
11:25	0	200	mL/min	5.02	7.27	0.151	15.4	7.16	11.1	21.1	Clear	No Odor
11:30	5	200	mL/min	5.2	7.22	0.151	4.2	7.04	11.1	28.5	Clear	No Odor
11:35	10	200	mL/min	5.2	7.18	0.151	0.8	6.97	11.1	36.9	Clear	No Odor
11:40	15	200	mL/min	5.2	7.2	0.152	0.2	6.96	11.4	43.8	Clear	No Odor
11:45	20	200	mL/min	5.2	7.23	0.152	0.7	6.92	11.3	46.9	Clear	No Odor
11:50	25	200	mL/min	5.2	7.2	0.152	0.8	6.95	11.2	51.1	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3

Comments: Sampled at 1200

Well Information:

Well Labeled Properly: yes

Is Well in Good Condition? good

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-02-07X	**Date(s):**	2023-10-18	**Work Order(s):**		2023 Fall LTM Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA	**Area:**	AOC 50
Weather(°F):	CLOUDS, T:59.31 °F, rH:74%, Clouds: 52%, Wind:0mph N			**Field Technician:**		Frank Martinez	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	30.00-40.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	6.22	**Total Depth (ft-bmp):**	40	**Water Column(ft):**	33.79	**Gallons in Well:**	5.49
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	35	**Purge Method:**	Low Flow	**Purging Equipment:**	Peristaltic Pump
Purge Start Time:	13:20	**Total Volume Purged (gallons):**	1.2	**Sample ID:**	G6M-02-07X-FAL23	**Sample Time:**	13:50
Purge End Time:	14:00	**Well Volumes Purged (total):**	0.22	**Replicate Type / Replicate ID:**	NA	**Water Quality Meter/ ID:**	YSI Pro DSS / NA
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
13:25	0	150	mL/min	6.22	7.18	1.872	27.6	1.81	13.3	0	Clear	No Odor
13:30	5	150	mL/min	6.23	7.17	1.873	14.2	1.25	13.5	8.8	Clear	No Odor
13:35	10	150	mL/min	6.23	7.16	1.862	7.4	1.1	13.1	19.8	Clear	No Odor
13:40	15	150	mL/min	6.23	7.17	1.865	7.4	1.03	13.1	17.9	Clear	No Odor
13:45	20	150	mL/min	6.23	7.17	1.864	7.2	1	13.1	18.2	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3

Comments:

Well Information:

Well Labeled Properly: yes

Is Well in Good Condition? good

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-02-08X	**Date(s):**	2023-10-19	**Work Order(s):**		2023 Fall LTM + SRI Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA, USA Updated	**Area:**	AOC 50
Weather(°F):	CLOUDS, T:55.36 °F, rH:76%, Clouds: 82%, Wind:14.97mph N-NW			**Field Technician:**		Diane Champagne	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	60.00-70.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	9.93	**Total Depth (ft-bmp):**	72.02	**Water Column(ft):**	62.58	**Liters in Well:**	10.17
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	70	**Purge Method:**	Low Flow	**Purging Equipment:**	Peristaltic Pump
Purge Start Time:	09:50	**Total Volume Purged (liters):**	7	**Sample ID:**	G6M-02-08X-FAL23	**Sample Time:**	11:00
Purge End Time:	11:03	**Well Volumes Purged (total):**	0.69	**Replicate Type / Replicate ID:**	NA	**Water Quality Meter/ ID:**	YSI Pro DSS / 16c100431
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
09:55	0	100	mL/min	9.93	6.6	0.174	32.01	1.73	13.2	-69.8	Clear	No Odor
10:10	15	100	mL/min	10.88	6.64	0.174	5.1	0.48	13.5	-70.8	Clear	No Odor
10:15	20	100	mL/min	10.99	6.65	0.178	2.77	0.42	13.5	-69.9	Clear	No Odor
10:20	25	100	mL/min	10.99	6.65	0.179	8.28	0.39	13.5	-69.3	Clear	No Odor
10:25	30	100	mL/min	10.99	6.65	0.18	1.11	0.36	13.6	-69.2	Clear	No Odor
10:30	35	100	mL/min	10.99	6.65	0.183	2.73	0.33	13.7	-68.2	Clear	No Odor
10:35	40	100	mL/min	10.99	6.67	0.182	5.73	0.31	13.7	-67.9	Clear	No Odor
10:40	45	100	mL/min	10.99	6.65	0.181	7.57	0.3	13.8	-67.3	Clear	No Odor
10:45	50	100	mL/min	10.99	6.65	0.181	9.64	0.3	13.9	-68.2	Clear	No Odor
10:51	56	100	mL/min	10.99	6.65	0.183	4.81	0.29	13.9	-67	Clear	No Odor
10:55	60	100	mL/min	10.98	6.65	0.184	4.45	0.29	14.1	-66.7	Clear	No Odor
11:00	65	100	mL/min	11.01	6.65	0.186	3.76	0.27	13.9	-65.3	Black	Moderate

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3
Nitrate/Nitrite	500 mL amber	1	H2SO4
Sulfate	125 mL plastic	1	None
Sulfide	250 mL plastic	2	ZnAC/NaOH
Alkalinity	250 mL plastic	1	None
Ethane, Ethene, Methane	40 mL glass	3	HCL
Total Organic Carbon	250 mL plastic	1	HNO3

Comments: None

Well Information:

Well Labeled Properly: yes

Is Well in Good Condition? good

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Project Number	30167457	**Well ID**	G6M-02-11X			**Date**	10/17/2023
Project Name/Location	Former Fort Devens AOC 50		**Weather(°F)**	58 F °F, Overcast, S winds at 4 mph.			
Measuring Pt. Description	Top of Inner Casing	**MP Elevation**	NA	**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	57.46	**Total Depth (ft-bmp)**	137.92	**Water Column (ft)**	80.49	**Gallons in Well**	13.08
Purge Start	11:03	**Pump Intake (ft-bmp)**	135	**Purge Method**	Low-Flow	**Purge Equipment**	Bladder
Purge End	12:45	**Volumes Purged**	0.26	**Sample ID**	G6X-02-11X-FAL23	**Sampled by**	Nelson Martinez
Sample Time	12:40	**Gallons Purged**	3.42	**Replicate/ Code No.**	NA	**Sample Type**	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
11:05	0	0	200	57.46	0.05	6.38	1.012	12.6	9.32	12.8	145.2	Clear	None
11:10	5	5	15	57.45	0.13	6.27	1.007	6.63	8.52	12.6	95.6	Clear	None
11:15	5	10	15	57.48	0.15	6.32	1.011	5.89	4.73	13	30.2	Clear	None
11:20	5	15	150	57.48	0.34	6.54	0.913	3.69	5.92	12.7	-62.4	Clear	None
11:25	5	20	150	57.48	0.54	6.88	0.63	3.98	1.34	12.1	-103.8	Clear	None
11:30	5	25	150	57.48	0.74	6.88	0.642	1.67	0.77	12.1	-121.3	Clear	None
11:35	5	30	150	57.48	0.94	6.86	0.67	4.8	0.64	12.1	-126	Clear	None
11:40	5	35	150	57.48	1.14	6.9	0.693	5.62	0.58	12.1	-131	Clear	None
11:45	5	40	150	57.48	1.33	6.91	0.705	4.11	0.55	12.1	-132.9	Clear	None
11:50	5	45	150	57.48	1.53	6.92	0.714	4.41	0.51	12.1	-134.4	Clear	None
11:55	5	50	150	57.48	1.73	6.92	0.72	3.37	0.49	12.1	-135.1	Clear	None
12:00	5	55	150	57.48	1.93	6.92	0.727	3.73	0.46	12.2	-135.1	Clear	None
12:05	5	60	150	57.52	2.13	6.92	0.732	1.1	0.45	12.2	-135.4	Clear	None
12:10	5	65	150	57.52	2.32	6.92	0.737	1.54	0.45	12.2	-135.8	Clear	None
12:15	5	70	150	57.52	2.52	6.91	0.739	3.37	0.45	12.2	-139.9	Clear	None
12:20	5	75	150	57.52	2.72	6.91	0.742	2.43	0.44	12.2	-139.5	Clear	None
12:25	5	80	150	57.52	2.92	6.9	0.745	3.68	0.42	12.1	-140.5	Clear	None
12:30	5	85	150	57.52	3.12	6.9	0.751	3.62	0.4	12.1	-140.8	Clear	None
12:35	5	90	150	57.52	3.42	6.9	0.753	3.2	0.41	12.1	-140.9	Clear	None

Constituent Sampled	Container	Number	Preservative
Metals	250 mL Plastic	1	HNO3
VOCs	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot

1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: In woods

Condition of Well: Good condition

Well Completion: Stick-up

Well Locked at Arrival: yes

Well Locked at Departure: yes

Key Number To Well: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-02-13X	**Date(s):**	2023-10-23	**Work Order(s):**		2023 Fall LTM Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA	**Area:**	AOC 50
Weather(°F):	CLOUDS, T:54.18 °F, rH:73%, Clouds: 20%, Wind:12.66mph W-NW			**Field Technician:**		Allyson Fenton	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	110.00-120.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	56.3	**Total Depth (ft-bmp):**	106.46	**Water Column(ft):**	50.36	**Gallons in Well:**	8.22
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	104	**Purge Method:**	Low Flow	**Purging Equipment:**	Portable Bladder
Purge Start Time:	10:55	**Total Volume Purged (gallons):**	3.25	**Sample ID:**	G6M-02-13X-FAL23	**Sample Time:**	13:00
Purge End Time:	13:00	**Well Volumes Purged (total):**	0.40	**Replicate Type / Replicate ID:**	NA / NA	**Water Quality Meter/ ID:**	YSI Pro DSS / NA
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
11:00	0	100	mL/min	56.3	6.14	0.815	8.6	1.78	14.8	46.1	Clear	No Odor
11:05	5	100	mL/min	56.3	6.08	0.747	8.3	1.46	14.7	51.4	Clear	No Odor
11:10	10	100	mL/min	56.3	9.6	0.725	10.2	1.23	14.6	53.7	Clear	No Odor
11:15	15	100	mL/min	56.3	6.01	0.726	9.3	1.12	14.4	49.9	Clear	No Odor
11:20	20	100	mL/min	56.3	6.08	0.79	6.9	0.54	14.3	8.7	Clear	No Odor
11:25	25	100	mL/min	56.3	6.16	0.84	6.6	0.47	14.3	-11.2	Clear	No Odor
11:30	30	100	mL/min	56.3	6.25	0.894	6.8	0.43	14.3	-31.4	Clear	No Odor
11:35	35	100	mL/min	56.3	6.31	0.931	7.1	0.53	14.7	-43.3	Clear	No Odor
11:40	40	100	mL/min	56.3	6.35	0.977	8.3	0.57	15	-51.9	Clear	No Odor
11:45	45	100	mL/min	56.3	6.41	1.039	11	0.55	15.1	-63.9	Clear	No Odor
11:50	50	100	mL/min	56.3	6.47	1.071	17	0.78	15	-77.7	Clear	No Odor
11:55	55	100	mL/min	56.3	6.49	1.089	24.6	0.86	15.4	-81.2	Clear	No Odor
12:00	60	100	mL/min	56.3	6.5	1.11	42	0.86	15.8	-82	Clear	No Odor
12:05	65	100	mL/min	56.3	6.52	1.127	69.7	0.89	15.7	-83.3	Clear	No Odor
12:10	70	100	mL/min	56.3	6.54	1.168	87	0.83	15.7	-85.6	Clear	No Odor
12:15	75	100	mL/min	56.3	6.56	1.223	127.4	0.77	16.1	-88	Clear	No Odor
12:20	80	100	mL/min	56.3	6.57	1.255	146	0.76	16.4	-90.2	Clear	No Odor
12:25	85	100	mL/min	56.3	6.58	1.248	28	0.7	15.5	-92.6	Clear	No Odor
12:30	90	100	mL/min	56.3	6.59	1.252	30	0.68	15.5	-94.4	Clear	No Odor
12:35	95	100	mL/min	56.3	6.59	1.291	42.1	0.69	16.1	-95.5	Clear	No Odor
12:40	100	100	mL/min	56.3	6.6	1.279	54.2	0.65	15.1	-97.6	Clear	No Odor
12:50	110	100	mL/min	56.3	6.6	1.306	119	0.64	16.2	-100.7	Clear	No Odor
12:55	115	100	mL/min	56.3	6.6	1.309	152.1	0.66	16.3	-99.5	Clear	No Odor
13:00	120	100	mL/min	56.3	6.6	1.304	8.89	0.64	16	-99.1	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

Comments: None

Well Information:

Well Labeled Properly:	NA
Is Well in Good Condition?	NA
Well Inspection Comments:	NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-03-07X	**Date(s):**	2023-10-19	**Work Order(s):**		2023 Fall LTM + SRI Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA, USA Updated	**Area:**	AOC 50
Weather(°F):	CLOUDS, T:63.09 °F, rH:64%, Clouds: 16%, Wind:6.91mph N			**Field Technician:**		Allyson Fenton	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	80.00-90.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	53.25	**Total Depth (ft-bmp):**	87.31	**Water Column(ft):**	26.41	**Gallons in Well:**	4.29
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	85	**Purge Method:**	Low Flow	**Purging Equipment:**	Portable Bladder
Purge Start Time:	10:05	**Total Volume Purged (gallons):**	0.92	**Sample ID:**	G6M-03-07X-FAL23	**Sample Time:**	10:40
Purge End Time:	10:40	**Well Volumes Purged (total):**	0.21	**Replicate Type / Replicate ID:**	NA / NA	**Water Quality Meter/ ID:**	YSI Pro DSS / NA
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
10:10	0	100	mL/min	53.25	6.15	0.729	160.2	0.4	14.5	-82	Clear	No Odor
10:15	5	100	mL/min	53.25	6.16	0.726	223.9	0.32	14.4	-84.4	Clear	No Odor
10:20	10	100	mL/min	53.25	6.16	0.741	169.9	0.26	14.8	-86.8	Clear	No Odor
10:25	15	100	mL/min	53.25	6.17	0.742	254	0.23	14.6	-88	Clear	No Odor
10:30	20	100	mL/min	53.25	6.17	0.748	270.4	0.21	14.6	-87.7	Clear	No Odor
10:35	25	100	mL/min	53.25	6.18	0.751	131	0.2	14.7	-86.9	Clear	No Odor
10:40	30	100	mL/min	53.25	6.18	0.768	143.2	0.2	15	-87	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3
Nitrate/Nitrite	500 mL amber	1	H2SO4
Sulfate	125 mL plastic	1	None
Sulfide	250 mL plastic	2	ZnAC/NaOH
Alkalinity	250 mL plastic	1	None
Ethane, Ethene, Methane	40 mL glass	3	HCL
Total Organic Carbon	250 mL plastic	1	HNO3

Comments: None

Well Information:

Well Labeled Properly: NA

Is Well in Good Condition? NA

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Project Number	30167457	**Well ID**	G6M-03-10X			**Date**	10/17/2023
Project Name/Location	Former Fort Devens AOC 50		**Weather(°F)**	59 F °F, Overcast, S winds at 4 mph.			
Measuring Pt. Description	Top of Inner Casing	**MP Elevation**	NA	**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	59.65	**Total Depth (ft-bmp)**	137.94	**Water Column (ft)**	78.38	**Gallons in Well**	12.74
Purge Start	13:10	**Pump Intake (ft-bmp)**	135	**Purge Method**	Low-Flow	**Purge Equipment**	Bladder
Purge End	14:27	**Volumes Purged**	0.22	**Sample ID**	G6X-03-10X-FAL23	**Sampled by**	Nelson Martinez
Sample Time	14:20	**Gallons Purged**	2.74	**Replicate/ Code No.**	NA	**Sample Type**	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:12	0	0	155	59.65	0.09	6.75	0.963	13.2	3.79	12.1	-53.4	Clear	None
13:17	5	5	155	59.62	0.29	6.79	0.895	5.95	1.72	12.2	-87.1	Clear	None
13:22	5	10	155	59.62	0.49	6.83	0.902	2.49	1.1	12.2	-102.6	Clear	None
13:27	5	15	155	59.62	0.01	6.84	0.924	1.65	0.84	12.2	-109.8	Clear	None
13:32	5	20	155	59.63	0.90	6.86	0.941	1.66	0.71	12.2	-115.1	Clear	None
13:37	5	25	155	59.62	1.11	6.87	0.95	0.09	0.64	12.2	-118.4	Clear	None
13:42	5	30	155	59.62	1.31	6.88	0.956	0.02	0.58	12.1	-121.1	Clear	None
13:47	5	35	155	59.63	1.52	6.89	0.961	0.02	0.54	12.1	-123.3	Clear	None
13:52	5	40	155	59.63	1.72	6.9	0.964	0.02	0.52	12.1	-125	Clear	None
13:57	5	45	155	59.63	1.92	6.91	0.967	1.54	0.49	12.1	-126.1	Clear	None
14:02	5	50	155	59.63	2.13	6.91	0.969	1.5	0.47	12.2	-127.5	Clear	None
14:07	5	55	155	59.63	2.33	6.92	0.967	3.07	0.45	12.1	-128.7	Clear	None
14:12	5	60	155	59.63	2.54	6.92	0.974	2.83	0.43	12.1	-129.4	Clear	None
14:17	5	65	155	59.63	2.74	6.93	0.976	2.85	0.42	12.1	-130	Clear	None

Constituent Sampled	Container	Number	Preservative
Metals	250 mL Plastic	1	HNO3
VOCs	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot — 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: In woods
Condition of Well: Good condition
Well Completion: Stick-up
Well Locked at Arrival: yes
Well Locked at Departure: yes
Key Number To Well: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-04-01X	**Date(s):**	2023-10-20	**Work Order(s):**		2023 Fall LTM Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA	**Area:**	AOC 50
Weather(°F):	CLOUDS, T:55.83 °F, rH:90%, Clouds: 100%, Wind:4.61mph S-SE			**Field Technician:**		Frank Martinez	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	82.00-92.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	48.95	**Total Depth (ft-bmp):**	90.7	**Water Column(ft):**	41.81	**Gallons in Well:**	6.82
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	87	**Purge Method:**	Low Flow	**Purging Equipment:**	Portable Bladder
Purge Start Time:	11:20	**Total Volume Purged (gallons):**	1.7	**Sample ID:**	G6M-04-01X-FAL23	**Sample Time:**	12:00
Purge End Time:	11:57	**Well Volumes Purged (total):**	0.25	**Replicate Type / Replicate ID:**	NA	**Water Quality Meter/ ID:**	YSI Pro DSS / NA
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
11:25	0	175	mL/min	48.95	6.23	3.584	350	1.74	13.8	-50.5	Clear	No Odor
11:30	5	175	mL/min	48.91	6.26	3.553	97.8	1.45	13.8	-59.3	Clear	No Odor
11:36	11	175	mL/min	48.92	6.3	3.525	28.6	1.36	13.9	-67.4	Clear	No Odor
11:41	16	175	mL/min	48.92	6.3	3.557	16.2	1.15	13.9	-69.4	Clear	No Odor
11:45	20	175	mL/min	48.93	6.3	3.561	16.2	1.13	14	-71.8	Clear	No Odor
11:50	25	175	mL/min	48.93	6.32	3.562	15.2	1.1	13.9	-76.8	Clear	No Odor
11:55	30	175	mL/min	48.93	6.33	3.569	15.2	1.07	13.8	-78.8	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3

Comments:

Well Information:

Well Labeled Properly: yes

Is Well in Good Condition? good

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-04-02X	**Date(s):**	2023-10-20	**Work Order(s):**		2023 Fall LTM Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA	**Area:**	AOC 50
Weather(°F):	CLOUDS, T:51.76 °F, rH:92%, Clouds: 100%, Wind:4.12mph SE			**Field Technician:**		Allyson Fenton	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	80.00-90.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	56.35	**Total Depth (ft-bmp):**	92.2	**Water Column(ft):**	35.85	**Gallons in Well:**	5.85
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	NA	**Purge Method:**	Low Flow	**Purging Equipment:**	Portable Bladder
Purge Start Time:	08:55	**Total Volume Purged (gallons):**	0.9	**Sample ID:**	G6M-04-02X-FAL23	**Sample Time:**	9:30
Purge End Time:	10:30	**Well Volumes Purged (total):**	0.15	**Replicate Type / Replicate ID:**	NA / NA	**Water Quality Meter/ ID:**	YSI Pro DSS / NA
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
09:00	0	100	mL/min	56.35	5.69	1.384	213	0.57	13.1	-40.7	Clear	No Odor
09:05	5	100	mL/min	56.35	5.68	1.377	469	0.35	13	-36.5	Clear	No Odor
09:10	10	100	mL/min	56.35	5.67	1.365	100.2	0.27	13	-35.5	Clear	No Odor
09:15	15	100	mL/min	56.35	5.67	1.343	222	0.22	13	-37.9	Clear	No Odor
09:20	20	100	mL/min	56.35	5.68	1.332	316.6	0.2	13	-41.3	Clear	No Odor
09:25	25	100	mL/min	56.35	5.68	1.323	242.1	0.17	13	-40.7	Clear	No Odor
09:30	30	100	mL/min	56.35	5.69	1.314	181.3	0.16	13	-41.8	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3
Nitrate/Nitrite	500 mL amber	1	H2SO4
Sulfate	125 mL plastic	1	None
Sulfide	250 mL plastic	2	ZnAC/NaOH
Alkalinity	250 mL plastic	1	None
Ethane, Ethene, Methane	40 mL glass	3	HCL
Total Organic Carbon	250 mL plastic	1	HNO3

Comments: None

Well Information:

Well Labeled Properly: NA

Is Well in Good Condition? NA

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-04-03X	**Date(s):**	2023-10-18	**Work Order(s):**		2023 Fall LTM Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA	**Area:**	AOC 50
Weather(°F):	T:55.2 °F, rH:70%, Clouds: 77%, Wind:0mph N			**Field Technician:**		Allyson Fenton	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	85.00-95.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	53.3	**Total Depth (ft-bmp):**	92.95	**Water Column(ft):**	39.7	**Gallons in Well:**	6.45
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	90	**Purge Method:**	Low Flow	**Purging Equipment:**	Portable Bladder
Purge Start Time:	14:50	**Total Volume Purged (gallons):**	2.1	**Sample ID:**	G6M-04-03X-FAL23	**Sample Time:**	15:30
Purge End Time:	15:30	**Well Volumes Purged (total):**	0.33	**Replicate Type / Replicate ID:**	NA / NA	**Water Quality Meter/ ID:**	YSI Pro DSS / NA
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
14:55	0	200	mL/min	53.3	6.83	1.197	96	0.49	14.7	-143.2	Clear	No Odor
15:00	5	200	mL/min	53.3	6.74	1.086	213.7	0.36	14.6	-139.3	Clear	No Odor
15:05	10	200	mL/min	53.3	6.68	1.079	418.1	0.22	14.6	-136.9	Clear	No Odor
15:10	15	200	mL/min	53.3	6.64	1.103	373.3	0.19	14.6	-135.7	Clear	No Odor
15:15	20	200	mL/min	53.3	6.61	1.135	401.1	0.18	14.5	-134.6	Clear	No Odor
15:20	25	200	mL/min	53.3	6.6	1.152	440.1	0.14	14.3	-133.7	Clear	No Odor
15:25	30	200	mL/min	53.3	6.59	1.169	585.5	0.15	14.3	-134.4	Clear	No Odor
15:30	35	200	mL/min	53.3	6.59	1.186	600.2	0.13	14.4	-135.2	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3
Nitrate/Nitrite	500 mL amber	1	H2SO4
Sulfate	125 mL plastic	1	None
Sulfide	250 mL plastic	2	ZnAC/NaOH
Alkalinity	250 mL plastic	1	None
Ethane, Ethene, Methane	40 mL glass	3	HCL
Total Organic Carbon	250 mL plastic	1	HNO3

Comments: None

Well Information:

Well Labeled Properly: NA

Is Well in Good Condition? NA

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-04-04X	**Date(s):**	2023-10-23	**Work Order(s):**		2023 Fall LTM Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA	**Area:**	AOC 50
Weather(°F):	CLOUDS, T:59.25 °F, rH:63%, Clouds: 75%, Wind:10.36mph N-NW			**Field Technician:**		Allyson Fenton	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	94.00-104.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	54.5	**Total Depth (ft-bmp):**	104	**Water Column(ft):**	49.7	**Gallons in Well:**	8.11
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	NA	**Purge Method:**	Low Flow	**Purging Equipment:**	Portable Bladder
Purge Start Time:	14:05	**Total Volume Purged (gallons):**	1.2	**Sample ID:**	G6M-04-04X-FAL23	**Sample Time:**	14:50
Purge End Time:	14:50	**Well Volumes Purged (total):**	0.15	**Replicate Type / Replicate ID:**	Duplicate / AOC50-DUP01-FAL23	**Water Quality Meter/ ID:**	YSI Pro DSS / NA
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
14:10	0	100	mL/min	54.5	6.47	1.866	86.6	0.66	15.9	-90.3	Clear	No Odor
14:15	5	100	mL/min	54.5	6.43	1.836	146	0.39	15.1	-95.4	Clear	No Odor
14:20	10	100	mL/min	54.5	6.44	1.867	45.6	0.29	16	-101.4	Clear	No Odor
14:25	15	100	mL/min	54.5	6.45	1.864	135.5	0.22	15.7	-105.1	Clear	No Odor
14:30	20	100	mL/min	54.5	6.45	1.842	161.3	0.19	15.4	-15.5	Clear	No Odor
14:35	25	100	mL/min	54.5	6.45	1.832	227	0.17	15.3	-106.1	Clear	No Odor
14:40	30	100	mL/min	54.5	6.45	1.836	5.2	0.16	15.1	-106.4	Clear	No Odor
14:45	35	100	mL/min	54.5	6.45	1.825	40.8	0.13	14.9	-106.4	Clear	No Odor
14:50	40	100	mL/min	54.5	6.45	1.828	3.2	0.13	15	-106.7	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3

Comments: None

Well Information:

Well Labeled Properly: NA

Is Well in Good Condition? NA

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-04-06X	**Date(s):**	2023-11-02	**Work Order(s):**		2023 Fall LTM Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA	**Area:**	AOC 50
Weather(°F):	CLEAR, T:30.38 °F, rH:79%, Clouds: 0%, Wind:0mph N			**Field Technician:**		Frank Martinez	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	95.00-105.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	59.18	**Total Depth (ft-bmp):**	105	**Water Column(ft):**	45.82	**Gallons in Well:**	7.48
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	103	**Purge Method:**	Low Flow	**Purging Equipment:**	Portable Bladder
Purge Start Time:	08:50	**Total Volume Purged (gallons):**	1.5	**Sample ID:**	G6M-04-06X-FAL23	**Sample Time:**	9:40
Purge End Time:	09:39	**Well Volumes Purged (total):**	0.20	**Replicate Type / Replicate ID:**		**Water Quality Meter/ ID:**	YSI Pro DSS / NA
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
08:55	0	120	mL/min	59.2	7.35	0.25	3.2	8.75	8.2	194.5	Clear	No Odor
09:00	5	120	mL/min	59.26	6.72	0.199	2.1	3.48	9	196	Clear	No Odor
09:05	10	120	mL/min	59.25	6.5	0.196	1.2	2.29	9.2	195.7	Clear	No Odor
09:10	15	120	mL/min	59.26	6.42	0.196	0.3	1.9	9.3	194.1	Clear	No Odor
09:15	20	120	mL/min	56.25	6.39	0.197	0.1	1.76	9.2	192.2	Clear	No Odor
09:25	30	120	mL/min	59.3	6.36	0.195	0.2	1.57	9.4	188.8	Clear	No Odor
09:30	35	120	mL/min	59.3	6.36	0.195	0.3	1.52	9.3	187.3	Clear	No Odor
09:36	41	120	mL/min	59.3	6.36	0.195	0.1	1.47	9.3	184.5	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3

Comments: Sampled at 09:40

Well Information:

Well Labeled Properly: yes

Is Well in Good Condition? good

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-04-07X	**Date(s):**	2023-11-02	**Work Order(s):**		2023 Fall LTM Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA	**Area:**	AOC 50
Weather(°F):	CLEAR, T:35.26 °F, rH:72%, Clouds: 0%, Wind:1.99mph W			**Field Technician:**		Frank Martinez	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	120.00-130.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	58.81	**Total Depth (ft-bmp):**	130	**Water Column(ft):**	71.19	**Gallons in Well:**	11.62
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	125	**Purge Method:**	Low Flow	**Purging Equipment:**	Portable Bladder
Purge Start Time:	09:55	**Total Volume Purged (gallons):**	3.5	**Sample ID:**	G6M-04-07X-FAL23	**Sample Time:**	10:45
Purge End Time:	10:43	**Well Volumes Purged (total):**	0.30	**Replicate Type / Replicate ID:**		**Water Quality Meter/ ID:**	YSI Pro DSS / NA
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
10:00	0	300	mL/min	59.1	6.35	0.635	0.1	3.96	10.3	39.4	Clear	No Odor
10:05	5	300	mL/min	59.2	6.21	0.652	0.3	1.95	10.5	15.4	Clear	No Odor
10:10	10	300	mL/min	59.3	6.21	0.634	0.8	1.54	10.4	10.5	Clear	No Odor
10:15	15	300	mL/min	59.3	6.22	0.592	0.8	1.38	10.7	9.1	Clear	No Odor
10:20	20	300	mL/min	59.1	6.25	0.563	0.9	1.3	10.6	6.4	Clear	No Odor
10:25	25	300	mL/min	59.1	6.26	0.552	1	1.25	10.5	4	Clear	No Odor
10:30	30	300	mL/min	59.1	6.26	0.546	0.9	1.2	10.4	3.4	Clear	No Odor
10:35	35	300	mL/min	59.1	6.25	0.541	0.9	1.17	10.6	3.2	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3
Nitrate/Nitrite	500 mL amber	1	H2SO4
Sulfate	125 mL plastic	1	None
Sulfide	250 mL plastic	2	ZnAC/NaOH
Alkalinity	250 mL plastic	1	None
Ethane, Ethene, Methane	40 mL glass	3	HCL
Total Organic Carbon	250 mL plastic	1	HNO3

Comments: Sampled at 10:45

Well Information:

Well Labeled Properly: yes

Is Well in Good Condition? good

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-04-09X	**Date(s):**	2023-10-19	**Work Order(s):**		2023 Fall LTM Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA	**Area:**	AOC 50
Weather(°F):	CLEAR, T:59.86 °F, rH:75%, Clouds: 3%, Wind:4mph W-SW			**Field Technician:**		Frank Martinez	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	55.00-65.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	28.3	**Total Depth (ft-bmp):**	66.25	**Water Column(ft):**	28.15	**Gallons in Well:**	4.57
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	60	**Purge Method:**	Low Flow	**Purging Equipment:**	Portable Bladder
Purge Start Time:	11:20	**Total Volume Purged (gallons):**	2.6	**Sample ID:**	G6M-04-09X-FAL23	**Sample Time:**	12:30
Purge End Time:	12:48	**Well Volumes Purged (total):**	0.57	**Replicate Type / Replicate ID:**	NA	**Water Quality Meter/ ID:**	YSI Pro DSS / NA
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
11:25	0	165	mL/min	28.3	6.98	0.452	32.6	1.84	15.3	-152.1	Clear	No Odor
11:30	5	160	mL/min	28.32	6.85	0.446	26.6	1.32	13.8	-163.4	Clear	No Odor
11:35	10	160	mL/min	28.35	6.83	0.444	31.8	1.17	13.1	-166.7	Clear	No Odor
11:40	15	160	mL/min	28.35	6.77	0.446	41.2	1.08	13.2	-163	Clear	No Odor
11:45	20	160	mL/min	28.36	6.52	0.497	43.3	1.04	13	-146	Clear	No Odor
11:51	26	160	mL/min	28.36	6.47	0.52	16.2	0.96	14.7	-149.4	Clear	No Odor
11:55	30	160	mL/min	28.36	6.47	0.533	15.6	0.91	15.5	-150.3	Clear	No Odor
12:00	35	160	mL/min	28.36	6.47	0.544	15.3	0.93	14.2	-149.8	Clear	No Odor
12:05	40	160	mL/min	28.36	6.47	0.543	15.3	0.93	13.2	-149.3	Clear	No Odor
12:11	46	160	mL/min	28.36	6.47	0.543	15.2	0.91	13.8	-148.7	Clear	No Odor
12:16	51	160	mL/min	28.36	6.48	0.547	15.2	0.9	13.6	-148.6	Clear	No Odor
12:21	56	160	mL/min	28.37	6.47	0.549	15.2	0.85	13.6	-150.6	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3
Nitrate/Nitrite	500 mL amber	1	H2SO4
Sulfate	125 mL plastic	1	None
Sulfide	250 mL plastic	2	ZnAC/NaOH
Alkalinity	250 mL plastic	1	None
Ethane, Ethene, Methane	40 mL glass	3	HCL
Total Organic Carbon	250 mL plastic	1	HNO3

Comments:

Well Information:

Well Labeled Properly: yes

Is Well in Good Condition? good

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-04-10A	**Date(s):**	2023-10-19	**Work Order(s):**		2023 Fall LTM Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA	**Area:**	AOC 50
Weather(°F):	CLOUDS, T:54.66 °F, rH:77%, Clouds: 89%, Wind:10.36mph N			**Field Technician:**		Diane Champagne	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	30.00-40.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	9.09	**Total Depth (ft-bmp):**	42.1	**Water Column(ft):**	33.04	**Liters in Well:**	5.37
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	40	**Purge Method:**	Low Flow	**Purging Equipment:**	Peristaltic Pump
Purge Start Time:	12:05	**Total Volume Purged (liters):**	14.26	**Sample ID:**	G6M-04-10A-FAL23	**Sample Time:**	NA
Purge End Time:	14:02	**Well Volumes Purged (total):**	2.66	**Replicate Type / Replicate ID:**	MS/MSD / G6M-04-10A-FAL23	**Water Quality Meter/ ID:**	YSI Pro DSS / 16c100431
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm^c)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
12:15	0	100	mL/min	9.09	6.39	0.356	5.21	1.48	14.1	-46.5	Clear	No Odor
12:20	5	125	mL/min	9.09	6.4	0.349	10.77	0.81	13.9	-51	Orange	Moderate
12:25	10	125	mL/min	9.1	6.41	0.332	18.04	0.66	14.5	-53.1	Clear	No Odor
12:30	15	125	mL/min	9.1	6.41	0.33	19.14	0.59	14.9	-54.3	Orange	Moderate
12:35	20	125	mL/min	9.11	6.42	0.329	16.76	0.53	15	-54.8	Clear	No Odor
12:40	25	125	mL/min	9.1	6.42	0.326	14.68	0.53	15.9	-55.6	Clear	No Odor
12:45	30	125	mL/min	9.11	6.42	0.324	11.41	0.52	16.1	-56.4	Clear	No Odor
12:50	35	125	mL/min	9.11	6.43	0.325	13.55	0.49	16.1	-57.3	Clear	No Odor
12:55	40	125	mL/min	9.11	6.45	0.327	12.26	0.47	15.9	-58.3	Clear	No Odor
13:01	46	125	mL/min	9.11	6.46	0.33	10.39	0.46	15.9	-59.2	Clear	No Odor
13:10	55	125	mL/min	9.11	6.47	0.339	12.45	0.38	16	-61.4	Clear	No Odor
13:15	60	125	mL/min	9.11	6.47	0.346	22.33	0.37	16	-62.7	Clear	No Odor
13:20	65	125	mL/min	9.11	6.48	0.35	19.78	0.36	16	-63.4	Clear	No Odor
13:25	70	125	mL/min	9.11	6.48	0.352	24.42	0.36	15.3	-63.6	Clear	No Odor
13:30	75	125	mL/min	9.11	6.49	0.356	28.75	0.36	15.2	-63.9	Clear	No Odor
13:35	80	125	mL/min	9.12	6.49	0.355	37.32	0.36	15.3	-64.6	Clear	No Odor
13:40	85	125	mL/min	9.1	6.49	0.358	54.94	0.36	15	-65.1	Clear	No Odor
13:45	90	125	mL/min	9.1	6.49	0.361	3.17	0.35	14.8	-65.4	Clear	No Odor
13:50	95	125	mL/min	9.11	6.49	0.355	3.1	0.34	15.4	-66.2	Clear	No Odor
13:55	100	125	mL/min	9.12	6.49	0.359	2.11	0.33	15.8	-66.9	Clear	No Odor
14:01	106	125	mL/min	9.11	6.5	0.361	1.36	0.33	15.5	-67.4	Orange	Moderate

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3
Nitrate/Nitrite	500 mL amber	1	H2SO4
Sulfate	125 mL plastic	1	None
Sulfide	250 mL plastic	2	ZnAC/NaOH
Alkalinity	250 mL plastic	1	None
Ethane, Ethene, Methane	40 mL glass	3	HCL
Total Organic Carbon	250 mL plastic	1	HNO3

Comments: None

Well Information:

Well Labeled Properly: yes

Is Well in Good Condition? good

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-04-10X	**Date(s):**	2023-10-18	**Work Order(s):**		2023 Fall LTM Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA	**Area:**	AOC 50
Weather(°F):	CLOUDS, T:54.66 °F, rH:77%, Clouds: 89%, Wind:10.36mph N			**Field Technician:**		Diane Champagne	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	52.00-62.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	9.93	**Total Depth (ft-bmp):**	63.5	**Water Column(ft):**	53.61	**Liters in Well:**	8.71
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	61	**Purge Method:**	Low Flow	**Purging Equipment:**	Peristaltic Pump
Purge Start Time:	14:00	**Total Volume Purged (liters):**	5	**Sample ID:**	G6M-04-10X-FAL23	**Sample Time:**	14:40
Purge End Time:	14:40	**Well Volumes Purged (total):**	0.57	**Replicate Type / Replicate ID:**	NA / NA	**Water Quality Meter/ ID:**	YSI Pro DSS / 16c100431
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
14:05	0	125	mL/min	9.93	6.48	1.826	1.07	1.79	15.1	-77.3	Clear	No Odor
14:10	5	125	mL/min	9.95	6.47	1.907	0.39	1.37	15.1	-81.6	Clear	No Odor
14:15	10	125	mL/min	9.93	6.43	1.936	0.69	1.12	15.3	-85.2	Clear	No Odor
14:20	15	125	mL/min	9.96	6.42	1.944	2.13	1.4	15.5	-83.3	Clear	No Odor
14:25	20	125	mL/min	9.97	6.39	1.947	0.56	1.41	15.7	-80.4	Clear	No Odor
14:30	25	125	mL/min	9.94	6.38	1.948	0.46	1.55	15.9	-78.6	Clear	No Odor
14:35	30	125	mL/min	9.94	6.36	1.951	1.69	1.58	16	-76.3	Clear	No Odor
14:40	35	125	mL/min	9.94	6.34	1.955	0.09	1.49	16.1	-74.5	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL

Comments: None

Well Information:

Well Labeled Properly: yes

Is Well in Good Condition? good

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-04-13X	**Date(s):**	2023-10-18	**Work Order(s):**		2023 Fall LTM Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA	**Area:**	AOC 50
Weather(°F):	CLOUDS, T:54.66 °F, rH:77%, Clouds: 89%, Wind:10.36mph N			**Field Technician:**		Diane Champagne	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	30.00-40.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	10.93	**Total Depth (ft-bmp):**	42.01	**Water Column(ft):**	31.27	**Liters in Well:**	5.08
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	40	**Purge Method:**	Low Flow	**Purging Equipment:**	Peristaltic Pump
Purge Start Time:	12:00	**Total Volume Purged (liters):**	10.7	**Sample ID:**	G6M-04-13X-FAL23	**Sample Time:**	13:30
Purge End Time:	13:31	**Well Volumes Purged (total):**	2.11	**Replicate Type / Replicate ID:**	NA / NA	**Water Quality Meter/ ID:**	YSI Pro DSS / 16c100431
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
12:10	0	100	mL/min	10.93	7.03	0.144	3.55	0.83	12.5	-63.2	Clear	No Odor
12:15	5	100	mL/min	10.96	7.04	0.143	14.88	0.6	12.8	-69.7	Clear	No Odor
12:20	10	100	mL/min	10.96	7.04	0.142	15.55	0.57	12.9	-70	Clear	No Odor
12:25	15	100	mL/min	10.96	7.03	0.141	2.15	0.56	12.8	-69.6	Clear	No Odor
12:30	20	125	mL/min	10.96	7.01	0.139	4.9	0.53	12.8	-69	Clear	No Odor
12:35	25	125	mL/min	10.96	7	0.137	4.15	0.51	13	-69.9	Clear	No Odor
12:41	31	125	mL/min	10.96	6.99	0.135	5.87	0.49	12.8	-69.1	Clear	No Odor
12:45	35	125	mL/min	10.96	6.97	0.134	5.41	0.5	13	-69.1	Clear	No Odor
12:50	40	125	mL/min	10.96	6.96	0.132	9.63	0.5	12.8	-68.2	Clear	No Odor
12:55	45	125	mL/min	10.96	6.93	0.13	8.45	0.5	13	-67.6	Clear	No Odor
13:00	50	125	mL/min	10.96	6.9	0.126	4.19	0.51	13	-65.9	Clear	No Odor
13:05	55	125	mL/min	10.96	6.86	0.121	1.93	0.51	13.3	-63.7	Clear	No Odor
13:10	60	125	mL/min	10.96	6.85	0.119	2.65	0.51	13.4	-63.1	Clear	No Odor
13:16	66	125	mL/min	10.95	6.82	0.116	2.82	0.51	13.3	-61.2	Clear	No Odor
13:20	70	125	mL/min	10.95	6.79	0.112	2.94	0.51	13.7	-59.7	Clear	No Odor
13:26	76	125	mL/min	10.95	6.79	0.112	3.21	0.51	13.7	-59.5	Clear	No Odor
13:30	80	125	mL/min	10.95	6.78	0.111	3.31	0.51	13.8	-58.7	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL

Comments: None

Well Information:

Well Labeled Properly: yes

Is Well in Good Condition? good

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Project Number	30167457	**Well ID**	G6M-04-14X			**Date**	10/18/2023
Project Name/Location	Former Fort Devens AOC 50		**Weather(°F)**	52 °F, Overcast, winds at 0 mph.			
Measuring Pt. Description	Top of Inner Casing	**MP Elevation**	NA	**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	5.84	**Total Depth (ft-bmp)**	90	**Water Column (ft)**	84.23	**Gallons in Well**	13.69
Purge Start	09:33	**Pump Intake (ft-bmp)**	85	**Purge Method**	Low-Flow	**Purge Equipment**	Peristaltic
Purge End	10:36	**Volumes Purged**	0.13	**Sample ID**	G6X-04-14X-FAL23	**Sampled by**	Nelson Martinez
Sample Time	10:27	**Gallons Purged**	1.78	**Replicate/ Code No.**	NA	**Sample Type**	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
09:37	0	0	125	5.84	0.13	7.35	0.668	233	6.09	13.2	18.9	Clear	None
09:42	5	5	125	5.84	0.30	7.45	0.873	135	0.87	13.3	-75.2	Clear	None
09:47	5	10	125	5.84	0.46	7.51	0.872	45.4	0.56	13.3	-73.4	Clear	None
09:52	5	15	125	5.84	0.63	7.52	0.872	21.2	0.42	13.3	-64.4	Clear	None
09:57	5	20	125	5.84	0.79	7.53	0.872	11.9	0.36	13.3	-55.4	Clear	None
10:02	5	25	125	5.84	0.96	7.53	0.87	6.8	0.33	13.3	-48.9	Clear	None
10:07	5	30	125	5.84	1.12	7.54	0.87	5.47	0.3	13.3	-42.6	Clear	None
10:12	5	35	125	5.84	1.29	7.54	0.87	5.75	0.27	13.4	-37.3	Clear	None
10:17	5	40	125	5.84	1.45	7.54	0.87	2.33	0.28	13.4	-32.7	Clear	None
10:22	5	45	125	5.84	1.62	7.54	0.869	2.16	0.26	13.4	-29.5	Clear	None
10:27	5	50	125	5.84	1.78	7.54	0.868	1.78	0.26	13.4	-25.3	Clear	None

Constituent Sampled	Container	Number	Preservative
Metals	250 mL Plastic	1	HNO3
VOCs	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot — 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: Edge of river
Condition of Well: Good condition
Well Completion: Stick-up
Well Locked at Arrival: yes
Well Locked at Departure: yes
Key Number To Well: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-04-15X	**Date(s):**	2023-10-19	**Work Order(s):**		2023 Fall LTM Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA	**Area:**	AOC 50
Weather(°F):	CLEAR, T:55.35 °F, rH:87%, Clouds: 4%, Wind:4mph W-NW			**Field Technician:**		Frank Martinez	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	70.00-80.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	38.96	**Total Depth (ft-bmp):**	81.1	**Water Column(ft):**	42.28	**Gallons in Well:**	6.87
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	75	**Purge Method:**	Low Flow	**Purging Equipment:**	Portable Bladder
Purge Start Time:	09:50	**Total Volume Purged (gallons):**	1.7	**Sample ID:**	G6M-04-15X-FAL23	**Sample Time:**	10:30
Purge End Time:	10:38	**Well Volumes Purged (total):**	0.25	**Replicate Type / Replicate ID:**	NA	**Water Quality Meter/ ID:**	YSI Pro DSS / NA
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
09:55	0	180	mL/min	38.96	6.24	0.375	69.2	2.66	11.7	9.6	Clear	No Odor
10:00	5	180	mL/min	30.91	6.23	0.481	5.06	1.68	11.6	-15.3	Clear	No Odor
10:05	10	180	mL/min	38.91	6.25	0.509	17.6	1.43	11.5	-22.3	Clear	No Odor
10:10	15	180	mL/min	38.91	6.25	0.501	9.36	1.31	11.6	-24.3	Clear	No Odor
10:15	20	180	mL/min	38.91	6.24	0.5	9.6	1.23	11.5	-25.3	Clear	No Odor
10:20	25	180	mL/min	38.91	6.24	0.5	9.3	1.17	11.6	-26.4	Clear	No Odor
10:25	30	180	mL/min	38.92	6.24	0.496	9.2	1.14	11.8	-27.1	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3

Comments:

Well Information:

Well Labeled Properly: yes

Is Well in Good Condition? good

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-07-01X	**Date(s):**	2023-10-20	**Work Order(s):**		2023 Fall LTM Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA	**Area:**	AOC 50
Weather(°F):	MIST, T:51.26 °F, rH:92%, Clouds: 100%, Wind:0mph N			**Field Technician:**		Frank Martinez	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	78.00-98.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	50.46	**Total Depth (ft-bmp):**	95	**Water Column(ft):**	44.73	**Gallons in Well:**	7.27
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	88	**Purge Method:**	Low Flow	**Purging Equipment:**	Portable Bladder
Purge Start Time:	09:00	**Total Volume Purged (gallons):**	3.68	**Sample ID:**	G6M-07-01X-FAL23	**Sample Time:**	10:15
Purge End Time:	10:13	**Well Volumes Purged (total):**	0.51	**Replicate Type / Replicate ID:**	NA	**Water Quality Meter/ ID:**	YSI Pro DSS / NA
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
09:05	0	220	mL/min	50.46	6.6	1.365	61.8	3.54	14	174.7	Clear	No Odor
09:10	5	200	mL/min	50.46	6.64	1.465	54.6	2.17	14	154	Clear	No Odor
09:15	10	200	mL/min	50.48	6.64	1.445	37.3	1.87	13.9	131.4	Clear	No Odor
09:20	15	200	mL/min	50.48	6.61	1.422	24.49	1.72	13.9	113.5	Clear	No Odor
09:25	20	200	mL/min	50.48	6.59	1.412	27.6	1.74	15	104.4	Clear	No Odor
09:30	25	200	mL/min	50.48	6.56	1.394	22.2	1.63	14.9	100.4	Clear	No Odor
09:35	30	200	mL/min	50.46	6.47	1.36	22.5	1.49	14	99.7	Clear	No Odor
09:41	36	200	mL/min	50.48	6.41	1.33	24.4	1.46	14.7	100.7	Clear	No Odor
09:45	40	200	mL/min	50.43	6.32	1.291	18.2	1.36	13.8	104.1	Clear	No Odor
09:50	45	200	mL/min	50.48	6.2	1.241	12.6	1.29	13.9	110.6	Clear	No Odor
09:55	50	200	mL/min	50.48	6.15	1.215	13.2	1.25	13.7	116.2	Clear	No Odor
10:00	55	200	mL/min	50.48	6.13	1.186	13.3	1.25	13.5	120.8	Clear	No Odor
10:05	60	200	mL/min	50.48	6.11	1.166	13.2	1.26	13.6	123.5	Clear	No Odor
10:10	65	200	mL/min	50.48	6.11	1.153	13.2	1.26	13.6	125.3	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3
Nitrate/Nitrite	500 mL amber	1	H2SO4
Sulfate	125 mL plastic	1	None
Sulfide	250 mL plastic	2	ZnAC/NaOH
Alkalinity	250 mL plastic	1	None
Ethane, Ethene, Methane	40 mL glass	3	HCL
Total Organic Carbon	250 mL plastic	1	HNO3

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

Comments: Sampled at 10:15

Well Information:

Well Labeled Properly:	yes
Is Well in Good Condition?	good
Well Inspection Comments:	NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-07-02X	**Date(s):**	2023-10-18	**Work Order(s):**		2023 Fall LTM Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA	**Area:**	AOC 50
Weather(°F):	CLOUDS, T:54.66 °F, rH:77%, Clouds: 89%, Wind:10.36mph N			**Field Technician:**		Diane Champagne	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	22.50-27.50	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	10.06	**Total Depth (ft-bmp):**	29.11	**Water Column(ft):**	19.12	**Liters in Well:**	3.11
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	26.5	**Purge Method:**	Low Flow	**Purging Equipment:**	Peristaltic Pump
Purge Start Time:	10:00	**Total Volume Purged (liters):**	6.25	**Sample ID:**	G6M-07-02X-FAL23	**Sample Time:**	10:50
Purge End Time:	10:51	**Well Volumes Purged (total):**	2.01	**Replicate Type / Replicate ID:**	Duplicate / AOC50-DUP03-FAL23	**Water Quality Meter/ ID:**	YSI Pro DSS / 16c100431
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm^c)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
10:10	0	125	mL/min	10.06	6.91	0.357	4.59	1.93	12	-72.6	Clear	Strong
10:15	5	125	mL/min	10.77	6.87	0.298	4.79	0.9	11.9	-83.3	Clear	No Odor
10:20	10	125	mL/min	11.35	6.88	0.293	3.98	0.73	11.9	-86.6	Clear	No Odor
10:27	17	125	mL/min	12.01	6.89	0.288	6.97	0.57	11.9	-88.8	Clear	No Odor
10:36	26	125	mL/min	11.99	6.88	0.284	8.21	0.47	12.1	-89.9	Clear	No Odor
10:40	30	125	mL/min	12	6.86	0.282	4.97	0.46	12.1	-89.5	Clear	No Odor
10:45	35	125	mL/min	12.02	6.87	0.281	3.17	0.45	12.1	-90.2	Clear	No Odor
10:50	40	125	mL/min	12.03	6.87	0.278	2.56	0.45	12.2	-90.2	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3
Nitrate/Nitrite	500 mL amber	1	H2SO4
Sulfate	125 mL plastic	1	None
Sulfide	250 mL plastic	2	ZnAC/NaOH
Alkalinity	250 mL plastic	1	None
Ethane, Ethene, Methane	40 mL glass	3	HCL
Total Organic Carbon	250 mL plastic	1	HNO3

Comments: None

Well Information:

Well Labeled Properly: yes

Is Well in Good Condition? poor

Issues: Cover broken

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-13-01X	**Date(s):**	2023-10-18	**Work Order(s):**		2023 Fall LTM Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA	**Area:**	AOC 50
Weather(°F):	CLOUDS, T:60.97 °F, rH:60%, Clouds: 32%, Wind:3.22mph S			**Field Technician:**		Allyson Fenton	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	125.00-135.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	59.7	**Total Depth (ft-bmp):**	137.65	**Water Column(ft):**	76.96	**Gallons in Well:**	12.51
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	130	**Purge Method:**	Low Flow	**Purging Equipment:**	Portable Bladder
Purge Start Time:	12:50	**Total Volume Purged (gallons):**	1.2	**Sample ID:**	G6M-13-01X-FAL23	**Sample Time:**	13:35
Purge End Time:	13:35	**Well Volumes Purged (total):**	0.10	**Replicate Type / Replicate ID:**	NA / NA	**Water Quality Meter/ ID:**	YSI Pro DSS / NA
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
12:55	0	100	mL/min	59.7	6.65	0.808	3.9	3.02	14.1	-26.9	Clear	No Odor
13:00	5	100	mL/min	59.7	6.47	0.834	3.1	1.39	13.6	-29	Clear	No Odor
13:05	10	100	mL/min	59.7	6.46	0.846	3.2	0.9	13.7	-33.7	Clear	No Odor
13:10	15	100	mL/min	59.7	6.47	0.852	2.8	0.72	13.7	-38.4	Clear	No Odor
13:15	20	100	mL/min	59.7	6.48	0.856	3.1	0.61	13.8	-40.8	Clear	No Odor
13:20	25	100	mL/min	59.7	6.48	0.859	3	0.52	13.8	-42.7	Clear	No Odor
13:25	30	100	mL/min	59.7	6.49	0.862	3.1	0.47	13.8	-44.4	Clear	No Odor
13:30	35	100	mL/min	59.7	6.48	0.865	2.8	0.43	13.9	-45.3	Clear	No Odor
13:35	40	100	mL/min	59.7	6.49	0.864	2.6	0.39	13.8	-46.6	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3
Nitrate/Nitrite	500 mL amber	1	H2SO4
Sulfate	125 mL plastic	1	None
Sulfide	250 mL plastic	2	ZnAC/NaOH
Alkalinity	250 mL plastic	1	None
Ethane, Ethene, Methane	40 mL glass	3	HCL
Total Organic Carbon	250 mL plastic	1	HNO3

Comments: None

Well Information:

Well Labeled Properly: NA

Is Well in Good Condition? NA

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-13-02X	**Date(s):**	2023-10-20	**Work Order(s):**		2023 Fall LTM Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA	**Area:**	AOC 50
Weather(°F):	CLOUDS, T:60.35 °F, rH:85%, Clouds: 100%, Wind:6.91mph E-SE			**Field Technician:**		Allyson Fenton	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	115.00-125.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	57.5	**Total Depth (ft-bmp):**	124.95	**Water Column(ft):**	68.49	**Gallons in Well:**	11.18
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	120	**Purge Method:**	Low Flow	**Purging Equipment:**	Portable Bladder
Purge Start Time:	13:20	**Total Volume Purged (gallons):**	1.7	**Sample ID:**	G6M-13-02X-FAL23	**Sample Time:**	14:25
Purge End Time:	14:25	**Well Volumes Purged (total):**	0.15	**Replicate Type / Replicate ID:**	Duplicate / AOC50-DUP02-FAL23	**Water Quality Meter/ ID:**	YSI Pro DSS / NA
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
13:25	0	100	mL/min	57.5	6.08	0.767	9.1	1.53	15.6	-16.1	Clear	No Odor
13:31	6	100	mL/min	57.5	6.16	0.855	11.5	1.18	15.7	-23.5	Clear	No Odor
13:35	10	100	mL/min	57.5	6.19	0.89	11.9	0.87	15.7	-19.5	Clear	No Odor
13:40	15	100	mL/min	57.5	6.2	0.945	14.3	0.66	15.6	-13.8	Clear	No Odor
13:45	20	100	mL/min	57.5	6.19	0.992	15.9	0.56	15.5	-11.6	Clear	No Odor
13:50	25	100	mL/min	57.5	6.19	1.024	19.8	0.5	15.5	-9.3	Clear	No Odor
13:55	30	100	mL/min	57.55	6.18	1.065	32.2	0.45	16.3	-7.7	Clear	No Odor
14:00	35	100	mL/min	57.55	6.18	1.078	41.7	0.41	16	-4.9	Clear	No Odor
14:05	40	100	mL/min	57.55	6.17	1.084	61	0.38	15.8	-1	Clear	No Odor
14:10	45	100	mL/min	57.55	6.18	1.099	52.8	0.32	16.1	2.9	Clear	No Odor
14:15	50	100	mL/min	57.55	6.18	1.099	64.6	0.33	15.9	6.18	Clear	No Odor
14:20	55	100	mL/min	57.55	6.18	1.101	82.2	0.31	15.8	6.2	Clear	No Odor
14:25	60	100	mL/min	57.55	6.18	1.101	96.1	0.3	15.7	6.8	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3
Nitrate/Nitrite	500 mL amber	1	H2SO4
Sulfate	125 mL plastic	1	None
Sulfide	250 mL plastic	2	ZnAC/NaOH
Alkalinity	250 mL plastic	1	None
Ethane, Ethene, Methane	40 mL glass	3	HCL
Total Organic Carbon	250 mL plastic	1	HNO3

Comments: None

Well Information:

Well Labeled Properly: NA

Is Well in Good Condition? NA

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-13-04X	**Date(s):**	2023-11-02	**Work Order(s):**		2023 Fall LTM Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA	**Area:**	AOC 50
Weather(°F):	CLEAR, T:42.55 °F, rH:51%, Clouds: 0%, Wind:8.05mph NW			**Field Technician:**		Frank Martinez	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	125.00-135.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	60.03	**Total Depth (ft-bmp):**	135	**Water Column(ft):**	74.97	**Gallons in Well:**	12.24
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	133	**Purge Method:**	Low Flow	**Purging Equipment:**	Portable Bladder
Purge Start Time:	13:20	**Total Volume Purged (gallons):**	1.25	**Sample ID:**	G6M-13-04X-FAL23	**Sample Time:**	14:05
Purge End Time:	14:04	**Well Volumes Purged (total):**	0.10	**Replicate Type / Replicate ID:**		**Water Quality Meter/ ID:**	YSI Pro DSS / NA
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
13:25	0	110	mL/min	59.98	6.58	1.316	10.1	4.32	8.5	-89.1	Clear	No Odor
13:30	5	110	mL/min	60.01	6.54	1.502	9.3	2.84	8.1	-102	Clear	No Odor
13:35	10	110	mL/min	60.02	6.54	1.519	8.4	2.31	9.2	-107.1	Clear	No Odor
13:40	15	110	mL/min	60.1	6.55	1.526	7.2	1.96	9.7	-111.6	Clear	No Odor
13:45	20	110	mL/min	6.05	6.57	1.537	6.33	1.82	9.2	-113.2	Clear	No Odor
13:50	25	110	mL/min	60.07	6.57	1.53	5.8	1.73	9.5	-113.9	Clear	No Odor
13:55	30	110	mL/min	60.1	6.58	1.523	5.6	1.67	9.6	-117.1	Clear	No Odor
14:00	35	110	mL/min	60.1	6.58	1.523	5.4	1.58	9.7	-118.9	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3

Comments: Sampled at 1405

Well Information:

Well Labeled Properly: yes

Is Well in Good Condition? good

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-13-05X	**Date(s):**	2023-10-17	**Work Order(s):**		2023 Fall LTM Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA	**Area:**	AOC 50
Weather(°F):	CLOUDS, T:55.06 °F, rH:75%, Clouds: 82%, Wind:13.8mph N-NW			**Field Technician:**		Diane Champagne	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	45.00-55.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	11.19	**Total Depth (ft-bmp):**	56.68	**Water Column(ft):**	45.8	**Liters in Well:**	7.44
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	50	**Purge Method:**	Low Flow	**Purging Equipment:**	Peristaltic Pump
Purge Start Time:	10:25	**Total Volume Purged (liters):**	1	**Sample ID:**	G6M-13-05X-FAL23	**Sample Time:**	11:00
Purge End Time:	11:02	**Well Volumes Purged (total):**	0.13	**Replicate Type / Replicate ID:**	NA / NA	**Water Quality Meter/ ID:**	YSI Pro DSS / 16c100431
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
10:35	0	100	mL/min	11.19	6.74	0.773	6.04	0.63	12.9	-68.1	Clear	No Odor
10:40	5	100	mL/min	11.23	6.75	0.78	3.47	0.54	12.9	-70.4	Clear	No Odor
10:45	10	100	mL/min	11.21	6.77	0.781	3.3	0.52	12.9	-71.9	Clear	No Odor
10:50	15	100	mL/min	11.21	6.77	0.777	1.52	0.46	13	-73.3	Clear	No Odor
10:55	20	100	mL/min	11.21	6.78	0.779	3.1	0.47	13	-73.6	Clear	No Odor
11:00	25	100	mL/min	11.21	6.78	0.784	3.69	0.45	13.1	-74.4	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3
Nitrate/Nitrite	500 mL amber	1	H2SO4
Sulfate	125 mL plastic	1	None
Sulfide	250 mL plastic	2	ZnAC/NaOH
Alkalinity	250 mL plastic	1	None
Ethane, Ethene, Methane	40 mL glass	3	HCL
Total Organic Carbon	250 mL plastic	1	HNO3

Comments: None

Well Information:

Well Labeled Properly: yes

Is Well in Good Condition? good

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-13-06X	**Date(s):**	2023-10-17	**Work Order(s):**		2023 Fall LTM Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA	**Area:**	AOC 50
Weather(°F):	CLOUDS, T:55.15 °F, rH:74%, Clouds: 80%, Wind:14.97mph N-NW			**Field Technician:**		Diane Champagne	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	50.00-60.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	10.33	**Total Depth (ft-bmp):**	62.1	**Water Column(ft):**	51.85	**Liters in Well:**	8.43
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	59	**Purge Method:**	Low Flow	**Purging Equipment:**	Peristaltic Pump
Purge Start Time:	12:30	**Total Volume Purged (liters):**	6	**Sample ID:**	G6M-13-06X-FAL23	**Sample Time:**	13:30
Purge End Time:	13:31	**Well Volumes Purged (total):**	0.71	**Replicate Type / Replicate ID:**	NA / NA	**Water Quality Meter/ ID:**	YSI Pro DSS / 16c100431
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
12:40	0	100	mL/min	10.33	6.2	1.045	13.66	0.62	13.6	-55.4	Clear	No Odor
12:45	5	100	mL/min	10.39	6.19	0.994	7.33	0.52	13.4	-54.4	Clear	No Odor
12:50	10	100	mL/min	10.49	6.18	0.98	4.97	0.47	13.4	-53.9	Clear	No Odor
12:55	15	100	mL/min	10.49	6.18	0.979	5.1	0.42	13.3	-53.8	Clear	No Odor
13:00	20	100	mL/min	10.49	6.18	0.972	8.08	0.4	13.1	-53.4	Clear	No Odor
13:05	25	100	mL/min	10.49	6.18	0.97	3.11	0.41	13	-53.3	Clear	No Odor
13:10	30	100	mL/min	10.49	6.17	0.967	4.92	0.38	13	-53	Clear	No Odor
13:15	35	100	mL/min	10.49	6.17	0.968	5.55	0.38	13	-52.9	Clear	No Odor
13:20	40	100	mL/min	10.49	6.17	0.969	3.73	0.37	13	-52.7	Clear	No Odor
13:25	45	100	mL/min	10.49	6.17	0.967	2.44	0.37	13	-52.5	Clear	No Odor
13:30	50	100	mL/min	10.49	6.17	0.973	2.95	0.36	13	-52.5	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3
Nitrate/Nitrite	500 mL amber	1	H2SO4
Sulfate	125 mL plastic	1	None
Sulfide	250 mL plastic	2	ZnAC/NaOH
Alkalinity	250 mL plastic	1	None
Ethane, Ethene, Methane	40 mL glass	3	HCL
Total Organic Carbon	250 mL plastic	1	HNO3

Comments: None

Well Information:

Well Labeled Properly: yes

Is Well in Good Condition? good

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-95-19X	**Date(s):**	2023-10-18	**Work Order(s):**		2023 Fall LTM Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA	**Area:**	AOC 50
Weather(°F):	CLOUDS, T:54.97 °F, rH:74%, Clouds: 86%, Wind:14.97mph N-NW			**Field Technician:**		Diane Champagne	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	48.00-58.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	8.99	**Total Depth (ft-bmp):**	58.71	**Water Column(ft):**	49.83	**Liters in Well:**	8.10
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	47	**Purge Method:**	Low Flow	**Purging Equipment:**	Peristaltic Pump
Purge Start Time:	09:00	**Total Volume Purged (liters):**	3.5	**Sample ID:**	G6M-95-19X-FAL23	**Sample Time:**	9:35
Purge End Time:	09:36	**Well Volumes Purged (total):**	0.43	**Replicate Type / Replicate ID:**	NA / NA	**Water Quality Meter/ ID:**	YSI Pro DSS / 16c100431
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
09:10	0	100	mL/min	8.99	5.7	3.273	0.03	6.87	12.6	-7	Clear	No Odor
09:15	5	100	mL/min	8.99	5.55	3.09	0.5	5.02	12.7	1.8	Clear	No Odor
09:20	10	100	mL/min	9.01	5.56	3.061	0.3	4.82	12.7	2.3	Clear	No Odor
09:26	16	100	mL/min	9.03	5.54	3.001	0.5	4.3	12.8	1.7	Clear	No Odor
09:30	20	100	mL/min	9.02	5.54	2.993	0.7	4.22	12.8	0.8	Clear	No Odor
09:35	25	100	mL/min	9.02	5.53	2.993	0.72	4.17	12.8	-0.2	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL

Comments: None

Well Information:

Well Labeled Properly: yes

Is Well in Good Condition? good

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-95-20X	**Date(s):**	2023-10-17	**Work Order(s):**		2023 Fall LTM Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA	**Area:**	AOC 50
Weather(°F):	CLOUDS, T:54.75 °F, rH:75%, Clouds: 86%, Wind:1.99mph N-NW			**Field Technician:**		Diane Champagne	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	18.00-23.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	9.42	**Total Depth (ft-bmp):**	24.9	**Water Column(ft):**	15.61	**Liters in Well:**	2.54
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	23	**Purge Method:**	Low Flow	**Purging Equipment:**	Peristaltic Pump
Purge Start Time:	14:20	**Total Volume Purged (liters):**	7	**Sample ID:**	G6M-95-20X-FAL23	**Sample Time:**	15:30
Purge End Time:	15:30	**Well Volumes Purged (total):**	2.76	**Replicate Type / Replicate ID:**	Duplicate / AOC50-DUP04-FAL23	**Water Quality Meter/ ID:**	YSI Pro DSS / 16c100431
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
14:25	0	100	mL/min	9.42	6.34	0.141	23.74	3.71	14.2	-22.1	Clear	No Odor
14:30	5	100	mL/min	9.59	6.17	0.119	32.1	1.4	13.9	-4.9	Clear	No Odor
14:35	10	100	mL/min	9.96	6.12	0.149	19.7	0.99	13.8	3.9	Clear	No Odor
14:41	16	100	mL/min	9.96	6.1	0.148	14.08	0.86	13.8	6.8	Clear	No Odor
14:45	20	100	mL/min	9.97	6.09	0.149	10.75	0.86	13.9	6.7	Clear	No Odor
14:50	25	100	mL/min	9.96	6.09	0.149	8.39	0.85	14	5	Clear	No Odor
14:55	30	100	mL/min	9.96	6.09	0.15	5.66	0.85	14	2.9	Clear	No Odor
15:00	35	100	mL/min	9.96	6.09	0.15	4.76	0.82	13.8	-0.1	Clear	No Odor
15:05	40	100	mL/min	9.96	6.09	0.151	4.67	0.77	13.7	-2.7	Clear	No Odor
15:10	45	100	mL/min	9.96	6.09	0.152	5.36	0.74	13.6	-5.3	Clear	No Odor
15:15	50	100	mL/min	9.96	6.09	0.153	2.26	0.71	13.5	-7.8	Clear	No Odor
15:20	55	100	mL/min	9.96	6.1	0.158	2.57	0.69	13.5	-10.1	Clear	No Odor
15:25	60	100	mL/min	9.96	6.1	0.158	2.37	0.69	13.5	-12	Clear	No Odor
15:30	65	100	mL/min	9.96	6.1	0.159	2.12	0.68	13.4	-13.7	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3

Comments: None

Well Information:

Well Labeled Properly: yes

Is Well in Good Condition? good

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-97-05B	**Date(s):**	2023-10-17	**Work Order(s):**		2023 Fall LTM Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA	**Area:**	AOC 50
Weather(°F):	CLOUDS, T:58.12 °F, rH:73%, Clouds: 100%, Wind:4.61mph W			**Field Technician:**		Allyson Fenton	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	130.00-135.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	62.45	**Total Depth (ft-bmp):**	135	**Water Column(ft):**	72.55	**Gallons in Well:**	11.79
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	132	**Purge Method:**	Low Flow	**Purging Equipment:**	Portable Bladder
Purge Start Time:	09:02	**Total Volume Purged (gallons):**	3.04	**Sample ID:**	G6M-97-05B-FAL23	**Sample Time:**	11:00
Purge End Time:	11:00	**Well Volumes Purged (total):**	0.26	**Replicate Type / Replicate ID:**	NA / NA	**Water Quality Meter/ ID:**	YSI Pro DSS / NA
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
09:05	0	100	mL/min	62.45	6.69	0.779	8.6	1.7	11.5	-72.2	Clear	Slight
09:10	5	100	mL/min	62.45	6.71	0.788	50.1	0.55	12.4	-88.7	Clear	Slight
09:15	10	100	mL/min	62.48	6.71	0.805	53.3	0.39	13.3	-94.9	Clear	No Odor
09:20	15	100	mL/min	62.44	6.72	0.799	40	0.32	12.9	-98	Clear	No Odor
09:25	20	100	mL/min	62.44	6.72	0.812	27.9	0.26	13.4	-100.1	Clear	No Odor
09:35	30	100	mL/min	62.44	6.74	0.825	633.1	0.21	13.9	-195.6	Clear	No Odor
09:40	35	100	mL/min	62.44	6.74	0.828	39.2	0.18	14	-106.4	Clear	No Odor
09:45	40	100	mL/min	62.44	6.74	0.829	188.2	0.16	14.2	-107.2	Clear	No Odor
09:50	45	100	mL/min	62.44	6.74	0.833	26.2	0.16	14.3	-105.8	Clear	No Odor
09:55	50	100	mL/min	62.44	6.74	0.846	35.6	0.14	14.9	-109.8	Clear	No Odor
10:00	55	100	mL/min	62.44	6.74	0.863	39.7	0.13	16.1	-111.8	Clear	No Odor
10:05	60	100	mL/min	62.44	6.75	0.849	7	0.13	14.1	-111.8	Clear	No Odor
10:10	65	100	mL/min	62.44	6.74	0.807	239.7	0.11	13	-109.7	Clear	No Odor
10:15	70	100	mL/min	62.44	6.74	0.819	9.6	0.11	13.7	-111.6	Clear	No Odor
10:20	75	100	mL/min	62.44	6.74	0.826	12.1	0.11	14.5	-113.5	Clear	No Odor
10:25	80	100	mL/min	62.44	6.74	0.859	27.7	0.1	15.4	-155	Clear	No Odor
10:30	85	100	mL/min	62.44	6.74	0.858	9.9	0.09	15.2	-115.3	Clear	No Odor
10:35	90	109	mL/min	62.44	6.74	0.858	10.1	0.09	15.5	-116.8	Clear	No Odor
10:40	95	100	mL/min	62.44	6.74	0.866	10	0.08	15.9	-117.7	Clear	No Odor
10:45	100	100	mL/min	62.45	6.74	0.865	10.1	0.08	15.3	-119.1	Clear	No Odor
10:50	105	100	mL/min	62.45	6.74	0.869	9.7	0.08	15.8	-120.1	Clear	No Odor
11:00	115	100	mL/min	62.44	6.75	0.869	7.5	0.06	15.6	-121.4	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3
Nitrate/Nitrite	500 mL amber	1	H2SO4
Sulfate	125 mL plastic	1	None
Sulfide	250 mL plastic	2	ZnAC/NaOH
Alkalinity	250 mL plastic	1	None
Ethane, Ethene, Methane	40 mL glass	3	HCL
Total Organic Carbon	250 mL plastic	1	HNO3

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

Comments: None

Well Information:

Well Labeled Properly:	NA
Is Well in Good Condition?	NA
Well Inspection Comments:	NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	G6M-97-28X	**Date(s):**	2023-10-19	**Work Order(s):**		2023 Fall LTM Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA	**Area:**	AOC 50
Weather(°F):	CLOUDS, T:63.03 °F, rH:64%, Clouds: 16%, Wind:6.91mph N			**Field Technician:**		Allyson Fenton	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	100.00-105.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	57.93	**Total Depth (ft-bmp):**	107	**Water Column(ft):**	49.2	**Gallons in Well:**	7.99
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	102	**Purge Method:**	Low Flow	**Purging Equipment:**	Portable Bladder
Purge Start Time:	12:55	**Total Volume Purged (gallons):**	4.2	**Sample ID:**	G6M-97-28X-FAL23	**Sample Time:**	14:55
Purge End Time:	14:55	**Well Volumes Purged (total):**	0.53	**Replicate Type / Replicate ID:**	NA / NA	**Water Quality Meter/ ID:**	YSI Pro DSS / NA
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
13:00	0	100	mL/min	57.93	6.58	0.572	4.8	1.09	15	-82.8	Clear	No Odor
13:05	5	100	mL/min	57.93	6.6	0.583	5.4	7.9	14.8	-89.9	Clear	No Odor
13:11	11	100	mL/min	57.93	6.62	0.595	6	0.67	14.7	-96.2	Clear	No Odor
13:15	15	100	mL/min	57.93	6.64	0.611	6.8	0.6	15.1	-101.1	Clear	No Odor
13:20	20	100	mL/min	57.93	6.67	0.616	8.2	5.1	14.3	-104.9	Clear	No Odor
13:25	25	1000	mL/min	57.93	6.68	0.619	9	0.49	14.2	-105.7	Clear	No Odor
13:30	30	100	mL/min	57.93	6.68	0.626	9.7	0.43	14.1	-106	Clear	No Odor
13:35	35	100	mL/min	57.93	6.68	0.638	11.1	0.36	14.4	-106.5	Clear	No Odor
13:40	40	100	mL/min	57.95	6.68	0.635	12.9	0.32	14	-106.7	Clear	No Odor
13:45	45	100	mL/min	57.95	6.68	0.639	13.9	0.31	14.1	-106.5	Clear	No Odor
13:50	50	100	mL/min	57.95	6.67	0.655	20	0.29	14.8	-106.9	Clear	No Odor
13:55	55	100	mL/min	57.95	6.67	0.662	22.6	0.28	14.8	-106.7	Clear	No Odor
14:00	60	100	mL/min	57.95	6.67	0.655	24.2	0.26	14.3	-106	Clear	No Odor
14:05	65	100	mL/min	57.95	6.66	0.658	26.7	0.24	14.3	-104.8	Clear	No Odor
14:10	70	100	mL/min	57.95	6.66	0.658	29.6	0.23	14.1	-103.6	Clear	No Odor
14:15	75	100	mL/min	57.95	6.65	0.663	30.4	0.22	14.2	-102.1	Clear	No Odor
14:20	80	100	mL/min	57.95	6.64	0.669	32.9	0.21	14.1	-100.3	Clear	No Odor
14:25	85	100	mL/min	57.95	6.63	0.678	36.5	0.21	14.4	-99.4	Clear	No Odor
14:30	90	100	mL/min	57.95	6.62	0.683	40.3	0.2	14.5	-99	Clear	No Odor
14:36	96	100	mL/min	57.95	6.61	0.7	45.3	0.21	15.1	-99.3	Clear	No Odor
14:40	100	100	mL/min	57.95	6.61	0.702	48	0.19	15.1	-99.2	Clear	No Odor
14:50	110	100	mL/min	57.95	6.6	0.709	58.3	0.17	15	-98.7	Clear	No Odor
14:55	115	100	mL/min	57.95	6.6	0.712	62.7	0.17	14.9	-98.4	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3

Comments: None

Well Information:

Well Labeled Properly: NA

Is Well in Good Condition? NA

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	MW-3	**Date(s):**	2023-10-18	**Work Order(s):**		2023 Fall LTM Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA	**Area:**	AOC 50
Weather(°F):	CLOUDS, T:56.21 °F, rH:63%, Clouds: 16%, Wind:5.05mph S-SW			**Field Technician:**		Allyson Fenton	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	126.00-136.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	59.15	**Total Depth (ft-bmp):**	130.4	**Water Column(ft):**	71.4	**Gallons in Well:**	11.60
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	131	**Purge Method:**	Low Flow	**Purging Equipment:**	Portable Bladder
Purge Start Time:	10:50	**Total Volume Purged (gallons):**	1.6	**Sample ID:**	MW-3-FAL23	**Sample Time:**	NA
Purge End Time:	11:30	**Well Volumes Purged (total):**	0.14	**Replicate Type / Replicate ID:**	MS/MSD / MW-3-FAL23	**Water Quality Meter/ ID:**	YSI Pro DSS / NA
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
10:55	0	150	mL/min	59.15	6.76	0.865	44.6	1.49	12.7	-110.7	Clear	No Odor
11:00	5	150	mL/min	59.15	6.71	0.91	121.9	0.81	12.7	-112.5	Clear	No Odor
11:05	10	150	mL/min	59.15	6.64	0.963	54.4	0.52	12.7	-111.1	Clear	No Odor
11:10	15	150	mL/min	59.13	6.6	1.005	68.8	0.42	12.7	-110.7	Clear	No Odor
11:15	20	150	mL/min	59.14	6.59	1.017	39.9	0.38	12.7	-111.3	Clear	No Odor
11:20	25	150	mL/min	59.14	6.58	1.027	33.6	0.33	12.7	-113.3	Clear	No Odor
11:25	30	150	mL/min	59.14	6.58	1.032	29.1	0.31	12.7	-114.2	Clear	No Odor
11:30	35	150	mL/min	59.14	6.58	1.036	17.9	0.29	12.8	-114.8	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3

Comments: None

Well Information:

Well Labeled Properly: NA

Is Well in Good Condition? NA

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	MW-7	**Date(s):**	2023-10-18	**Work Order(s):**		2023 Fall LTM Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA	**Area:**	AOC 50
Weather(°F):	CLOUDS, T:56.9 °F, rH:64%, Clouds: 16%, Wind:3.91mph N			**Field Technician:**		Allyson Fenton	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	125.00-135.00	**Casing Diameter (in):**	2.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	58.14	**Total Depth (ft-bmp):**	134.6	**Water Column(ft):**	76.4	**Gallons in Well:**	12.41
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	130	**Purge Method:**	Low Flow	**Purging Equipment:**	Portable Bladder
Purge Start Time:	09:00	**Total Volume Purged (gallons):**	2.9	**Sample ID:**	MW-7-FAL23	**Sample Time:**	9:55
Purge End Time:	09:55	**Well Volumes Purged (total):**	0.23	**Replicate Type / Replicate ID:**	NA / NA	**Water Quality Meter/ ID:**	YSI Pro DSS / NA
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
09:05	0	200	mL/min	58.14	6.08	0.85	31.4	37	12.4	-14.8	Clear	No Odor
09:10	5	200	mL/min	58.14	6.03	0.885	16.7	14.6	12.4	-18.3	Clear	No Odor
09:15	10	200	mL/min	58.14	6.02	0.937	14.2	6.7	12.3	-23.7	Clear	No Odor
09:20	15	200	mL/min	58.2	6.02	0.958	12.6	0.43	12.3	-27.1	Clear	No Odor
09:25	20	200	mL/min	58.2	6.03	0.973	9.8	3.1	12.5	-30.9	Clear	No Odor
09:30	25	200	mL/min	58.2	6.06	1	10.4	0.27	12.5	-38.9	Clear	No Odor
09:35	30	200	mL/min	58.2	6.09	1.027	8.6	0.23	12.5	-45.9	Clear	No Odor
09:40	35	200	mL/min	58.2	6.12	1.048	8.5	0.2	12.5	-50.3	Clear	No Odor
09:45	40	200	mL/min	58.2	6.13	1.058	10.3	0.18	12.6	-52.6	Clear	No Odor
09:50	45	200	mL/min	58.2	6.13	1.062	8.9	0.17	12.6	-54	Clear	No Odor
09:55	50	200	mL/min	58.2	6.14	1.065	8.4	0.16	12.6	-54.8	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3

Comments: None

Well Information:

Well Labeled Properly: NA

Is Well in Good Condition? NA

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Project Number	30167457	**Well ID**	XSA-12-95X			**Date**	10/18/2023
Project Name/Location	Former Fort Devens AOC 50		**Weather(°F)**	59 F °F, Overcast, W winds at 2 mph.			
Measuring Pt. Description	Top of Inner Casing	**MP Elevation**	NA	**Casing Diameter (in)**	1	**Well Casing Material**	Steel
Static Water Level (ft-bmp)	66.76	**Total Depth (ft-bmp)**	112.75	**Water Column (ft)**	48.14	**Gallons in Well**	1.96
Purge Start	13:35	**Pump Intake (ft-bmp)**	110	**Purge Method**	Low-Flow	**Purge Equipment**	Bladder
Purge End	15:22	**Volumes Purged**	1.98	**Sample ID**	XSA-12-95X-FAL23	**Sampled by**	Nelson Martinez
Sample Time	15:15	**Gallons Purged**	3.88	**Replicate/ Code No.**	NA	**Sample Type**	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallon Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
13:43	0	0	150	66.76	0.40	9.32	0.83	64.1	2.49	12.2	-39.2	Clear	None
13:48	5	5	150	66.43	0.52	9.98	0.778	64.5	0.5	12.1	-70.6	Clear	None
13:53	5	10	150	66.26	0.71	9.92	0.784	5091	0.35	12.1	-75.6	Clear	None
13:58	5	15	150	66.02	0.91	9.25	0.823	36.5	0.31	12.1	-72.2	Clear	None
14:03	5	20	150	66.09	1.11	7.53	1.011	29.1	0.27	12	-87.5	Clear	None
14:08	5	25	150	65.86	1.31	6.79	1.095	23.9	0.23	12	-64.1	Clear	None
14:13	5	30	150	66.02	1.51	6.69	1.118	21.8	0.2	12	-53.5	Clear	None
14:18	5	35	150	66.06	1.70	6.63	1.136	23.1	0.17	12	-46.4	Clear	None
14:23	5	40	150	66.18	1.90	6.6	1.142	21.6	0.17	12	-44	Clear	None
14:28	5	45	150	66.16	2.10	6.58	1.15	19.8	0.14	12.1	-40.4	Clear	None
14:33	5	50	150	65.82	2.30	6.57	1.149	18.2	0.12	12.1	-38.3	Clear	None
14:38	5	55	150	66.02	2.50	6.56	1.147	17.8	0.1	12	-36.4	Clear	None
14:43	5	60	150	66.12	2.69	6.56	1.143	17	0.09	12	-35.3	Clear	None
14:48	5	65	150	65.96	2.89	6.55	1.141	16.6	0.07	12	-34.8	Clear	None
14:53	5	70	150	66.05	3.09	6.55	1.14	15.7	0.06	11.9	-33.4	Clear	None
14:58	5	75	150	66.02	3.29	6.54	1.138	15.4	0.05	11.9	-33	Clear	None
15:03	5	80	150	65.98	3.49	6.54	1.134	14.2	0.04	11.9	-32.3	Clear	None
15:08	5	85	150	65.98	3.69	6.54	1.134	13.9	0.04	11.9	-31	Clear	None
15:13	5	90	150	66.03	3.88	6.53	1.131	13.9	0.04	11.9	-30.9	Clear	None

Constituent Sampled	Container	Number	Preservative
Dissolved Metals	250 mL Plastic	1	HNO3
VOCs	40 mL Glass	3	HCL

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot — 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47
1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

Well Information

Well Location: In woods
Condition of Well: Good condition
Well Completion: Stick-up
Well Locked at Arrival: yes
Well Locked at Departure: yes
Key Number To Well: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	XSA-12-96X	**Date(s):**	2023-11-13	**Work Order(s):**		2023 Fall LTM Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA, USA Updated	**Area:**	AOC 50
Weather(°F):	CLEAR, T:31.87 °F, rH:72%, Clouds: 0%, Wind:1.01mph N-NE			**Field Technician:**		Frank Martinez	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	120.00-130.00	**Casing Diameter (in):**	1.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	66.33	**Total Depth (ft-bmp):**	131.8	**Water Column(ft):**	65.47	**Gallons in Well:**	2.67
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	130	**Purge Method:**	Low Flow	**Purging Equipment:**	Portable Bladder
Purge Start Time:	11:05	**Total Volume Purged (gallons):**	2.08	**Sample ID:**	XSA-12-96X-FAL23	**Sample Time:**	12:10
Purge End Time:	12:09	**Well Volumes Purged (total):**	0.78	**Replicate Type / Replicate ID:**	NA / NA	**Water Quality Meter/ ID:**	YSI Pro DSS / NA
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
11:10	0	130	mL/min	67.2	6.83	1.276	23.7	3.1	9	-79.5	Clear	No Odor
11:15	5	130	mL/min	67.2	6.8	1.345	19.5	1.89	9.1	-93.2	Clear	No Odor
11:20	10	130	mL/min	67.2	6.75	1.353	22.6	1.63	9.4	-88.8	Clear	No Odor
11:25	15	130	mL/min	67.2	6.7	1.371	14.5	1.49	9.6	-81.6	Clear	No Odor
11:30	20	130	mL/min	67.2	6.63	1.396	9.8	1.41	9.4	-67.3	Clear	No Odor
11:35	25	130	mL/min	67.2	6.57	1.407	8.4	1.35	9.6	-55.7	Clear	No Odor
11:40	30	130	mL/min	67.2	6.55	1.409	9.6	1.3	9.5	-49.3	Clear	No Odor
11:45	35	130	mL/min	67.2	6.54	1.404	9.3	1.26	9.7	-45.6	Clear	No Odor
11:55	45	130	mL/min	67.2	6.5	1.403	9.2	1.2	9.8	-37.2	Clear	No Odor
12:00	50	130	mL/min	67.2	6.49	1.401	9.2	1.19	9.7	-34.6	Clear	No Odor
12:05	55	130	mL/min	67.2	6.48	1.399	8.7	1.17	9.7	-31.7	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3

Comments: Sampled at 1210

Well Information:

Well Labeled Properly: yes

Is Well in Good Condition? good

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

Groundwater Sampling Form

SERES Engineering & Services, LLC
ARCADIS a joint venture

Location ID:	XSA-12-98X	**Date(s):**	2023-10-18	**Work Order(s):**		2023 Fall LTM Sampling	
Client:	USACE	**Facility:**	Former Fort Devens	**Facility Location:**	Devens, MA	**Area:**	AOC 50
Weather(°F):	CLOUDS, T:60.46 °F, rH:70%, Clouds: 70%, Wind:0mph N			**Field Technician:**		Frank Martinez	
Measuring Pt. Description:	Top of Inner Casing	**Screen Setting (ft-bgs):**	60.00-70.00	**Casing Diameter (in):**	1.00	**Well Casing Material:**	PVC
Static Water Level (ft-bmp):	5.3	**Total Depth (ft-bmp):**	70	**Water Column(ft):**	64.1	**Gallons in Well:**	2.60
Depth to Product (ft-bmp):	NA	**Pump Intake Depth(ft-bmp):**	65	**Purge Method:**	Low Flow	**Purging Equipment:**	Peristaltic Pump
Purge Start Time:	14:45	**Total Volume Purged (gallons):**	2.2	**Sample ID:**	XSA-12-98X-FAL23	**Sample Time:**	15:30
Purge End Time:	15:40	**Well Volumes Purged (total):**	0.85	**Replicate Type / Replicate ID:**	NA	**Water Quality Meter/ ID:**	YSI Pro DSS / NA
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Flow Rate	Flow Rate Unit	Depth to Water (ft)	pH (S.U.)	Specific Conductivity (mS/cm[c])	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C)	Redox (mV)	Appearance	
											Color	Odor
14:50	0	200	mL/min	5.3	10.15	0.87	47.2	2.01	13	-410.4	Clear	No Odor
14:55	5	200	mL/min	5.4	8.61	1.265	64.3	1.22	12.8	-337.4	Clear	Slight
15:00	10	200	mL/min	5.4	7.81	1.309	7.8	1.11	12.7	-262.1	Clear	No Odor
15:05	15	200	mL/min	5.3	7.65	1.312	7.8	1.06	12.7	-239.6	Clear	No Odor
15:10	20	200	mL/min	5.3	7.58	1.313	7.8	1.02	12.7	-229.7	Clear	No Odor
15:15	25	200	mL/min	5.4	7.5	1.314	7.9	0.99	12.7	-223.5	Clear	No Odor
15:20	30	200	mL/min	5.3	7.51	1.313	7.9	0.9	12.6	-219.4	Clear	No Odor
15:25	35	200	mL/min	5.6	7.48	1.314	7.9	0.96	12.6	-216.6	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL glass	3	HCL
Dissolved Metals	250 mL plastic	1	HNO3

Comments: Sampled at 15:30

Well Information:

Well Labeled Properly: yes

Is Well in Good Condition? good

Well Inspection Comments: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
uS/cm = microSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units
mS/cm = milli

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	NE Devens TO LTM RAO SJV
PROJECT NUMBER	30167457
MODEL	YSI ProDSS
SERIAL NUMBER	15E102902
SAMPLER	Nelson Martinez
DATE	10/17/2023

SINGLE POINT CALIBRATION

LOT NUMBER	24001219
EXPIRATION DATE	2024-04-01

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.03	7	yes	08:20
pH	3.99	4	yes	08:24
pH	10.01	10	yes	08:28
Conductivity	1.416	1.413	yes	08:41
ORP	237	231	yes	08:20
DO	0.1	90	yes	08:03
DO	98.6	98.6	yes	08:16

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

10/17/2023
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	NE Devens TO LTM RAO SJV
PROJECT NUMBER	30167457
MODEL	YSI ProDSS
SERIAL NUMBER	16c100431
SAMPLER	Diane Champagne
DATE	10/18/2023

SINGLE POINT CALIBRATION

LOT NUMBER	N/A
EXPIRATION DATE	N/A

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	6.33	7	yes	08:24
pH	3.83	4	yes	08:29
pH	9.98	9.99	yes	08:34
Conductivity	1.281	1.411	yes	08:47
ORP	250.8	250.1	yes	08:38
DO	99.6	99.8	yes	08:46
Turbidity	4.08	0.01	yes	08:51

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

10/18/2023
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	NE Devens TO LTM RAO SJV
PROJECT NUMBER	30167457
MODEL	YSI ProDSS
SERIAL NUMBER	15E102902
SAMPLER	Nelson Martinez
DATE	10/18/2023

SINGLE POINT CALIBRATION

LOT NUMBER	20470161
EXPIRATION DATE	2025-12-01

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.09	7	yes	16:38
pH	4.03	4	yes	16:39
pH	9.97	10	yes	16:41
Conductivity	1.387	1.413	yes	16:29
ORP	225.4	231	yes	16:42
DO	98.9	100.1	yes	15:56
DO	0.1	0	yes	16:05

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

SIGNED

10/18/2023
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	NE Devens TO LTM RAO SJV
PROJECT NUMBER	30167457
MODEL	YSI ProDSS
SERIAL NUMBER	N/A
SAMPLER	Allyson Fenton
DATE	10/18/2023

SINGLE POINT CALIBRATION

LOT NUMBER	N/A
EXPIRATION DATE	N/A

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	9.7	10.01	--	08:00
pH	6.88	6.87	yes	07:55
pH	4.14	4	yes	07:57
Conductivity	1.076	1.079	yes	08:03
ORP	250.1	251.1	yes	08:02
DO	98	98.1	yes	07:49
Turbidity	--	--	--	--

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

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10/18/2023
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	NE Devens TO LTM RAO SJV
PROJECT NUMBER	30167457
MODEL	YSI ProDSS
SERIAL NUMBER	N/A
SAMPLER	Frank Martinez
DATE	10/18/2023

SINGLE POINT CALIBRATION

LOT NUMBER	N/A
EXPIRATION DATE	N/A

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.14	7	yes	11:20
pH	4.1	4	yes	11:21
pH	10.14	10	yes	11:23
Conductivity	1.413	1.216	yes	11:24
ORP	248	231	yes	11:26
DO	100.1	100.8	yes	11:29

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

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10/18/2023
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	NE Devens TO LTM RAO SJV
PROJECT NUMBER	30167457
MODEL	YSI ProDSS
SERIAL NUMBER	15E102902
SAMPLER	Nelson Martinez
DATE	10/19/2023

SINGLE POINT CALIBRATION

LOT NUMBER	22420139
EXPIRATION DATE	2024-03-07

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.03	700	yes	08:47
pH	3.98	4	yes	08:47
pH	10	10	yes	08:49
Conductivity	1.51	1.413	yes	08:21
ORP	239.3	231	yes	08:52
DO	100.9	100.3	yes	07:49
DO	0.7	0	yes	07:59

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

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DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	NE Devens TO LTM RAO SJV
PROJECT NUMBER	30167457
MODEL	YSI ProDSS
SERIAL NUMBER	N/A
SAMPLER	Frank Martinez
DATE	10/19/2023

SINGLE POINT CALIBRATION

LOT NUMBER	N/A
EXPIRATION DATE	N/A

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.02	7	yes	07:44
pH	3.89	4	yes	07:50
pH	10.06	10	yes	07:53
Conductivity	1.692	1.413	yes	07:58
ORP	234.5	231	yes	08:01
DO	101.6	100.9	yes	08:04
Turbidity	10	10	yes	08:12

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

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DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	NE Devens TO LTM RAO SJV
PROJECT NUMBER	30167457
MODEL	YSI ProDSS
SERIAL NUMBER	16c100431
SAMPLER	Diane Champagne
DATE	10/19/2023

SINGLE POINT CALIBRATION

LOT NUMBER	N/A
EXPIRATION DATE	N/A

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	6.43	7	yes	08:27
pH	3.83	4	yes	08:36
pH	9.88	9.98	yes	08:47
Conductivity	1.115	1.413	yes	08:06
ORP	249.9	249.8	yes	08:21
DO	99.8	99.9	yes	08:02
Turbidity	0.055	0.01	yes	08:06

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

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DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	NE Devens TO LTM RAO SJV
PROJECT NUMBER	30167457
MODEL	YSI ProDSS
SERIAL NUMBER	N/A
SAMPLER	Allyson Fenton
DATE	10/19/2023

SINGLE POINT CALIBRATION

LOT NUMBER	N/A
EXPIRATION DATE	N/A

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.13	7.03	yes	15:15
pH	4.13	4	yes	15:21
pH	10.07	10.08	yes	15:24
Conductivity	1.121	1.123	yes	15:25
ORP	234.9	236.7	yes	15:30
DO	52.9	0.5	--	15:34

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

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10/19/2023
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	NE Devens TO LTM RAO SJV
PROJECT NUMBER	30167457
MODEL	YSI ProDSS
SERIAL NUMBER	N/A
SAMPLER	Allyson Fenton
DATE	10/20/2023

SINGLE POINT CALIBRATION

LOT NUMBER	N/A
EXPIRATION DATE	N/A

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	6.99	7.06	yes	08:08
pH	4.1	3.95	yes	08:10
pH	10.2	10.17	yes	08:18
Conductivity	0.989	0.992	yes	08:25
ORP	237.5	294.2	yes	08:22

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

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10/20/2023
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	NE Devens TO LTM RAO SJV
PROJECT NUMBER	30167457
MODEL	YSI ProDSS
SERIAL NUMBER	N/A
SAMPLER	Frank Martinez
DATE	10/20/2023

SINGLE POINT CALIBRATION				
LOT NUMBER	N/A			
EXPIRATION DATE	N/A			
PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7	7	yes	07:43
pH	3.99	4	yes	07:44
pH	9.96	10	yes	07:49
Conductivity	1.352	1.413	yes	07:52
ORP	228.6	231	yes	07:55
DO	100.1	100.1	yes	08:01

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

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DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	NE Devens TO LTM RAO SJV
PROJECT NUMBER	30167457
MODEL	YSI ProDSS
SERIAL NUMBER	N/A
SAMPLER	Allyson Fenton
DATE	11/02/2023

SINGLE POINT CALIBRATION

LOT NUMBER	N/A
EXPIRATION DATE	2023-11-02

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.06	7.05	yes	07:47
pH	4.29	4.04	yes	07:54
pH	9.6	10.09	yes	08:09
Conductivity	1.283	1.286	yes	08:21
ORP	227.9	245.2	yes	08:18

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

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11/2/2023
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	NE Devens TO LTM RAO SJV
PROJECT NUMBER	30167457
MODEL	YSI ProDSS
SERIAL NUMBER	21F102556
SAMPLER	Diane Champagne
DATE	11/02/2023

SINGLE POINT CALIBRATION

LOT NUMBER	N/A
EXPIRATION DATE	N/A

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.02	7	yes	07:15
pH	4.12	4	yes	07:18
pH	9.99	9.98	yes	07:22
Conductivity	1.44	1.412	yes	07:31
ORP	247.3	240.1	yes	07:26
DO	99.8	99.8	yes	07:33
Turbidity	0.16	0	yes	07:31

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

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11/2/2023
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	NE Devens TO LTM RAO SJV
PROJECT NUMBER	30167457
MODEL	YSI ProDSS
SERIAL NUMBER	N/A
SAMPLER	Frank Martinez
DATE	11/02/2023

SINGLE POINT CALIBRATION

LOT NUMBER	N/A
EXPIRATION DATE	N/A

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.07	7	yes	07:38
pH	4.06	4	yes	07:39
pH	9.98	10	yes	07:42
Conductivity	1.484	1.413	yes	07:46
ORP	221.2	231	yes	07:49
DO	103	101.6	yes	08:00

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

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11/2/2023
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	NE Devens TO LTM RAO SJV
PROJECT NUMBER	30167457
MODEL	YSI ProDSS
SERIAL NUMBER	21F102556
SAMPLER	Diane Champagne
DATE	11/13/2023

SINGLE POINT CALIBRATION

LOT NUMBER	N/A
EXPIRATION DATE	N/A

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.12	7	yes	07:39
pH	4.11	4	yes	07:32
pH	10.31	10.02	yes	07:34
Conductivity	1.393	1.413	yes	07:40
ORP	281.1	240.1	yes	07:25
DO	99.3	99.3	yes	07:27
Turbidity	0.62	0	yes	07:15

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

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11/13/2023
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	NE Devens TO LTM RAO SJV
PROJECT NUMBER	30167457
MODEL	YSI ProDSS
SERIAL NUMBER	21F102556
SAMPLER	Michael Spaulding
DATE	11/13/2023

SINGLE POINT CALIBRATION

LOT NUMBER	N/A
EXPIRATION DATE	N/A

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	6.99	7	yes	07:19
pH	4.05	4	yes	07:24
pH	10	10	yes	07:28
Conductivity	1.407	1.413	yes	07:32
ORP	228.1	231	yes	07:36
DO	101.6	100.2	yes	07:15

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

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11/13/2023
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	NE Devens TO LTM RAO SJV
PROJECT NUMBER	30167457
MODEL	YSI ProDSS
SERIAL NUMBER	N/A
SAMPLER	Allyson Fenton
DATE	11/13/2023

SINGLE POINT CALIBRATION

LOT NUMBER	N/A
EXPIRATION DATE	N/A

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.03	7	yes	08:27
pH	4.3	4.06	yes	08:31
pH	9.6	9.98	yes	08:42
Conductivity	1.39	1.387	--	08:47
ORP	229.6	237.6	yes	08:44
DO	58	0.04	--	08:50
Turbidity	0.56	0.02	--	08:48

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

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11/13/2023
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	NE Devens TO LTM RAO SJV
PROJECT NUMBER	30167457
MODEL	YSI ProDSS
SERIAL NUMBER	N/A
SAMPLER	Frank Martinez
DATE	11/13/2023

SINGLE POINT CALIBRATION

LOT NUMBER	N/A
EXPIRATION DATE	N/A

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.01	7	yes	07:49
pH	4	4	yes	07:50
pH	9.84	10	yes	07:53
Conductivity	1.521	1.413	yes	07:58
ORP	232.5	231	yes	08:00
DO	102	101.3	yes	08:02

[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE QUALITY METER

NOTES:

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11/13/2023
DATE

Appendix B

Laboratory Analytical Reports

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Heather Levesque
Seres Engineering & Services LLC
669 Marina Drive
Suite B7
Charleston, South Carolina 29492

Generated 6/29/2023 9:56:00 PM

JOB DESCRIPTION

Seres-Arcadis JV, LTM, AOC 50, Spring 2023

JOB NUMBER

680-236018-1

Eurofins Savannah
5102 LaRoche Avenue
Savannah GA 31404

See page two for job notes and contact information.

my EOL

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.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization



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Authorized for release by
Jerry Lanier, Project Manager I
Jerry.Lanier@et.eurofinsus.com
(912)250-0281

Definitions/Glossary

Client: Seres Engineering & Services LLC
Job ID: 680-236018-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Spring 2023

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
M	Manual integrated compound.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

GC 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.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	Undetected at the Limit of Detection.

HPLC/IC

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Metals

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.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	Undetected at the Limit of Detection.

General Chemistry

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	Undetected at the Limit of Detection.

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

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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

Sample Summary

Client: Seres Engineering & Services LLC
Job ID: 680-236018-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Spring 2023

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-236018-1	G6M-04-07X-SPR23	Water	06/06/23 11:36	06/08/23 09:54
680-236018-2	G6M-04-10A-SPR23	Water	06/06/23 11:05	06/08/23 09:54
680-236018-5	G6M-07-02X-SPR23	Water	06/06/23 14:45	06/08/23 09:54
680-236018-6	G6M-DUP01-SPR23	Water	06/06/23 14:45	06/08/23 09:54
680-236018-7	G6M-13-01X-SPR23	Water	06/06/23 15:30	06/08/23 09:54
680-236018-8	G6M-97-05B-SPR23	Water	06/06/23 12:35	06/08/23 09:54
680-236018-9	XSA-12-96X-SPR23	Water	06/06/23 14:51	06/08/23 09:54
680-236018-10	AOC50-TB-01-SPR23	Water	06/06/23 00:00	06/08/23 09:54

Job ID: 680-236018-1

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-236018-1

Receipt
The samples were received on 6/8/2023 9:54 AM. 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 0.7°C and 1.3°C

GC/MS VOA
Method 8260D: Reanalysis of the following samples were performed outside of the analytical holding time due quality control failure on the initial run.: G6M-04-10A-SPR23 (680-236018-2), G6M-07-02X-SPR23 (680-236018-5) and G6M-DUP01-SPR23 (680-236018-6).

Method 8260D_DOD5: Surrogate recovery was outside acceptance limits for the following parent sample: G6M-04-10A-SPR23 (680-236018-2). The matrix spike/matrix spike duplicate (MS/MSD) sample's surrogate recovery was within limits. The parent sample has been qualified and reported.

Method 8260D_DOD5: The continuing calibration verification (CCV) associated with batch 680-784420 recovered above the upper control limit for Dichlorodifluoromethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8260D_DOD5: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 680-784420 recovered outside control limits for the following analytes: Dichlorodifluoromethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260D_DOD5: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 680-784420 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8260D_DOD5: The closing continuing calibration verification (CCVC) associated with batch 680-784420 recovered above the upper control limit for Dichlorodifluoromethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8260D_DOD5: The closing continuing calibration verification (CCVC) analyzed in batch 784420 was outside the method criteria for the 12 hour window. The data integrity was not impacted and the data has been reported and addressed. All other QC criteria have been met.

Method 8260D_DOD5: The continuing calibration verification (CCV) associated with batch 680-784463 recovered outside acceptance criteria, low biased, for Bromoform and Bromomethane. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

Method 8260D_DOD5: The continuing calibration verification (CCV) associated with batch 680-784463 recovered above the upper control limit for Acetone, 2-Butanone (MEK), Chloroethane, 2-Hexanone and 4-Methyl-2-pentanone (MIBK). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8260D_DOD5: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 680-784463.

Method 8260D_DOD5: The initial calibration verification (ICV) analyzed in batch 680-784451 was outside method criteria for the following analyte(s): Trichlorofluoromethane. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

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

Job ID: 680-236018-1 (Continued)

Laboratory: Eurofins Savannah (Continued)

GC VOA

Method RSK_175_DOD5: Due to the high concentration of Methane (TCD), the matrix spike / matrix spike duplicate (MS/MSD) for analytical batch 680-783098 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

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

HPLC/IC

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

Metals

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

General Chemistry

Method 353.2_Pres: The instrument blank for analytical batch 680-784964 contained Nitrate Nitrite as N greater than the method detection limit (MDL), and were not reanalyzed because the result is <1/2 RL. The data have been qualified and reported.

Method 353.2_Pres: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 680-784964 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 9060: TOC Result 2 was over the calibration range for the instrument, but the average value of the sample is within calibration range, so it was qualified and reported.G6M-07-02X-SPR23 (680-236018-5)

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

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

Client: Seres Engineering & Services LLC
Job ID: 680-236018-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Spring 2023

Client Sample ID: G6M-04-07X-SPR23
Lab Sample ID: 680-236018-1
Date Collected: 06/06/23 11:36
Matrix: Water
Date Received: 06/08/23 09:54

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U Q	25	10	3.7	ug/L		06/20/23 15:19	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		06/20/23 15:19	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		06/20/23 15:19	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/20/23 15:19	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		06/20/23 15:19	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		06/20/23 15:19	1
Bromomethane	10	U M Q	20	10	3.7	ug/L		06/20/23 15:19	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		06/20/23 15:19	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		06/20/23 15:19	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		06/20/23 15:19	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/20/23 15:19	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		06/20/23 15:19	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		06/20/23 15:19	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		06/20/23 15:19	1
Chloroethane	10	U Q	20	10	4.6	ug/L		06/20/23 15:19	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		06/20/23 15:19	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		06/20/23 15:19	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		06/20/23 15:19	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		06/20/23 15:19	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		06/20/23 15:19	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		06/20/23 15:19	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 15:19	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/20/23 15:19	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/20/23 15:19	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/20/23 15:19	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/20/23 15:19	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		06/20/23 15:19	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 15:19	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		06/20/23 15:19	1
cis-1,2-Dichloroethene	**67**		2.0	1.0	0.25	ug/L		06/20/23 15:19	1
trans-1,2-Dichloroethene	**0.66**	**J**	2.0	1.0	0.34	ug/L		06/20/23 15:19	1
1,2-Dichloroethene, Total	**68**		2.0	1.0	0.37	ug/L		06/20/23 15:19	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 15:19	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		06/20/23 15:19	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		06/20/23 15:19	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		06/20/23 15:19	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		06/20/23 15:19	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		06/20/23 15:19	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		06/20/23 15:19	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		06/20/23 15:19	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		06/20/23 15:19	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		06/20/23 15:19	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		06/20/23 15:19	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		06/20/23 15:19	1
Methylene Chloride	10	U	20	10	3.2	ug/L		06/20/23 15:19	1
4-Methyl-2-pentanone (MIBK)	10	U Q	20	10	2.7	ug/L		06/20/23 15:19	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		06/20/23 15:19	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		06/20/23 15:19	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		06/20/23 15:19	1

Client Sample ID: G6M-04-07X-SPR23
Lab Sample ID: 680-236018-1

Date Collected: 06/06/23 11:36
Matrix: Water

Date Received: 06/08/23 09:54

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		06/20/23 15:19	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		06/20/23 15:19	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		06/20/23 15:19	1
Tetrachloroethene	**2.1**		2.0	1.0	0.35	ug/L		06/20/23 15:19	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		06/20/23 15:19	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		06/20/23 15:19	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		06/20/23 15:19	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		06/20/23 15:19	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		06/20/23 15:19	1
Trichloroethene	**20**		1.0	0.50	0.20	ug/L		06/20/23 15:19	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 15:19	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		06/20/23 15:19	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/20/23 15:19	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		06/20/23 15:19	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		06/20/23 15:19	1
Vinyl chloride	**11**		2.0	1.0	0.40	ug/L		06/20/23 15:19	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		06/20/23 15:19	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		06/20/23 15:19	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		06/20/23 15:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*89 - 112*		*06/20/23 15:19*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*81 - 118*		*06/20/23 15:19*	*1*
4-Bromofluorobenzene (Surr)	*106*		*85 - 114*		*06/20/23 15:19*	*1*
Dibromofluoromethane (Surr)	*94*		*80 - 119*		*06/20/23 15:19*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**0.55**	**J**	1.1	0.76	0.30	ug/L		06/12/23 15:14	1
Ethylene	**0.48**	**J**	1.0	0.71	0.31	ug/L		06/12/23 15:14	1
Methane	**230**		1.2	1.2	0.57	ug/L		06/12/23 15:14	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**6.2**		1.0	1.0	0.40	mg/L		06/12/23 20:37	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**1200**		100	50	20	ug/L		06/09/23 13:09	1
Manganese	**3700**		10	5.0	1.3	ug/L		06/09/23 13:09	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**6.9**		5.0	3.0	0.86	ug/L		06/09/23 18:23	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**250**		5.0	5.0	2.2	mg/L		06/12/23 21:56	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	**0.020**	**J**	0.10	0.025	0.010	mg/L		06/21/23 16:36	1
Sulfide (SW846 9034)	1.5	U	2.0	1.5	0.70	mg/L		06/13/23 15:47	1

Client: Seres Engineering & Services LLC
Job ID: 680-236018-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Spring 2023

Client Sample ID: G6M-04-07X-SPR23
Lab Sample ID: 680-236018-1
Date Collected: 06/06/23 11:36
Matrix: Water
Date Received: 06/08/23 09:54

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon (SW846 9060)	0.99	J	1.5	1.0	0.50	mg/L		06/13/23 21:09	1

Client: Seres Engineering & Services LLC
Job ID: 680-236018-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Spring 2023

Client Sample ID: G6M-04-10A-SPR23
Lab Sample ID: 680-236018-2
Date Collected: 06/06/23 11:05
Matrix: Water
Date Received: 06/08/23 09:54

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		06/20/23 19:02	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		06/20/23 19:02	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		06/20/23 19:02	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/20/23 19:02	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		06/20/23 19:02	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		06/20/23 19:02	1
Bromomethane	10	U	20	10	3.7	ug/L		06/20/23 19:02	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		06/20/23 19:02	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		06/20/23 19:02	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		06/20/23 19:02	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/20/23 19:02	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		06/20/23 19:02	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		06/20/23 19:02	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		06/20/23 19:02	1
Chloroethane	10	U	20	10	4.6	ug/L		06/20/23 19:02	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		06/20/23 19:02	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		06/20/23 19:02	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		06/20/23 19:02	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		06/20/23 19:02	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		06/20/23 19:02	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		06/20/23 19:02	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 19:02	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/20/23 19:02	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/20/23 19:02	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/20/23 19:02	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/20/23 19:02	1
Dichlorodifluoromethane	1.0	U J1 Q	2.0	1.0	0.36	ug/L		06/20/23 19:02	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 19:02	1
1,2-Dichloroethane	1.0	U	2.0	1.0	0.25	ug/L		06/20/23 19:02	1
cis-1,2-Dichloroethene	**0.71**	**J**	2.0	1.0	0.25	ug/L		06/20/23 19:02	1
trans-1,2-Dichloroethene	1.0	U J1	2.0	1.0	0.34	ug/L		06/20/23 19:02	1
1,2-Dichloroethene, Total	**0.71**	**J**	2.0	1.0	0.37	ug/L		06/20/23 19:02	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 19:02	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		06/20/23 19:02	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		06/20/23 19:02	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		06/20/23 19:02	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		06/20/23 19:02	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		06/20/23 19:02	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		06/20/23 19:02	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		06/20/23 19:02	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		06/20/23 19:02	1
2-Hexanone	10	U	20	10	3.2	ug/L		06/20/23 19:02	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		06/20/23 19:02	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		06/20/23 19:02	1
Methylene Chloride	10	U	20	10	3.2	ug/L		06/20/23 19:02	1
4-Methyl-2-pentanone (MIBK)	10	U J1	20	10	2.7	ug/L		06/20/23 19:02	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		06/20/23 19:02	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		06/20/23 19:02	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		06/20/23 19:02	1

Client Sample ID: G6M-04-10A-SPR23
Lab Sample ID: 680-236018-2
Date Collected: 06/06/23 11:05
Matrix: Water
Date Received: 06/08/23 09:54

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		06/20/23 19:02	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		06/20/23 19:02	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		06/20/23 19:02	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		06/20/23 19:02	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		06/20/23 19:02	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		06/20/23 19:02	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		06/20/23 19:02	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		06/20/23 19:02	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		06/20/23 19:02	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		06/20/23 19:02	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 19:02	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		06/20/23 19:02	1
1,2,4-Trimethylbenzene	**0.98**	**J**	2.0	1.0	0.43	ug/L		06/20/23 19:02	1
1,3,5-Trimethylbenzene	**0.47**	**J**	2.0	1.0	0.28	ug/L		06/20/23 19:02	1
Vinyl acetate	2.0	U H	2.5	2.0	0.69	ug/L		06/22/23 16:57	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		06/20/23 19:02	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		06/20/23 19:02	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		06/20/23 19:02	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		06/20/23 19:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*115*	*Q*	*89 - 112*		*06/20/23 19:02*	*1*
Toluene-d8 (Surr)	*96*		*89 - 112*		*06/22/23 16:57*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*81 - 118*		*06/20/23 19:02*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*81 - 118*		*06/22/23 16:57*	*1*
4-Bromofluorobenzene (Surr)	*108*		*85 - 114*		*06/20/23 19:02*	*1*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*		*06/22/23 16:57*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*06/20/23 19:02*	*1*
Dibromofluoromethane (Surr)	*94*		*80 - 119*		*06/22/23 16:57*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**6.5**		1.1	0.76	0.30	ug/L		06/12/23 15:27	1
Ethylene	**3.8**		1.0	0.71	0.31	ug/L		06/12/23 15:27	1
Methane (TCD)	**18000**	**J1**	390	77	39	ug/L		06/12/23 15:27	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**0.49**	**J**	1.0	1.0	0.40	mg/L		06/12/23 21:15	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**81000**	**J1**	100	50	20	ug/L		06/09/23 12:50	1
Manganese	**810**		10	5.0	1.3	ug/L		06/09/23 12:50	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**380**	**J1**	5.0	3.0	0.86	ug/L		06/09/23 18:03	1

Client: Seres Engineering & Services LLC
Job ID: 680-236018-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Spring 2023

Client Sample ID: G6M-04-10A-SPR23
Lab Sample ID: 680-236018-2
Date Collected: 06/06/23 11:05
Matrix: Water
Date Received: 06/08/23 09:54

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**170**		5.0	5.0	2.2	mg/L		06/12/23 22:41	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	**0.057**	**J J1**	0.10	0.025	0.010	mg/L		06/21/23 17:08	1
Sulfide (SW846 9034)	1.5	U	2.0	1.5	0.70	mg/L		06/13/23 15:47	1
Total Organic Carbon (SW846 9060)	**18**		1.5	1.0	0.50	mg/L		06/13/23 19:24	1

Client: Seres Engineering & Services LLC
Job ID: 680-236018-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Spring 2023

Client Sample ID: G6M-07-02X-SPR23
Lab Sample ID: 680-236018-5
Date Collected: 06/06/23 14:45
Matrix: Water
Date Received: 06/08/23 09:54

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U H	25	10	3.7	ug/L		06/22/23 17:40	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		06/20/23 15:42	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		06/20/23 15:42	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/20/23 15:42	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		06/20/23 15:42	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		06/20/23 15:42	1
Bromomethane	10	U Q	20	10	3.7	ug/L		06/20/23 15:42	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		06/20/23 15:42	1
n-Butylbenzene	**0.53**	**J**	2.5	2.0	0.52	ug/L		06/20/23 15:42	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		06/20/23 15:42	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/20/23 15:42	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		06/20/23 15:42	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		06/20/23 15:42	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		06/20/23 15:42	1
Chloroethane	10	U Q	20	10	4.6	ug/L		06/20/23 15:42	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		06/20/23 15:42	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		06/20/23 15:42	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		06/20/23 15:42	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		06/20/23 15:42	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		06/20/23 15:42	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		06/20/23 15:42	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 15:42	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/20/23 15:42	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/20/23 15:42	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/20/23 15:42	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/20/23 15:42	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		06/20/23 15:42	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 15:42	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		06/20/23 15:42	1
cis-1,2-Dichloroethene	**0.94**	**J**	2.0	1.0	0.25	ug/L		06/20/23 15:42	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		06/20/23 15:42	1
1,2-Dichloroethene, Total	**0.94**	**J**	2.0	1.0	0.37	ug/L		06/20/23 15:42	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 15:42	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		06/20/23 15:42	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		06/20/23 15:42	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		06/20/23 15:42	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		06/20/23 15:42	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		06/20/23 15:42	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		06/20/23 15:42	1
Ethylbenzene	**0.21**	**J**	1.0	0.50	0.20	ug/L		06/20/23 15:42	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		06/20/23 15:42	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		06/20/23 15:42	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		06/20/23 15:42	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		06/20/23 15:42	1
Methylene Chloride	10	U	20	10	3.2	ug/L		06/20/23 15:42	1
4-Methyl-2-pentanone (MIBK)	10	U Q	20	10	2.7	ug/L		06/20/23 15:42	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		06/20/23 15:42	1
Naphthalene	**4.3**	**J**	10	5.0	2.4	ug/L		06/20/23 15:42	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		06/20/23 15:42	1

Client Sample ID: G6M-07-02X-SPR23
Lab Sample ID: 680-236018-5
Date Collected: 06/06/23 14:45
Matrix: Water
Date Received: 06/08/23 09:54

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		06/20/23 15:42	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		06/20/23 15:42	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		06/20/23 15:42	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		06/20/23 15:42	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		06/20/23 15:42	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		06/20/23 15:42	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		06/20/23 15:42	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		06/20/23 15:42	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		06/20/23 15:42	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		06/20/23 15:42	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 15:42	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		06/20/23 15:42	1
1,2,4-Trimethylbenzene	**1.1**	**J**	2.0	1.0	0.43	ug/L		06/20/23 15:42	1
1,3,5-Trimethylbenzene	**0.35**	**J M**	2.0	1.0	0.28	ug/L		06/20/23 15:42	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		06/20/23 15:42	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		06/20/23 15:42	1
o-Xylene	**0.27**	**J**	2.0	1.0	0.26	ug/L		06/20/23 15:42	1
m-Xylene & p-Xylene	**0.54**	**J**	2.0	1.0	0.49	ug/L		06/20/23 15:42	1
Xylenes, Total	**0.81**	**J**	2.0	1.0	0.49	ug/L		06/20/23 15:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*89 - 112*		*06/20/23 15:42*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*06/22/23 17:40*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*		*06/20/23 15:42*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*		*06/22/23 17:40*	*1*
4-Bromofluorobenzene (Surr)	*106*		*85 - 114*		*06/20/23 15:42*	*1*
4-Bromofluorobenzene (Surr)	*103*		*85 - 114*		*06/22/23 17:40*	*1*
Dibromofluoromethane (Surr)	*93*		*80 - 119*		*06/20/23 15:42*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 119*		*06/22/23 17:40*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**6.7**		1.1	0.76	0.30	ug/L		06/12/23 16:06	1
Ethylene	**7.6**		1.0	0.71	0.31	ug/L		06/12/23 16:06	1
Methane (TCD)	**16000**		390	77	39	ug/L		06/12/23 16:06	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		06/12/23 21:53	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**100000**		100	50	20	ug/L		06/09/23 13:12	1
Manganese	**3300**		10	5.0	1.3	ug/L		06/09/23 13:12	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**7.3**		5.0	3.0	0.86	ug/L		06/09/23 18:27	1

Client: Seres Engineering & Services LLC
Job ID: 680-236018-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Spring 2023

Client Sample ID: G6M-07-02X-SPR23
Lab Sample ID: 680-236018-5
Date Collected: 06/06/23 14:45
Matrix: Water
Date Received: 06/08/23 09:54

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**95**		5.0	5.0	2.2	mg/L		06/12/23 22:04	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	**0.064**	**J**	0.10	0.025	0.010	mg/L		06/21/23 16:37	1
Sulfide (SW846 9034)	1.5	U	2.0	1.5	0.70	mg/L		06/13/23 15:47	1
Total Organic Carbon (SW846 9060)	**100**		1.5	1.0	0.50	mg/L		06/13/23 21:28	1

Client: Seres Engineering & Services LLC
Job ID: 680-236018-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Spring 2023

Client Sample ID: G6M-DUP01-SPR23
Lab Sample ID: 680-236018-6
Date Collected: 06/06/23 14:45
Matrix: Water
Date Received: 06/08/23 09:54

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U H	25	10	3.7	ug/L		06/22/23 17:18	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		06/20/23 16:06	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		06/20/23 16:06	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/20/23 16:06	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		06/20/23 16:06	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		06/20/23 16:06	1
Bromomethane	10	U Q	20	10	3.7	ug/L		06/20/23 16:06	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		06/20/23 16:06	1
n-Butylbenzene	**0.53**	**J**	2.5	2.0	0.52	ug/L		06/20/23 16:06	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		06/20/23 16:06	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/20/23 16:06	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		06/20/23 16:06	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		06/20/23 16:06	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		06/20/23 16:06	1
Chloroethane	10	U Q	20	10	4.6	ug/L		06/20/23 16:06	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		06/20/23 16:06	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		06/20/23 16:06	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		06/20/23 16:06	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		06/20/23 16:06	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		06/20/23 16:06	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		06/20/23 16:06	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 16:06	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/20/23 16:06	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/20/23 16:06	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/20/23 16:06	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/20/23 16:06	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		06/20/23 16:06	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 16:06	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		06/20/23 16:06	1
cis-1,2-Dichloroethene	**0.98**	**J**	2.0	1.0	0.25	ug/L		06/20/23 16:06	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		06/20/23 16:06	1
1,2-Dichloroethene, Total	**0.98**	**J**	2.0	1.0	0.37	ug/L		06/20/23 16:06	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 16:06	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		06/20/23 16:06	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		06/20/23 16:06	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		06/20/23 16:06	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		06/20/23 16:06	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		06/20/23 16:06	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		06/20/23 16:06	1
Ethylbenzene	**0.21**	**J**	1.0	0.50	0.20	ug/L		06/20/23 16:06	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		06/20/23 16:06	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		06/20/23 16:06	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		06/20/23 16:06	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		06/20/23 16:06	1
Methylene Chloride	10	U	20	10	3.2	ug/L		06/20/23 16:06	1
4-Methyl-2-pentanone (MIBK)	10	U Q	20	10	2.7	ug/L		06/20/23 16:06	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		06/20/23 16:06	1
Naphthalene	**4.5**	**J**	10	5.0	2.4	ug/L		06/20/23 16:06	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		06/20/23 16:06	1

Client Sample ID: G6M-DUP01-SPR23
Lab Sample ID: 680-236018-6
Date Collected: 06/06/23 14:45
Matrix: Water
Date Received: 06/08/23 09:54

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		06/20/23 16:06	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		06/20/23 16:06	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		06/20/23 16:06	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		06/20/23 16:06	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		06/20/23 16:06	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		06/20/23 16:06	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		06/20/23 16:06	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		06/20/23 16:06	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		06/20/23 16:06	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		06/20/23 16:06	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 16:06	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		06/20/23 16:06	1
1,2,4-Trimethylbenzene	**1.1**	**J**	2.0	1.0	0.43	ug/L		06/20/23 16:06	1
1,3,5-Trimethylbenzene	**0.36**	**J M**	2.0	1.0	0.28	ug/L		06/20/23 16:06	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		06/20/23 16:06	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		06/20/23 16:06	1
o-Xylene	**0.29**	**J**	2.0	1.0	0.26	ug/L		06/20/23 16:06	1
m-Xylene & p-Xylene	**0.54**	**J**	2.0	1.0	0.49	ug/L		06/20/23 16:06	1
Xylenes, Total	**0.83**	**J**	2.0	1.0	0.49	ug/L		06/20/23 16:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*89 - 112*		*06/20/23 16:06*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*06/22/23 17:18*	*1*
1,2-Dichloroethane-d4 (Surr)	*97*		*81 - 118*		*06/20/23 16:06*	*1*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*		*06/22/23 17:18*	*1*
4-Bromofluorobenzene (Surr)	*105*		*85 - 114*		*06/20/23 16:06*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*06/22/23 17:18*	*1*
Dibromofluoromethane (Surr)	*94*		*80 - 119*		*06/20/23 16:06*	*1*
Dibromofluoromethane (Surr)	*94*		*80 - 119*		*06/22/23 17:18*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**1.6**		1.1	0.76	0.30	ug/L		06/12/23 16:19	1
Ethylene	**1.9**		1.0	0.71	0.31	ug/L		06/12/23 16:19	1
Methane (TCD)	**15000**		390	77	39	ug/L		06/12/23 16:19	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		06/12/23 22:06	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**110000**		100	50	20	ug/L		06/09/23 13:14	1
Manganese	**3400**		10	5.0	1.3	ug/L		06/09/23 13:14	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**7.3**		5.0	3.0	0.86	ug/L		06/09/23 18:31	1

Client: Seres Engineering & Services LLC
Job ID: 680-236018-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Spring 2023

Client Sample ID: G6M-DUP01-SPR23
Lab Sample ID: 680-236018-6
Date Collected: 06/06/23 14:45
Matrix: Water
Date Received: 06/08/23 09:54

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**93**		5.0	5.0	2.2	mg/L		06/12/23 22:22	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	**0.063**	**J**	0.10	0.025	0.010	mg/L		06/21/23 16:38	1
Sulfide (SW846 9034)	1.5	U	2.0	1.5	0.70	mg/L		06/13/23 15:47	1
Total Organic Carbon (SW846 9060)	**99**		1.5	1.0	0.50	mg/L		06/13/23 21:50	1

Client: Seres Engineering & Services LLC
Job ID: 680-236018-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Spring 2023

Client Sample ID: G6M-13-01X-SPR23
Lab Sample ID: 680-236018-7
Date Collected: 06/06/23 15:30
Matrix: Water
Date Received: 06/08/23 09:54

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U Q	25	10	3.7	ug/L		06/20/23 16:29	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		06/20/23 16:29	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		06/20/23 16:29	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/20/23 16:29	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		06/20/23 16:29	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		06/20/23 16:29	1
Bromomethane	10	U Q	20	10	3.7	ug/L		06/20/23 16:29	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		06/20/23 16:29	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		06/20/23 16:29	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		06/20/23 16:29	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/20/23 16:29	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		06/20/23 16:29	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		06/20/23 16:29	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		06/20/23 16:29	1
Chloroethane	10	U Q	20	10	4.6	ug/L		06/20/23 16:29	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		06/20/23 16:29	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		06/20/23 16:29	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		06/20/23 16:29	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		06/20/23 16:29	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		06/20/23 16:29	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		06/20/23 16:29	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 16:29	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/20/23 16:29	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/20/23 16:29	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/20/23 16:29	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/20/23 16:29	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		06/20/23 16:29	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 16:29	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		06/20/23 16:29	1
cis-1,2-Dichloroethene	**0.61**	**J**	2.0	1.0	0.25	ug/L		06/20/23 16:29	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		06/20/23 16:29	1
1,2-Dichloroethene, Total	**0.61**	**J**	2.0	1.0	0.37	ug/L		06/20/23 16:29	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 16:29	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		06/20/23 16:29	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		06/20/23 16:29	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		06/20/23 16:29	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		06/20/23 16:29	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		06/20/23 16:29	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		06/20/23 16:29	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		06/20/23 16:29	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		06/20/23 16:29	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		06/20/23 16:29	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		06/20/23 16:29	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		06/20/23 16:29	1
Methylene Chloride	10	U	20	10	3.2	ug/L		06/20/23 16:29	1
4-Methyl-2-pentanone (MIBK)	10	U Q	20	10	2.7	ug/L		06/20/23 16:29	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		06/20/23 16:29	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		06/20/23 16:29	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		06/20/23 16:29	1

Client Sample ID: G6M-13-01X-SPR23
Lab Sample ID: 680-236018-7
Date Collected: 06/06/23 15:30
Matrix: Water
Date Received: 06/08/23 09:54

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		06/20/23 16:29	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		06/20/23 16:29	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		06/20/23 16:29	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		06/20/23 16:29	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		06/20/23 16:29	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		06/20/23 16:29	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		06/20/23 16:29	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		06/20/23 16:29	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		06/20/23 16:29	1
Trichloroethene	**0.31**	**J**	1.0	0.50	0.20	ug/L		06/20/23 16:29	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 16:29	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		06/20/23 16:29	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/20/23 16:29	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		06/20/23 16:29	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		06/20/23 16:29	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		06/20/23 16:29	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		06/20/23 16:29	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		06/20/23 16:29	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		06/20/23 16:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*89 - 112*		*06/20/23 16:29*	*1*
1,2-Dichloroethane-d4 (Surr)	*97*		*81 - 118*		*06/20/23 16:29*	*1*
4-Bromofluorobenzene (Surr)	*105*		*85 - 114*		*06/20/23 16:29*	*1*
Dibromofluoromethane (Surr)	*94*		*80 - 119*		*06/20/23 16:29*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	0.76	U	1.1	0.76	0.30	ug/L		06/12/23 16:32	1
Ethylene	**0.47**	**J**	1.0	0.71	0.31	ug/L		06/12/23 16:32	1
Methane (TCD)	**750**		390	77	39	ug/L		06/12/23 16:32	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**15**		1.0	1.0	0.40	mg/L		06/12/23 22:18	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**6000**		100	50	20	ug/L		06/09/23 13:17	1
Manganese	**3900**		10	5.0	1.3	ug/L		06/09/23 13:17	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**230**		5.0	3.0	0.86	ug/L		06/09/23 18:44	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**81**		5.0	5.0	2.2	mg/L		06/12/23 22:31	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	**0.036**	**J**	0.10	0.025	0.010	mg/L		06/21/23 16:38	1
Sulfide (SW846 9034)	1.5	U	2.0	1.5	0.70	mg/L		06/13/23 15:47	1

Client: Seres Engineering & Services LLC
Job ID: 680-236018-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Spring 2023

Client Sample ID: G6M-13-01X-SPR23
Lab Sample ID: 680-236018-7
Date Collected: 06/06/23 15:30
Matrix: Water
Date Received: 06/08/23 09:54

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon (SW846 9060)	0.97	J	1.5	1.0	0.50	mg/L		06/13/23 22:11	1

Client: Seres Engineering & Services LLC
Job ID: 680-236018-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Spring 2023

Client Sample ID: G6M-97-05B-SPR23
Lab Sample ID: 680-236018-8
Date Collected: 06/06/23 12:35
Matrix: Water
Date Received: 06/08/23 09:54

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U Q	25	10	3.7	ug/L		06/20/23 16:53	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		06/20/23 16:53	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		06/20/23 16:53	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/20/23 16:53	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		06/20/23 16:53	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		06/20/23 16:53	1
Bromomethane	10	U Q	20	10	3.7	ug/L		06/20/23 16:53	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		06/20/23 16:53	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		06/20/23 16:53	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		06/20/23 16:53	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/20/23 16:53	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		06/20/23 16:53	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		06/20/23 16:53	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		06/20/23 16:53	1
Chloroethane	10	U Q	20	10	4.6	ug/L		06/20/23 16:53	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		06/20/23 16:53	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		06/20/23 16:53	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		06/20/23 16:53	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		06/20/23 16:53	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		06/20/23 16:53	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		06/20/23 16:53	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 16:53	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/20/23 16:53	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/20/23 16:53	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/20/23 16:53	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/20/23 16:53	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		06/20/23 16:53	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 16:53	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		06/20/23 16:53	1
cis-1,2-Dichloroethene	**0.58**	**J**	2.0	1.0	0.25	ug/L		06/20/23 16:53	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		06/20/23 16:53	1
1,2-Dichloroethene, Total	**0.58**	**J**	2.0	1.0	0.37	ug/L		06/20/23 16:53	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 16:53	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		06/20/23 16:53	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		06/20/23 16:53	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		06/20/23 16:53	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		06/20/23 16:53	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		06/20/23 16:53	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		06/20/23 16:53	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		06/20/23 16:53	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		06/20/23 16:53	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		06/20/23 16:53	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		06/20/23 16:53	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		06/20/23 16:53	1
Methylene Chloride	10	U	20	10	3.2	ug/L		06/20/23 16:53	1
4-Methyl-2-pentanone (MIBK)	10	U Q	20	10	2.7	ug/L		06/20/23 16:53	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		06/20/23 16:53	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		06/20/23 16:53	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		06/20/23 16:53	1

Client Sample ID: G6M-97-05B-SPR23
Lab Sample ID: 680-236018-8
Date Collected: 06/06/23 12:35
Matrix: Water
Date Received: 06/08/23 09:54

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		06/20/23 16:53	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		06/20/23 16:53	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		06/20/23 16:53	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		06/20/23 16:53	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		06/20/23 16:53	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		06/20/23 16:53	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		06/20/23 16:53	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		06/20/23 16:53	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		06/20/23 16:53	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		06/20/23 16:53	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 16:53	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		06/20/23 16:53	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/20/23 16:53	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		06/20/23 16:53	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		06/20/23 16:53	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		06/20/23 16:53	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		06/20/23 16:53	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		06/20/23 16:53	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		06/20/23 16:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*89 - 112*		*06/20/23 16:53*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*81 - 118*		*06/20/23 16:53*	*1*
4-Bromofluorobenzene (Surr)	*105*		*85 - 114*		*06/20/23 16:53*	*1*
Dibromofluoromethane (Surr)	*95*		*80 - 119*		*06/20/23 16:53*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**27**		1.1	0.76	0.30	ug/L		06/12/23 16:45	1
Ethylene	**7.0**		1.0	0.71	0.31	ug/L		06/12/23 16:45	1
Methane (TCD)	**34000**		390	77	39	ug/L		06/12/23 16:45	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**1.0**		1.0	1.0	0.40	mg/L		06/12/23 22:31	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**77000**		100	50	20	ug/L		06/09/23 13:19	1
Manganese	**7600**		10	5.0	1.3	ug/L		06/09/23 13:19	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**320**		5.0	3.0	0.86	ug/L		06/09/23 18:48	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**160**		5.0	5.0	2.2	mg/L		06/12/23 22:14	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	**0.055**	**J**	0.10	0.025	0.010	mg/L		06/21/23 17:14	1
Sulfide (SW846 9034)	1.5	U	2.0	1.5	0.70	mg/L		06/13/23 15:47	1

Client: Seres Engineering & Services LLC
Job ID: 680-236018-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Spring 2023

Client Sample ID: G6M-97-05B-SPR23
Lab Sample ID: 680-236018-8
Date Collected: 06/06/23 12:35
Matrix: Water
Date Received: 06/08/23 09:54

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon (SW846 9060)	18		1.5	1.0	0.50	mg/L		06/13/23 22:33	1

Client: Seres Engineering & Services LLC
Job ID: 680-236018-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Spring 2023

Client Sample ID: XSA-12-96X-SPR23
Lab Sample ID: 680-236018-9
Date Collected: 06/06/23 14:51
Matrix: Water
Date Received: 06/08/23 09:54

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U Q	25	10	3.7	ug/L		06/20/23 18:05	1
Benzene	**0.30**	**J**	2.0	1.0	0.27	ug/L		06/20/23 18:05	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		06/20/23 18:05	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/20/23 18:05	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		06/20/23 18:05	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		06/20/23 18:05	1
Bromomethane	10	U Q	20	10	3.7	ug/L		06/20/23 18:05	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		06/20/23 18:05	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		06/20/23 18:05	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		06/20/23 18:05	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/20/23 18:05	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		06/20/23 18:05	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		06/20/23 18:05	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		06/20/23 18:05	1
Chloroethane	10	U Q	20	10	4.6	ug/L		06/20/23 18:05	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		06/20/23 18:05	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		06/20/23 18:05	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		06/20/23 18:05	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		06/20/23 18:05	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		06/20/23 18:05	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		06/20/23 18:05	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 18:05	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/20/23 18:05	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/20/23 18:05	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/20/23 18:05	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/20/23 18:05	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		06/20/23 18:05	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 18:05	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		06/20/23 18:05	1
cis-1,2-Dichloroethene	**5.3**		2.0	1.0	0.25	ug/L		06/20/23 18:05	1
trans-1,2-Dichloroethene	**3.3**		2.0	1.0	0.34	ug/L		06/20/23 18:05	1
1,2-Dichloroethene, Total	**8.6**		2.0	1.0	0.37	ug/L		06/20/23 18:05	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 18:05	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		06/20/23 18:05	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		06/20/23 18:05	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		06/20/23 18:05	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		06/20/23 18:05	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		06/20/23 18:05	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		06/20/23 18:05	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		06/20/23 18:05	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		06/20/23 18:05	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		06/20/23 18:05	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		06/20/23 18:05	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		06/20/23 18:05	1
Methylene Chloride	10	U	20	10	3.2	ug/L		06/20/23 18:05	1
4-Methyl-2-pentanone (MIBK)	10	U Q	20	10	2.7	ug/L		06/20/23 18:05	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		06/20/23 18:05	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		06/20/23 18:05	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		06/20/23 18:05	1

Client Sample ID: XSA-12-96X-SPR23
Lab Sample ID: 680-236018-9
Date Collected: 06/06/23 14:51
Matrix: Water
Date Received: 06/08/23 09:54

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		06/20/23 18:05	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		06/20/23 18:05	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		06/20/23 18:05	1
Tetrachloroethene	**1.7**	**J**	2.0	1.0	0.35	ug/L		06/20/23 18:05	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		06/20/23 18:05	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		06/20/23 18:05	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		06/20/23 18:05	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		06/20/23 18:05	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		06/20/23 18:05	1
Trichloroethene	**4.4**		1.0	0.50	0.20	ug/L		06/20/23 18:05	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 18:05	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		06/20/23 18:05	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/20/23 18:05	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		06/20/23 18:05	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		06/20/23 18:05	1
Vinyl chloride	**4.2**		2.0	1.0	0.40	ug/L		06/20/23 18:05	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		06/20/23 18:05	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		06/20/23 18:05	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		06/20/23 18:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*89 - 112*		*06/20/23 18:05*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*81 - 118*		*06/20/23 18:05*	*1*
4-Bromofluorobenzene (Surr)	*103*		*85 - 114*		*06/20/23 18:05*	*1*
Dibromofluoromethane (Surr)	*93*		*80 - 119*		*06/20/23 18:05*	*1*

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**2300**		100	50	20	ug/L		06/09/23 13:22	1
Manganese	**5700**		10	5.0	1.3	ug/L		06/09/23 13:22	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**1.8**	**J**	5.0	3.0	0.86	ug/L		06/09/23 18:52	1

Client: Seres Engineering & Services LLC
Job ID: 680-236018-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Spring 2023

Client Sample ID: AOC50-TB-01-SPR23
Lab Sample ID: 680-236018-10
Date Collected: 06/06/23 00:00
Matrix: Water
Date Received: 06/08/23 09:54

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U Q	25	10	3.7	ug/L		06/20/23 12:58	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		06/20/23 12:58	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		06/20/23 12:58	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/20/23 12:58	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		06/20/23 12:58	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		06/20/23 12:58	1
Bromomethane	10	U Q	20	10	3.7	ug/L		06/20/23 12:58	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		06/20/23 12:58	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		06/20/23 12:58	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		06/20/23 12:58	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/20/23 12:58	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		06/20/23 12:58	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		06/20/23 12:58	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		06/20/23 12:58	1
Chloroethane	10	U Q	20	10	4.6	ug/L		06/20/23 12:58	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		06/20/23 12:58	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		06/20/23 12:58	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		06/20/23 12:58	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		06/20/23 12:58	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		06/20/23 12:58	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		06/20/23 12:58	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 12:58	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/20/23 12:58	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/20/23 12:58	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/20/23 12:58	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/20/23 12:58	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		06/20/23 12:58	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 12:58	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		06/20/23 12:58	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		06/20/23 12:58	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		06/20/23 12:58	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		06/20/23 12:58	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 12:58	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		06/20/23 12:58	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		06/20/23 12:58	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		06/20/23 12:58	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		06/20/23 12:58	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		06/20/23 12:58	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		06/20/23 12:58	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		06/20/23 12:58	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		06/20/23 12:58	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		06/20/23 12:58	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		06/20/23 12:58	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		06/20/23 12:58	1
Methylene Chloride	10	U	20	10	3.2	ug/L		06/20/23 12:58	1
4-Methyl-2-pentanone (MIBK)	10	U Q	20	10	2.7	ug/L		06/20/23 12:58	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		06/20/23 12:58	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		06/20/23 12:58	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		06/20/23 12:58	1

Client: Seres Engineering & Services LLC
Job ID: 680-236018-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Spring 2023

Client Sample ID: AOC50-TB-01-SPR23
Lab Sample ID: 680-236018-10
Date Collected: 06/06/23 00:00
Matrix: Water
Date Received: 06/08/23 09:54

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		06/20/23 12:58	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		06/20/23 12:58	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		06/20/23 12:58	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		06/20/23 12:58	1
Toluene	**0.48**	**J**	2.0	1.0	0.25	ug/L		06/20/23 12:58	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		06/20/23 12:58	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		06/20/23 12:58	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		06/20/23 12:58	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		06/20/23 12:58	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		06/20/23 12:58	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 12:58	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		06/20/23 12:58	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/20/23 12:58	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		06/20/23 12:58	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		06/20/23 12:58	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		06/20/23 12:58	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		06/20/23 12:58	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		06/20/23 12:58	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		06/20/23 12:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*89 - 112*		*06/20/23 12:58*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*81 - 118*		*06/20/23 12:58*	*1*
4-Bromofluorobenzene (Surr)	*105*		*85 - 114*		*06/20/23 12:58*	*1*
Dibromofluoromethane (Surr)	*94*		*80 - 119*		*06/20/23 12:58*	*1*

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

Lab Sample ID: MB 680-784420/9
Matrix: Water
Analysis Batch: 784420

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		06/20/23 13:43	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		06/20/23 13:43	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		06/20/23 13:43	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/20/23 13:43	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		06/20/23 13:43	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		06/20/23 13:43	1
Bromomethane	10	U	20	10	3.7	ug/L		06/20/23 13:43	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		06/20/23 13:43	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		06/20/23 13:43	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		06/20/23 13:43	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/20/23 13:43	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		06/20/23 13:43	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		06/20/23 13:43	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		06/20/23 13:43	1
Chloroethane	10	U	20	10	4.6	ug/L		06/20/23 13:43	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		06/20/23 13:43	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		06/20/23 13:43	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		06/20/23 13:43	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		06/20/23 13:43	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		06/20/23 13:43	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		06/20/23 13:43	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 13:43	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/20/23 13:43	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/20/23 13:43	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/20/23 13:43	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/20/23 13:43	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		06/20/23 13:43	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 13:43	1
1,2-Dichloroethane	1.0	U	2.0	1.0	0.25	ug/L		06/20/23 13:43	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		06/20/23 13:43	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		06/20/23 13:43	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		06/20/23 13:43	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 13:43	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		06/20/23 13:43	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		06/20/23 13:43	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		06/20/23 13:43	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		06/20/23 13:43	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		06/20/23 13:43	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		06/20/23 13:43	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		06/20/23 13:43	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		06/20/23 13:43	1
2-Hexanone	10	U	20	10	3.2	ug/L		06/20/23 13:43	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		06/20/23 13:43	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		06/20/23 13:43	1
Methylene Chloride	10	U	20	10	3.2	ug/L		06/20/23 13:43	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		06/20/23 13:43	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		06/20/23 13:43	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		06/20/23 13:43	1

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

Lab Sample ID: MB 680-784420/9
Matrix: Water
Analysis Batch: 784420

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		06/20/23 13:43	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		06/20/23 13:43	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		06/20/23 13:43	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		06/20/23 13:43	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		06/20/23 13:43	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		06/20/23 13:43	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		06/20/23 13:43	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		06/20/23 13:43	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		06/20/23 13:43	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		06/20/23 13:43	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		06/20/23 13:43	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 13:43	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		06/20/23 13:43	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/20/23 13:43	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		06/20/23 13:43	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		06/20/23 13:43	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		06/20/23 13:43	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		06/20/23 13:43	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		06/20/23 13:43	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		06/20/23 13:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*89 - 112*		*06/20/23 13:43*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*06/20/23 13:43*	*1*
4-Bromofluorobenzene (Surr)	*109*		*85 - 114*		*06/20/23 13:43*	*1*
Dibromofluoromethane (Surr)	*90*		*80 - 119*		*06/20/23 13:43*	*1*

Lab Sample ID: LCS 680-784420/5
Matrix: Water
Analysis Batch: 784420

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	250	260		ug/L		104	39 - 160
Benzene	50.0	46.3		ug/L		93	79 - 120
Bromobenzene	50.0	52.7		ug/L		105	80 - 120
Chlorobromomethane	50.0	44.8		ug/L		90	78 - 123
Dichlorobromomethane	50.0	47.0		ug/L		94	79 - 125
Bromoform	50.0	50.2		ug/L		100	66 - 130
Bromomethane	50.0	66.4		ug/L		133	53 - 141
2-Butanone (MEK)	250	265		ug/L		106	56 - 143
n-Butylbenzene	50.0	48.7		ug/L		97	75 - 128
sec-Butylbenzene	50.0	48.9		ug/L		98	77 - 126
tert-Butylbenzene	50.0	49.4		ug/L		99	78 - 124
Carbon disulfide	50.0	46.3		ug/L		93	64 - 133
Carbon tetrachloride	50.0	43.3		ug/L		87	72 - 136
Chlorobenzene	50.0	51.8		ug/L		104	82 - 118
Chloroethane	50.0	50.3		ug/L		101	60 - 138
Chloroform	50.0	45.8		ug/L		92	79 - 124

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

Lab Sample ID: LCS 680-784420/5
Matrix: Water
Analysis Batch: 784420

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloromethane	50.0	54.8		ug/L		110	50 - 139
2-Chlorotoluene	50.0	50.6		ug/L		101	79 - 122
4-Chlorotoluene	50.0	50.8		ug/L		102	78 - 122
Chlorodibromomethane	50.0	48.5		ug/L		97	74 - 126
1,2-Dibromo-3-Chloropropane	50.0	58.8		ug/L		118	62 - 128
Ethylene Dibromide	50.0	49.3		ug/L		99	75 - 127
Dibromomethane	50.0	52.2		ug/L		104	79 - 123
1,2-Dichlorobenzene	50.0	51.8		ug/L		104	80 - 119
1,3-Dichlorobenzene	50.0	49.1		ug/L		98	80 - 119
1,4-Dichlorobenzene	50.0	50.7		ug/L		101	79 - 118
Dichlorodifluoromethane	50.0	93.0	Q	ug/L		186	32 - 152
1,1-Dichloroethane	50.0	45.9		ug/L		92	77 - 125
1,2-Dichloroethane	50.0	49.2		ug/L		98	73 - 128
cis-1,2-Dichloroethene	50.0	52.8		ug/L		106	78 - 123
trans-1,2-Dichloroethene	50.0	42.7		ug/L		85	75 - 124
1,2-Dichloroethene, Total	100	95.5		ug/L		95	79 - 121
1,1-Dichloroethene	50.0	48.5		ug/L		97	71 - 131
1,2-Dichloropropane	50.0	47.7		ug/L		95	78 - 122
1,3-Dichloropropane	50.0	49.3		ug/L		99	80 - 119
2,2-Dichloropropane	50.0	45.3		ug/L		91	60 - 139
1,1-Dichloropropene	50.0	43.5		ug/L		87	79 - 125
cis-1,3-Dichloropropene	50.0	44.6		ug/L		89	75 - 124
trans-1,3-Dichloropropene	50.0	48.6		ug/L		97	73 - 127
Ethylbenzene	50.0	52.5		ug/L		105	79 - 121
Hexachlorobutadiene	50.0	49.5		ug/L		99	66 - 134
2-Hexanone	250	274		ug/L		110	57 - 139
Isopropylbenzene	50.0	51.4		ug/L		103	72 - 131
4-Isopropyltoluene	50.0	48.3		ug/L		97	77 - 127
Methylene Chloride	50.0	46.2		ug/L		92	74 - 124
4-Methyl-2-pentanone (MIBK)	250	288		ug/L		115	67 - 130
Methyl tert-butyl ether	50.0	51.3		ug/L		103	71 - 124
Naphthalene	50.0	50.4		ug/L		101	61 - 128
N-Propylbenzene	50.0	50.2		ug/L		100	76 - 126
Styrene	50.0	50.6		ug/L		101	78 - 123
1,1,1,2-Tetrachloroethane	50.0	52.3		ug/L		105	78 - 124
1,1,2,2-Tetrachloroethane	50.0	44.0		ug/L		88	71 - 121
Tetrachloroethene	50.0	50.5		ug/L		101	74 - 129
Toluene	50.0	50.4		ug/L		101	80 - 121
1,2,3-Trichlorobenzene	50.0	52.4		ug/L		105	69 - 129
1,2,4-Trichlorobenzene	50.0	51.2		ug/L		102	69 - 130
1,1,1-Trichloroethane	50.0	45.4		ug/L		91	74 - 131
1,1,2-Trichloroethane	50.0	46.1		ug/L		92	80 - 119
Trichloroethene	50.0	49.8		ug/L		100	79 - 123
Trichlorofluoromethane	50.0	50.7		ug/L		101	65 - 141
1,2,3-Trichloropropane	50.0	59.5		ug/L		119	73 - 122
1,2,4-Trimethylbenzene	50.0	49.7		ug/L		99	76 - 124
1,3,5-Trimethylbenzene	50.0	48.3		ug/L		97	75 - 124
Vinyl acetate	100	49.1	Q	ug/L		49	54 - 146
Vinyl chloride	50.0	59.3		ug/L		119	58 - 137

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

Lab Sample ID: LCS 680-784420/5
Matrix: Water
Analysis Batch: 784420

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			50.0	48.4		ug/L		97	78 - 122		
m-Xylene & p-Xylene			50.0	49.5		ug/L		99	80 - 121		
Xylenes, Total			100	97.9		ug/L		98	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*102*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*103*		*81 - 118*
4-Bromofluorobenzene (Surr)	*105*		*85 - 114*
Dibromofluoromethane (Surr)	*90*		*80 - 119*

Lab Sample ID: LCSD 680-784420/6
Matrix: Water
Analysis Batch: 784420

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
Acetone			250	265		ug/L		106	39 - 160	2	20
Benzene			50.0	45.8		ug/L		92	79 - 120	1	20
Bromobenzene			50.0	52.5		ug/L		105	80 - 120	0	20
Chlorobromomethane			50.0	43.7		ug/L		87	78 - 123	2	20
Dichlorobromomethane			50.0	47.3		ug/L		95	79 - 125	1	20
Bromoform			50.0	49.9		ug/L		100	66 - 130	1	20
Bromomethane			50.0	70.5		ug/L		141	53 - 141	6	20
2-Butanone (MEK)			250	276		ug/L		110	56 - 143	4	20
n-Butylbenzene			50.0	49.7		ug/L		99	75 - 128	2	20
sec-Butylbenzene			50.0	48.8		ug/L		98	77 - 126	0	20
tert-Butylbenzene			50.0	49.7		ug/L		99	78 - 124	1	20
Carbon disulfide			50.0	46.5		ug/L		93	64 - 133	0	20
Carbon tetrachloride			50.0	43.5		ug/L		87	72 - 136	0	20
Chlorobenzene			50.0	52.0		ug/L		104	82 - 118	0	20
Chloroethane			50.0	54.7		ug/L		109	60 - 138	8	20
Chloroform			50.0	46.3		ug/L		93	79 - 124	1	20
Chloromethane			50.0	52.9		ug/L		106	50 - 139	3	20
2-Chlorotoluene			50.0	50.6		ug/L		101	79 - 122	0	20
4-Chlorotoluene			50.0	50.7		ug/L		101	78 - 122	0	20
Chlorodibromomethane			50.0	47.2		ug/L		94	74 - 126	3	20
1,2-Dibromo-3-Chloropropane			50.0	60.5		ug/L		121	62 - 128	3	20
Ethylene Dibromide			50.0	51.4		ug/L		103	75 - 127	4	20
Dibromomethane			50.0	51.1		ug/L		102	79 - 123	2	20
1,2-Dichlorobenzene			50.0	53.9		ug/L		108	80 - 119	4	20
1,3-Dichlorobenzene			50.0	51.6		ug/L		103	80 - 119	5	20
1,4-Dichlorobenzene			50.0	52.6		ug/L		105	79 - 118	4	20
Dichlorodifluoromethane			50.0	90.0	M Q	ug/L		180	32 - 152	3	20
1,1-Dichloroethane			50.0	45.2		ug/L		90	77 - 125	2	20
1,2-Dichloroethane			50.0	50.4		ug/L		101	73 - 128	2	20
cis-1,2-Dichloroethene			50.0	51.2		ug/L		102	78 - 123	3	20
trans-1,2-Dichloroethene			50.0	50.7		ug/L		101	75 - 124	17	20
1,2-Dichloroethene, Total			100	102		ug/L		102	79 - 121	7	20
1,1-Dichloroethene			50.0	44.7		ug/L		89	71 - 131	8	20

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

Lab Sample ID: LCSD 680-784420/6
Matrix: Water
Analysis Batch: 784420

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Dichloropropane	50.0	46.2		ug/L		92	78 - 122	3	20
1,3-Dichloropropane	50.0	49.7		ug/L		99	80 - 119	1	20
2,2-Dichloropropane	50.0	44.9		ug/L		90	60 - 139	1	20
1,1-Dichloropropene	50.0	44.1		ug/L		88	79 - 125	1	20
cis-1,3-Dichloropropene	50.0	44.9		ug/L		90	75 - 124	1	20
trans-1,3-Dichloropropene	50.0	49.1		ug/L		98	73 - 127	1	20
Ethylbenzene	50.0	51.9		ug/L		104	79 - 121	1	20
Hexachlorobutadiene	50.0	52.7		ug/L		105	66 - 134	6	20
2-Hexanone	250	277		ug/L		111	57 - 139	1	20
Isopropylbenzene	50.0	50.6		ug/L		101	72 - 131	2	20
4-Isopropyltoluene	50.0	49.7		ug/L		99	77 - 127	3	20
Methylene Chloride	50.0	45.6		ug/L		91	74 - 124	1	20
4-Methyl-2-pentanone (MIBK)	250	296		ug/L		118	67 - 130	3	20
Methyl tert-butyl ether	50.0	51.2		ug/L		102	71 - 124	0	20
Naphthalene	50.0	52.1		ug/L		104	61 - 128	3	20
N-Propylbenzene	50.0	51.0		ug/L		102	76 - 126	2	20
Styrene	50.0	51.1		ug/L		102	78 - 123	1	20
1,1,1,2-Tetrachloroethane	50.0	51.0		ug/L		102	78 - 124	3	20
1,1,2,2-Tetrachloroethane	50.0	44.3		ug/L		89	71 - 121	1	20
Tetrachloroethene	50.0	50.2		ug/L		100	74 - 129	1	20
Toluene	50.0	50.8		ug/L		102	80 - 121	1	20
1,2,3-Trichlorobenzene	50.0	54.3		ug/L		109	69 - 129	4	20
1,2,4-Trichlorobenzene	50.0	52.9		ug/L		106	69 - 130	3	20
1,1,1-Trichloroethane	50.0	45.5		ug/L		91	74 - 131	0	20
1,1,2-Trichloroethane	50.0	49.2		ug/L		98	80 - 119	6	20
Trichloroethene	50.0	50.7		ug/L		101	79 - 123	2	20
Trichlorofluoromethane	50.0	51.1		ug/L		102	65 - 141	1	20
1,2,3-Trichloropropane	50.0	55.7		ug/L		111	73 - 122	6	20
1,2,4-Trimethylbenzene	50.0	48.1		ug/L		96	76 - 124	3	20
1,3,5-Trimethylbenzene	50.0	49.0		ug/L		98	75 - 124	1	20
Vinyl acetate	100	49.4	Q	ug/L		49	54 - 146	1	20
Vinyl chloride	50.0	56.8		ug/L		114	58 - 137	4	20
o-Xylene	50.0	48.7		ug/L		97	78 - 122	1	20
m-Xylene & p-Xylene	50.0	49.7		ug/L		99	80 - 121	0	20
Xylenes, Total	100	98.4		ug/L		98	79 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*104*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*102*		*81 - 118*
4-Bromofluorobenzene (Surr)	*105*		*85 - 114*
Dibromofluoromethane (Surr)	*91*		*80 - 119*

Lab Sample ID: 680-236018-2 MS
Matrix: Water
Analysis Batch: 784420

Client Sample ID: G6M-04-10A-SPR23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	10	U	250	256		ug/L		103	39 - 160

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

Lab Sample ID: 680-236018-2 MS
Matrix: Water
Analysis Batch: 784420

Client Sample ID: G6M-04-10A-SPR23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	1.0	U	50.0	44.3		ug/L		89	79 - 120
Bromobenzene	0.50	U	50.0	50.1		ug/L		100	80 - 120
Chlorobromomethane	1.0	U	50.0	48.2		ug/L		96	78 - 123
Dichlorobromomethane	1.0	U	50.0	48.4		ug/L		97	79 - 125
Bromoform	2.0	U	50.0	48.6		ug/L		97	66 - 130
Bromomethane	10	U	50.0	59.5		ug/L		119	53 - 141
2-Butanone (MEK)	20	U	250	274		ug/L		109	56 - 143
n-Butylbenzene	2.0	U	50.0	51.9		ug/L		104	75 - 128
sec-Butylbenzene	2.0	U	50.0	48.7		ug/L		97	77 - 126
tert-Butylbenzene	1.0	U	50.0	49.2		ug/L		98	78 - 124
Carbon disulfide	1.0	U	50.0	48.4		ug/L		97	64 - 133
Carbon tetrachloride	1.0	U	50.0	49.4		ug/L		99	72 - 136
Chlorobenzene	0.50	U	50.0	50.7		ug/L		101	82 - 118
Chloroethane	10	U	50.0	48.9		ug/L		98	60 - 138
Chloroform	1.0	U	50.0	45.9		ug/L		92	79 - 124
Chloromethane	2.0	U	50.0	47.7	M	ug/L		95	50 - 139
2-Chlorotoluene	0.50	U	50.0	47.3		ug/L		95	79 - 122
4-Chlorotoluene	1.0	U	50.0	47.7		ug/L		95	78 - 122
Chlorodibromomethane	1.0	U	50.0	47.3		ug/L		95	74 - 126
1,2-Dibromo-3-Chloropropane	5.0	U	50.0	57.0		ug/L		114	62 - 128
Ethylene Dibromide	1.0	U	50.0	48.4		ug/L		97	75 - 127
Dibromomethane	1.0	U	50.0	49.9		ug/L		100	79 - 123
1,2-Dichlorobenzene	1.0	U	50.0	51.7		ug/L		103	80 - 119
1,3-Dichlorobenzene	1.0	U	50.0	49.4		ug/L		99	80 - 119
1,4-Dichlorobenzene	1.0	U	50.0	50.4		ug/L		101	79 - 118
Dichlorodifluoromethane	1.0	U J1 Q	50.0	82.2	J1	ug/L		164	32 - 152
1,1-Dichloroethane	1.0	U	50.0	47.9		ug/L		96	77 - 125
1,2-Dichloroethane	1.0	U	50.0	50.7		ug/L		101	73 - 128
cis-1,2-Dichloroethene	0.71	J	50.0	52.1		ug/L		103	78 - 123
trans-1,2-Dichloroethene	1.0	U J1	50.0	53.8		ug/L		108	75 - 124
1,2-Dichloroethene, Total	0.71	J	100	106		ug/L		105	79 - 121
1,1-Dichloroethene	1.0	U	50.0	41.6		ug/L		83	71 - 131
1,2-Dichloropropane	0.50	U	50.0	48.2		ug/L		96	78 - 122
1,3-Dichloropropane	1.0	U	50.0	47.7		ug/L		95	80 - 119
2,2-Dichloropropane	1.0	U	50.0	35.6		ug/L		71	60 - 139
1,1-Dichloropropene	1.0	U	50.0	46.1		ug/L		92	79 - 125
cis-1,3-Dichloropropene	1.0	U	50.0	43.0		ug/L		86	75 - 124
trans-1,3-Dichloropropene	1.0	U	50.0	46.0		ug/L		92	73 - 127
Ethylbenzene	0.50	U	50.0	51.3		ug/L		103	79 - 121
Hexachlorobutadiene	1.0	U	50.0	51.2		ug/L		102	66 - 134
2-Hexanone	10	U	250	300		ug/L		120	57 - 139
Isopropylbenzene	1.0	U	50.0	51.1		ug/L		102	72 - 131
4-Isopropyltoluene	1.0	U	50.0	50.5		ug/L		101	77 - 127
Methylene Chloride	10	U	50.0	46.2		ug/L		92	74 - 124
4-Methyl-2-pentanone (MIBK)	10	U J1	250	325		ug/L		130	67 - 130
Methyl tert-butyl ether	2.0	U	50.0	52.2		ug/L		104	71 - 124
Naphthalene	5.0	U	50.0	50.6		ug/L		101	61 - 128
N-Propylbenzene	1.0	U	50.0	48.5		ug/L		97	76 - 126
Styrene	1.0	U	50.0	48.6		ug/L		97	78 - 123

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

Lab Sample ID: 680-236018-2 MS
Matrix: Water
Analysis Batch: 784420

Client Sample ID: G6M-04-10A-SPR23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	1.0	U	50.0	51.3		ug/L		103	78 - 124
1,1,2,2-Tetrachloroethane	1.0	U	50.0	48.4		ug/L		97	71 - 121
Tetrachloroethene	1.0	U	50.0	50.5		ug/L		101	74 - 129
Toluene	1.0	U	50.0	50.2		ug/L		100	80 - 121
1,2,3-Trichlorobenzene	2.0	U	50.0	49.8		ug/L		100	69 - 129
1,2,4-Trichlorobenzene	2.0	U	50.0	47.7		ug/L		95	69 - 130
1,1,1-Trichloroethane	0.50	U	50.0	50.3		ug/L		101	74 - 131
1,1,2-Trichloroethane	1.0	U	50.0	45.6		ug/L		91	80 - 119
Trichloroethene	0.50	U	50.0	47.2		ug/L		94	79 - 123
Trichlorofluoromethane	1.0	U	50.0	50.8		ug/L		102	65 - 141
1,2,3-Trichloropropane	1.0	U	50.0	54.8		ug/L		110	73 - 122
1,2,4-Trimethylbenzene	0.98	J	50.0	50.1		ug/L		98	76 - 124
1,3,5-Trimethylbenzene	0.47	J	50.0	50.7		ug/L		101	75 - 124
Vinyl acetate	2.0	U Q	100	103		ug/L		103	54 - 146
Vinyl chloride	1.0	U	50.0	54.7		ug/L		109	58 - 137
o-Xylene	1.0	U	50.0	47.8		ug/L		96	78 - 122
m-Xylene & p-Xylene	1.0	U	50.0	48.1		ug/L		96	80 - 121
Xylenes, Total	1.0	U	100	95.9		ug/L		96	79 - 121

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*103*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*104*		*81 - 118*
4-Bromofluorobenzene (Surr)	*106*		*85 - 114*
Dibromofluoromethane (Surr)	*92*		*80 - 119*

Lab Sample ID: 680-236018-2 MSD
Matrix: Water
Analysis Batch: 784420

Client Sample ID: G6M-04-10A-SPR23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetone	10	U	250	220		ug/L		88	39 - 160	15	20
Benzene	1.0	U	50.0	45.7		ug/L		91	79 - 120	3	20
Bromobenzene	0.50	U	50.0	52.0		ug/L		104	80 - 120	4	20
Chlorobromomethane	1.0	U	50.0	46.9		ug/L		94	78 - 123	3	20
Dichlorobromomethane	1.0	U	50.0	49.7		ug/L		99	79 - 125	3	20
Bromoform	2.0	U	50.0	51.2		ug/L		102	66 - 130	5	20
Bromomethane	10	U	50.0	57.4		ug/L		115	53 - 141	4	20
2-Butanone (MEK)	20	U	250	273		ug/L		109	56 - 143	0	20
n-Butylbenzene	2.0	U	50.0	50.4		ug/L		101	75 - 128	3	20
sec-Butylbenzene	2.0	U	50.0	50.2		ug/L		100	77 - 126	3	20
tert-Butylbenzene	1.0	U	50.0	50.0		ug/L		100	78 - 124	2	20
Carbon disulfide	1.0	U	50.0	42.6		ug/L		85	64 - 133	13	20
Carbon tetrachloride	1.0	U	50.0	50.4		ug/L		101	72 - 136	2	20
Chlorobenzene	0.50	U	50.0	51.7		ug/L		103	82 - 118	2	20
Chloroethane	10	U	50.0	51.0		ug/L		102	60 - 138	4	20
Chloroform	1.0	U	50.0	46.3		ug/L		93	79 - 124	1	20
Chloromethane	2.0	U	50.0	46.2	M	ug/L		92	50 - 139	3	20
2-Chlorotoluene	0.50	U	50.0	49.9		ug/L		100	79 - 122	5	20

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

Lab Sample ID: 680-236018-2 MSD
Client Sample ID: G6M-04-10A-SPR23
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 784420

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
4-Chlorotoluene	1.0	U	50.0	50.0		ug/L		100	78 - 122	5	20
Chlorodibromomethane	1.0	U	50.0	48.4		ug/L		97	74 - 126	2	20
1,2-Dibromo-3-Chloropropane	5.0	U	50.0	54.6		ug/L		109	62 - 128	4	20
Ethylene Dibromide	1.0	U	50.0	48.0		ug/L		96	75 - 127	1	20
Dibromomethane	1.0	U	50.0	51.2		ug/L		102	79 - 123	2	20
1,2-Dichlorobenzene	1.0	U	50.0	51.8		ug/L		104	80 - 119	0	20
1,3-Dichlorobenzene	1.0	U	50.0	49.9		ug/L		100	80 - 119	1	20
1,4-Dichlorobenzene	1.0	U	50.0	50.7		ug/L		101	79 - 118	1	20
Dichlorodifluoromethane	1.0	U J1 Q	50.0	74.3		ug/L		149	32 - 152	10	20
1,1-Dichloroethane	1.0	U	50.0	48.2		ug/L		96	77 - 125	1	20
1,2-Dichloroethane	1.0	U	50.0	51.7		ug/L		103	73 - 128	2	20
cis-1,2-Dichloroethene	0.71	J	50.0	52.3		ug/L		103	78 - 123	0	20
trans-1,2-Dichloroethene	1.0	U J1	50.0	43.5	J1	ug/L		87	75 - 124	21	20
1,2-Dichloroethene, Total	0.71	J	100	95.8		ug/L		95	79 - 121	10	20
1,1-Dichloroethene	1.0	U	50.0	41.8		ug/L		84	71 - 131	0	20
1,2-Dichloropropane	0.50	U	50.0	47.8		ug/L		96	78 - 122	1	20
1,3-Dichloropropane	1.0	U	50.0	48.1		ug/L		96	80 - 119	1	20
2,2-Dichloropropane	1.0	U	50.0	34.7		ug/L		69	60 - 139	2	20
1,1-Dichloropropene	1.0	U	50.0	47.1		ug/L		94	79 - 125	2	20
cis-1,3-Dichloropropene	1.0	U	50.0	42.7		ug/L		85	75 - 124	1	20
trans-1,3-Dichloropropene	1.0	U	50.0	47.0		ug/L		94	73 - 127	2	20
Ethylbenzene	0.50	U	50.0	52.5		ug/L		105	79 - 121	2	20
Hexachlorobutadiene	1.0	U	50.0	51.7		ug/L		103	66 - 134	1	20
2-Hexanone	10	U	250	302		ug/L		121	57 - 139	1	20
Isopropylbenzene	1.0	U	50.0	51.4		ug/L		103	72 - 131	1	20
4-Isopropyltoluene	1.0	U	50.0	49.3		ug/L		99	77 - 127	2	20
Methylene Chloride	10	U	50.0	40.0		ug/L		80	74 - 124	14	20
4-Methyl-2-pentanone (MIBK)	10	U J1	250	332	J1	ug/L		133	67 - 130	2	20
Methyl tert-butyl ether	2.0	U	50.0	55.8		ug/L		112	71 - 124	7	20
Naphthalene	5.0	U	50.0	50.0		ug/L		100	61 - 128	1	20
N-Propylbenzene	1.0	U	50.0	50.2		ug/L		100	76 - 126	4	20
Styrene	1.0	U	50.0	49.5		ug/L		99	78 - 123	2	20
1,1,1,2-Tetrachloroethane	1.0	U	50.0	53.4		ug/L		107	78 - 124	4	20
1,1,2,2-Tetrachloroethane	1.0	U	50.0	50.7		ug/L		101	71 - 121	5	20
Tetrachloroethene	1.0	U	50.0	50.7		ug/L		101	74 - 129	0	20
Toluene	1.0	U	50.0	49.9		ug/L		100	80 - 121	1	20
1,2,3-Trichlorobenzene	2.0	U	50.0	50.0		ug/L		100	69 - 129	0	20
1,2,4-Trichlorobenzene	2.0	U	50.0	49.5		ug/L		99	69 - 130	4	20
1,1,1-Trichloroethane	0.50	U	50.0	49.2		ug/L		98	74 - 131	2	20
1,1,2-Trichloroethane	1.0	U	50.0	47.9		ug/L		96	80 - 119	5	20
Trichloroethene	0.50	U	50.0	47.4		ug/L		95	79 - 123	0	20
Trichlorofluoromethane	1.0	U	50.0	48.2		ug/L		96	65 - 141	5	20
1,2,3-Trichloropropane	1.0	U	50.0	58.1		ug/L		116	73 - 122	6	20
1,2,4-Trimethylbenzene	0.98	J	50.0	52.0		ug/L		102	76 - 124	4	20
1,3,5-Trimethylbenzene	0.47	J	50.0	50.6		ug/L		100	75 - 124	0	20
Vinyl acetate	2.0	U Q	100	107		ug/L		107	54 - 146	4	20
Vinyl chloride	1.0	U	50.0	51.7		ug/L		103	58 - 137	6	20
o-Xylene	1.0	U	50.0	49.6		ug/L		99	78 - 122	4	20
m-Xylene & p-Xylene	1.0	U	50.0	49.3		ug/L		99	80 - 121	3	20

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

Lab Sample ID: 680-236018-2 MSD
Client Sample ID: G6M-04-10A-SPR23
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 784420

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Xylenes, Total	1.0	U	100	98.9		ug/L		99	79 - 121	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*104*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*105*		*81 - 118*
4-Bromofluorobenzene (Surr)	*107*		*85 - 114*
Dibromofluoromethane (Surr)	*93*		*80 - 119*

Lab Sample ID: MB 680-784463/9
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 784463

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		06/20/23 12:34	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		06/20/23 12:34	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		06/20/23 12:34	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/20/23 12:34	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		06/20/23 12:34	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		06/20/23 12:34	1
Bromomethane	10	U M	20	10	3.7	ug/L		06/20/23 12:34	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		06/20/23 12:34	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		06/20/23 12:34	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		06/20/23 12:34	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/20/23 12:34	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		06/20/23 12:34	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		06/20/23 12:34	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		06/20/23 12:34	1
Chloroethane	10	U	20	10	4.6	ug/L		06/20/23 12:34	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		06/20/23 12:34	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		06/20/23 12:34	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		06/20/23 12:34	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		06/20/23 12:34	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		06/20/23 12:34	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		06/20/23 12:34	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 12:34	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/20/23 12:34	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/20/23 12:34	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/20/23 12:34	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/20/23 12:34	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		06/20/23 12:34	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 12:34	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		06/20/23 12:34	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		06/20/23 12:34	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		06/20/23 12:34	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		06/20/23 12:34	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 12:34	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		06/20/23 12:34	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		06/20/23 12:34	1

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

Lab Sample ID: MB 680-784463/9
Matrix: Water
Analysis Batch: 784463

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		06/20/23 12:34	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		06/20/23 12:34	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		06/20/23 12:34	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		06/20/23 12:34	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		06/20/23 12:34	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		06/20/23 12:34	1
2-Hexanone	10	U	20	10	3.2	ug/L		06/20/23 12:34	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		06/20/23 12:34	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		06/20/23 12:34	1
Methylene Chloride	10	U	20	10	3.2	ug/L		06/20/23 12:34	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		06/20/23 12:34	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		06/20/23 12:34	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		06/20/23 12:34	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		06/20/23 12:34	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		06/20/23 12:34	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		06/20/23 12:34	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		06/20/23 12:34	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		06/20/23 12:34	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		06/20/23 12:34	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		06/20/23 12:34	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		06/20/23 12:34	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		06/20/23 12:34	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		06/20/23 12:34	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		06/20/23 12:34	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		06/20/23 12:34	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		06/20/23 12:34	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/20/23 12:34	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		06/20/23 12:34	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		06/20/23 12:34	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		06/20/23 12:34	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		06/20/23 12:34	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		06/20/23 12:34	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		06/20/23 12:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*89 - 112*		*06/20/23 12:34*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*81 - 118*		*06/20/23 12:34*	*1*
4-Bromofluorobenzene (Surr)	*108*		*85 - 114*		*06/20/23 12:34*	*1*
Dibromofluoromethane (Surr)	*94*		*80 - 119*		*06/20/23 12:34*	*1*

Lab Sample ID: LCS 680-784463/5
Matrix: Water
Analysis Batch: 784463

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Acetone			250	338		ug/L		135	39 - 160		
Benzene			50.0	49.8		ug/L		100	79 - 120		
Bromobenzene			50.0	48.3		ug/L		97	80 - 120		

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

Lab Sample ID: LCS 680-784463/5
Matrix: Water
Analysis Batch: 784463

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chlorobromomethane	50.0	52.7		ug/L		105	78 - 123
Dichlorobromomethane	50.0	46.7		ug/L		93	79 - 125
Bromoform	50.0	40.4		ug/L		81	66 - 130
Bromomethane	50.0	43.0		ug/L		86	53 - 141
2-Butanone (MEK)	250	356		ug/L		142	56 - 143
n-Butylbenzene	50.0	53.0		ug/L		106	75 - 128
sec-Butylbenzene	50.0	49.1		ug/L		98	77 - 126
tert-Butylbenzene	50.0	49.8		ug/L		100	78 - 124
Carbon disulfide	50.0	48.8		ug/L		98	64 - 133
Carbon tetrachloride	50.0	45.4		ug/L		91	72 - 136
Chlorobenzene	50.0	50.1		ug/L		100	82 - 118
Chloroethane	50.0	61.1		ug/L		122	60 - 138
Chloroform	50.0	49.6		ug/L		99	79 - 124
Chloromethane	50.0	57.0		ug/L		114	50 - 139
2-Chlorotoluene	50.0	49.5		ug/L		99	79 - 122
4-Chlorotoluene	50.0	49.2		ug/L		98	78 - 122
Chlorodibromomethane	50.0	45.0		ug/L		90	74 - 126
1,2-Dibromo-3-Chloropropane	50.0	47.9		ug/L		96	62 - 128
Ethylene Dibromide	50.0	50.1		ug/L		100	75 - 127
Dibromomethane	50.0	50.2		ug/L		100	79 - 123
1,2-Dichlorobenzene	50.0	52.4		ug/L		105	80 - 119
1,3-Dichlorobenzene	50.0	51.5		ug/L		103	80 - 119
1,4-Dichlorobenzene	50.0	51.6		ug/L		103	79 - 118
Dichlorodifluoromethane	50.0	49.0		ug/L		98	32 - 152
1,1-Dichloroethane	50.0	50.6		ug/L		101	77 - 125
1,2-Dichloroethane	50.0	53.1		ug/L		106	73 - 128
cis-1,2-Dichloroethene	50.0	48.7		ug/L		97	78 - 123
trans-1,2-Dichloroethene	50.0	51.5		ug/L		103	75 - 124
1,2-Dichloroethene, Total	100	100		ug/L		100	79 - 121
1,1-Dichloroethene	50.0	51.2		ug/L		102	71 - 131
1,2-Dichloropropane	50.0	52.1		ug/L		104	78 - 122
1,3-Dichloropropane	50.0	52.1		ug/L		104	80 - 119
2,2-Dichloropropane	50.0	48.3		ug/L		97	60 - 139
1,1-Dichloropropene	50.0	48.6		ug/L		97	79 - 125
cis-1,3-Dichloropropene	50.0	47.7		ug/L		95	75 - 124
trans-1,3-Dichloropropene	50.0	53.1		ug/L		106	73 - 127
Ethylbenzene	50.0	50.4		ug/L		101	79 - 121
Hexachlorobutadiene	50.0	52.2		ug/L		104	66 - 134
2-Hexanone	250	339		ug/L		136	57 - 139
Isopropylbenzene	50.0	50.5		ug/L		101	72 - 131
4-Isopropyltoluene	50.0	51.5		ug/L		103	77 - 127
Methylene Chloride	50.0	50.1		ug/L		100	74 - 124
4-Methyl-2-pentanone (MIBK)	250	314		ug/L		126	67 - 130
Methyl tert-butyl ether	50.0	53.5		ug/L		107	71 - 124
Naphthalene	50.0	59.9		ug/L		120	61 - 128
N-Propylbenzene	50.0	48.4		ug/L		97	76 - 126
Styrene	50.0	50.4		ug/L		101	78 - 123
1,1,1,2-Tetrachloroethane	50.0	47.9		ug/L		96	78 - 124
1,1,2,2-Tetrachloroethane	50.0	51.8		ug/L		104	71 - 121

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

Lab Sample ID: LCS 680-784463/5
Matrix: Water
Analysis Batch: 784463

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Tetrachloroethene			50.0	47.4		ug/L		95	74 - 129		
Toluene			50.0	48.5		ug/L		97	80 - 121		
1,2,3-Trichlorobenzene			50.0	52.6		ug/L		105	69 - 129		
1,2,4-Trichlorobenzene			50.0	52.4		ug/L		105	69 - 130		
1,1,1-Trichloroethane			50.0	48.7		ug/L		97	74 - 131		
1,1,2-Trichloroethane			50.0	50.0		ug/L		100	80 - 119		
Trichloroethene			50.0	52.1		ug/L		104	79 - 123		
Trichlorofluoromethane			50.0	49.8		ug/L		100	65 - 141		
1,2,3-Trichloropropane			50.0	53.3		ug/L		107	73 - 122		
1,2,4-Trimethylbenzene			50.0	48.0		ug/L		96	76 - 124		
1,3,5-Trimethylbenzene			50.0	48.5		ug/L		97	75 - 124		
Vinyl acetate			100	104		ug/L		104	54 - 146		
Vinyl chloride			50.0	54.9		ug/L		110	58 - 137		
o-Xylene			50.0	47.6		ug/L		95	78 - 122		
m-Xylene & p-Xylene			50.0	48.8		ug/L		98	80 - 121		
Xylenes, Total			100	96.4		ug/L		96	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*105*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*104*		*81 - 118*
4-Bromofluorobenzene (Surr)	*104*		*85 - 114*
Dibromofluoromethane (Surr)	*99*		*80 - 119*

Lab Sample ID: LCSD 680-784463/6
Matrix: Water
Analysis Batch: 784463

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
Acetone			250	333		ug/L		133	39 - 160	1	20
Benzene			50.0	49.5		ug/L		99	79 - 120	1	20
Bromobenzene			50.0	48.5		ug/L		97	80 - 120	0	20
Chlorobromomethane			50.0	52.5		ug/L		105	78 - 123	0	20
Dichlorobromomethane			50.0	47.7		ug/L		95	79 - 125	2	20
Bromoform			50.0	40.3		ug/L		81	66 - 130	0	20
Bromomethane			50.0	43.3		ug/L		87	53 - 141	1	20
2-Butanone (MEK)			250	356		ug/L		142	56 - 143	0	20
n-Butylbenzene			50.0	54.3		ug/L		109	75 - 128	2	20
sec-Butylbenzene			50.0	49.6		ug/L		99	77 - 126	1	20
tert-Butylbenzene			50.0	49.8		ug/L		100	78 - 124	0	20
Carbon disulfide			50.0	49.3		ug/L		99	64 - 133	1	20
Carbon tetrachloride			50.0	44.9		ug/L		90	72 - 136	1	20
Chlorobenzene			50.0	50.0		ug/L		100	82 - 118	0	20
Chloroethane			50.0	55.7		ug/L		111	60 - 138	9	20
Chloroform			50.0	50.1		ug/L		100	79 - 124	1	20
Chloromethane			50.0	56.3		ug/L		113	50 - 139	1	20
2-Chlorotoluene			50.0	49.8		ug/L		100	79 - 122	1	20
4-Chlorotoluene			50.0	49.8		ug/L		100	78 - 122	1	20
Chlorodibromomethane			50.0	45.2		ug/L		90	74 - 126	1	20

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

Lab Sample ID: LCSD 680-784463/6
Matrix: Water
Analysis Batch: 784463

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Dibromo-3-Chloropropane	50.0	50.3		ug/L		101	62 - 128	5	20
Ethylene Dibromide	50.0	50.3		ug/L		101	75 - 127	0	20
Dibromomethane	50.0	49.9		ug/L		100	79 - 123	1	20
1,2-Dichlorobenzene	50.0	53.0		ug/L		106	80 - 119	1	20
1,3-Dichlorobenzene	50.0	52.3		ug/L		105	80 - 119	2	20
1,4-Dichlorobenzene	50.0	51.7		ug/L		103	79 - 118	0	20
Dichlorodifluoromethane	50.0	47.3		ug/L		95	32 - 152	4	20
1,1-Dichloroethane	50.0	51.2		ug/L		102	77 - 125	1	20
1,2-Dichloroethane	50.0	53.2		ug/L		106	73 - 128	0	20
cis-1,2-Dichloroethene	50.0	48.6		ug/L		97	78 - 123	0	20
trans-1,2-Dichloroethene	50.0	50.8		ug/L		102	75 - 124	1	20
1,2-Dichloroethene, Total	100	99.4		ug/L		99	79 - 121	1	20
1,1-Dichloroethene	50.0	51.6		ug/L		103	71 - 131	1	20
1,2-Dichloropropane	50.0	51.9		ug/L		104	78 - 122	0	20
1,3-Dichloropropane	50.0	52.4		ug/L		105	80 - 119	1	20
2,2-Dichloropropane	50.0	47.8		ug/L		96	60 - 139	1	20
1,1-Dichloropropene	50.0	48.3		ug/L		97	79 - 125	1	20
cis-1,3-Dichloropropene	50.0	48.1		ug/L		96	75 - 124	1	20
trans-1,3-Dichloropropene	50.0	53.2		ug/L		106	73 - 127	0	20
Ethylbenzene	50.0	50.4		ug/L		101	79 - 121	0	20
Hexachlorobutadiene	50.0	52.3		ug/L		105	66 - 134	0	20
2-Hexanone	250	338		ug/L		135	57 - 139	0	20
Isopropylbenzene	50.0	50.9		ug/L		102	72 - 131	1	20
4-Isopropyltoluene	50.0	52.1		ug/L		104	77 - 127	1	20
Methylene Chloride	50.0	50.1		ug/L		100	74 - 124	0	20
4-Methyl-2-pentanone (MIBK)	250	316		ug/L		126	67 - 130	0	20
Methyl tert-butyl ether	50.0	53.4		ug/L		107	71 - 124	0	20
Naphthalene	50.0	60.7		ug/L		121	61 - 128	1	20
N-Propylbenzene	50.0	49.9		ug/L		100	76 - 126	3	20
Styrene	50.0	50.7		ug/L		101	78 - 123	0	20
1,1,1,2-Tetrachloroethane	50.0	47.5		ug/L		95	78 - 124	1	20
1,1,2,2-Tetrachloroethane	50.0	51.4		ug/L		103	71 - 121	1	20
Tetrachloroethene	50.0	47.8		ug/L		96	74 - 129	1	20
Toluene	50.0	48.2		ug/L		96	80 - 121	0	20
1,2,3-Trichlorobenzene	50.0	53.0		ug/L		106	69 - 129	1	20
1,2,4-Trichlorobenzene	50.0	52.7		ug/L		105	69 - 130	1	20
1,1,1-Trichloroethane	50.0	48.2		ug/L		96	74 - 131	1	20
1,1,2-Trichloroethane	50.0	50.1		ug/L		100	80 - 119	0	20
Trichloroethene	50.0	51.5		ug/L		103	79 - 123	1	20
Trichlorofluoromethane	50.0	48.9		ug/L		98	65 - 141	2	20
1,2,3-Trichloropropane	50.0	53.0		ug/L		106	73 - 122	0	20
1,2,4-Trimethylbenzene	50.0	48.6		ug/L		97	76 - 124	1	20
1,3,5-Trimethylbenzene	50.0	48.7		ug/L		97	75 - 124	0	20
Vinyl acetate	100	96.0		ug/L		96	54 - 146	8	20
Vinyl chloride	50.0	55.0		ug/L		110	58 - 137	0	20
o-Xylene	50.0	48.7		ug/L		97	78 - 122	2	20
m-Xylene & p-Xylene	50.0	49.6		ug/L		99	80 - 121	2	20
Xylenes, Total	100	98.3		ug/L		98	79 - 121	2	20

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

Lab Sample ID: LCSD 680-784463/6
Matrix: Water
Analysis Batch: 784463

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	*105*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*105*		*81 - 118*
4-Bromofluorobenzene (Surr)	*106*		*85 - 114*
Dibromofluoromethane (Surr)	*98*		*80 - 119*

Lab Sample ID: MB 680-784911/8
Matrix: Water
Analysis Batch: 784911

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		06/22/23 12:57	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		06/22/23 12:57	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		06/22/23 12:57	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/22/23 12:57	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		06/22/23 12:57	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		06/22/23 12:57	1
Bromomethane	10	U	20	10	3.7	ug/L		06/22/23 12:57	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		06/22/23 12:57	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		06/22/23 12:57	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		06/22/23 12:57	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/22/23 12:57	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		06/22/23 12:57	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		06/22/23 12:57	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		06/22/23 12:57	1
Chloroethane	10	U	20	10	4.6	ug/L		06/22/23 12:57	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		06/22/23 12:57	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		06/22/23 12:57	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		06/22/23 12:57	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		06/22/23 12:57	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		06/22/23 12:57	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		06/22/23 12:57	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		06/22/23 12:57	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/22/23 12:57	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/22/23 12:57	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/22/23 12:57	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/22/23 12:57	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		06/22/23 12:57	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		06/22/23 12:57	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		06/22/23 12:57	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		06/22/23 12:57	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		06/22/23 12:57	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		06/22/23 12:57	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		06/22/23 12:57	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		06/22/23 12:57	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		06/22/23 12:57	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		06/22/23 12:57	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		06/22/23 12:57	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		06/22/23 12:57	1

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

Lab Sample ID: MB 680-784911/8
Matrix: Water
Analysis Batch: 784911

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		06/22/23 12:57	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		06/22/23 12:57	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		06/22/23 12:57	1
2-Hexanone	10	U M	20	10	3.2	ug/L		06/22/23 12:57	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		06/22/23 12:57	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		06/22/23 12:57	1
Methylene Chloride	10	U	20	10	3.2	ug/L		06/22/23 12:57	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		06/22/23 12:57	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		06/22/23 12:57	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		06/22/23 12:57	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		06/22/23 12:57	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		06/22/23 12:57	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		06/22/23 12:57	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		06/22/23 12:57	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		06/22/23 12:57	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		06/22/23 12:57	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		06/22/23 12:57	1
1,2,4-Trichlorobenzene	2.0	U M	5.0	2.0	0.53	ug/L		06/22/23 12:57	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		06/22/23 12:57	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		06/22/23 12:57	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		06/22/23 12:57	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		06/22/23 12:57	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		06/22/23 12:57	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/22/23 12:57	1
1,3,5-Trimethylbenzene	1.0	U M	2.0	1.0	0.28	ug/L		06/22/23 12:57	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		06/22/23 12:57	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		06/22/23 12:57	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		06/22/23 12:57	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		06/22/23 12:57	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		06/22/23 12:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*92*		*89 - 112*		*06/22/23 12:57*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*		*06/22/23 12:57*	*1*
4-Bromofluorobenzene (Surr)	*103*		*85 - 114*		*06/22/23 12:57*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 119*		*06/22/23 12:57*	*1*

Lab Sample ID: LCS 680-784911/4
Matrix: Water
Analysis Batch: 784911

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	250	271		ug/L		109	39 - 160
Benzene	50.0	54.7		ug/L		109	79 - 120
Bromobenzene	50.0	53.7		ug/L		107	80 - 120
Chlorobromomethane	50.0	51.8		ug/L		104	78 - 123
Dichlorobromomethane	50.0	49.0		ug/L		98	79 - 125
Bromoform	50.0	41.7		ug/L		83	66 - 130

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

Lab Sample ID: LCS 680-784911/4
Matrix: Water
Analysis Batch: 784911

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromomethane	50.0	53.4		ug/L		107	53 - 141
2-Butanone (MEK)	250	282		ug/L		113	56 - 143
n-Butylbenzene	50.0	53.8		ug/L		108	75 - 128
sec-Butylbenzene	50.0	54.9		ug/L		110	77 - 126
tert-Butylbenzene	50.0	54.5		ug/L		109	78 - 124
Carbon disulfide	50.0	50.7		ug/L		101	64 - 133
Carbon tetrachloride	50.0	40.2		ug/L		80	72 - 136
Chlorobenzene	50.0	49.5		ug/L		99	82 - 118
Chloroethane	50.0	48.7		ug/L		97	60 - 138
Chloroform	50.0	50.2		ug/L		100	79 - 124
Chloromethane	50.0	57.0		ug/L		114	50 - 139
2-Chlorotoluene	50.0	51.7	M	ug/L		103	79 - 122
4-Chlorotoluene	50.0	53.2	M	ug/L		106	78 - 122
Chlorodibromomethane	50.0	45.4		ug/L		91	74 - 126
1,2-Dibromo-3-Chloropropane	50.0	43.2		ug/L		86	62 - 128
Ethylene Dibromide	50.0	46.1		ug/L		92	75 - 127
Dibromomethane	50.0	47.9		ug/L		96	79 - 123
1,2-Dichlorobenzene	50.0	51.5		ug/L		103	80 - 119
1,3-Dichlorobenzene	50.0	52.2		ug/L		104	80 - 119
1,4-Dichlorobenzene	50.0	49.5		ug/L		99	79 - 118
Dichlorodifluoromethane	50.0	48.3		ug/L		97	32 - 152
1,1-Dichloroethane	50.0	52.6		ug/L		105	77 - 125
1,2-Dichloroethane	50.0	49.4		ug/L		99	73 - 128
cis-1,2-Dichloroethene	50.0	50.4		ug/L		101	78 - 123
trans-1,2-Dichloroethene	50.0	49.3		ug/L		99	75 - 124
1,2-Dichloroethene, Total	100	99.8		ug/L		100	79 - 121
1,1-Dichloroethene	50.0	51.3		ug/L		103	71 - 131
1,2-Dichloropropane	50.0	57.9		ug/L		116	78 - 122
1,3-Dichloropropane	50.0	45.8		ug/L		92	80 - 119
2,2-Dichloropropane	50.0	46.4		ug/L		93	60 - 139
1,1-Dichloropropene	50.0	52.9		ug/L		106	79 - 125
cis-1,3-Dichloropropene	50.0	50.8		ug/L		102	75 - 124
trans-1,3-Dichloropropene	50.0	43.7		ug/L		87	73 - 127
Ethylbenzene	50.0	51.8		ug/L		104	79 - 121
Hexachlorobutadiene	50.0	52.0		ug/L		104	66 - 134
2-Hexanone	250	253		ug/L		101	57 - 139
Isopropylbenzene	50.0	53.7		ug/L		107	72 - 131
4-Isopropyltoluene	50.0	53.3		ug/L		107	77 - 127
Methylene Chloride	50.0	51.3		ug/L		103	74 - 124
4-Methyl-2-pentanone (MIBK)	250	213		ug/L		85	67 - 130
Methyl tert-butyl ether	50.0	54.1	M	ug/L		108	71 - 124
Naphthalene	50.0	48.3		ug/L		97	61 - 128
N-Propylbenzene	50.0	53.5		ug/L		107	76 - 126
Styrene	50.0	47.0		ug/L		94	78 - 123
1,1,1,2-Tetrachloroethane	50.0	44.5		ug/L		89	78 - 124
1,1,2,2-Tetrachloroethane	50.0	48.2		ug/L		96	71 - 121
Tetrachloroethene	50.0	42.0		ug/L		84	74 - 129
Toluene	50.0	53.1		ug/L		106	80 - 121
1,2,3-Trichlorobenzene	50.0	56.0		ug/L		112	69 - 129

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

Lab Sample ID: LCS 680-784911/4
Matrix: Water
Analysis Batch: 784911

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,4-Trichlorobenzene	50.0	52.1		ug/L		104	69 - 130
1,1,1-Trichloroethane	50.0	45.7		ug/L		91	74 - 131
1,1,2-Trichloroethane	50.0	45.5		ug/L		91	80 - 119
Trichloroethene	50.0	48.5		ug/L		97	79 - 123
Trichlorofluoromethane	50.0	41.8		ug/L		84	65 - 141
1,2,3-Trichloropropane	50.0	51.3		ug/L		103	73 - 122
1,2,4-Trimethylbenzene	50.0	49.3		ug/L		99	76 - 124
1,3,5-Trimethylbenzene	50.0	53.4		ug/L		107	75 - 124
Vinyl acetate	100	110		ug/L		110	54 - 146
Vinyl chloride	50.0	63.8		ug/L		128	58 - 137
o-Xylene	50.0	44.2		ug/L		88	78 - 122
m-Xylene & p-Xylene	50.0	50.0		ug/L		100	80 - 121
Xylenes, Total	100	94.2		ug/L		94	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*101*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*92*		*81 - 118*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*
Dibromofluoromethane (Surr)	*99*		*80 - 119*

Lab Sample ID: LCSD 680-784911/5
Matrix: Water
Analysis Batch: 784911

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
Acetone	250	261		ug/L		104	39 - 160	4	20
Benzene	50.0	52.6		ug/L		105	79 - 120	4	20
Bromobenzene	50.0	49.1		ug/L		98	80 - 120	9	20
Chlorobromomethane	50.0	57.0		ug/L		114	78 - 123	10	20
Dichlorobromomethane	50.0	47.8		ug/L		96	79 - 125	2	20
Bromoform	50.0	44.0		ug/L		88	66 - 130	5	20
Bromomethane	50.0	52.1		ug/L		104	53 - 141	3	20
2-Butanone (MEK)	250	271		ug/L		108	56 - 143	4	20
n-Butylbenzene	50.0	54.5		ug/L		109	75 - 128	1	20
sec-Butylbenzene	50.0	51.9		ug/L		104	77 - 126	6	20
tert-Butylbenzene	50.0	51.6		ug/L		103	78 - 124	5	20
Carbon disulfide	50.0	49.5		ug/L		99	64 - 133	2	20
Carbon tetrachloride	50.0	39.5		ug/L		79	72 - 136	2	20
Chlorobenzene	50.0	49.1		ug/L		98	82 - 118	1	20
Chloroethane	50.0	43.0		ug/L		86	60 - 138	13	20
Chloroform	50.0	49.3		ug/L		99	79 - 124	2	20
Chloromethane	50.0	55.6		ug/L		111	50 - 139	2	20
2-Chlorotoluene	50.0	48.1	M	ug/L		96	79 - 122	7	20
4-Chlorotoluene	50.0	49.5	M	ug/L		99	78 - 122	7	20
Chlorodibromomethane	50.0	44.5		ug/L		89	74 - 126	2	20
1,2-Dibromo-3-Chloropropane	50.0	51.8		ug/L		104	62 - 128	18	20
Ethylene Dibromide	50.0	46.4		ug/L		93	75 - 127	0	20
Dibromomethane	50.0	47.8		ug/L		96	79 - 123	0	20

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

Lab Sample ID: LCSD 680-784911/5
Matrix: Water
Analysis Batch: 784911

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Dichlorobenzene	50.0	51.2		ug/L		102	80 - 119	1	20
1,3-Dichlorobenzene	50.0	51.2		ug/L		102	80 - 119	2	20
1,4-Dichlorobenzene	50.0	50.4		ug/L		101	79 - 118	2	20
Dichlorodifluoromethane	50.0	50.5		ug/L		101	32 - 152	4	20
1,1-Dichloroethane	50.0	50.3		ug/L		101	77 - 125	4	20
1,2-Dichloroethane	50.0	47.4		ug/L		95	73 - 128	4	20
cis-1,2-Dichloroethene	50.0	48.4		ug/L		97	78 - 123	4	20
trans-1,2-Dichloroethene	50.0	47.9		ug/L		96	75 - 124	3	20
1,2-Dichloroethene, Total	100	96.3		ug/L		96	79 - 121	4	20
1,1-Dichloroethene	50.0	52.2		ug/L		104	71 - 131	2	20
1,2-Dichloropropane	50.0	55.9		ug/L		112	78 - 122	4	20
1,3-Dichloropropane	50.0	45.0		ug/L		90	80 - 119	2	20
2,2-Dichloropropane	50.0	45.7		ug/L		91	60 - 139	2	20
1,1-Dichloropropene	50.0	52.7		ug/L		105	79 - 125	0	20
cis-1,3-Dichloropropene	50.0	52.2		ug/L		104	75 - 124	3	20
trans-1,3-Dichloropropene	50.0	48.1		ug/L		96	73 - 127	10	20
Ethylbenzene	50.0	52.6		ug/L		105	79 - 121	1	20
Hexachlorobutadiene	50.0	55.1		ug/L		110	66 - 134	6	20
2-Hexanone	250	238		ug/L		95	57 - 139	6	20
Isopropylbenzene	50.0	50.3		ug/L		101	72 - 131	7	20
4-Isopropyltoluene	50.0	48.5		ug/L		97	77 - 127	10	20
Methylene Chloride	50.0	50.7		ug/L		101	74 - 124	1	20
4-Methyl-2-pentanone (MIBK)	250	257		ug/L		103	67 - 130	18	20
Methyl tert-butyl ether	50.0	52.6	M	ug/L		105	71 - 124	3	20
Naphthalene	50.0	49.9		ug/L		100	61 - 128	3	20
N-Propylbenzene	50.0	47.7		ug/L		95	76 - 126	12	20
Styrene	50.0	52.3		ug/L		105	78 - 123	11	20
1,1,1,2-Tetrachloroethane	50.0	47.8		ug/L		96	78 - 124	7	20
1,1,2,2-Tetrachloroethane	50.0	47.8		ug/L		96	71 - 121	1	20
Tetrachloroethene	50.0	46.1		ug/L		92	74 - 129	9	20
Toluene	50.0	53.8		ug/L		108	80 - 121	1	20
1,2,3-Trichlorobenzene	50.0	54.2		ug/L		108	69 - 129	3	20
1,2,4-Trichlorobenzene	50.0	54.0		ug/L		108	69 - 130	4	20
1,1,1-Trichloroethane	50.0	44.7		ug/L		89	74 - 131	2	20
1,1,2-Trichloroethane	50.0	46.2		ug/L		92	80 - 119	2	20
Trichloroethene	50.0	47.6		ug/L		95	79 - 123	2	20
Trichlorofluoromethane	50.0	39.2		ug/L		78	65 - 141	6	20
1,2,3-Trichloropropane	50.0	48.3		ug/L		97	73 - 122	6	20
1,2,4-Trimethylbenzene	50.0	50.1		ug/L		100	76 - 124	2	20
1,3,5-Trimethylbenzene	50.0	49.7		ug/L		99	75 - 124	7	20
Vinyl acetate	100	103		ug/L		103	54 - 146	6	20
Vinyl chloride	50.0	61.0		ug/L		122	58 - 137	4	20
o-Xylene	50.0	49.9		ug/L		100	78 - 122	12	20
m-Xylene & p-Xylene	50.0	43.3		ug/L		87	80 - 121	14	20
Xylenes, Total	100	93.2		ug/L		93	79 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*104*		*89 - 112*

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

Lab Sample ID: LCSD 680-784911/5
Matrix: Water
Analysis Batch: 784911

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

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*
Dibromofluoromethane (Surr)	*97*		*80 - 119*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-783098/8
Matrix: Water
Analysis Batch: 783098

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	0.76	U	1.1	0.76	0.30	ug/L		06/12/23 12:56	1
Ethylene	0.71	U	1.0	0.71	0.31	ug/L		06/12/23 12:56	1
Methane	1.2	U	1.2	1.2	0.57	ug/L		06/12/23 12:56	1

Lab Sample ID: LCS 680-783098/3
Matrix: Water
Analysis Batch: 783098

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methane (TCD)	1920	1890		ug/L		98	73 - 125

Lab Sample ID: LCS 680-783098/6
Matrix: Water
Analysis Batch: 783098

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethane	361	360		ug/L		100	74 - 131
Ethylene	337	329		ug/L		98	72 - 133
Methane	192	189		ug/L		98	73 - 125

Lab Sample ID: LCSD 680-783098/4
Matrix: Water
Analysis Batch: 783098

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
Methane (TCD)	1920	1910		ug/L		99	73 - 125	1	30

Lab Sample ID: LCSD 680-783098/7
Matrix: Water
Analysis Batch: 783098

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
Ethane	361	364		ug/L		101	74 - 131	1	30
Ethylene	337	333		ug/L		99	72 - 133	1	30
Methane	192	190		ug/L		99	73 - 125	1	30

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: 680-236018-2 MS
Client Sample ID: G6M-04-10A-SPR23
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 783098

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethane	6.5		361	380		ug/L		104	74 - 131
Ethylene	3.8		337	339		ug/L		99	72 - 133
Methane (TCD)	18000	J1	192	21500	4	ug/L		1747	73 - 125

Lab Sample ID: 680-236018-2 MSD
Client Sample ID: G6M-04-10A-SPR23
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 783098

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ethane	6.5		361	423		ug/L		115	74 - 131	11	30
Ethylene	3.8		337	381		ug/L		112	72 - 133	12	30
Methane (TCD)	18000	J1	192	20400	4	ug/L		1157	73 - 125	5	30

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-783088/33
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 783088

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		06/12/23 17:40	1

Lab Sample ID: LCS 680-783088/34
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 783088

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	10.0	9.65		mg/L		96	87 - 112

Lab Sample ID: LCSD 680-783088/35
Client Sample ID: Lab Control Sample Dup
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 783088

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	10.0	9.69		mg/L		97	87 - 112	0	15

Lab Sample ID: 680-236018-2 MS
Client Sample ID: G6M-04-10A-SPR23
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 783088

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	0.49	J	10.0	9.98		mg/L		95	87 - 112

Lab Sample ID: 680-236018-2 MSD
Client Sample ID: G6M-04-10A-SPR23
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 783088

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	0.49	J	10.0	9.54		mg/L		91	87 - 112	5	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-782739/1-A
Matrix: Water
Analysis Batch: 782920

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 782739

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		06/09/23 12:45	1
Manganese	5.0	U	10	5.0	1.3	ug/L		06/09/23 12:45	1

Lab Sample ID: LCS 680-782739/2-A
Matrix: Water
Analysis Batch: 782920

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 782739

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	5000	5040		ug/L		101	87 - 115
Manganese	400	413		ug/L		103	90 - 114

Lab Sample ID: 680-236018-2 MS
Matrix: Water
Analysis Batch: 782920

Client Sample ID: G6M-04-10A-SPR23
Prep Type: Dissolved
Prep Batch: 782739

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	81000	J1	5000	84800	4	ug/L		74	87 - 115
Manganese	810		400	1220		ug/L		103	90 - 114

Lab Sample ID: 680-236018-2 MSD
Matrix: Water
Analysis Batch: 782920

Client Sample ID: G6M-04-10A-SPR23
Prep Type: Dissolved
Prep Batch: 782739

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	81000	J1	5000	84200	4	ug/L		63	87 - 115	1	20
Manganese	810		400	1200		ug/L		98	90 - 114	1	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-782740/1-A
Matrix: Water
Analysis Batch: 782927

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 782740

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		06/09/23 17:55	1

Lab Sample ID: LCS 680-782740/2-A
Matrix: Water
Analysis Batch: 782927

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 782740

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	107		ug/L		107	84 - 116

Lab Sample ID: 680-236018-2 MS
Matrix: Water
Analysis Batch: 782927

Client Sample ID: G6M-04-10A-SPR23
Prep Type: Dissolved
Prep Batch: 782740

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	380	J1	100	454	J1	ug/L		76	84 - 116

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

Lab Sample ID: 680-236018-2 MSD — **Client Sample ID: G6M-04-10A-SPR23**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 782927 — **Prep Batch: 782740**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	380	J1	100	451	J1	ug/L		73	84 - 116	1	20

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 680-783306/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 783306

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0	5.0	2.2	mg/L		06/12/23 18:17	1

Lab Sample ID: LCS 680-783306/6 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 783306

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	250	243		mg/L		97	90 - 112

Lab Sample ID: LCSD 680-783306/31 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 783306

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity	250	250		mg/L		100	90 - 112	3	30

Method: 353.2-1993 R2.0 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 680-784964/17 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 784964

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.025	U	0.10	0.025	0.010	mg/L		06/21/23 16:22	1

Lab Sample ID: LCS 680-784964/18 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 784964

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	1.00	1.01		mg/L		101	90 - 110

Lab Sample ID: 680-236018-2 MS — **Client Sample ID: G6M-04-10A-SPR23**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 784964

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	0.057	J1	1.00	0.704	J1	mg/L		65	90 - 110

Method: 353.2-1993 R2.0 - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: 680-236018-2 MSD
Matrix: Water
Analysis Batch: 784964

Client Sample ID: G6M-04-10A-SPR23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate Nitrite as N	0.057	J1	1.00	0.710	J1	mg/L		65	90 - 110	1	10

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 410-386098/1
Matrix: Water
Analysis Batch: 386098

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfide	1.5	U	2.0	1.5	0.70	mg/L		06/13/23 15:47	1

Lab Sample ID: LCS 410-386098/2
Matrix: Water
Analysis Batch: 386098

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	20.1	18.3		mg/L		91	77 - 110

Lab Sample ID: 680-236018-2 MS
Matrix: Water
Analysis Batch: 386098

Client Sample ID: G6M-04-10A-SPR23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	1.5	U	10.0	7.96		mg/L		79	77 - 110

Lab Sample ID: 680-236018-2 MSD
Matrix: Water
Analysis Batch: 386098

Client Sample ID: G6M-04-10A-SPR23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	1.5	U	10.0	8.55		mg/L		85	77 - 110	7	10

Lab Sample ID: 680-236018-2 DU
Matrix: Water
Analysis Batch: 386098

Client Sample ID: G6M-04-10A-SPR23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfide	1.5	U	1.5	U	mg/L		NC	10

Method: 9060 - Organic Carbon, Total (TOC)

Lab Sample ID: MB 680-783745/3
Matrix: Water
Analysis Batch: 783745

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon	1.0	U	1.5	1.0	0.50	mg/L		06/13/23 14:56	1

Method: 9060 - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: LCS 680-783745/4
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 783745

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Organic Carbon			20.0	18.4		mg/L		92	80 - 120		

Lab Sample ID: LCSD 680-783745/5
Client Sample ID: Lab Control Sample Dup
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 783745

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Organic Carbon			20.0	18.4		mg/L		92	80 - 120	0	25

Lab Sample ID: 680-236018-2 MS
Client Sample ID: G6M-04-10A-SPR23
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 783745

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Organic Carbon	18		20.0	35.8		mg/L		90	80 - 120		

Lab Sample ID: 680-236018-2 MSD
Client Sample ID: G6M-04-10A-SPR23
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 783745

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Organic Carbon	18		20.0	35.7		mg/L		90	80 - 120	0	25

GC/MS VOA

Analysis Batch: 784420

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236018-2	G6M-04-10A-SPR23	Total/NA	Water	8260D	
MB 680-784420/9	Method Blank	Total/NA	Water	8260D	
LCS 680-784420/5	Lab Control Sample	Total/NA	Water	8260D	
LCSD 680-784420/6	Lab Control Sample Dup	Total/NA	Water	8260D	
680-236018-2 MS	G6M-04-10A-SPR23	Total/NA	Water	8260D	
680-236018-2 MSD	G6M-04-10A-SPR23	Total/NA	Water	8260D	

Analysis Batch: 784463

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236018-1	G6M-04-07X-SPR23	Total/NA	Water	8260D	
680-236018-5	G6M-07-02X-SPR23	Total/NA	Water	8260D	
680-236018-6	G6M-DUP01-SPR23	Total/NA	Water	8260D	
680-236018-7	G6M-13-01X-SPR23	Total/NA	Water	8260D	
680-236018-8	G6M-97-05B-SPR23	Total/NA	Water	8260D	
680-236018-9	XSA-12-96X-SPR23	Total/NA	Water	8260D	
680-236018-10	AOC50-TB-01-SPR23	Total/NA	Water	8260D	
MB 680-784463/9	Method Blank	Total/NA	Water	8260D	
LCS 680-784463/5	Lab Control Sample	Total/NA	Water	8260D	
LCSD 680-784463/6	Lab Control Sample Dup	Total/NA	Water	8260D	

Analysis Batch: 784911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236018-2	G6M-04-10A-SPR23	Total/NA	Water	8260D	
680-236018-5	G6M-07-02X-SPR23	Total/NA	Water	8260D	
680-236018-6	G6M-DUP01-SPR23	Total/NA	Water	8260D	
MB 680-784911/8	Method Blank	Total/NA	Water	8260D	
LCS 680-784911/4	Lab Control Sample	Total/NA	Water	8260D	
LCSD 680-784911/5	Lab Control Sample Dup	Total/NA	Water	8260D	

GC VOA

Analysis Batch: 783098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236018-1	G6M-04-07X-SPR23	Total/NA	Water	RSK-175	
680-236018-2	G6M-04-10A-SPR23	Total/NA	Water	RSK-175	
680-236018-5	G6M-07-02X-SPR23	Total/NA	Water	RSK-175	
680-236018-6	G6M-DUP01-SPR23	Total/NA	Water	RSK-175	
680-236018-7	G6M-13-01X-SPR23	Total/NA	Water	RSK-175	
680-236018-8	G6M-97-05B-SPR23	Total/NA	Water	RSK-175	
MB 680-783098/8	Method Blank	Total/NA	Water	RSK-175	
LCS 680-783098/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-783098/6	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-783098/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-783098/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	
680-236018-2 MS	G6M-04-10A-SPR23	Total/NA	Water	RSK-175	
680-236018-2 MSD	G6M-04-10A-SPR23	Total/NA	Water	RSK-175	

HPLC/IC

Analysis Batch: 783088

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236018-1	G6M-04-07X-SPR23	Total/NA	Water	9056A	

HPLC/IC (Continued)

Analysis Batch: 783088 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236018-2	G6M-04-10A-SPR23	Total/NA	Water	9056A	
680-236018-5	G6M-07-02X-SPR23	Total/NA	Water	9056A	
680-236018-6	G6M-DUP01-SPR23	Total/NA	Water	9056A	
680-236018-7	G6M-13-01X-SPR23	Total/NA	Water	9056A	
680-236018-8	G6M-97-05B-SPR23	Total/NA	Water	9056A	
MB 680-783088/33	Method Blank	Total/NA	Water	9056A	
LCS 680-783088/34	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-783088/35	Lab Control Sample Dup	Total/NA	Water	9056A	
680-236018-2 MS	G6M-04-10A-SPR23	Total/NA	Water	9056A	
680-236018-2 MSD	G6M-04-10A-SPR23	Total/NA	Water	9056A	

Metals

Prep Batch: 782739

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236018-1	G6M-04-07X-SPR23	Dissolved	Water	3005A	
680-236018-2	G6M-04-10A-SPR23	Dissolved	Water	3005A	
680-236018-5	G6M-07-02X-SPR23	Dissolved	Water	3005A	
680-236018-6	G6M-DUP01-SPR23	Dissolved	Water	3005A	
680-236018-7	G6M-13-01X-SPR23	Dissolved	Water	3005A	
680-236018-8	G6M-97-05B-SPR23	Dissolved	Water	3005A	
680-236018-9	XSA-12-96X-SPR23	Dissolved	Water	3005A	
MB 680-782739/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-782739/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-236018-2 MS	G6M-04-10A-SPR23	Dissolved	Water	3005A	
680-236018-2 MSD	G6M-04-10A-SPR23	Dissolved	Water	3005A	

Prep Batch: 782740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236018-1	G6M-04-07X-SPR23	Dissolved	Water	3005A	
680-236018-2	G6M-04-10A-SPR23	Dissolved	Water	3005A	
680-236018-5	G6M-07-02X-SPR23	Dissolved	Water	3005A	
680-236018-6	G6M-DUP01-SPR23	Dissolved	Water	3005A	
680-236018-7	G6M-13-01X-SPR23	Dissolved	Water	3005A	
680-236018-8	G6M-97-05B-SPR23	Dissolved	Water	3005A	
680-236018-9	XSA-12-96X-SPR23	Dissolved	Water	3005A	
MB 680-782740/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-782740/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-236018-2 MS	G6M-04-10A-SPR23	Dissolved	Water	3005A	
680-236018-2 MSD	G6M-04-10A-SPR23	Dissolved	Water	3005A	

Analysis Batch: 782920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236018-1	G6M-04-07X-SPR23	Dissolved	Water	6010C	782739
680-236018-2	G6M-04-10A-SPR23	Dissolved	Water	6010C	782739
680-236018-5	G6M-07-02X-SPR23	Dissolved	Water	6010C	782739
680-236018-6	G6M-DUP01-SPR23	Dissolved	Water	6010C	782739
680-236018-7	G6M-13-01X-SPR23	Dissolved	Water	6010C	782739
680-236018-8	G6M-97-05B-SPR23	Dissolved	Water	6010C	782739
680-236018-9	XSA-12-96X-SPR23	Dissolved	Water	6010C	782739
MB 680-782739/1-A	Method Blank	Total Recoverable	Water	6010C	782739

Metals (Continued)

Analysis Batch: 782920 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 680-782739/2-A	Lab Control Sample	Total Recoverable	Water	6010C	782739
680-236018-2 MS	G6M-04-10A-SPR23	Dissolved	Water	6010C	782739
680-236018-2 MSD	G6M-04-10A-SPR23	Dissolved	Water	6010C	782739

Analysis Batch: 782927

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236018-1	G6M-04-07X-SPR23	Dissolved	Water	6020A	782740
680-236018-2	G6M-04-10A-SPR23	Dissolved	Water	6020A	782740
680-236018-5	G6M-07-02X-SPR23	Dissolved	Water	6020A	782740
680-236018-6	G6M-DUP01-SPR23	Dissolved	Water	6020A	782740
680-236018-7	G6M-13-01X-SPR23	Dissolved	Water	6020A	782740
680-236018-8	G6M-97-05B-SPR23	Dissolved	Water	6020A	782740
680-236018-9	XSA-12-96X-SPR23	Dissolved	Water	6020A	782740
MB 680-782740/1-A	Method Blank	Total Recoverable	Water	6020A	782740
LCS 680-782740/2-A	Lab Control Sample	Total Recoverable	Water	6020A	782740
680-236018-2 MS	G6M-04-10A-SPR23	Dissolved	Water	6020A	782740
680-236018-2 MSD	G6M-04-10A-SPR23	Dissolved	Water	6020A	782740

General Chemistry

Analysis Batch: 386098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236018-1	G6M-04-07X-SPR23	Total/NA	Water	9034	
680-236018-2	G6M-04-10A-SPR23	Total/NA	Water	9034	
680-236018-5	G6M-07-02X-SPR23	Total/NA	Water	9034	
680-236018-6	G6M-DUP01-SPR23	Total/NA	Water	9034	
680-236018-7	G6M-13-01X-SPR23	Total/NA	Water	9034	
680-236018-8	G6M-97-05B-SPR23	Total/NA	Water	9034	
MB 410-386098/1	Method Blank	Total/NA	Water	9034	
LCS 410-386098/2	Lab Control Sample	Total/NA	Water	9034	
680-236018-2 MS	G6M-04-10A-SPR23	Total/NA	Water	9034	
680-236018-2 MSD	G6M-04-10A-SPR23	Total/NA	Water	9034	
680-236018-2 DU	G6M-04-10A-SPR23	Total/NA	Water	9034	

Analysis Batch: 783306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236018-1	G6M-04-07X-SPR23	Total/NA	Water	2320B-2011	
680-236018-2	G6M-04-10A-SPR23	Total/NA	Water	2320B-2011	
680-236018-5	G6M-07-02X-SPR23	Total/NA	Water	2320B-2011	
680-236018-6	G6M-DUP01-SPR23	Total/NA	Water	2320B-2011	
680-236018-7	G6M-13-01X-SPR23	Total/NA	Water	2320B-2011	
680-236018-8	G6M-97-05B-SPR23	Total/NA	Water	2320B-2011	
MB 680-783306/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-783306/6	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-783306/31	Lab Control Sample Dup	Total/NA	Water	2320B-2011	

Analysis Batch: 783745

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236018-1	G6M-04-07X-SPR23	Total/NA	Water	9060	
680-236018-2	G6M-04-10A-SPR23	Total/NA	Water	9060	
680-236018-5	G6M-07-02X-SPR23	Total/NA	Water	9060	

General Chemistry (Continued)

Analysis Batch: 783745 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236018-6	G6M-DUP01-SPR23	Total/NA	Water	9060	
680-236018-7	G6M-13-01X-SPR23	Total/NA	Water	9060	
680-236018-8	G6M-97-05B-SPR23	Total/NA	Water	9060	
MB 680-783745/3	Method Blank	Total/NA	Water	9060	
LCS 680-783745/4	Lab Control Sample	Total/NA	Water	9060	
LCSD 680-783745/5	Lab Control Sample Dup	Total/NA	Water	9060	
680-236018-2 MS	G6M-04-10A-SPR23	Total/NA	Water	9060	
680-236018-2 MSD	G6M-04-10A-SPR23	Total/NA	Water	9060	

Analysis Batch: 784964

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236018-1	G6M-04-07X-SPR23	Total/NA	Water	353.2-1993 R2.0	
680-236018-2	G6M-04-10A-SPR23	Total/NA	Water	353.2-1993 R2.0	
680-236018-5	G6M-07-02X-SPR23	Total/NA	Water	353.2-1993 R2.0	
680-236018-6	G6M-DUP01-SPR23	Total/NA	Water	353.2-1993 R2.0	
680-236018-7	G6M-13-01X-SPR23	Total/NA	Water	353.2-1993 R2.0	
680-236018-8	G6M-97-05B-SPR23	Total/NA	Water	353.2-1993 R2.0	
MB 680-784964/17	Method Blank	Total/NA	Water	353.2-1993 R2.0	
LCS 680-784964/18	Lab Control Sample	Total/NA	Water	353.2-1993 R2.0	
680-236018-2 MS	G6M-04-10A-SPR23	Total/NA	Water	353.2-1993 R2.0	
680-236018-2 MSD	G6M-04-10A-SPR23	Total/NA	Water	353.2-1993 R2.0	

Client Sample ID: G6M-04-07X-SPR23

Lab Sample ID: 680-236018-1

Date Collected: 06/06/23 11:36

Matrix: Water

Date Received: 06/08/23 09:54

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	784463	06/20/23 15:19	P1C	EET SAV
	Instrument ID: CMSAA									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	783098	06/12/23 15:14	OK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	783088	06/12/23 20:37	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			25 mL	25 mL	782739	06/09/23 07:16	RR	EET SAV
Dissolved	Analysis	6010C		1			782920	06/09/23 13:09	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	782740	06/09/23 07:16	RR	EET SAV
Dissolved	Analysis	6020A		1			782927	06/09/23 18:23	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	2320B-2011		1			783306	06/12/23 21:56	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	784964	06/21/23 16:36	AF	EET SAV
	Instrument ID: SEAL 1									
Total/NA	Analysis	9034		1	200 mL	200 mL	386098	06/13/23 15:47	USE1	ELLE
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060		1	40 mL	40 mL	783745	06/13/23 21:09	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: G6M-04-10A-SPR23

Lab Sample ID: 680-236018-2

Date Collected: 06/06/23 11:05

Matrix: Water

Date Received: 06/08/23 09:54

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	784420	06/20/23 19:02	P1C	EET SAV
	Instrument ID: CMSAD									
Total/NA	Analysis	8260D		1	5 mL	5 mL	784911	06/22/23 16:57	Y1S	EET SAV
	Instrument ID: CMSAJ									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	783098	06/12/23 15:27	OK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	783088	06/12/23 21:15	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			25 mL	25 mL	782739	06/09/23 07:16	RR	EET SAV
Dissolved	Analysis	6010C		1			782920	06/09/23 12:50	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	782740	06/09/23 07:16	RR	EET SAV
Dissolved	Analysis	6020A		1			782927	06/09/23 18:03	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	2320B-2011		1			783306	06/12/23 22:41	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	784964	06/21/23 17:08	AF	EET SAV
	Instrument ID: SEAL 1									

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-236018-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Spring 2023

Client Sample ID: G6M-04-10A-SPR23
Lab Sample ID: 680-236018-2
Date Collected: 06/06/23 11:05
Matrix: Water
Date Received: 06/08/23 09:54

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9034		1	200 mL	200 mL	386098	06/13/23 15:47	USE1	ELLE
Total/NA	Analysis	9060		1	40 mL	40 mL	783745	06/13/23 19:24	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: G6M-07-02X-SPR23
Lab Sample ID: 680-236018-5
Date Collected: 06/06/23 14:45
Matrix: Water
Date Received: 06/08/23 09:54

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	784463	06/20/23 15:42	P1C	EET SAV
	Instrument ID: CMSAA									
Total/NA	Analysis	8260D		1	5 mL	5 mL	784911	06/22/23 17:40	Y1S	EET SAV
	Instrument ID: CMSAJ									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	783098	06/12/23 16:06	OK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	783088	06/12/23 21:53	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			25 mL	25 mL	782739	06/09/23 07:16	RR	EET SAV
Dissolved	Analysis	6010C		1			782920	06/09/23 13:12	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	782740	06/09/23 07:16	RR	EET SAV
Dissolved	Analysis	6020A		1			782927	06/09/23 18:27	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	2320B-2011		1			783306	06/12/23 22:04	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	784964	06/21/23 16:37	AF	EET SAV
	Instrument ID: SEAL 1									
Total/NA	Analysis	9034		1	200 mL	200 mL	386098	06/13/23 15:47	USE1	ELLE
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060		1	40 mL	40 mL	783745	06/13/23 21:28	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: G6M-DUP01-SPR23
Lab Sample ID: 680-236018-6
Date Collected: 06/06/23 14:45
Matrix: Water
Date Received: 06/08/23 09:54

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	784463	06/20/23 16:06	P1C	EET SAV
	Instrument ID: CMSAA									
Total/NA	Analysis	8260D		1	5 mL	5 mL	784911	06/22/23 17:18	Y1S	EET SAV
	Instrument ID: CMSAJ									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	783098	06/12/23 16:19	OK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	783088	06/12/23 22:06	UI	EET SAV
	Instrument ID: CICK									

Client Sample ID: G6M-DUP01-SPR23

Lab Sample ID: 680-236018-6

Date Collected: 06/06/23 14:45

Matrix: Water

Date Received: 06/08/23 09:54

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			25 mL	25 mL	782739	06/09/23 07:16	RR	EET SAV
Dissolved	Analysis	6010C		1			782920	06/09/23 13:14	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	782740	06/09/23 07:16	RR	EET SAV
Dissolved	Analysis	6020A		1			782927	06/09/23 18:31	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	2320B-2011		1			783306	06/12/23 22:22	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	784964	06/21/23 16:38	AF	EET SAV
	Instrument ID: SEAL 1									
Total/NA	Analysis	9034		1	200 mL	200 mL	386098	06/13/23 15:47	USE1	ELLE
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060		1	40 mL	40 mL	783745	06/13/23 21:50	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: G6M-13-01X-SPR23

Lab Sample ID: 680-236018-7

Date Collected: 06/06/23 15:30

Matrix: Water

Date Received: 06/08/23 09:54

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	784463	06/20/23 16:29	P1C	EET SAV
	Instrument ID: CMSAA									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	783098	06/12/23 16:32	OK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	783088	06/12/23 22:18	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			25 mL	25 mL	782739	06/09/23 07:16	RR	EET SAV
Dissolved	Analysis	6010C		1			782920	06/09/23 13:17	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	782740	06/09/23 07:16	RR	EET SAV
Dissolved	Analysis	6020A		1			782927	06/09/23 18:44	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	2320B-2011		1			783306	06/12/23 22:31	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	784964	06/21/23 16:38	AF	EET SAV
	Instrument ID: SEAL 1									
Total/NA	Analysis	9034		1	200 mL	200 mL	386098	06/13/23 15:47	USE1	ELLE
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060		1	40 mL	40 mL	783745	06/13/23 22:11	JU	EET SAV
	Instrument ID: TOC8									

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-236018-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Spring 2023

Client Sample ID: G6M-97-05B-SPR23
Lab Sample ID: 680-236018-8
Date Collected: 06/06/23 12:35
Matrix: Water
Date Received: 06/08/23 09:54

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	784463	06/20/23 16:53	P1C	EET SAV
	Instrument ID: CMSAA									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	783098	06/12/23 16:45	OK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	783088	06/12/23 22:31	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			25 mL	25 mL	782739	06/09/23 07:16	RR	EET SAV
Dissolved	Analysis	6010C		1			782920	06/09/23 13:19	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	782740	06/09/23 07:16	RR	EET SAV
Dissolved	Analysis	6020A		1			782927	06/09/23 18:48	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	2320B-2011		1			783306	06/12/23 22:14	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	784964	06/21/23 17:14	AF	EET SAV
	Instrument ID: SEAL 1									
Total/NA	Analysis	9034		1	200 mL	200 mL	386098	06/13/23 15:47	USE1	ELLE
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060		1	40 mL	40 mL	783745	06/13/23 22:33	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: XSA-12-96X-SPR23
Lab Sample ID: 680-236018-9
Date Collected: 06/06/23 14:51
Matrix: Water
Date Received: 06/08/23 09:54

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	784463	06/20/23 18:05	P1C	EET SAV
	Instrument ID: CMSAA									
Dissolved	Prep	3005A			25 mL	25 mL	782739	06/09/23 07:16	RR	EET SAV
Dissolved	Analysis	6010C		1			782920	06/09/23 13:22	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	782740	06/09/23 07:16	RR	EET SAV
Dissolved	Analysis	6020A		1			782927	06/09/23 18:52	BWR	EET SAV
	Instrument ID: ICPMSC									

Client Sample ID: AOC50-TB-01-SPR23
Lab Sample ID: 680-236018-10
Date Collected: 06/06/23 00:00
Matrix: Water
Date Received: 06/08/23 09:54

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	784463	06/20/23 12:58	P1C	EET SAV
	Instrument ID: CMSAA									

Laboratory References:

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

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

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-236018-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Spring 2023

Laboratory: Eurofins Savannah

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

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-22-24

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-24

Method Summary

Client: Seres Engineering & Services LLC
Job ID: 680-236018-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Spring 2023

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds (GC/MS)	SW846	EET SAV
RSK-175	Dissolved Gases (GC)	RSK	EET SAV
9056A	Anions, Ion Chromatography	SW846	EET SAV
6010C	Metals (ICP)	SW846	EET SAV
6020A	Metals (ICP/MS)	SW846	EET SAV
2320B-2011	Alkalinity, Total	SM	EET SAV
353.2-1993 R2.0	Nitrogen, Nitrate-Nitrite	MCAWW	EET SAV
9034	Sulfide, Acid Soluble and Insoluble (Titrimetric)	SW846	ELLE
9060	Organic Carbon, Total (TOC)	SW846	EET SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET SAV
5030C	Purge and Trap	SW846	EET SAV

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique , RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

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

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

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive Suite B7, Charleston SC 29492
(843) 619-370-0374 jennifer singer@arcadis com

COC # AOC50_SPR23

US Army Corps of Engineers

Boston #215

Project Name Former Fort Devens, Long Term Monitoring	Laboratory Eurofins Environment Testing TestAmerica, Savannah, GA	Event Seres-Arcadis JV, Long Term Monitoring, AOC 50, Spring 2023
Project Number DEVNS-LTM	POC Jerry Lanier, 912-250-0281, jerry lanier@eurofinsus com	
WBS Code	Ship to Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments
A2320B (A) = Alkalinity
E353 2 (A) = Nitrite Nitrate as N
RSK175 (A) = Dissolved Gases
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9034 (A) = Sulfide

Equipment.

Code	Matrix
WG	Ground Water

Code	Container/Preservative
5	1x 125mL plastic, Cool < 6degC
7	2x 250mL plastic ZnAc/NaOH Cool < 6degC
8	3x 40mL glass VOA Vials HCl pH < 2 Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2 Cool < 6degC
10	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
29	3x 40mL glass VOA Vials, HCl, pH < 2 Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC
47	1x 500mL, amber glass H2SO4 Cool < 6degC

Event. Seres-Arcadis JV, Long Term Monitoring, AOC 50, Spring 2023

	Sample ID	Matrix	Date	Time	Samp Init.	A2320B (A) 46	E353 2 (A) 47	RSK175 (A) 8	SW6010C/FLDFLT (B) 9	SW6020A/FLDFLT (B) 9	SW8260B - VOCs 29	SW9034 (A) 7	SW9056A - SO4 5	SW9060A - TOC 10	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
1	G6M-04-02X-SPR23	WG				X	X	X	X	X	X	X	X	X	G6M-04-02X	N1	80 00	90 00		
2	G6M-04-07X-SPR23	WG	6.6.23	1136	SG	X	X	X	X	X	X	X	X	X	G6M-04-07X	N1	120 00	130 00		
3	G6M-04-10A-SPR23	WG	6.6.23	1105	FC	X	X	X	X	X	X	X	X	X	G6M-04-10A	N1	30 00	40 00		
4	G6M-04-10A-SPR23	WG	6.6.23	1105	FC	X	X	X	X	X	X	X	X	X	G6M-04-10A	MS1	30 00	40 00		
5	G6M-04-10A-SPR23	WG	6.6.23	1105	FC	X	X	X	X	X	X	X	X	X	G6M-04-10A	SD1	30 00	40 00		
6	G6M-07-02X-SPR23	WG	6 6 23	1449	FC	X	X	X	X	X	X	X	X	X	G6M-07-02X	N1	22.50	27 50		
7	G6M-DUP01-SPR23	WG	6 6 23	1445	FC	X	X	X	X	X	X	X	X	X	G6M-07-02X	FD1	22 50	27 50		
8	G6M-13-01X-SPR23	WG	6.6 23	1530	GS	X	X	X	X	X	X	X	X	X	G6M-13-01X	N1	125 00	135 00		
9	G6M-13-02X-SPR23	WG				X	X	X	X	X	X	X	X	X	G6M-13-02X	N1	115 00	125 00		
10	G6M-13-05X-SPR23	WG				X	X	X	X	X	X	X	X	X	G6M-13-05X	N1	45 00	55 00		
11	G6M-97-05B-SPR23	WG	6.6.23	1235	GS	X	X	X	X	X	X	X	X	X	G6M-97-05B	N1	130 00	135 00		
12	XSA-12-96X-SPR23	WG	6 6 23	1451	SC				X	X	X				XSA-12-96X	N1	120 00	130 00		
13	XSA-12-97X-SPR23	WG							X	X	X				XSA-12-97X	N1	120 00	130 00		
14	Trip Blank	WG	6/1/23	—	—						X									
15																				
16																				
17																				
18																				

Turnaround Time Standard

680-236018 Chain of Custody

Relinquished by (Signature)
Date 6/6/2023
Time 17:45
Received by (Signature)

Received by Laboratory (Signature)
Date 6/6/23

6/7/23

6/29/2023

Eurofins Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Phone: 912-354-7858 Fax: 912-352-0165

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Lanier, Jerry A	Carrier Tracking No(s):	COC No: 680-740766.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Jerry.Lanier@et.eurofinsus.com	State of Origin: Massachusetts	Page: Page 1 of 1
Company: Eurofins Lancaster Laboratories Environm		Accreditations Required (See note): Dept. of Defense ELAP - A2LA; DoD - ANAB		Job #: 680-236018-1
Address: 2425 New Holland Pike, ,	Due Date Requested: 6/19/2023			
City: Lancaster	TAT Requested (days):			
State, Zip: PA, 17601				
Phone: 717-656-2300(Tel)	PO #:			
Email:	WO #:			
Project Name: Seres-Arcadis JV, LTM, AOC 50, Spring 2023	Project #: 68023801			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9034/ Sulfide	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
G6M-04-07X-SPR23 (680-236018-1)	6/6/23	11:36 Eastern		Water			X	2	
G6M-04-10A-SPR23 (680-236018-2)	6/6/23	11:05 Eastern		Water			X	2	
G6M-04-10A-SPR23 (680-236018-2MS)	6/6/23	11:05 Eastern	MS	Water			X	2	
G6M-04-10A-SPR23 (680-236018-2MSD)	6/6/23	11:05 Eastern	MSD	Water			X	2	
G6M-07-02X-SPR23 (680-236018-5)	6/6/23	14:45 Eastern		Water			X	2	
G6M-DUP01-SPR23 (680-236018-6)	6/6/23	14:45 Eastern		Water			X	2	
G6M-13-01X-SPR23 (680-236018-7)	6/6/23	15:30 Eastern		Water			X	2	
G6M-97-05B-SPR23 (680-236018-8)	6/6/23	12:35 Eastern		Water			X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Southeast, 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 Environment Testing Southeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Southeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Southeast, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 6/12/23 1300	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 6/13/23 10:05	Company: EWET

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.3/2.5 1.6/1.9 0.5/0.6

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-236018-1

Login Number: 236018

List Source: Eurofins Savannah

List Number: 1

Creator: Munro, Caroline

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-236018-1

Login Number: 236018
List Number: 2
Creator: McCaskey, Jonathan

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC
List Creation: 06/13/23 12:57 PM

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 (</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Heather Levesque
Seres Engineering & Services LLC
669 Marina Drive
Suite B7
Charleston, South Carolina 29492

Generated 10/18/2023 9:46:18 AM Revision 1

JOB DESCRIPTION

Seres-Arcadis JV,LTM, AOC 50, Spring 2023

JOB NUMBER

680-236086-1

Eurofins Savannah
5102 LaRoche Avenue
Savannah GA 31404

See page two for job notes and contact information.

my EOL

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.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization



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10/18/2023 9:46:18 AM
Revision 1

Authorized for release by
Jerry Lanier, Project Manager I
Jerry.Lanier@et.eurofinsus.com
(912)250-0281

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
M	Manual integrated compound.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

GC VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

HPLC/IC

Qualifier	Qualifier Description
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	Undetected at the Limit of Detection.

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

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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

Sample Summary

Client: Seres Engineering & Services LLC
Job ID: 680-236086-1
Project/Site: Seres-Arcadis JV,LTM, AOC 50, Spring 2023

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-236086-1	G6M-04-02X-SPR23	Water	06/07/23 11:25	06/09/23 09:46
680-236086-2	G6M-13-02X-SPR23	Water	06/07/23 11:15	06/09/23 09:46
680-236086-3	G6M-13-05X-SPR23	Water	06/07/23 09:35	06/09/23 09:46
680-236086-4	AOC50-RB-01-SPR23	Water	06/07/23 15:30	06/09/23 09:46
680-236086-7	AOC50-TB-02-SPR23	Water	06/07/23 00:00	06/09/23 09:46

Job ID: 680-236086-1

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-236086-1

Receipt
The samples were received on 6/9/2023 9:46 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.2°C

Revision
The final report was revised to include the RSK175 re-runs per client request.

GC/MS VOA
Method 8260D_DOD5: The laboratory control sample duplicate (LCSD) was biased high for 4-Bromofluorobenzene surrogate by 5%. All other QC and sample recoveries were acceptable and within control limits, and sample target analyte recoveries were acceptable. There is insufficient time to rerun samples in hold time, data has been qualified and reported. (LCSD 680-784770/4)

Method 8260D_DOD5: Surrogate recovery for the following samples were outside control limits: G6M-04-02X-SPR23 (680-236086-1), (680-236086-D-5), (680-236086-C-5 MS) and (680-236086-C-5 MSD). Evidence of matrix interferences is not obvious.

Method 8260D_DOD5: Surrogate recovery for the following samples were outside the upper control limit: AOC50-RB-01-SPR23 (680-236086-4), AOC50-TB-02-SPR23 (680-236086-7), (LCS 680-784670/5), (LCSD 680-784670/6) and (MB 680-784670/9). The samples did not contain any target analytes and there was insufficient time to reanalyze the samples due to holding time restraints so the data was reported and qualified accordingly.

Method 8260D_DOD5: The laboratory control sample (LCS) for analytical batch 680-784770 recovered outside control limits for the following analytes: Trichlorofluoromethane. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported. The laboratory control sample duplicate (LCSD) for analytical batch 680-784770 recovered outside control limits for the following analytes: Naphthalene, 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene and Trichlorofluoromethane. These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

Method 8260D_DOD5: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 680-784770 recovered outside control limits for the following analytes: sec-Butylbenzene, tert-Butylbenzene, 2-Chlorotoluene, 4-Chlorotoluene, Isopropylbenzene, Naphthalene, N-Propylbenzene, Styrene, 1,2,3-Trichlorobenzene and 1,2,4-Trichlorobenzene.

Method 8260D_DOD5: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 680-784670 recovered outside control limits for the following analytes: Bromomethane and Chloroethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260D_DOD5: Reanalysis of the following sample(s) due to failure of quality control parameters in the initial analysis was performed outside of the analytical holding time . G6M-13-05X-SPR23 (680-236086-3)

Method 8260D_DOD5: The initial calibration verification (ICV) analyzed in batch 680-784451 was outside method criteria for the following analyte(s): Trichlorofluoromethane. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8260D_DOD5: The continuing calibration verification (CCV) analyzed in batch 680-784670 was outside the method criteria for the following analyte(s): Acetone, Bromomethane, sec-Butylbenzene, Chloroethane, Styrene and 1,3,5-Trimethylbenzene. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated. The continuing calibration verification cap (CCVC) analyzed in batch 680-784670 was outside the method criteria for the following analyte(s): Bromomethane, Chloroethane and Vinyl acetate. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Job ID: 680-236086-1 (Continued)

Laboratory: Eurofins Savannah (Continued)

Method 8260D_DOD5: The continuing calibration verification (CCV) associated with batch 680-784770 recovered outside acceptance criteria, low biased, for Vinyl acetate. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported. The continuing calibration verification (CCV) associated with batch 680-784770 recovered above the upper control limit for sec-Butylbenzene, tert-Butylbenzene, 2-Chlorotoluene, 4-Chlorotoluene, Ethylbenzene, Isopropylbenzene, N-Propylbenzene, Styrene, 1,1,2,2-Tetrachloroethane, Trichlorofluoromethane, o-Xylene, m-Xylene & p-Xylene and Xylenes, Total. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The closing continuing calibration verification (CCVC) associated with batch 680-784770 recovered above the upper control limit for Chloroethane and Trichlorofluoromethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

GC VOA

Method RSK-175: Due to the high concentration of Methane (TCD), the matrix spike / matrix spike duplicate (MS/MSD) for analytical batch 680-783326 could not be evaluated for accuracy and precision. The associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) met acceptance criteria.

Method RSK-175: Reanalysis of the following samples were performed outside of the analytical holding time: G6M-13-02X-SPR23 (680-236086-2) and G6M-13-05X-SPR23 (680-236086-3).

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

HPLC/IC

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

Metals

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

General Chemistry

Method 353.2_Pres: The method blank for analytical batch 680-785065 contained Nitrate Nitrite as N above the method detection limit (MDL). Associated samples were not re-analyzed because results were less than the reporting limit (RL) OR practical quantitation limit (PQL).

Method 353.2_Pres: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 680-785065 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 9034: The following samples were received with less than 2 days remaining on the holding time or less than one shift (8 hours) remaining on a test with a holding time of 48 hours or less. As such, the laboratory had insufficient time remaining to perform the analysis within holding time: G6M-04-02X-SPR23 (680-236086-1), G6M-13-02X-SPR23 (680-236086-2) and G6M-13-05X-SPR23 (680-236086-3).

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV,LTM, AOC 50, Spring 2023

Job ID: 680-236086-1

Client Sample ID: G6M-04-02X-SPR23
Date Collected: 06/07/23 11:25
Date Received: 06/09/23 09:46

Lab Sample ID: 680-236086-1
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U M	25	10	3.7	ug/L		06/21/23 16:18	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		06/21/23 16:18	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		06/21/23 16:18	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/21/23 16:18	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		06/21/23 16:18	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		06/21/23 16:18	1
Bromomethane	10	U	20	10	3.7	ug/L		06/21/23 16:18	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		06/21/23 16:18	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		06/21/23 16:18	1
sec-Butylbenzene	2.0	U Q	2.5	2.0	0.53	ug/L		06/21/23 16:18	1
tert-Butylbenzene	1.0	U Q	2.0	1.0	0.43	ug/L		06/21/23 16:18	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		06/21/23 16:18	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		06/21/23 16:18	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		06/21/23 16:18	1
Chloroethane	10	U Q	20	10	4.6	ug/L		06/21/23 16:18	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		06/21/23 16:18	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		06/21/23 16:18	1
2-Chlorotoluene	0.50	U Q	1.0	0.50	0.25	ug/L		06/21/23 16:18	1
4-Chlorotoluene	1.0	U Q	2.0	1.0	0.41	ug/L		06/21/23 16:18	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		06/21/23 16:18	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		06/21/23 16:18	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		06/21/23 16:18	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/21/23 16:18	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/21/23 16:18	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/21/23 16:18	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/21/23 16:18	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		06/21/23 16:18	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		06/21/23 16:18	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		06/21/23 16:18	1
cis-1,2-Dichloroethene	**60**		2.0	1.0	0.25	ug/L		06/21/23 16:18	1
trans-1,2-Dichloroethene	**0.51**	**J**	2.0	1.0	0.34	ug/L		06/21/23 16:18	1
1,2-Dichloroethene, Total	**61**		2.0	1.0	0.37	ug/L		06/21/23 16:18	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		06/21/23 16:18	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		06/21/23 16:18	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		06/21/23 16:18	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		06/21/23 16:18	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		06/21/23 16:18	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		06/21/23 16:18	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		06/21/23 16:18	1
Ethylbenzene	0.50	U Q	1.0	0.50	0.20	ug/L		06/21/23 16:18	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		06/21/23 16:18	1
2-Hexanone	10	U	20	10	3.2	ug/L		06/21/23 16:18	1
Isopropylbenzene	1.0	U Q	2.0	1.0	0.26	ug/L		06/21/23 16:18	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		06/21/23 16:18	1
Methylene Chloride	10	U	20	10	3.2	ug/L		06/21/23 16:18	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		06/21/23 16:18	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		06/21/23 16:18	1
Naphthalene	5.0	U Q	10	5.0	2.4	ug/L		06/21/23 16:18	1
N-Propylbenzene	1.0	U Q	2.0	1.0	0.41	ug/L		06/21/23 16:18	1

Client Sample ID: G6M-04-02X-SPR23
Lab Sample ID: 680-236086-1

Date Collected: 06/07/23 11:25
Matrix: Water
Date Received: 06/09/23 09:46

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U Q	2.0	1.0	0.27	ug/L		06/21/23 16:18	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		06/21/23 16:18	1
1,1,2,2-Tetrachloroethane	1.0	U Q	2.0	1.0	0.40	ug/L		06/21/23 16:18	1
Tetrachloroethene	**26**		2.0	1.0	0.35	ug/L		06/21/23 16:18	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		06/21/23 16:18	1
1,2,3-Trichlorobenzene	2.0	U Q	5.0	2.0	0.81	ug/L		06/21/23 16:18	1
1,2,4-Trichlorobenzene	2.0	U Q	5.0	2.0	0.53	ug/L		06/21/23 16:18	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		06/21/23 16:18	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		06/21/23 16:18	1
Trichloroethene	**50**		1.0	0.50	0.20	ug/L		06/21/23 16:18	1
Trichlorofluoromethane	1.0	U Q	2.0	1.0	0.33	ug/L		06/21/23 16:18	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		06/21/23 16:18	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/21/23 16:18	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		06/21/23 16:18	1
Vinyl acetate	2.0	U Q	2.5	2.0	0.69	ug/L		06/21/23 16:18	1
Vinyl chloride	**9.3**		2.0	1.0	0.40	ug/L		06/21/23 16:18	1
o-Xylene	1.0	U Q	2.0	1.0	0.26	ug/L		06/21/23 16:18	1
m-Xylene & p-Xylene	1.0	U Q	2.0	1.0	0.49	ug/L		06/21/23 16:18	1
Xylenes, Total	1.0	U Q	2.0	1.0	0.49	ug/L		06/21/23 16:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*108*	*M*	*89 - 112*		*06/21/23 16:18*	*1*
1,2-Dichloroethane-d4 (Surr)	*109*		*81 - 118*		*06/21/23 16:18*	*1*
4-Bromofluorobenzene (Surr)	*84*	*Q*	*85 - 114*		*06/21/23 16:18*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 119*		*06/21/23 16:18*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**6.0**		1.1	0.76	0.30	ug/L		06/13/23 15:04	1
Ethylene	**21**		1.0	0.71	0.31	ug/L		06/13/23 15:04	1
Methane (TCD)	**20000**		390	77	39	ug/L		06/13/23 15:04	1

Method: RSK-175 - Dissolved Gases (GC) - RA

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**5.5**		1.1	0.76	0.30	ug/L		06/13/23 16:08	1
Ethylene	**20**		1.0	0.71	0.31	ug/L		06/13/23 16:08	1
Methane (TCD)	**20000**		390	77	39	ug/L		06/13/23 16:08	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**6.0**		1.0	1.0	0.40	mg/L		06/15/23 20:59	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**35000**		100	50	20	ug/L		06/14/23 16:05	1
Manganese	**12000**		10	5.0	1.3	ug/L		06/14/23 16:05	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**73**		5.0	3.0	0.86	ug/L		06/14/23 15:39	1

Client: Seres Engineering & Services LLC
Job ID: 680-236086-1
Project/Site: Seres-Arcadis JV,LTM, AOC 50, Spring 2023

Client Sample ID: G6M-04-02X-SPR23
Lab Sample ID: 680-236086-1
Date Collected: 06/07/23 11:25
Matrix: Water
Date Received: 06/09/23 09:46

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**130**		5.0	5.0	2.2	mg/L		06/13/23 19:16	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	**0.083**	**J J1**	0.10	0.025	0.010	mg/L		06/22/23 13:06	1
Sulfide (SW846 9034)	1.5	U H	2.0	1.5	0.70	mg/L		06/16/23 11:09	1
Total Organic Carbon (SW846 9060)	**4.7**		1.5	1.0	0.50	mg/L		06/18/23 01:15	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV,LTM, AOC 50, Spring 2023

Job ID: 680-236086-1

Client Sample ID: G6M-13-02X-SPR23
Date Collected: 06/07/23 11:15
Date Received: 06/09/23 09:46

Lab Sample ID: 680-236086-2
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		06/21/23 16:38	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		06/21/23 16:38	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		06/21/23 16:38	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/21/23 16:38	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		06/21/23 16:38	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		06/21/23 16:38	1
Bromomethane	10	U	20	10	3.7	ug/L		06/21/23 16:38	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		06/21/23 16:38	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		06/21/23 16:38	1
sec-Butylbenzene	2.0	U Q	2.5	2.0	0.53	ug/L		06/21/23 16:38	1
tert-Butylbenzene	1.0	U Q	2.0	1.0	0.43	ug/L		06/21/23 16:38	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		06/21/23 16:38	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		06/21/23 16:38	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		06/21/23 16:38	1
Chloroethane	10	U Q	20	10	4.6	ug/L		06/21/23 16:38	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		06/21/23 16:38	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		06/21/23 16:38	1
2-Chlorotoluene	0.50	U Q	1.0	0.50	0.25	ug/L		06/21/23 16:38	1
4-Chlorotoluene	1.0	U Q	2.0	1.0	0.41	ug/L		06/21/23 16:38	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		06/21/23 16:38	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		06/21/23 16:38	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		06/21/23 16:38	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/21/23 16:38	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/21/23 16:38	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/21/23 16:38	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/21/23 16:38	1
Dichlorodifluoromethane	1.0	U M	2.0	1.0	0.36	ug/L		06/21/23 16:38	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		06/21/23 16:38	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		06/21/23 16:38	1
cis-1,2-Dichloroethene	**11**		2.0	1.0	0.25	ug/L		06/21/23 16:38	1
trans-1,2-Dichloroethene	**0.65**	**J**	2.0	1.0	0.34	ug/L		06/21/23 16:38	1
1,2-Dichloroethene, Total	**12**		2.0	1.0	0.37	ug/L		06/21/23 16:38	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		06/21/23 16:38	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		06/21/23 16:38	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		06/21/23 16:38	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		06/21/23 16:38	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		06/21/23 16:38	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		06/21/23 16:38	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		06/21/23 16:38	1
Ethylbenzene	0.50	U Q	1.0	0.50	0.20	ug/L		06/21/23 16:38	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		06/21/23 16:38	1
2-Hexanone	10	U	20	10	3.2	ug/L		06/21/23 16:38	1
Isopropylbenzene	1.0	U Q	2.0	1.0	0.26	ug/L		06/21/23 16:38	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		06/21/23 16:38	1
Methylene Chloride	10	U	20	10	3.2	ug/L		06/21/23 16:38	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		06/21/23 16:38	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		06/21/23 16:38	1
Naphthalene	5.0	U Q	10	5.0	2.4	ug/L		06/21/23 16:38	1
N-Propylbenzene	1.0	U Q	2.0	1.0	0.41	ug/L		06/21/23 16:38	1

Client Sample ID: G6M-13-02X-SPR23
Lab Sample ID: 680-236086-2

Date Collected: 06/07/23 11:15
Matrix: Water
Date Received: 06/09/23 09:46

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U Q	2.0	1.0	0.27	ug/L		06/21/23 16:38	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		06/21/23 16:38	1
1,1,2,2-Tetrachloroethane	1.0	U Q	2.0	1.0	0.40	ug/L		06/21/23 16:38	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		06/21/23 16:38	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		06/21/23 16:38	1
1,2,3-Trichlorobenzene	2.0	U Q	5.0	2.0	0.81	ug/L		06/21/23 16:38	1
1,2,4-Trichlorobenzene	2.0	U Q	5.0	2.0	0.53	ug/L		06/21/23 16:38	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		06/21/23 16:38	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		06/21/23 16:38	1
Trichloroethene	**7.2**		1.0	0.50	0.20	ug/L		06/21/23 16:38	1
Trichlorofluoromethane	1.0	U Q	2.0	1.0	0.33	ug/L		06/21/23 16:38	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		06/21/23 16:38	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/21/23 16:38	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		06/21/23 16:38	1
Vinyl acetate	2.0	U Q	2.5	2.0	0.69	ug/L		06/21/23 16:38	1
Vinyl chloride	**0.45**	**J M**	2.0	1.0	0.40	ug/L		06/21/23 16:38	1
o-Xylene	1.0	U Q	2.0	1.0	0.26	ug/L		06/21/23 16:38	1
m-Xylene & p-Xylene	1.0	U Q	2.0	1.0	0.49	ug/L		06/21/23 16:38	1
Xylenes, Total	1.0	U Q	2.0	1.0	0.49	ug/L		06/21/23 16:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*89*		*89 - 112*		*06/21/23 16:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*111*		*81 - 118*		*06/21/23 16:38*	*1*
4-Bromofluorobenzene (Surr)	*105*		*85 - 114*		*06/21/23 16:38*	*1*
Dibromofluoromethane (Surr)	*109*		*80 - 119*		*06/21/23 16:38*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**47**		1.1	0.76	0.30	ug/L		06/13/23 16:21	1
Ethylene	**17**		1.0	0.71	0.31	ug/L		06/13/23 16:21	1
Methane (TCD)	**19000**		390	77	39	ug/L		06/13/23 16:21	1

Method: RSK-175 - Dissolved Gases (GC) - RA

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	0.76	U H	1.1	0.76	0.30	ug/L		10/05/23 14:55	1
Ethylene	0.71	U H	1.0	0.71	0.31	ug/L		10/05/23 14:55	1
Methane (TCD)	**780**	**H**	390	77	39	ug/L		10/05/23 14:55	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**8.8**	**M**	1.0	1.0	0.40	mg/L		06/15/23 21:37	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**600**		100	50	20	ug/L		06/14/23 16:07	1
Manganese	**12000**		10	5.0	1.3	ug/L		06/14/23 16:07	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**20**		5.0	3.0	0.86	ug/L		06/14/23 15:43	1

Client: Seres Engineering & Services LLC
Job ID: 680-236086-1
Project/Site: Seres-Arcadis JV,LTM, AOC 50, Spring 2023

Client Sample ID: G6M-13-02X-SPR23
Lab Sample ID: 680-236086-2
Date Collected: 06/07/23 11:15
Matrix: Water
Date Received: 06/09/23 09:46

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**93**		5.0	5.0	2.2	mg/L		06/13/23 19:07	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	**0.016**	**J**	0.10	0.025	0.010	mg/L		06/22/23 13:13	1
Sulfide (SW846 9034)	1.5	U H	2.0	1.5	0.70	mg/L		06/16/23 11:09	1
Total Organic Carbon (SW846 9060)	**2.0**		1.5	1.0	0.50	mg/L		06/18/23 01:35	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV,LTM, AOC 50, Spring 2023

Job ID: 680-236086-1

Client Sample ID: G6M-13-05X-SPR23
Date Collected: 06/07/23 09:35
Date Received: 06/09/23 09:46

Lab Sample ID: 680-236086-3
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	**5.0**	**J**	25	10	3.7	ug/L		06/21/23 16:58	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		06/21/23 16:58	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		06/21/23 16:58	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/21/23 16:58	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		06/21/23 16:58	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		06/21/23 16:58	1
Bromomethane	10	U	20	10	3.7	ug/L		06/21/23 16:58	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		06/21/23 16:58	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		06/21/23 16:58	1
sec-Butylbenzene	2.0	U Q	2.5	2.0	0.53	ug/L		06/21/23 16:58	1
tert-Butylbenzene	1.0	U Q	2.0	1.0	0.43	ug/L		06/21/23 16:58	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		06/21/23 16:58	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		06/21/23 16:58	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		06/21/23 16:58	1
Chloroethane	10	U Q	20	10	4.6	ug/L		06/21/23 16:58	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		06/21/23 16:58	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		06/21/23 16:58	1
2-Chlorotoluene	0.50	U Q	1.0	0.50	0.25	ug/L		06/21/23 16:58	1
4-Chlorotoluene	1.0	U Q	2.0	1.0	0.41	ug/L		06/21/23 16:58	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		06/21/23 16:58	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		06/21/23 16:58	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		06/21/23 16:58	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/21/23 16:58	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/21/23 16:58	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/21/23 16:58	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/21/23 16:58	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		06/21/23 16:58	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		06/21/23 16:58	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		06/21/23 16:58	1
cis-1,2-Dichloroethene	**14**		2.0	1.0	0.25	ug/L		06/21/23 16:58	1
trans-1,2-Dichloroethene	**0.42**	**J**	2.0	1.0	0.34	ug/L		06/21/23 16:58	1
1,2-Dichloroethene, Total	**14**		2.0	1.0	0.37	ug/L		06/21/23 16:58	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		06/21/23 16:58	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		06/21/23 16:58	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		06/21/23 16:58	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		06/21/23 16:58	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		06/21/23 16:58	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		06/21/23 16:58	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		06/21/23 16:58	1
Ethylbenzene	0.50	U M Q	1.0	0.50	0.20	ug/L		06/21/23 16:58	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		06/21/23 16:58	1
2-Hexanone	10	U	20	10	3.2	ug/L		06/21/23 16:58	1
Isopropylbenzene	1.0	U Q	2.0	1.0	0.26	ug/L		06/21/23 16:58	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		06/21/23 16:58	1
Methylene Chloride	10	U	20	10	3.2	ug/L		06/21/23 16:58	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		06/21/23 16:58	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		06/21/23 16:58	1
Naphthalene	**3.2**	**J Q**	10	5.0	2.4	ug/L		06/21/23 16:58	1
N-Propylbenzene	1.0	U Q	2.0	1.0	0.41	ug/L		06/21/23 16:58	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV,LTM, AOC 50, Spring 2023

Job ID: 680-236086-1

Client Sample ID: G6M-13-05X-SPR23
Date Collected: 06/07/23 09:35
Date Received: 06/09/23 09:46

Lab Sample ID: 680-236086-3
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U Q	2.0	1.0	0.27	ug/L		06/21/23 16:58	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		06/21/23 16:58	1
1,1,2,2-Tetrachloroethane	1.0	U Q	2.0	1.0	0.40	ug/L		06/21/23 16:58	1
Tetrachloroethene	**39**		2.0	1.0	0.35	ug/L		06/21/23 16:58	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		06/21/23 16:58	1
1,2,3-Trichlorobenzene	2.0	U Q	5.0	2.0	0.81	ug/L		06/21/23 16:58	1
1,2,4-Trichlorobenzene	2.0	U Q	5.0	2.0	0.53	ug/L		06/21/23 16:58	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		06/21/23 16:58	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		06/21/23 16:58	1
Trichloroethene	**6.3**		1.0	0.50	0.20	ug/L		06/21/23 16:58	1
Trichlorofluoromethane	1.0	U Q	2.0	1.0	0.33	ug/L		06/21/23 16:58	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		06/21/23 16:58	1
1,2,4-Trimethylbenzene	**0.47**	**J M**	2.0	1.0	0.43	ug/L		06/21/23 16:58	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		06/21/23 16:58	1
Vinyl acetate	2.0	U Q	2.5	2.0	0.69	ug/L		06/21/23 16:58	1
Vinyl chloride	**27**		2.0	1.0	0.40	ug/L		06/21/23 16:58	1
o-Xylene	**0.29**	**J Q**	2.0	1.0	0.26	ug/L		06/21/23 16:58	1
m-Xylene & p-Xylene	1.0	U M Q	2.0	1.0	0.49	ug/L		06/21/23 16:58	1
Xylenes, Total	1.0	U Q	2.0	1.0	0.49	ug/L		06/21/23 16:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*90*		*89 - 112*		*06/21/23 16:58*	*1*
1,2-Dichloroethane-d4 (Surr)	*115*		*81 - 118*		*06/21/23 16:58*	*1*
4-Bromofluorobenzene (Surr)	*90*		*85 - 114*		*06/21/23 16:58*	*1*
Dibromofluoromethane (Surr)	*112*		*80 - 119*		*06/21/23 16:58*	*1*

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Naphthalene	5.0	U H	10	5.0	2.4	ug/L		06/23/23 14:55	1
o-Xylene	**0.54**	**J H**	2.0	1.0	0.26	ug/L		06/23/23 14:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*89 - 112*		*06/23/23 14:55*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*81 - 118*		*06/23/23 14:55*	*1*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*		*06/23/23 14:55*	*1*
Dibromofluoromethane (Surr)	*93*		*80 - 119*		*06/23/23 14:55*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	0.76	U	1.1	0.76	0.30	ug/L		06/13/23 16:34	1
Ethylene	**0.56**	**J**	1.0	0.71	0.31	ug/L		06/13/23 16:34	1
Methane (TCD)	**3100**		390	77	39	ug/L		06/13/23 16:34	1

Method: RSK-175 - Dissolved Gases (GC) - RA

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**18**	**H**	1.1	0.76	0.30	ug/L		10/05/23 15:07	1
Ethylene	**8.1**	**H**	1.0	0.71	0.31	ug/L		10/05/23 15:07	1
Methane (TCD)	**4000**	**H**	390	77	39	ug/L		10/05/23 15:07	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV,LTM, AOC 50, Spring 2023

Job ID: 680-236086-1

Client Sample ID: G6M-13-05X-SPR23

Date Collected: 06/07/23 09:35
Date Received: 06/09/23 09:46

Lab Sample ID: 680-236086-3

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		06/15/23 21:49	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**72000**		100	50	20	ug/L		06/14/23 16:13	1
Manganese	**6400**		10	5.0	1.3	ug/L		06/14/23 16:13	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**160**		5.0	3.0	0.86	ug/L		06/14/23 15:47	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**61**		5.0	5.0	2.2	mg/L		06/13/23 19:25	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	**0.12**		0.10	0.025	0.010	mg/L		06/22/23 13:12	1
Sulfide (SW846 9034)	1.5	U H	2.0	1.5	0.70	mg/L		06/16/23 11:09	1
Total Organic Carbon (SW846 9060)	**3.7**		1.5	1.0	0.50	mg/L		06/18/23 01:57	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV,LTM, AOC 50, Spring 2023

Job ID: 680-236086-1

Client Sample ID: AOC50-RB-01-SPR23
Date Collected: 06/07/23 15:30
Date Received: 06/09/23 09:46

Lab Sample ID: 680-236086-4
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U Q	25	10	3.7	ug/L		06/21/23 13:10	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		06/21/23 13:10	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		06/21/23 13:10	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/21/23 13:10	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		06/21/23 13:10	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		06/21/23 13:10	1
Bromomethane	10	U Q	20	10	3.7	ug/L		06/21/23 13:10	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		06/21/23 13:10	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		06/21/23 13:10	1
sec-Butylbenzene	2.0	U Q	2.5	2.0	0.53	ug/L		06/21/23 13:10	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/21/23 13:10	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		06/21/23 13:10	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		06/21/23 13:10	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		06/21/23 13:10	1
Chloroethane	10	U Q	20	10	4.6	ug/L		06/21/23 13:10	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		06/21/23 13:10	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		06/21/23 13:10	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		06/21/23 13:10	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		06/21/23 13:10	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		06/21/23 13:10	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		06/21/23 13:10	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		06/21/23 13:10	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/21/23 13:10	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/21/23 13:10	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/21/23 13:10	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/21/23 13:10	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		06/21/23 13:10	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		06/21/23 13:10	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		06/21/23 13:10	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		06/21/23 13:10	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		06/21/23 13:10	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		06/21/23 13:10	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		06/21/23 13:10	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		06/21/23 13:10	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		06/21/23 13:10	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		06/21/23 13:10	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		06/21/23 13:10	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		06/21/23 13:10	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		06/21/23 13:10	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		06/21/23 13:10	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		06/21/23 13:10	1
2-Hexanone	10	U	20	10	3.2	ug/L		06/21/23 13:10	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		06/21/23 13:10	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		06/21/23 13:10	1
Methylene Chloride	10	U	20	10	3.2	ug/L		06/21/23 13:10	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		06/21/23 13:10	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		06/21/23 13:10	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		06/21/23 13:10	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		06/21/23 13:10	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV,LTM, AOC 50, Spring 2023

Job ID: 680-236086-1

Client Sample ID: AOC50-RB-01-SPR23

Date Collected: 06/07/23 15:30
Date Received: 06/09/23 09:46

Lab Sample ID: 680-236086-4

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U Q	2.0	1.0	0.27	ug/L		06/21/23 13:10	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		06/21/23 13:10	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		06/21/23 13:10	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		06/21/23 13:10	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		06/21/23 13:10	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		06/21/23 13:10	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		06/21/23 13:10	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		06/21/23 13:10	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		06/21/23 13:10	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		06/21/23 13:10	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		06/21/23 13:10	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		06/21/23 13:10	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/21/23 13:10	1
1,3,5-Trimethylbenzene	1.0	U Q	2.0	1.0	0.28	ug/L		06/21/23 13:10	1
Vinyl acetate	2.0	U Q	2.5	2.0	0.69	ug/L		06/21/23 13:10	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		06/21/23 13:10	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		06/21/23 13:10	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		06/21/23 13:10	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		06/21/23 13:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*112*		*89 - 112*		*06/21/23 13:10*	*1*
1,2-Dichloroethane-d4 (Surr)	*127*	*Q*	*81 - 118*		*06/21/23 13:10*	*1*
4-Bromofluorobenzene (Surr)	*108*		*85 - 114*		*06/21/23 13:10*	*1*
Dibromofluoromethane (Surr)	*126*	*Q*	*80 - 119*		*06/21/23 13:10*	*1*

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**67**	**J**	100	50	20	ug/L		06/14/23 16:15	1
Manganese	5.0	U	10	5.0	1.3	ug/L		06/14/23 16:15	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		06/14/23 15:59	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV,LTM, AOC 50, Spring 2023

Job ID: 680-236086-1

Client Sample ID: AOC50-TB-02-SPR23
Date Collected: 06/07/23 00:00
Date Received: 06/09/23 09:46

Lab Sample ID: 680-236086-7
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U Q	25	10	3.7	ug/L		06/21/23 13:29	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		06/21/23 13:29	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		06/21/23 13:29	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/21/23 13:29	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		06/21/23 13:29	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		06/21/23 13:29	1
Bromomethane	10	U Q	20	10	3.7	ug/L		06/21/23 13:29	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		06/21/23 13:29	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		06/21/23 13:29	1
sec-Butylbenzene	2.0	U Q	2.5	2.0	0.53	ug/L		06/21/23 13:29	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/21/23 13:29	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		06/21/23 13:29	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		06/21/23 13:29	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		06/21/23 13:29	1
Chloroethane	10	U Q	20	10	4.6	ug/L		06/21/23 13:29	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		06/21/23 13:29	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		06/21/23 13:29	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		06/21/23 13:29	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		06/21/23 13:29	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		06/21/23 13:29	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		06/21/23 13:29	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		06/21/23 13:29	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/21/23 13:29	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/21/23 13:29	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/21/23 13:29	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/21/23 13:29	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		06/21/23 13:29	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		06/21/23 13:29	1
1,2-Dichloroethane	1.0	U	2.0	1.0	0.25	ug/L		06/21/23 13:29	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		06/21/23 13:29	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		06/21/23 13:29	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		06/21/23 13:29	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		06/21/23 13:29	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		06/21/23 13:29	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		06/21/23 13:29	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		06/21/23 13:29	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		06/21/23 13:29	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		06/21/23 13:29	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		06/21/23 13:29	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		06/21/23 13:29	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		06/21/23 13:29	1
2-Hexanone	10	U	20	10	3.2	ug/L		06/21/23 13:29	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		06/21/23 13:29	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		06/21/23 13:29	1
Methylene Chloride	10	U	20	10	3.2	ug/L		06/21/23 13:29	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		06/21/23 13:29	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		06/21/23 13:29	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		06/21/23 13:29	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		06/21/23 13:29	1

Client: Seres Engineering & Services LLC
Job ID: 680-236086-1
Project/Site: Seres-Arcadis JV,LTM, AOC 50, Spring 2023

Client Sample ID: AOC50-TB-02-SPR23
Lab Sample ID: 680-236086-7
Date Collected: 06/07/23 00:00
Matrix: Water
Date Received: 06/09/23 09:46

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U Q	2.0	1.0	0.27	ug/L		06/21/23 13:29	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		06/21/23 13:29	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		06/21/23 13:29	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		06/21/23 13:29	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		06/21/23 13:29	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		06/21/23 13:29	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		06/21/23 13:29	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		06/21/23 13:29	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		06/21/23 13:29	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		06/21/23 13:29	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		06/21/23 13:29	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		06/21/23 13:29	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/21/23 13:29	1
1,3,5-Trimethylbenzene	1.0	U Q	2.0	1.0	0.28	ug/L		06/21/23 13:29	1
Vinyl acetate	2.0	U Q	2.5	2.0	0.69	ug/L		06/21/23 13:29	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		06/21/23 13:29	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		06/21/23 13:29	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		06/21/23 13:29	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		06/21/23 13:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*110*		*89 - 112*		*06/21/23 13:29*	*1*
1,2-Dichloroethane-d4 (Surr)	*134*	*Q*	*81 - 118*		*06/21/23 13:29*	*1*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*		*06/21/23 13:29*	*1*
Dibromofluoromethane (Surr)	*129*	*Q*	*80 - 119*		*06/21/23 13:29*	*1*

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

Lab Sample ID: MB 680-784670/9
Matrix: Water
Analysis Batch: 784670

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		06/21/23 12:05	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		06/21/23 12:05	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		06/21/23 12:05	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/21/23 12:05	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		06/21/23 12:05	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		06/21/23 12:05	1
Bromomethane	10	U	20	10	3.7	ug/L		06/21/23 12:05	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		06/21/23 12:05	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		06/21/23 12:05	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		06/21/23 12:05	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/21/23 12:05	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		06/21/23 12:05	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		06/21/23 12:05	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		06/21/23 12:05	1
Chloroethane	10	U	20	10	4.6	ug/L		06/21/23 12:05	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		06/21/23 12:05	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		06/21/23 12:05	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		06/21/23 12:05	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		06/21/23 12:05	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		06/21/23 12:05	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		06/21/23 12:05	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		06/21/23 12:05	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/21/23 12:05	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/21/23 12:05	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/21/23 12:05	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/21/23 12:05	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		06/21/23 12:05	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		06/21/23 12:05	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		06/21/23 12:05	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		06/21/23 12:05	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		06/21/23 12:05	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		06/21/23 12:05	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		06/21/23 12:05	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		06/21/23 12:05	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		06/21/23 12:05	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		06/21/23 12:05	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		06/21/23 12:05	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		06/21/23 12:05	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		06/21/23 12:05	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		06/21/23 12:05	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		06/21/23 12:05	1
2-Hexanone	10	U	20	10	3.2	ug/L		06/21/23 12:05	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		06/21/23 12:05	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		06/21/23 12:05	1
Methylene Chloride	10	U	20	10	3.2	ug/L		06/21/23 12:05	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		06/21/23 12:05	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		06/21/23 12:05	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		06/21/23 12:05	1

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

Lab Sample ID: MB 680-784670/9
Matrix: Water
Analysis Batch: 784670

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		06/21/23 12:05	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		06/21/23 12:05	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		06/21/23 12:05	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		06/21/23 12:05	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		06/21/23 12:05	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		06/21/23 12:05	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		06/21/23 12:05	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		06/21/23 12:05	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		06/21/23 12:05	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		06/21/23 12:05	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		06/21/23 12:05	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		06/21/23 12:05	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		06/21/23 12:05	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/21/23 12:05	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		06/21/23 12:05	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		06/21/23 12:05	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		06/21/23 12:05	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		06/21/23 12:05	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		06/21/23 12:05	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		06/21/23 12:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*111*		*89 - 112*		*06/21/23 12:05*	*1*
1,2-Dichloroethane-d4 (Surr)	*127*	*Q*	*81 - 118*		*06/21/23 12:05*	*1*
4-Bromofluorobenzene (Surr)	*105*		*85 - 114*		*06/21/23 12:05*	*1*
Dibromofluoromethane (Surr)	*124*	*Q*	*80 - 119*		*06/21/23 12:05*	*1*

Lab Sample ID: LCS 680-784670/5
Matrix: Water
Analysis Batch: 784670

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	250	202		ug/L		81	39 - 160
Benzene	50.0	53.7		ug/L		107	79 - 120
Bromobenzene	50.0	55.7		ug/L		111	80 - 120
Chlorobromomethane	50.0	39.6		ug/L		79	78 - 123
Dichlorobromomethane	50.0	54.3		ug/L		109	79 - 125
Bromoform	50.0	51.8		ug/L		104	66 - 130
Bromomethane	50.0	79.6	Q	ug/L		159	53 - 141
2-Butanone (MEK)	250	222		ug/L		89	56 - 143
n-Butylbenzene	50.0	50.9		ug/L		102	75 - 128
sec-Butylbenzene	50.0	58.2		ug/L		116	77 - 126
tert-Butylbenzene	50.0	57.9		ug/L		116	78 - 124
Carbon disulfide	50.0	46.6		ug/L		93	64 - 133
Carbon tetrachloride	50.0	53.7		ug/L		107	72 - 136
Chlorobenzene	50.0	56.5		ug/L		113	82 - 118
Chloroethane	50.0	76.4	Q	ug/L		153	60 - 138
Chloroform	50.0	49.7		ug/L		99	79 - 124

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

Lab Sample ID: LCS 680-784670/5
Matrix: Water
Analysis Batch: 784670

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloromethane	50.0	47.9		ug/L		96	50 - 139
2-Chlorotoluene	50.0	57.0		ug/L		114	79 - 122
4-Chlorotoluene	50.0	57.0		ug/L		114	78 - 122
Chlorodibromomethane	50.0	53.7		ug/L		107	74 - 126
1,2-Dibromo-3-Chloropropane	50.0	53.4		ug/L		107	62 - 128
Ethylene Dibromide	50.0	50.3		ug/L		101	75 - 127
Dibromomethane	50.0	52.5		ug/L		105	79 - 123
1,2-Dichlorobenzene	50.0	55.4		ug/L		111	80 - 119
1,3-Dichlorobenzene	50.0	55.5		ug/L		111	80 - 119
1,4-Dichlorobenzene	50.0	55.5		ug/L		111	79 - 118
Dichlorodifluoromethane	50.0	51.5		ug/L		103	32 - 152
1,1-Dichloroethane	50.0	44.7		ug/L		89	77 - 125
1,2-Dichloroethane	50.0	55.6		ug/L		111	73 - 128
cis-1,2-Dichloroethene	50.0	50.4		ug/L		101	78 - 123
trans-1,2-Dichloroethene	50.0	50.1		ug/L		100	75 - 124
1,2-Dichloroethene, Total	100	100		ug/L		100	79 - 121
1,1-Dichloroethene	50.0	49.1		ug/L		98	71 - 131
1,2-Dichloropropane	50.0	46.6		ug/L		93	78 - 122
1,3-Dichloropropane	50.0	46.1		ug/L		92	80 - 119
2,2-Dichloropropane	50.0	58.0		ug/L		116	60 - 139
1,1-Dichloropropene	50.0	45.6		ug/L		91	79 - 125
cis-1,3-Dichloropropene	50.0	50.4		ug/L		101	75 - 124
trans-1,3-Dichloropropene	50.0	52.6		ug/L		105	73 - 127
Ethylbenzene	50.0	51.0		ug/L		102	79 - 121
Hexachlorobutadiene	50.0	52.4		ug/L		105	66 - 134
2-Hexanone	250	252		ug/L		101	57 - 139
Isopropylbenzene	50.0	53.4		ug/L		107	72 - 131
4-Isopropyltoluene	50.0	48.9		ug/L		98	77 - 127
Methylene Chloride	50.0	50.1		ug/L		100	74 - 124
4-Methyl-2-pentanone (MIBK)	250	257		ug/L		103	67 - 130
Methyl tert-butyl ether	50.0	48.7		ug/L		97	71 - 124
Naphthalene	50.0	55.0		ug/L		110	61 - 128
N-Propylbenzene	50.0	56.8		ug/L		114	76 - 126
Styrene	50.0	59.1		ug/L		118	78 - 123
1,1,1,2-Tetrachloroethane	50.0	57.1		ug/L		114	78 - 124
1,1,2,2-Tetrachloroethane	50.0	49.8		ug/L		100	71 - 121
Tetrachloroethene	50.0	45.8		ug/L		92	74 - 129
Toluene	50.0	48.7		ug/L		97	80 - 121
1,2,3-Trichlorobenzene	50.0	53.4		ug/L		107	69 - 129
1,2,4-Trichlorobenzene	50.0	53.4		ug/L		107	69 - 130
1,1,1-Trichloroethane	50.0	50.7		ug/L		101	74 - 131
1,1,2-Trichloroethane	50.0	52.0		ug/L		104	80 - 119
Trichloroethene	50.0	52.3		ug/L		105	79 - 123
Trichlorofluoromethane	50.0	51.5		ug/L		103	65 - 141
1,2,3-Trichloropropane	50.0	56.7		ug/L		113	73 - 122
1,2,4-Trimethylbenzene	50.0	57.6		ug/L		115	76 - 124
1,3,5-Trimethylbenzene	50.0	58.2		ug/L		116	75 - 124
Vinyl acetate	100	77.0		ug/L		77	54 - 146
Vinyl chloride	50.0	49.0		ug/L		98	58 - 137

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

Lab Sample ID: LCS 680-784670/5
Matrix: Water
Analysis Batch: 784670

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
o-Xylene	50.0	55.9		ug/L		112	78 - 122
m-Xylene & p-Xylene	50.0	55.5		ug/L		111	80 - 121
Xylenes, Total	100	111		ug/L		111	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*111*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*119*	*Q*	*81 - 118*
4-Bromofluorobenzene (Surr)	*109*		*85 - 114*
Dibromofluoromethane (Surr)	*114*		*80 - 119*

Lab Sample ID: LCSD 680-784670/6
Matrix: Water
Analysis Batch: 784670

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
Acetone	250	202		ug/L		81	39 - 160	0	20
Benzene	50.0	53.8		ug/L		108	79 - 120	0	20
Bromobenzene	50.0	56.9		ug/L		114	80 - 120	2	20
Chlorobromomethane	50.0	43.1		ug/L		86	78 - 123	9	20
Dichlorobromomethane	50.0	55.1		ug/L		110	79 - 125	1	20
Bromoform	50.0	53.4		ug/L		107	66 - 130	3	20
Bromomethane	50.0	81.3	Q	ug/L		163	53 - 141	2	20
2-Butanone (MEK)	250	232		ug/L		93	56 - 143	4	20
n-Butylbenzene	50.0	51.9		ug/L		104	75 - 128	2	20
sec-Butylbenzene	50.0	60.0		ug/L		120	77 - 126	3	20
tert-Butylbenzene	50.0	59.8		ug/L		120	78 - 124	3	20
Carbon disulfide	50.0	48.6		ug/L		97	64 - 133	4	20
Carbon tetrachloride	50.0	55.1		ug/L		110	72 - 136	3	20
Chlorobenzene	50.0	58.2		ug/L		116	82 - 118	3	20
Chloroethane	50.0	73.6	Q	ug/L		147	60 - 138	4	20
Chloroform	50.0	49.6		ug/L		99	79 - 124	0	20
Chloromethane	50.0	53.8		ug/L		108	50 - 139	12	20
2-Chlorotoluene	50.0	57.6		ug/L		115	79 - 122	1	20
4-Chlorotoluene	50.0	58.4		ug/L		117	78 - 122	2	20
Chlorodibromomethane	50.0	55.7		ug/L		111	74 - 126	4	20
1,2-Dibromo-3-Chloropropane	50.0	53.0		ug/L		106	62 - 128	1	20
Ethylene Dibromide	50.0	51.8		ug/L		104	75 - 127	3	20
Dibromomethane	50.0	53.9		ug/L		108	79 - 123	3	20
1,2-Dichlorobenzene	50.0	56.9		ug/L		114	80 - 119	3	20
1,3-Dichlorobenzene	50.0	56.4		ug/L		113	80 - 119	2	20
1,4-Dichlorobenzene	50.0	56.7		ug/L		113	79 - 118	2	20
Dichlorodifluoromethane	50.0	54.7		ug/L		109	32 - 152	6	20
1,1-Dichloroethane	50.0	45.7		ug/L		91	77 - 125	2	20
1,2-Dichloroethane	50.0	56.8		ug/L		114	73 - 128	2	20
cis-1,2-Dichloroethene	50.0	50.5		ug/L		101	78 - 123	0	20
trans-1,2-Dichloroethene	50.0	48.2		ug/L		96	75 - 124	4	20
1,2-Dichloroethene, Total	100	98.7		ug/L		99	79 - 121	2	20
1,1-Dichloroethene	50.0	49.4		ug/L		99	71 - 131	1	20

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

Lab Sample ID: LCSD 680-784670/6
Matrix: Water
Analysis Batch: 784670

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Dichloropropane			50.0	47.1		ug/L		94	78 - 122	1	20
1,3-Dichloropropane			50.0	47.7		ug/L		95	80 - 119	3	20
2,2-Dichloropropane			50.0	59.2		ug/L		118	60 - 139	2	20
1,1-Dichloropropene			50.0	45.1		ug/L		90	79 - 125	1	20
cis-1,3-Dichloropropene			50.0	52.5		ug/L		105	75 - 124	4	20
trans-1,3-Dichloropropene			50.0	52.9		ug/L		106	73 - 127	1	20
Ethylbenzene			50.0	52.8		ug/L		106	79 - 121	4	20
Hexachlorobutadiene			50.0	55.8		ug/L		112	66 - 134	6	20
2-Hexanone			250	261		ug/L		105	57 - 139	4	20
Isopropylbenzene			50.0	56.3		ug/L		113	72 - 131	5	20
4-Isopropyltoluene			50.0	49.2		ug/L		98	77 - 127	1	20
Methylene Chloride			50.0	51.0		ug/L		102	74 - 124	2	20
4-Methyl-2-pentanone (MIBK)			250	267		ug/L		107	67 - 130	4	20
Methyl tert-butyl ether			50.0	50.1		ug/L		100	71 - 124	3	20
Naphthalene			50.0	57.0		ug/L		114	61 - 128	4	20
N-Propylbenzene			50.0	58.2		ug/L		116	76 - 126	2	20
Styrene			50.0	60.9		ug/L		122	78 - 123	3	20
1,1,1,2-Tetrachloroethane			50.0	58.3		ug/L		117	78 - 124	2	20
1,1,2,2-Tetrachloroethane			50.0	51.6		ug/L		103	71 - 121	4	20
Tetrachloroethene			50.0	48.2		ug/L		96	74 - 129	5	20
Toluene			50.0	49.9		ug/L		100	80 - 121	2	20
1,2,3-Trichlorobenzene			50.0	56.2		ug/L		112	69 - 129	5	20
1,2,4-Trichlorobenzene			50.0	55.0		ug/L		110	69 - 130	3	20
1,1,1-Trichloroethane			50.0	53.1		ug/L		106	74 - 131	5	20
1,1,2-Trichloroethane			50.0	53.0		ug/L		106	80 - 119	2	20
Trichloroethene			50.0	54.4		ug/L		109	79 - 123	4	20
Trichlorofluoromethane			50.0	52.9		ug/L		106	65 - 141	3	20
1,2,3-Trichloropropane			50.0	58.5		ug/L		117	73 - 122	3	20
1,2,4-Trimethylbenzene			50.0	58.8		ug/L		118	76 - 124	2	20
1,3,5-Trimethylbenzene			50.0	59.6		ug/L		119	75 - 124	2	20
Vinyl acetate			100	75.6		ug/L		76	54 - 146	2	20
Vinyl chloride			50.0	51.2		ug/L		102	58 - 137	4	20
o-Xylene			50.0	55.7		ug/L		111	78 - 122	0	20
m-Xylene & p-Xylene			50.0	55.6		ug/L		111	80 - 121	0	20
Xylenes, Total			100	111		ug/L		111	79 - 121	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*113*	*Q*	*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*123*	*Q*	*81 - 118*
4-Bromofluorobenzene (Surr)	*108*		*85 - 114*
Dibromofluoromethane (Surr)	*117*		*80 - 119*

Lab Sample ID: MB 680-784770/9
Matrix: Water
Analysis Batch: 784770

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		06/21/23 15:59	1

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

Lab Sample ID: MB 680-784770/9
Matrix: Water
Analysis Batch: 784770

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	1.0	U	2.0	1.0	0.27	ug/L		06/21/23 15:59	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		06/21/23 15:59	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/21/23 15:59	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		06/21/23 15:59	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		06/21/23 15:59	1
Bromomethane	10	U	20	10	3.7	ug/L		06/21/23 15:59	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		06/21/23 15:59	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		06/21/23 15:59	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		06/21/23 15:59	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/21/23 15:59	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		06/21/23 15:59	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		06/21/23 15:59	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		06/21/23 15:59	1
Chloroethane	10	U	20	10	4.6	ug/L		06/21/23 15:59	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		06/21/23 15:59	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		06/21/23 15:59	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		06/21/23 15:59	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		06/21/23 15:59	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		06/21/23 15:59	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		06/21/23 15:59	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		06/21/23 15:59	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/21/23 15:59	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/21/23 15:59	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/21/23 15:59	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/21/23 15:59	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		06/21/23 15:59	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		06/21/23 15:59	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		06/21/23 15:59	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		06/21/23 15:59	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		06/21/23 15:59	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		06/21/23 15:59	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		06/21/23 15:59	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		06/21/23 15:59	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		06/21/23 15:59	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		06/21/23 15:59	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		06/21/23 15:59	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		06/21/23 15:59	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		06/21/23 15:59	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		06/21/23 15:59	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		06/21/23 15:59	1
2-Hexanone	10	U	20	10	3.2	ug/L		06/21/23 15:59	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		06/21/23 15:59	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		06/21/23 15:59	1
Methylene Chloride	10	U	20	10	3.2	ug/L		06/21/23 15:59	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		06/21/23 15:59	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		06/21/23 15:59	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		06/21/23 15:59	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		06/21/23 15:59	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		06/21/23 15:59	1

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

Lab Sample ID: MB 680-784770/9
Matrix: Water
Analysis Batch: 784770

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		06/21/23 15:59	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		06/21/23 15:59	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		06/21/23 15:59	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		06/21/23 15:59	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		06/21/23 15:59	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		06/21/23 15:59	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		06/21/23 15:59	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		06/21/23 15:59	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		06/21/23 15:59	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		06/21/23 15:59	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		06/21/23 15:59	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/21/23 15:59	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		06/21/23 15:59	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		06/21/23 15:59	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		06/21/23 15:59	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		06/21/23 15:59	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		06/21/23 15:59	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		06/21/23 15:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*94*		*89 - 112*		*06/21/23 15:59*	*1*
1,2-Dichloroethane-d4 (Surr)	*111*		*81 - 118*		*06/21/23 15:59*	*1*
4-Bromofluorobenzene (Surr)	*85*		*85 - 114*		*06/21/23 15:59*	*1*
Dibromofluoromethane (Surr)	*110*		*80 - 119*		*06/21/23 15:59*	*1*

Lab Sample ID: LCS 680-784770/3
Matrix: Water
Analysis Batch: 784770

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	250	247		ug/L		99	39 - 160
Benzene	50.0	52.1		ug/L		104	79 - 120
Bromobenzene	50.0	51.2		ug/L		102	80 - 120
Chlorobromomethane	50.0	52.9		ug/L		106	78 - 123
Dichlorobromomethane	50.0	60.0		ug/L		120	79 - 125
Bromoform	50.0	51.2		ug/L		102	66 - 130
Bromomethane	50.0	54.6		ug/L		109	53 - 141
2-Butanone (MEK)	250	259		ug/L		104	56 - 143
n-Butylbenzene	50.0	54.7		ug/L		109	75 - 128
sec-Butylbenzene	50.0	50.7		ug/L		101	77 - 126
tert-Butylbenzene	50.0	50.6		ug/L		101	78 - 124
Carbon disulfide	50.0	51.9		ug/L		104	64 - 133
Carbon tetrachloride	50.0	51.8		ug/L		104	72 - 136
Chlorobenzene	50.0	52.1		ug/L		104	82 - 118
Chloroethane	50.0	53.2		ug/L		106	60 - 138
Chloroform	50.0	54.6		ug/L		109	79 - 124
Chloromethane	50.0	50.9		ug/L		102	50 - 139
2-Chlorotoluene	50.0	55.9		ug/L		112	79 - 122

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

Lab Sample ID: LCS 680-784770/3
Matrix: Water
Analysis Batch: 784770

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4-Chlorotoluene	50.0	55.3		ug/L		111	78 - 122
Chlorodibromomethane	50.0	58.0		ug/L		116	74 - 126
1,2-Dibromo-3-Chloropropane	50.0	54.7		ug/L		109	62 - 128
Ethylene Dibromide	50.0	55.2		ug/L		110	75 - 127
Dibromomethane	50.0	58.3		ug/L		117	79 - 123
1,2-Dichlorobenzene	50.0	55.4		ug/L		111	80 - 119
1,3-Dichlorobenzene	50.0	54.1		ug/L		108	80 - 119
1,4-Dichlorobenzene	50.0	56.9		ug/L		114	79 - 118
Dichlorodifluoromethane	50.0	48.1		ug/L		96	32 - 152
1,1-Dichloroethane	50.0	53.1		ug/L		106	77 - 125
1,2-Dichloroethane	50.0	55.9		ug/L		112	73 - 128
cis-1,2-Dichloroethene	50.0	55.9		ug/L		112	78 - 123
trans-1,2-Dichloroethene	50.0	53.5		ug/L		107	75 - 124
1,2-Dichloroethene, Total	100	109		ug/L		109	79 - 121
1,1-Dichloroethene	50.0	55.6		ug/L		111	71 - 131
1,2-Dichloropropane	50.0	56.7		ug/L		113	78 - 122
1,3-Dichloropropane	50.0	57.2		ug/L		114	80 - 119
2,2-Dichloropropane	50.0	51.6		ug/L		103	60 - 139
1,1-Dichloropropene	50.0	51.8		ug/L		104	79 - 125
cis-1,3-Dichloropropene	50.0	55.2		ug/L		110	75 - 124
trans-1,3-Dichloropropene	50.0	57.7		ug/L		115	73 - 127
Ethylbenzene	50.0	54.3		ug/L		109	79 - 121
Hexachlorobutadiene	50.0	58.7		ug/L		117	66 - 134
2-Hexanone	250	234		ug/L		93	57 - 139
Isopropylbenzene	50.0	52.5		ug/L		105	72 - 131
4-Isopropyltoluene	50.0	53.3		ug/L		107	77 - 127
Methylene Chloride	50.0	55.2		ug/L		110	74 - 124
4-Methyl-2-pentanone (MIBK)	250	269		ug/L		108	67 - 130
Methyl tert-butyl ether	50.0	53.8		ug/L		108	71 - 124
Naphthalene	50.0	56.9		ug/L		114	61 - 128
N-Propylbenzene	50.0	55.0		ug/L		110	76 - 126
Styrene	50.0	53.4		ug/L		107	78 - 123
1,1,1,2-Tetrachloroethane	50.0	54.1		ug/L		108	78 - 124
1,1,2,2-Tetrachloroethane	50.0	49.8		ug/L		100	71 - 121
Tetrachloroethene	50.0	53.1		ug/L		106	74 - 129
Toluene	50.0	54.6		ug/L		109	80 - 121
1,2,3-Trichlorobenzene	50.0	61.9		ug/L		124	69 - 129
1,2,4-Trichlorobenzene	50.0	59.5		ug/L		119	69 - 130
1,1,1-Trichloroethane	50.0	53.8		ug/L		108	74 - 131
1,1,2-Trichloroethane	50.0	56.3		ug/L		113	80 - 119
Trichloroethene	50.0	55.2		ug/L		110	79 - 123
Trichlorofluoromethane	50.0	77.1	Q	ug/L		154	65 - 141
1,2,3-Trichloropropane	50.0	51.2		ug/L		102	73 - 122
1,2,4-Trimethylbenzene	50.0	50.5		ug/L		101	76 - 124
1,3,5-Trimethylbenzene	50.0	52.1		ug/L		104	75 - 124
Vinyl acetate	100	92.4		ug/L		92	54 - 146
Vinyl chloride	50.0	52.9		ug/L		106	58 - 137
o-Xylene	50.0	53.7		ug/L		107	78 - 122
m-Xylene & p-Xylene	50.0	55.3		ug/L		111	80 - 121

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

Lab Sample ID: LCS 680-784770/3
Matrix: Water
Analysis Batch: 784770

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Xylenes, Total			100	109		ug/L		109	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*93*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*114*		*81 - 118*
4-Bromofluorobenzene (Surr)	*114*		*85 - 114*
Dibromofluoromethane (Surr)	*113*		*80 - 119*

Lab Sample ID: LCSD 680-784770/4
Matrix: Water
Analysis Batch: 784770

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
Acetone			250	245		ug/L		98	39 - 160	1	20
Benzene			50.0	52.5		ug/L		105	79 - 120	1	20
Bromobenzene			50.0	48.1		ug/L		96	80 - 120	6	20
Chlorobromomethane			50.0	52.9		ug/L		106	78 - 123	0	20
Dichlorobromomethane			50.0	60.6		ug/L		121	79 - 125	1	20
Bromoform			50.0	50.8		ug/L		102	66 - 130	1	20
Bromomethane			50.0	53.0		ug/L		106	53 - 141	3	20
2-Butanone (MEK)			250	259		ug/L		103	56 - 143	0	20
n-Butylbenzene			50.0	62.4		ug/L		125	75 - 128	13	20
sec-Butylbenzene			50.0	40.6	Q	ug/L		81	77 - 126	22	20
tert-Butylbenzene			50.0	39.3	Q	ug/L		79	78 - 124	25	20
Carbon disulfide			50.0	52.9		ug/L		106	64 - 133	2	20
Carbon tetrachloride			50.0	52.6		ug/L		105	72 - 136	2	20
Chlorobenzene			50.0	54.0		ug/L		108	82 - 118	4	20
Chloroethane			50.0	54.0		ug/L		108	60 - 138	1	20
Chloroform			50.0	54.3		ug/L		109	79 - 124	1	20
Chloromethane			50.0	49.5		ug/L		99	50 - 139	3	20
2-Chlorotoluene			50.0	43.9	Q	ug/L		88	79 - 122	24	20
4-Chlorotoluene			50.0	44.3	Q	ug/L		89	78 - 122	22	20
Chlorodibromomethane			50.0	57.8		ug/L		116	74 - 126	0	20
1,2-Dibromo-3-Chloropropane			50.0	53.9		ug/L		108	62 - 128	2	20
Ethylene Dibromide			50.0	54.8		ug/L		110	75 - 127	1	20
Dibromomethane			50.0	57.7		ug/L		115	79 - 123	1	20
1,2-Dichlorobenzene			50.0	56.7		ug/L		113	80 - 119	2	20
1,3-Dichlorobenzene			50.0	52.1		ug/L		104	80 - 119	4	20
1,4-Dichlorobenzene			50.0	55.3		ug/L		111	79 - 118	3	20
Dichlorodifluoromethane			50.0	50.4		ug/L		101	32 - 152	5	20
1,1-Dichloroethane			50.0	53.8		ug/L		108	77 - 125	1	20
1,2-Dichloroethane			50.0	56.0		ug/L		112	73 - 128	0	20
cis-1,2-Dichloroethene			50.0	56.9		ug/L		114	78 - 123	2	20
trans-1,2-Dichloroethene			50.0	54.2		ug/L		108	75 - 124	1	20
1,2-Dichloroethene, Total			100	111		ug/L		111	79 - 121	1	20
1,1-Dichloroethene			50.0	55.9		ug/L		112	71 - 131	1	20
1,2-Dichloropropane			50.0	57.3		ug/L		115	78 - 122	1	20
1,3-Dichloropropane			50.0	57.7		ug/L		115	80 - 119	1	20

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

Lab Sample ID: LCSD 680-784770/4
Matrix: Water
Analysis Batch: 784770

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
2,2-Dichloropropane			50.0	51.7		ug/L		103	60 - 139	0	20
1,1-Dichloropropene			50.0	53.0		ug/L		106	79 - 125	2	20
cis-1,3-Dichloropropene			50.0	54.9		ug/L		110	75 - 124	1	20
trans-1,3-Dichloropropene			50.0	57.9		ug/L		116	73 - 127	0	20
Ethylbenzene			50.0	54.2		ug/L		108	79 - 121	0	20
Hexachlorobutadiene			50.0	63.5		ug/L		127	66 - 134	8	20
2-Hexanone			250	222		ug/L		89	57 - 139	5	20
Isopropylbenzene			50.0	38.5	Q	ug/L		77	72 - 131	31	20
4-Isopropyltoluene			50.0	58.4		ug/L		117	77 - 127	9	20
Methylene Chloride			50.0	55.7		ug/L		111	74 - 124	1	20
4-Methyl-2-pentanone (MIBK)			250	267		ug/L		107	67 - 130	1	20
Methyl tert-butyl ether			50.0	53.5		ug/L		107	71 - 124	1	20
Naphthalene			50.0	73.5	Q	ug/L		147	61 - 128	25	20
N-Propylbenzene			50.0	42.3	Q	ug/L		85	76 - 126	26	20
Styrene			50.0	42.7	Q	ug/L		85	78 - 123	22	20
1,1,1,2-Tetrachloroethane			50.0	54.7		ug/L		109	78 - 124	1	20
1,1,2,2-Tetrachloroethane			50.0	58.7		ug/L		117	71 - 121	16	20
Tetrachloroethene			50.0	53.5		ug/L		107	74 - 129	1	20
Toluene			50.0	56.9		ug/L		114	80 - 121	4	20
1,2,3-Trichlorobenzene			50.0	77.0	Q	ug/L		154	69 - 129	22	20
1,2,4-Trichlorobenzene			50.0	76.8	Q	ug/L		154	69 - 130	25	20
1,1,1-Trichloroethane			50.0	55.0		ug/L		110	74 - 131	2	20
1,1,2-Trichloroethane			50.0	56.4		ug/L		113	80 - 119	0	20
Trichloroethene			50.0	57.3		ug/L		115	79 - 123	4	20
Trichlorofluoromethane			50.0	78.2	Q	ug/L		156	65 - 141	1	20
1,2,3-Trichloropropane			50.0	50.2		ug/L		100	73 - 122	2	20
1,2,4-Trimethylbenzene			50.0	49.3		ug/L		99	76 - 124	2	20
1,3,5-Trimethylbenzene			50.0	50.6		ug/L		101	75 - 124	3	20
Vinyl acetate			100	79.1		ug/L		79	54 - 146	15	20
Vinyl chloride			50.0	53.0		ug/L		106	58 - 137	0	20
o-Xylene			50.0	44.2		ug/L		88	78 - 122	19	20
m-Xylene & p-Xylene			50.0	45.5		ug/L		91	80 - 121	20	20
Xylenes, Total			100	89.7		ug/L		90	79 - 121	19	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*95*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*115*		*81 - 118*
4-Bromofluorobenzene (Surr)	*119*	*Q*	*85 - 114*
Dibromofluoromethane (Surr)	*115*		*80 - 119*

Lab Sample ID: MB 680-785162/8
Matrix: Water
Analysis Batch: 785162

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		06/23/23 12:56	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		06/23/23 12:56	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		06/23/23 12:56	1

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

Lab Sample ID: MB 680-785162/8
Matrix: Water
Analysis Batch: 785162

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/23/23 12:56	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		06/23/23 12:56	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		06/23/23 12:56	1
Bromomethane	10	U	20	10	3.7	ug/L		06/23/23 12:56	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		06/23/23 12:56	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		06/23/23 12:56	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		06/23/23 12:56	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/23/23 12:56	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		06/23/23 12:56	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		06/23/23 12:56	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		06/23/23 12:56	1
Chloroethane	10	U	20	10	4.6	ug/L		06/23/23 12:56	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		06/23/23 12:56	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		06/23/23 12:56	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		06/23/23 12:56	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		06/23/23 12:56	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		06/23/23 12:56	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		06/23/23 12:56	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		06/23/23 12:56	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/23/23 12:56	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/23/23 12:56	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/23/23 12:56	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/23/23 12:56	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		06/23/23 12:56	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		06/23/23 12:56	1
1,2-Dichloroethane	1.0	U	2.0	1.0	0.25	ug/L		06/23/23 12:56	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		06/23/23 12:56	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		06/23/23 12:56	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		06/23/23 12:56	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		06/23/23 12:56	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		06/23/23 12:56	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		06/23/23 12:56	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		06/23/23 12:56	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		06/23/23 12:56	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		06/23/23 12:56	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		06/23/23 12:56	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		06/23/23 12:56	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		06/23/23 12:56	1
2-Hexanone	10	U M	20	10	3.2	ug/L		06/23/23 12:56	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		06/23/23 12:56	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		06/23/23 12:56	1
Methylene Chloride	10	U	20	10	3.2	ug/L		06/23/23 12:56	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		06/23/23 12:56	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		06/23/23 12:56	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		06/23/23 12:56	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		06/23/23 12:56	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		06/23/23 12:56	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		06/23/23 12:56	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		06/23/23 12:56	1

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

Lab Sample ID: MB 680-785162/8
Matrix: Water
Analysis Batch: 785162

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		06/23/23 12:56	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		06/23/23 12:56	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		06/23/23 12:56	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		06/23/23 12:56	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		06/23/23 12:56	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		06/23/23 12:56	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		06/23/23 12:56	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		06/23/23 12:56	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		06/23/23 12:56	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/23/23 12:56	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		06/23/23 12:56	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		06/23/23 12:56	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		06/23/23 12:56	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		06/23/23 12:56	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		06/23/23 12:56	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		06/23/23 12:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*89 - 112*		*06/23/23 12:56*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*81 - 118*		*06/23/23 12:56*	*1*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*		*06/23/23 12:56*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 119*		*06/23/23 12:56*	*1*

Lab Sample ID: LCS 680-785162/4
Matrix: Water
Analysis Batch: 785162

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	250	251		ug/L		100	39 - 160
Benzene	50.0	51.9		ug/L		104	79 - 120
Bromobenzene	50.0	54.8		ug/L		110	80 - 120
Chlorobromomethane	50.0	56.3		ug/L		113	78 - 123
Dichlorobromomethane	50.0	47.3		ug/L		95	79 - 125
Bromoform	50.0	44.3		ug/L		89	66 - 130
Bromomethane	50.0	47.0		ug/L		94	53 - 141
2-Butanone (MEK)	250	257		ug/L		103	56 - 143
n-Butylbenzene	50.0	56.6		ug/L		113	75 - 128
sec-Butylbenzene	50.0	54.2		ug/L		108	77 - 126
tert-Butylbenzene	50.0	53.6		ug/L		107	78 - 124
Carbon disulfide	50.0	48.2		ug/L		96	64 - 133
Carbon tetrachloride	50.0	39.4		ug/L		79	72 - 136
Chlorobenzene	50.0	50.3		ug/L		101	82 - 118
Chloroethane	50.0	38.4		ug/L		77	60 - 138
Chloroform	50.0	48.4		ug/L		97	79 - 124
Chloromethane	50.0	48.8		ug/L		98	50 - 139
2-Chlorotoluene	50.0	50.5	M	ug/L		101	79 - 122
4-Chlorotoluene	50.0	52.4		ug/L		105	78 - 122
Chlorodibromomethane	50.0	45.6		ug/L		91	74 - 126

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

Lab Sample ID: LCS 680-785162/4
Matrix: Water
Analysis Batch: 785162

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dibromo-3-Chloropropane	50.0	48.8		ug/L		98	62 - 128
Ethylene Dibromide	50.0	48.7		ug/L		97	75 - 127
Dibromomethane	50.0	48.7		ug/L		97	79 - 123
1,2-Dichlorobenzene	50.0	54.0		ug/L		108	80 - 119
1,3-Dichlorobenzene	50.0	53.6		ug/L		107	80 - 119
1,4-Dichlorobenzene	50.0	51.2		ug/L		102	79 - 118
Dichlorodifluoromethane	50.0	51.0		ug/L		102	32 - 152
1,1-Dichloroethane	50.0	50.2		ug/L		100	77 - 125
1,2-Dichloroethane	50.0	46.6		ug/L		93	73 - 128
cis-1,2-Dichloroethene	50.0	48.7		ug/L		97	78 - 123
trans-1,2-Dichloroethene	50.0	47.5		ug/L		95	75 - 124
1,2-Dichloroethene, Total	100	96.2		ug/L		96	79 - 121
1,1-Dichloroethene	50.0	50.7		ug/L		101	71 - 131
1,2-Dichloropropane	50.0	54.4		ug/L		109	78 - 122
1,3-Dichloropropane	50.0	48.9		ug/L		98	80 - 119
2,2-Dichloropropane	50.0	44.5		ug/L		89	60 - 139
1,1-Dichloropropene	50.0	50.6		ug/L		101	79 - 125
cis-1,3-Dichloropropene	50.0	51.3		ug/L		103	75 - 124
trans-1,3-Dichloropropene	50.0	50.1		ug/L		100	73 - 127
Ethylbenzene	50.0	53.4		ug/L		107	79 - 121
Hexachlorobutadiene	50.0	52.2		ug/L		104	66 - 134
2-Hexanone	250	265		ug/L		106	57 - 139
Isopropylbenzene	50.0	52.6		ug/L		105	72 - 131
4-Isopropyltoluene	50.0	55.0		ug/L		110	77 - 127
Methylene Chloride	50.0	50.5		ug/L		101	74 - 124
4-Methyl-2-pentanone (MIBK)	250	264		ug/L		106	67 - 130
Methyl tert-butyl ether	50.0	50.6	M	ug/L		101	71 - 124
Naphthalene	50.0	48.8		ug/L		98	61 - 128
N-Propylbenzene	50.0	53.9		ug/L		108	76 - 126
Styrene	50.0	55.9		ug/L		112	78 - 123
1,1,1,2-Tetrachloroethane	50.0	48.4		ug/L		97	78 - 124
1,1,2,2-Tetrachloroethane	50.0	54.1		ug/L		108	71 - 121
Tetrachloroethene	50.0	46.7		ug/L		93	74 - 129
Toluene	50.0	54.1		ug/L		108	80 - 121
1,2,3-Trichlorobenzene	50.0	55.0		ug/L		110	69 - 129
1,2,4-Trichlorobenzene	50.0	52.3		ug/L		105	69 - 130
1,1,1-Trichloroethane	50.0	45.2		ug/L		90	74 - 131
1,1,2-Trichloroethane	50.0	50.5		ug/L		101	80 - 119
Trichloroethene	50.0	47.8		ug/L		96	79 - 123
Trichlorofluoromethane	50.0	41.9		ug/L		84	65 - 141
1,2,3-Trichloropropane	50.0	49.4		ug/L		99	73 - 122
1,2,4-Trimethylbenzene	50.0	52.4		ug/L		105	76 - 124
1,3,5-Trimethylbenzene	50.0	52.8		ug/L		106	75 - 124
Vinyl acetate	100	101		ug/L		101	54 - 146
Vinyl chloride	50.0	51.7		ug/L		103	58 - 137
o-Xylene	50.0	53.5		ug/L		107	78 - 122
m-Xylene & p-Xylene	50.0	51.4		ug/L		103	80 - 121
Xylenes, Total	100	105		ug/L		105	79 - 121

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

Lab Sample ID: LCS 680-785162/4
Matrix: Water
Analysis Batch: 785162

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

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	*102*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*85*		*81 - 118*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*
Dibromofluoromethane (Surr)	*95*		*80 - 119*

Lab Sample ID: LCSD 680-785162/5
Matrix: Water
Analysis Batch: 785162

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
Acetone			250	262		ug/L		105	39 - 160	5	20
Benzene			50.0	50.7		ug/L		101	79 - 120	2	20
Bromobenzene			50.0	54.8		ug/L		110	80 - 120	0	20
Chlorobromomethane			50.0	47.9		ug/L		96	78 - 123	16	20
Dichlorobromomethane			50.0	49.7		ug/L		99	79 - 125	5	20
Bromoform			50.0	48.0		ug/L		96	66 - 130	8	20
Bromomethane			50.0	50.8		ug/L		102	53 - 141	8	20
2-Butanone (MEK)			250	275		ug/L		110	56 - 143	7	20
n-Butylbenzene			50.0	54.5		ug/L		109	75 - 128	4	20
sec-Butylbenzene			50.0	58.5		ug/L		117	77 - 126	8	20
tert-Butylbenzene			50.0	54.8		ug/L		110	78 - 124	2	20
Carbon disulfide			50.0	45.5		ug/L		91	64 - 133	6	20
Carbon tetrachloride			50.0	40.2		ug/L		80	72 - 136	2	20
Chlorobenzene			50.0	50.0		ug/L		100	82 - 118	1	20
Chloroethane			50.0	41.4		ug/L		83	60 - 138	8	20
Chloroform			50.0	49.0		ug/L		98	79 - 124	1	20
Chloromethane			50.0	51.4		ug/L		103	50 - 139	5	20
2-Chlorotoluene			50.0	51.3	M	ug/L		103	79 - 122	2	20
4-Chlorotoluene			50.0	52.4	M	ug/L		105	78 - 122	0	20
Chlorodibromomethane			50.0	48.2		ug/L		96	74 - 126	6	20
1,2-Dibromo-3-Chloropropane			50.0	52.0		ug/L		104	62 - 128	6	20
Ethylene Dibromide			50.0	51.8		ug/L		104	75 - 127	6	20
Dibromomethane			50.0	49.3		ug/L		99	79 - 123	1	20
1,2-Dichlorobenzene			50.0	53.5		ug/L		107	80 - 119	1	20
1,3-Dichlorobenzene			50.0	53.6		ug/L		107	80 - 119	0	20
1,4-Dichlorobenzene			50.0	50.5		ug/L		101	79 - 118	1	20
Dichlorodifluoromethane			50.0	52.7		ug/L		105	32 - 152	3	20
1,1-Dichloroethane			50.0	48.5		ug/L		97	77 - 125	3	20
1,2-Dichloroethane			50.0	49.2		ug/L		98	73 - 128	5	20
cis-1,2-Dichloroethene			50.0	49.6		ug/L		99	78 - 123	2	20
trans-1,2-Dichloroethene			50.0	46.1		ug/L		92	75 - 124	3	20
1,2-Dichloroethene, Total			100	95.7		ug/L		96	79 - 121	1	20
1,1-Dichloroethene			50.0	49.8		ug/L		100	71 - 131	2	20
1,2-Dichloropropane			50.0	52.5		ug/L		105	78 - 122	4	20
1,3-Dichloropropane			50.0	50.5		ug/L		101	80 - 119	3	20
2,2-Dichloropropane			50.0	44.3		ug/L		89	60 - 139	0	20
1,1-Dichloropropene			50.0	50.5		ug/L		101	79 - 125	0	20
cis-1,3-Dichloropropene			50.0	50.7		ug/L		101	75 - 124	1	20

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

Lab Sample ID: LCSD 680-785162/5
Matrix: Water
Analysis Batch: 785162

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
trans-1,3-Dichloropropene			50.0	51.3		ug/L		103	73 - 127	2	20
Ethylbenzene			50.0	52.1		ug/L		104	79 - 121	3	20
Hexachlorobutadiene			50.0	50.1		ug/L		100	66 - 134	4	20
2-Hexanone			250	287		ug/L		115	57 - 139	8	20
Isopropylbenzene			50.0	52.6		ug/L		105	72 - 131	0	20
4-Isopropyltoluene			50.0	53.1		ug/L		106	77 - 127	4	20
Methylene Chloride			50.0	48.8		ug/L		98	74 - 124	3	20
4-Methyl-2-pentanone (MIBK)			250	278		ug/L		111	67 - 130	5	20
Methyl tert-butyl ether			50.0	53.1	M	ug/L		106	71 - 124	5	20
Naphthalene			50.0	49.7		ug/L		99	61 - 128	2	20
N-Propylbenzene			50.0	52.5		ug/L		105	76 - 126	3	20
Styrene			50.0	55.9		ug/L		112	78 - 123	0	20
1,1,1,2-Tetrachloroethane			50.0	49.7		ug/L		99	78 - 124	3	20
1,1,2,2-Tetrachloroethane			50.0	55.4		ug/L		111	71 - 121	2	20
Tetrachloroethene			50.0	48.1		ug/L		96	74 - 129	3	20
Toluene			50.0	53.8		ug/L		108	80 - 121	1	20
1,2,3-Trichlorobenzene			50.0	56.4		ug/L		113	69 - 129	2	20
1,2,4-Trichlorobenzene			50.0	51.8		ug/L		104	69 - 130	1	20
1,1,1-Trichloroethane			50.0	46.1		ug/L		92	74 - 131	2	20
1,1,2-Trichloroethane			50.0	52.4		ug/L		105	80 - 119	4	20
Trichloroethene			50.0	47.7		ug/L		95	79 - 123	0	20
Trichlorofluoromethane			50.0	44.1		ug/L		88	65 - 141	5	20
1,2,3-Trichloropropane			50.0	52.2		ug/L		104	73 - 122	5	20
1,2,4-Trimethylbenzene			50.0	56.6		ug/L		113	76 - 124	8	20
1,3,5-Trimethylbenzene			50.0	52.8		ug/L		106	75 - 124	0	20
Vinyl acetate			100	102		ug/L		102	54 - 146	1	20
Vinyl chloride			50.0	54.4		ug/L		109	58 - 137	5	20
o-Xylene			50.0	53.0		ug/L		106	78 - 122	1	20
m-Xylene & p-Xylene			50.0	51.1		ug/L		102	80 - 121	1	20
Xylenes, Total			100	104		ug/L		104	79 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*102*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*91*		*81 - 118*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*
Dibromofluoromethane (Surr)	*97*		*80 - 119*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-783326/8
Matrix: Water
Analysis Batch: 783326

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	0.76	U	1.1	0.76	0.30	ug/L		06/13/23 13:06	1
Ethylene	0.71	U	1.0	0.71	0.31	ug/L		06/13/23 13:06	1
Methane	1.2	U	1.2	1.2	0.57	ug/L		06/13/23 13:06	1

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: LCS 680-783326/3
Matrix: Water
Analysis Batch: 783326

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methane (TCD)	1920	1870		ug/L		97	73 - 125

Lab Sample ID: LCS 680-783326/6
Matrix: Water
Analysis Batch: 783326

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethane	361	393		ug/L		109	74 - 131
Ethylene	337	359		ug/L		107	72 - 133
Methane	192	206		ug/L		107	73 - 125

Lab Sample ID: LCSD 680-783326/4
Matrix: Water
Analysis Batch: 783326

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
Methane (TCD)	1920	1810		ug/L		94	73 - 125	3	30

Lab Sample ID: LCSD 680-783326/7
Matrix: Water
Analysis Batch: 783326

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
Ethane	361	374		ug/L		104	74 - 131	5	30
Ethylene	337	342		ug/L		102	72 - 133	5	30
Methane	192	196		ug/L		102	73 - 125	5	30

Lab Sample ID: MB 680-801193/8
Matrix: Water
Analysis Batch: 801193

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	0.76	U	1.1	0.76	0.30	ug/L		10/05/23 14:28	1
Ethylene	0.71	U	1.0	0.71	0.31	ug/L		10/05/23 14:28	1
Methane	1.2	U	1.2	1.2	0.57	ug/L		10/05/23 14:28	1

Lab Sample ID: LCS 680-801193/3
Matrix: Water
Analysis Batch: 801193

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methane (TCD)	1920	1880		ug/L		98	73 - 125

Lab Sample ID: LCS 680-801193/6
Matrix: Water
Analysis Batch: 801193

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethane	361	362		ug/L		100	74 - 131
Ethylene	337	321		ug/L		95	72 - 133

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: LCS 680-801193/6
Matrix: Water
Analysis Batch: 801193

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Methane			192	187		ug/L		97	73 - 125		

Lab Sample ID: LCSD 680-801193/4
Matrix: Water
Analysis Batch: 801193

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
Methane (TCD)			1920	2010		ug/L		104	73 - 125	7	30

Lab Sample ID: LCSD 680-801193/7
Matrix: Water
Analysis Batch: 801193

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
Ethane			361	344		ug/L		95	74 - 131	5	30
Ethylene			337	311		ug/L		92	72 - 133	3	30
Methane			192	176		ug/L		92	73 - 125	6	30

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-783805/33
Matrix: Water
Analysis Batch: 783805

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		06/15/23 20:21	1

Lab Sample ID: LCS 680-783805/34
Matrix: Water
Analysis Batch: 783805

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Sulfate			10.0	9.73	M	mg/L		97	87 - 112		

Lab Sample ID: LCSD 680-783805/35
Matrix: Water
Analysis Batch: 783805

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
Sulfate			10.0	9.67		mg/L		97	87 - 112	1	15

Lab Sample ID: 680-236086-1 MS
Matrix: Water
Analysis Batch: 783805

Client Sample ID: G6M-04-02X-SPR23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Sulfate	6.0		10.0	16.4		mg/L		103	87 - 112		

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

Lab Sample ID: 680-236086-1 MSD
Matrix: Water
Analysis Batch: 783805

Client Sample ID: G6M-04-02X-SPR23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	6.0		10.0	15.8	M	mg/L		97	87 - 112	4	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-783316/1-A
Matrix: Water
Analysis Batch: 783688

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 783316

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		06/14/23 15:51	1
Manganese	5.0	U	10	5.0	1.3	ug/L		06/14/23 15:51	1

Lab Sample ID: LCS 680-783316/2-A
Matrix: Water
Analysis Batch: 783688

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 783316

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	5000	5240		ug/L		105	87 - 115
Manganese	400	431		ug/L		108	90 - 114

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-783315/1-A
Matrix: Water
Analysis Batch: 783691

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 783315

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		06/14/23 15:10	1

Lab Sample ID: LCS 680-783315/2-A
Matrix: Water
Analysis Batch: 783691

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 783315

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	105		ug/L		105	84 - 116

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 680-783582/4
Matrix: Water
Analysis Batch: 783582

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0	5.0	2.2	mg/L		06/13/23 17:22	1

Lab Sample ID: LCS 680-783582/6
Matrix: Water
Analysis Batch: 783582

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	250	246		mg/L		98	90 - 112

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: LCSD 680-783582/31
Matrix: Water
Analysis Batch: 783582

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
Alkalinity			250	247		mg/L		99	90 - 112	1	30

Method: 353.2-1993 R2.0 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 680-785065/4
Matrix: Water
Analysis Batch: 785065

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.0110	J	0.10	0.025	0.010	mg/L		06/22/23 13:03	1

Lab Sample ID: LCS 680-785065/5
Matrix: Water
Analysis Batch: 785065

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Nitrate Nitrite as N			1.00	1.00		mg/L		100	90 - 110		

Lab Sample ID: 680-236086-1 MS
Matrix: Water
Analysis Batch: 785065

Client Sample ID: G6M-04-02X-SPR23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Nitrate Nitrite as N	0.083	J1	1.00	0.877	J1	mg/L		79	90 - 110		

Lab Sample ID: 680-236086-1 MSD
Matrix: Water
Analysis Batch: 785065

Client Sample ID: G6M-04-02X-SPR23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate Nitrite as N	0.083	J1	1.00	0.883	J1	mg/L		80	90 - 110	1	10

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 410-387509/1
Matrix: Water
Analysis Batch: 387509

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfide	1.5	U	2.0	1.5	0.70	mg/L		06/16/23 11:09	1

Lab Sample ID: LCS 410-387509/2
Matrix: Water
Analysis Batch: 387509

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Sulfide			20.1	18.5		mg/L		92	77 - 110		

Client: Seres Engineering & Services LLC
Job ID: 680-236086-1
Project/Site: Seres-Arcadis JV,LTM, AOC 50, Spring 2023

Method: 9060 - Organic Carbon, Total (TOC)

Lab Sample ID: MB 680-784475/2
Matrix: Water
Analysis Batch: 784475

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon	1.0	U	1.5	1.0	0.50	mg/L		06/17/23 17:13	1

Lab Sample ID: LCS 680-784475/3
Matrix: Water
Analysis Batch: 784475

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Organic Carbon			20.0	18.5		mg/L		93	80 - 120		

Lab Sample ID: LCSD 680-784475/4
Matrix: Water
Analysis Batch: 784475

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
Total Organic Carbon			20.0	18.7		mg/L		94	80 - 120	1	25

GC/MS VOA

Analysis Batch: 784670

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236086-4	AOC50-RB-01-SPR23	Total/NA	Water	8260D	
680-236086-7	AOC50-TB-02-SPR23	Total/NA	Water	8260D	
MB 680-784670/9	Method Blank	Total/NA	Water	8260D	
LCS 680-784670/5	Lab Control Sample	Total/NA	Water	8260D	
LCSD 680-784670/6	Lab Control Sample Dup	Total/NA	Water	8260D	

Analysis Batch: 784770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236086-1	G6M-04-02X-SPR23	Total/NA	Water	8260D	
680-236086-2	G6M-13-02X-SPR23	Total/NA	Water	8260D	
680-236086-3	G6M-13-05X-SPR23	Total/NA	Water	8260D	
MB 680-784770/9	Method Blank	Total/NA	Water	8260D	
LCS 680-784770/3	Lab Control Sample	Total/NA	Water	8260D	
LCSD 680-784770/4	Lab Control Sample Dup	Total/NA	Water	8260D	

Analysis Batch: 785162

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236086-3 - RA	G6M-13-05X-SPR23	Total/NA	Water	8260D	
MB 680-785162/8	Method Blank	Total/NA	Water	8260D	
LCS 680-785162/4	Lab Control Sample	Total/NA	Water	8260D	
LCSD 680-785162/5	Lab Control Sample Dup	Total/NA	Water	8260D	

GC VOA

Analysis Batch: 783326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236086-1	G6M-04-02X-SPR23	Total/NA	Water	RSK-175	
680-236086-1 - RA	G6M-04-02X-SPR23	Total/NA	Water	RSK-175	
680-236086-2	G6M-13-02X-SPR23	Total/NA	Water	RSK-175	
680-236086-3	G6M-13-05X-SPR23	Total/NA	Water	RSK-175	
MB 680-783326/8	Method Blank	Total/NA	Water	RSK-175	
LCS 680-783326/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-783326/6	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-783326/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-783326/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	

Analysis Batch: 801193

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236086-2 - RA	G6M-13-02X-SPR23	Total/NA	Water	RSK-175	
680-236086-3 - RA	G6M-13-05X-SPR23	Total/NA	Water	RSK-175	
MB 680-801193/8	Method Blank	Total/NA	Water	RSK-175	
LCS 680-801193/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-801193/6	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-801193/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-801193/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	

HPLC/IC

Analysis Batch: 783805

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236086-1	G6M-04-02X-SPR23	Total/NA	Water	9056A	
680-236086-2	G6M-13-02X-SPR23	Total/NA	Water	9056A	

HPLC/IC (Continued)

Analysis Batch: 783805 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236086-3	G6M-13-05X-SPR23	Total/NA	Water	9056A	
MB 680-783805/33	Method Blank	Total/NA	Water	9056A	
LCS 680-783805/34	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-783805/35	Lab Control Sample Dup	Total/NA	Water	9056A	
680-236086-1 MS	G6M-04-02X-SPR23	Total/NA	Water	9056A	
680-236086-1 MSD	G6M-04-02X-SPR23	Total/NA	Water	9056A	

Metals

Prep Batch: 783315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236086-1	G6M-04-02X-SPR23	Dissolved	Water	3005A	
680-236086-2	G6M-13-02X-SPR23	Dissolved	Water	3005A	
680-236086-3	G6M-13-05X-SPR23	Dissolved	Water	3005A	
680-236086-4	AOC50-RB-01-SPR23	Dissolved	Water	3005A	
MB 680-783315/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-783315/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 783316

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236086-1	G6M-04-02X-SPR23	Dissolved	Water	3005A	
680-236086-2	G6M-13-02X-SPR23	Dissolved	Water	3005A	
680-236086-3	G6M-13-05X-SPR23	Dissolved	Water	3005A	
680-236086-4	AOC50-RB-01-SPR23	Dissolved	Water	3005A	
MB 680-783316/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-783316/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 783688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236086-1	G6M-04-02X-SPR23	Dissolved	Water	6010C	783316
680-236086-2	G6M-13-02X-SPR23	Dissolved	Water	6010C	783316
680-236086-3	G6M-13-05X-SPR23	Dissolved	Water	6010C	783316
680-236086-4	AOC50-RB-01-SPR23	Dissolved	Water	6010C	783316
MB 680-783316/1-A	Method Blank	Total Recoverable	Water	6010C	783316
LCS 680-783316/2-A	Lab Control Sample	Total Recoverable	Water	6010C	783316

Analysis Batch: 783691

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236086-1	G6M-04-02X-SPR23	Dissolved	Water	6020A	783315
680-236086-2	G6M-13-02X-SPR23	Dissolved	Water	6020A	783315
680-236086-3	G6M-13-05X-SPR23	Dissolved	Water	6020A	783315
680-236086-4	AOC50-RB-01-SPR23	Dissolved	Water	6020A	783315
MB 680-783315/1-A	Method Blank	Total Recoverable	Water	6020A	783315
LCS 680-783315/2-A	Lab Control Sample	Total Recoverable	Water	6020A	783315

General Chemistry

Analysis Batch: 387509

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236086-1	G6M-04-02X-SPR23	Total/NA	Water	9034	
680-236086-2	G6M-13-02X-SPR23	Total/NA	Water	9034	
680-236086-3	G6M-13-05X-SPR23	Total/NA	Water	9034	

General Chemistry (Continued)

Analysis Batch: 387509 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-387509/1	Method Blank	Total/NA	Water	9034	
LCS 410-387509/2	Lab Control Sample	Total/NA	Water	9034	

Analysis Batch: 783582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236086-1	G6M-04-02X-SPR23	Total/NA	Water	2320B-2011	
680-236086-2	G6M-13-02X-SPR23	Total/NA	Water	2320B-2011	
680-236086-3	G6M-13-05X-SPR23	Total/NA	Water	2320B-2011	
MB 680-783582/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-783582/6	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-783582/31	Lab Control Sample Dup	Total/NA	Water	2320B-2011	

Analysis Batch: 784475

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236086-1	G6M-04-02X-SPR23	Total/NA	Water	9060	
680-236086-2	G6M-13-02X-SPR23	Total/NA	Water	9060	
680-236086-3	G6M-13-05X-SPR23	Total/NA	Water	9060	
MB 680-784475/2	Method Blank	Total/NA	Water	9060	
LCS 680-784475/3	Lab Control Sample	Total/NA	Water	9060	
LCSD 680-784475/4	Lab Control Sample Dup	Total/NA	Water	9060	

Analysis Batch: 785065

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236086-1	G6M-04-02X-SPR23	Total/NA	Water	353.2-1993 R2.0	
680-236086-2	G6M-13-02X-SPR23	Total/NA	Water	353.2-1993 R2.0	
680-236086-3	G6M-13-05X-SPR23	Total/NA	Water	353.2-1993 R2.0	
MB 680-785065/4	Method Blank	Total/NA	Water	353.2-1993 R2.0	
LCS 680-785065/5	Lab Control Sample	Total/NA	Water	353.2-1993 R2.0	
680-236086-1 MS	G6M-04-02X-SPR23	Total/NA	Water	353.2-1993 R2.0	
680-236086-1 MSD	G6M-04-02X-SPR23	Total/NA	Water	353.2-1993 R2.0	

Client Sample ID: G6M-04-02X-SPR23
Lab Sample ID: 680-236086-1

Date Collected: 06/07/23 11:25
Matrix: Water
Date Received: 06/09/23 09:46

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	784770	06/21/23 16:18	Y1S	EET SAV
	Instrument ID: CMSB									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	783326	06/13/23 15:04	OK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	RSK-175	RA	1	17 mL	17 mL	783326	06/13/23 16:08	OK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	783805	06/15/23 20:59	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			25 mL	25 mL	783316	06/13/23 10:35	RR	EET SAV
Dissolved	Analysis	6010C		1			783688	06/14/23 16:05	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	783315	06/13/23 10:35	RR	EET SAV
Dissolved	Analysis	6020A		1			783691	06/14/23 15:39	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	2320B-2011		1			783582	06/13/23 19:16	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	785065	06/22/23 13:06	AF	EET SAV
	Instrument ID: SEAL 1									
Total/NA	Analysis	9034		1	200 mL	200 mL	387509	06/16/23 11:09	USE1	ELLE
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060		1	40 mL	40 mL	784475	06/18/23 01:15	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: G6M-13-02X-SPR23
Lab Sample ID: 680-236086-2

Date Collected: 06/07/23 11:15
Matrix: Water
Date Received: 06/09/23 09:46

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	784770	06/21/23 16:38	Y1S	EET SAV
	Instrument ID: CMSB									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	783326	06/13/23 16:21	OK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	RSK-175	RA	1	17 mL	17 mL	801193	10/05/23 14:55	OK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	783805	06/15/23 21:37	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			25 mL	25 mL	783316	06/13/23 10:35	RR	EET SAV
Dissolved	Analysis	6010C		1			783688	06/14/23 16:07	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	783315	06/13/23 10:35	RR	EET SAV
Dissolved	Analysis	6020A		1			783691	06/14/23 15:43	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	2320B-2011		1			783582	06/13/23 19:07	PG	EET SAV
	Instrument ID: MANTECH 2									

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-236086-1
Project/Site: Seres-Arcadis JV,LTM, AOC 50, Spring 2023

Client Sample ID: G6M-13-02X-SPR23
Lab Sample ID: 680-236086-2
Date Collected: 06/07/23 11:15
Matrix: Water
Date Received: 06/09/23 09:46

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	785065	06/22/23 13:13	AF	EET SAV
Total/NA	Analysis	9034		1	200 mL	200 mL	387509	06/16/23 11:09	USE1	ELLE
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060		1	40 mL	40 mL	784475	06/18/23 01:35	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: G6M-13-05X-SPR23
Lab Sample ID: 680-236086-3
Date Collected: 06/07/23 09:35
Matrix: Water
Date Received: 06/09/23 09:46

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D	RA	1	5 mL	5 mL	785162	06/23/23 14:55	Y1S	EET SAV
	Instrument ID: CMSAJ									
Total/NA	Analysis	8260D		1	5 mL	5 mL	784770	06/21/23 16:58	Y1S	EET SAV
	Instrument ID: CMSB									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	783326	06/13/23 16:34	OK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	RSK-175	RA	1	17 mL	17 mL	801193	10/05/23 15:07	OK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	783805	06/15/23 21:49	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			25 mL	25 mL	783316	06/13/23 10:35	RR	EET SAV
Dissolved	Analysis	6010C		1			783688	06/14/23 16:13	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	783315	06/13/23 10:35	RR	EET SAV
Dissolved	Analysis	6020A		1			783691	06/14/23 15:47	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	2320B-2011		1			783582	06/13/23 19:25	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	785065	06/22/23 13:12	AF	EET SAV
	Instrument ID: SEAL 1									
Total/NA	Analysis	9034		1	200 mL	200 mL	387509	06/16/23 11:09	USE1	ELLE
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060		1	40 mL	40 mL	784475	06/18/23 01:57	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: AOC50-RB-01-SPR23
Lab Sample ID: 680-236086-4
Date Collected: 06/07/23 15:30
Matrix: Water
Date Received: 06/09/23 09:46

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	784670	06/21/23 13:10	P1C	EET SAV
	Instrument ID: CMSAG									

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-236086-1
Project/Site: Seres-Arcadis JV,LTM, AOC 50, Spring 2023

Client Sample ID: AOC50-RB-01-SPR23
Lab Sample ID: 680-236086-4
Date Collected: 06/07/23 15:30
Matrix: Water
Date Received: 06/09/23 09:46

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			25 mL	25 mL	783316	06/13/23 10:35	RR	EET SAV
Dissolved	Analysis	6010C		1			783688	06/14/23 16:15	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	783315	06/13/23 10:35	RR	EET SAV
Dissolved	Analysis	6020A		1			783691	06/14/23 15:59	BWR	EET SAV
	Instrument ID: ICPMSC									

Client Sample ID: AOC50-TB-02-SPR23
Lab Sample ID: 680-236086-7
Date Collected: 06/07/23 00:00
Matrix: Water
Date Received: 06/09/23 09:46

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	784670	06/21/23 13:29	P1C	EET SAV
	Instrument ID: CMSAG									

Laboratory References:

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

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

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-236086-1
Project/Site: Seres-Arcadis JV,LTM, AOC 50, Spring 2023

Laboratory: Eurofins Savannah

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

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-22-24

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-24

Method Summary

Client: Seres Engineering & Services LLC
Job ID: 680-236086-1
Project/Site: Seres-Arcadis JV,LTM, AOC 50, Spring 2023

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds (GC/MS)	SW846	EET SAV
RSK-175	Dissolved Gases (GC)	RSK	EET SAV
9056A	Anions, Ion Chromatography	SW846	EET SAV
6010C	Metals (ICP)	SW846	EET SAV
6020A	Metals (ICP/MS)	SW846	EET SAV
2320B-2011	Alkalinity, Total	SM	EET SAV
353.2-1993 R2.0	Nitrogen, Nitrate-Nitrite	MCAWW	EET SAV
9034	Sulfide, Acid Soluble and Insoluble (Titrimetric)	SW846	ELLE
9060	Organic Carbon, Total (TOC)	SW846	EET SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET SAV
5030C	Purge and Trap	SW846	EET SAV

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

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

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

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive Suite B7, Charleston SC 29492
(843) 619-370-0374 jennifer singer@arcadis com

COC # AOC50_SPR23

US Army Corps of Engineers ®

Project Name Former Fort Devens, Long Term Monitoring	Laboratory Eurofins Environment Testing TestAmerica, Savannah, GA	Event Seres-Arcadis JV, Long Term Monitoring, AOC 50, Spring 2023
Project Number DEVNS-LTM	POC Jerry Lanier, 912-250-0281, jerry lanier@eurofinsus com	
WBS Code	Ship to Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments
A2320B (A) = Alkalinity
E353.2 (A) = Nitrite Nitrate as N
RSK175 (A) = Dissolved Gases
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9034 (A) = Sulfide

Equipment

Code	Matrix
WG	Ground Water

Code	Container/Preservative
5	1x 125mL plastic, Cool < 6degC
7	2x 250mL plastic, ZnAc/NaOH Cool < 6degC
8	3x 40mL glass VOA Vials HCl pH < 2 Cool < 6degC
9	1x 250mL, plastic, HNO3 pH < 2 Cool < 6degC
10	1x 250mL, plastic, HNO3, pH < 2, Cool < 6degC
29	3x 40mL glass VOA Vials, HCl pH < 2, Cool < 6degC
46	1x 250mL, plastic Cool < 6degC
47	1x 500mL amber glass H2SO4 Cool < 6degC

Boston #215

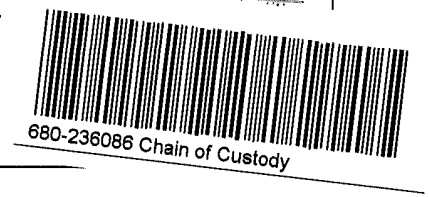
Analytical Test Method

Event Seres-Arcadis JV, Long Term Monitoring, AOC 50, Spring 2023

	A2320B (A)	E353.2 (A)	RSK175 (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW8260B - VOCs	SW9034 (A)	SW9056A - SO4	SW9060A - TOC
	46	47	8	9	9	29	7	5	10

	Sample ID	Matrix	Date	Time	Samp Init	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
1	G6M-04-02X-SPR23	WG	6/7/23	11:25	DG	G6M-04-02X	N1	80 00	90 00		
2	G6M-04-07X-SPR23	WG				G6M-04-07X	N1	120 00	130 00		
3	G6M-04-10A-SPR23	WG				G6M-04-10A	N1	30 00	40 00		
4	G6M-04-10A-SPR23	WG				G6M-04-10A	MS1	30 00	40 00		
5	G6M-04-10A-SPR23	WG				G6M-04-10A	SD1	30 00	40 00		
6	G6M-07-02X-SPR23	WG				G6M-07-02X	N1	22 50	27 50		
7	G6M-DUP01-SPR23	WG				G6M-07-02X	FD1	22 50	27 50		
8	G6M-13-01X-SPR23	WG				G6M-13-01X	N1	125 00	135 00		
9	G6M-13-02X-SPR23	WG	6/7/23	11:15	GS	G6M-13-02X	N1	115 00	125 00		
10	G6M-13-05X-SPR23	WG	6/7/2023	9:35	FG	G6M-13-05X	N1	45 00	55 00		
11	~~G6M-97-05B-SPR23~~	~~WG~~				~~G6M-97-05B~~	~~N1~~	~~130.00~~	~~135.00~~		
12	XSA-12-96X-SPR23	WG				XSA-12-96X	N1	120 00	130 00		
13	XSA-12-97X-SPR23	WG				XSA-12-97X	N1	120 00	130 00		
14	AOC 50-RB-01-SPR23	WG	6/7/23	15:30	GS						
15											
16											
17											
18											

Turnaround Time Standard



6/6/23 1700

Relinquished by (Signature)
Date 6/7/2023
Time 17:20
Received by (Signature)

Received by Laboratory (Signature) TA 6-9-23 946
Date
Time 5.4/5.2

10/18/2023 (Rev. 1)

Eurofins Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Phone: 912-354-7858 Fax: 912-352-0165

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Lanier, Jerry A	Carrier Tracking No(s):	COC No: 680-740778.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Jerry Lanier@et eurofinsus com	State of Origin: Massachusetts	Page: Page 1 of 1
Company: Eurofins Lancaster Laboratories Environm		Accreditations Required (See note): Dept. of Defense ELAP - A2LA, DoD - ANAB		Job #: 680-236086-1
Address: 2425 New Holland Pike, ,	Due Date Requested: 6/20/2023			
City: Lancaster	TAT Requested (days):			
State, Zip: PA, 17601				
Phone: 717-656-2300(Tel)	PO #			
Email:	WO #			
Project Name: Seres-Arcadis JV,LTM, AOC 32/43A, Spring 2023	Project #: 68023801			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify), Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	MAVPH/5030C (MOD) MA VPH	MAVPH_Calc	PRE_SCREEN	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
32M-01-17XBR-SPR23 (680-236086-5)	6/7/23	14:05 Eastern		Water			X	X	X	2	
32M-01-17XBR-SPR23 (680-236086-5MS)	6/7/23	14:05 Eastern	MS	Water			X			3	
32M-01-17XBR-SPR23 (680-236086-5MSD)	6/7/23	14:05 Eastern	MSD	Water			X			3	
32M-RB-01-SPR23 (680-236086-6)	6/7/23	15:00 Eastern		Water			X	X	X	3	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Southeast, 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 Environment Testing Southeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Southeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Southeast, LLC.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) — Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	Relinquished by	Date/Time	Company	Received by	Date/Time: 6/13/23 1005	Company: FEDEX

Custody Seals Intact: Δ Yes Δ No — Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: Raw 1.9 - COC 1.7

MB

Ver: 06/08/2021

Eurofins Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Phone: 912-354-7858 Fax: 912-352-0165

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Lanier, Jerry A	Carrier Tracking No(s):	COC No: 680-740983.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Jerry.Lanier@et.eurofinsus.com	State of Origin: Massachusetts	Page: Page 1 of 1
Company: Eurofins Lancaster Laboratories Environm		Accreditations Required (See note): Dept. of Defense ELAP - A2LA, DoD - ANAB		Job #: 680-236086-1
Address: 2425 New Holland Pike, ,	Due Date Requested: 6/20/2023			
City: Lancaster	TAT Requested (days):			
State, Zip: PA, 17601	PO #:			
Phone: 717-656-2300(Tel)	WO #:			
Email:	Project #: 68023801			
Project Name: Seres-Arcadis JV,LTM, AOC 50, Spring 2023	SSOW#:			
Site:				

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9034/ Sulfide	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
G6M-04-02X-SPR23 (680-236086-1)	6/7/23	11:25 Eastern		Water			X	2	
G6M-13-02X-SPR23 (680-236086-2)	6/7/23	11:15 Eastern		Water			X	2	
G6M-13-05X-SPR23 (680-236086-3)	6/7/23	09:35 Eastern		Water			X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Southeast, 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 Environment Testing Southeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Southeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Southeast, LLC.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	[signature]	10/13/23 1610	Eurofins	[signature]		
2				[signature]		
3				[signature]	6-14-23 1610	

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: Raw 0.7 - COR 0.5

MB

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-236086-1

Login Number: 236086
List Number: 1
Creator: Sims, Robert D

List Source: Eurofins Savannah

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Received Trip Blank(s) not listed on COC.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	Refer to Job Narrative for details.
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-236086-1

Login Number: 236086
List Number: 2
Creator: Ballard, Megan

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC
List Creation: 06/13/23 11:31 AM

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable (</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	True	

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-236086-1

Login Number: 236086
List Number: 3
Creator: Ballard, Megan

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC
List Creation: 06/14/23 03:19 PM

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable (</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Heather Levesque
Seres Engineering & Services LLC
669 Marina Drive
Suite B7
Charleston, South Carolina 29492

Generated 7/11/2023 11:20:51 AM

JOB DESCRIPTION

Seres-Arcadis JV, LTM, AOC 50, Spring 2023

JOB NUMBER

680-236498-1

Eurofins Savannah
5102 LaRoche Avenue
Savannah GA 31404

See page two for job notes and contact information.

myEOL

Job Notes

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization



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Definitions/Glossary

Client: Seres Engineering & Services LLC
Job ID: 680-236498-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Spring 2023

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
M	Manual integrated compound.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

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

Sample Summary

Client: Seres Engineering & Services LLC
Job ID: 680-236498-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Spring 2023

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-236498-1	XSA-12-97X-SPR23	Water	06/15/23 14:22	06/17/23 09:30
680-236498-2	AOC50-RB02-SPR23	Water	06/15/23 15:30	06/17/23 09:30
680-236498-3	AOC50-TB-03-SPR23	Water	06/16/23 15:00	06/17/23 09:30

Job ID: 680-236498-1

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-236498-1

Receipt
The samples were received on 6/17/2023 9:30 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 1.6°C, 3.4°C and 5.7°C

GC/MS VOA
Method 8260D_DOD5: The continuing calibration verification (CCV) analyzed in batch 680-785871 was outside the method criteria for the following analyte(s): 2-Butanone (MEK), Carbon tetrachloride, Dichlorodifluoromethane and Trichlorofluoromethane. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8260D_DOD5: The following analyte(s) recovered outside control limits for the LCSD associated with analytical batch 680-785871: Trichlorofluoromethane. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

Method 8260D_DOD5: The closing continuing calibration verification (CCVC) associated with batch 680-785871 recovered above the upper control limit for Trichlorofluoromethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8260D_DOD5: The continuing calibration verification (CCV) associated with batch 680-786096 recovered above the upper control limit for Chloroethane and Trichlorofluoromethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The continuing calibration verification (CCV) also recovered outside acceptance criteria, low biased, for Dichlorodifluoromethane. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

Method 8260D_DOD5: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 680-786096 recovered outside control limits for the following analytes: Bromomethane, Chloroethane, Chloromethane and Trichlorofluoromethane.

Method 8260D_DOD5: The continuing calibration verification cap (CCVC) analyzed in batch 680-786096 was outside the method criteria for the following analyte(s): Chloroethane and Trichlorofluoromethane. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

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

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

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Spring 2023

Job ID: 680-236498-1

Client Sample ID: XSA-12-97X-SPR23
Date Collected: 06/15/23 14:22
Date Received: 06/17/23 09:30

Lab Sample ID: 680-236498-1
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		06/28/23 18:35	1
Benzene	**5.5**		2.0	1.0	0.27	ug/L		06/28/23 18:35	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		06/28/23 18:35	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/28/23 18:35	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		06/28/23 18:35	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		06/28/23 18:35	1
Bromomethane	10	U	20	10	3.7	ug/L		06/28/23 18:35	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		06/28/23 18:35	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		06/28/23 18:35	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		06/28/23 18:35	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/28/23 18:35	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		06/28/23 18:35	1
Carbon tetrachloride	1.0	U Q	2.0	1.0	0.30	ug/L		06/28/23 18:35	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		06/28/23 18:35	1
Chloroethane	10	U	20	10	4.6	ug/L		06/28/23 18:35	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		06/28/23 18:35	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		06/28/23 18:35	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		06/28/23 18:35	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		06/28/23 18:35	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		06/28/23 18:35	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		06/28/23 18:35	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		06/28/23 18:35	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/28/23 18:35	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/28/23 18:35	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/28/23 18:35	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/28/23 18:35	1
Dichlorodifluoromethane	1.0	U Q	2.0	1.0	0.36	ug/L		06/28/23 18:35	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		06/28/23 18:35	1
1,2-Dichloroethane	1.0	U	2.0	1.0	0.25	ug/L		06/28/23 18:35	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		06/28/23 18:35	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		06/28/23 18:35	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		06/28/23 18:35	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		06/28/23 18:35	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		06/28/23 18:35	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		06/28/23 18:35	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		06/28/23 18:35	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		06/28/23 18:35	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		06/28/23 18:35	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		06/28/23 18:35	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		06/28/23 18:35	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		06/28/23 18:35	1
2-Hexanone	10	U M	20	10	3.2	ug/L		06/28/23 18:35	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		06/28/23 18:35	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		06/28/23 18:35	1
Methylene Chloride	10	U	20	10	3.2	ug/L		06/28/23 18:35	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		06/28/23 18:35	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		06/28/23 18:35	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		06/28/23 18:35	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		06/28/23 18:35	1

Client Sample ID: XSA-12-97X-SPR23
Lab Sample ID: 680-236498-1

Date Collected: 06/15/23 14:22
Matrix: Water
Date Received: 06/17/23 09:30

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		06/28/23 18:35	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		06/28/23 18:35	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		06/28/23 18:35	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		06/28/23 18:35	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		06/28/23 18:35	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		06/28/23 18:35	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		06/28/23 18:35	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		06/28/23 18:35	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		06/28/23 18:35	1
Trichloroethene	**0.28**	**J**	1.0	0.50	0.20	ug/L		06/28/23 18:35	1
Trichlorofluoromethane	1.0	U Q	2.0	1.0	0.33	ug/L		06/28/23 18:35	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		06/28/23 18:35	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/28/23 18:35	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		06/28/23 18:35	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		06/28/23 18:35	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		06/28/23 18:35	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		06/28/23 18:35	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		06/28/23 18:35	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		06/28/23 18:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*89 - 112*		*06/28/23 18:35*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*06/28/23 18:35*	*1*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*		*06/28/23 18:35*	*1*
Dibromofluoromethane (Surr)	*94*		*80 - 119*		*06/28/23 18:35*	*1*

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**4100**		100	50	20	ug/L		06/20/23 17:16	1
Manganese	**4400**		10	5.0	1.3	ug/L		06/20/23 17:16	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**83**		5.0	3.0	0.86	ug/L		06/20/23 15:03	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Spring 2023

Job ID: 680-236498-1

Client Sample ID: AOC50-RB02-SPR23
Date Collected: 06/15/23 15:30
Date Received: 06/17/23 09:30

Lab Sample ID: 680-236498-2
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		06/28/23 18:57	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		06/28/23 18:57	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		06/28/23 18:57	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/28/23 18:57	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		06/28/23 18:57	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		06/28/23 18:57	1
Bromomethane	10	U	20	10	3.7	ug/L		06/28/23 18:57	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		06/28/23 18:57	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		06/28/23 18:57	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		06/28/23 18:57	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/28/23 18:57	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		06/28/23 18:57	1
Carbon tetrachloride	1.0	U Q	2.0	1.0	0.30	ug/L		06/28/23 18:57	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		06/28/23 18:57	1
Chloroethane	10	U	20	10	4.6	ug/L		06/28/23 18:57	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		06/28/23 18:57	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		06/28/23 18:57	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		06/28/23 18:57	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		06/28/23 18:57	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		06/28/23 18:57	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		06/28/23 18:57	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		06/28/23 18:57	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/28/23 18:57	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/28/23 18:57	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/28/23 18:57	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/28/23 18:57	1
Dichlorodifluoromethane	1.0	U Q	2.0	1.0	0.36	ug/L		06/28/23 18:57	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		06/28/23 18:57	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		06/28/23 18:57	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		06/28/23 18:57	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		06/28/23 18:57	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		06/28/23 18:57	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		06/28/23 18:57	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		06/28/23 18:57	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		06/28/23 18:57	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		06/28/23 18:57	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		06/28/23 18:57	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		06/28/23 18:57	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		06/28/23 18:57	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		06/28/23 18:57	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		06/28/23 18:57	1
2-Hexanone	10	U M	20	10	3.2	ug/L		06/28/23 18:57	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		06/28/23 18:57	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		06/28/23 18:57	1
Methylene Chloride	10	U	20	10	3.2	ug/L		06/28/23 18:57	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		06/28/23 18:57	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		06/28/23 18:57	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		06/28/23 18:57	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		06/28/23 18:57	1

Client Sample ID: AOC50-RB02-SPR23
Lab Sample ID: 680-236498-2

Date Collected: 06/15/23 15:30
Matrix: Water
Date Received: 06/17/23 09:30

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		06/28/23 18:57	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		06/28/23 18:57	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		06/28/23 18:57	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		06/28/23 18:57	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		06/28/23 18:57	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		06/28/23 18:57	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		06/28/23 18:57	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		06/28/23 18:57	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		06/28/23 18:57	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		06/28/23 18:57	1
Trichlorofluoromethane	1.0	U Q	2.0	1.0	0.33	ug/L		06/28/23 18:57	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		06/28/23 18:57	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/28/23 18:57	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		06/28/23 18:57	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		06/28/23 18:57	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		06/28/23 18:57	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		06/28/23 18:57	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		06/28/23 18:57	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		06/28/23 18:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*89 - 112*		*06/28/23 18:57*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*81 - 118*		*06/28/23 18:57*	*1*
4-Bromofluorobenzene (Surr)	*103*		*85 - 114*		*06/28/23 18:57*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 119*		*06/28/23 18:57*	*1*

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		06/20/23 18:12	1
Manganese	5.0	U	10	5.0	1.3	ug/L		06/20/23 18:12	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		06/20/23 20:31	1

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-236498-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Spring 2023

Client Sample ID: AOC50-TB-03-SPR23
Lab Sample ID: 680-236498-3

Date Collected: 06/16/23 15:00
Matrix: Water
Date Received: 06/17/23 09:30

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		06/29/23 15:37	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		06/29/23 15:37	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		06/29/23 15:37	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/29/23 15:37	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		06/29/23 15:37	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		06/29/23 15:37	1
Bromomethane	10	U Q	20	10	3.7	ug/L		06/29/23 15:37	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		06/29/23 15:37	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		06/29/23 15:37	1
sec-Butylbenzene	2.0	U M	2.5	2.0	0.53	ug/L		06/29/23 15:37	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/29/23 15:37	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		06/29/23 15:37	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		06/29/23 15:37	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		06/29/23 15:37	1
Chloroethane	10	U Q	20	10	4.6	ug/L		06/29/23 15:37	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		06/29/23 15:37	1
Chloromethane	2.0	U Q	2.5	2.0	0.54	ug/L		06/29/23 15:37	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		06/29/23 15:37	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		06/29/23 15:37	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		06/29/23 15:37	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		06/29/23 15:37	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		06/29/23 15:37	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/29/23 15:37	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/29/23 15:37	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/29/23 15:37	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/29/23 15:37	1
Dichlorodifluoromethane	1.0	U Q	2.0	1.0	0.36	ug/L		06/29/23 15:37	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		06/29/23 15:37	1
1,2-Dichloroethane	1.0	U	2.0	1.0	0.25	ug/L		06/29/23 15:37	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		06/29/23 15:37	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		06/29/23 15:37	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		06/29/23 15:37	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		06/29/23 15:37	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		06/29/23 15:37	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		06/29/23 15:37	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		06/29/23 15:37	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		06/29/23 15:37	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		06/29/23 15:37	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		06/29/23 15:37	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		06/29/23 15:37	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		06/29/23 15:37	1
2-Hexanone	10	U	20	10	3.2	ug/L		06/29/23 15:37	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		06/29/23 15:37	1
4-Isopropyltoluene	1.0	U M	2.0	1.0	0.44	ug/L		06/29/23 15:37	1
Methylene Chloride	10	U	20	10	3.2	ug/L		06/29/23 15:37	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		06/29/23 15:37	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		06/29/23 15:37	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		06/29/23 15:37	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		06/29/23 15:37	1

Client: Seres Engineering & Services LLC
Job ID: 680-236498-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Spring 2023

Client Sample ID: AOC50-TB-03-SPR23
Lab Sample ID: 680-236498-3
Date Collected: 06/16/23 15:00
Matrix: Water
Date Received: 06/17/23 09:30

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		06/29/23 15:37	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		06/29/23 15:37	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		06/29/23 15:37	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		06/29/23 15:37	1
Toluene	**0.43**	**J**	2.0	1.0	0.25	ug/L		06/29/23 15:37	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		06/29/23 15:37	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		06/29/23 15:37	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		06/29/23 15:37	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		06/29/23 15:37	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		06/29/23 15:37	1
Trichlorofluoromethane	1.0	U Q	2.0	1.0	0.33	ug/L		06/29/23 15:37	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		06/29/23 15:37	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/29/23 15:37	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		06/29/23 15:37	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		06/29/23 15:37	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		06/29/23 15:37	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		06/29/23 15:37	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		06/29/23 15:37	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		06/29/23 15:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*89 - 112*		*06/29/23 15:37*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*06/29/23 15:37*	*1*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*		*06/29/23 15:37*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 119*		*06/29/23 15:37*	*1*

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Spring 2023

Job ID: 680-236498-1

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

Lab Sample ID: MB 680-785871/8
Matrix: Water
Analysis Batch: 785871

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		06/28/23 12:33	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		06/28/23 12:33	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		06/28/23 12:33	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/28/23 12:33	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		06/28/23 12:33	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		06/28/23 12:33	1
Bromomethane	10	U	20	10	3.7	ug/L		06/28/23 12:33	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		06/28/23 12:33	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		06/28/23 12:33	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		06/28/23 12:33	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/28/23 12:33	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		06/28/23 12:33	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		06/28/23 12:33	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		06/28/23 12:33	1
Chloroethane	10	U	20	10	4.6	ug/L		06/28/23 12:33	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		06/28/23 12:33	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		06/28/23 12:33	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		06/28/23 12:33	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		06/28/23 12:33	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		06/28/23 12:33	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		06/28/23 12:33	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		06/28/23 12:33	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/28/23 12:33	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/28/23 12:33	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/28/23 12:33	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/28/23 12:33	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		06/28/23 12:33	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		06/28/23 12:33	1
1,2-Dichloroethane	1.0	U	2.0	1.0	0.25	ug/L		06/28/23 12:33	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		06/28/23 12:33	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		06/28/23 12:33	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		06/28/23 12:33	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		06/28/23 12:33	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		06/28/23 12:33	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		06/28/23 12:33	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		06/28/23 12:33	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		06/28/23 12:33	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		06/28/23 12:33	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		06/28/23 12:33	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		06/28/23 12:33	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		06/28/23 12:33	1
2-Hexanone	10	U	20	10	3.2	ug/L		06/28/23 12:33	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		06/28/23 12:33	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		06/28/23 12:33	1
Methylene Chloride	10	U	20	10	3.2	ug/L		06/28/23 12:33	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		06/28/23 12:33	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		06/28/23 12:33	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		06/28/23 12:33	1

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

Lab Sample ID: MB 680-785871/8
Matrix: Water
Analysis Batch: 785871

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		06/28/23 12:33	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		06/28/23 12:33	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		06/28/23 12:33	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		06/28/23 12:33	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		06/28/23 12:33	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		06/28/23 12:33	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		06/28/23 12:33	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		06/28/23 12:33	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		06/28/23 12:33	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		06/28/23 12:33	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		06/28/23 12:33	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		06/28/23 12:33	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		06/28/23 12:33	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/28/23 12:33	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		06/28/23 12:33	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		06/28/23 12:33	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		06/28/23 12:33	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		06/28/23 12:33	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		06/28/23 12:33	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		06/28/23 12:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*89 - 112*		*06/28/23 12:33*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*06/28/23 12:33*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*06/28/23 12:33*	*1*
Dibromofluoromethane (Surr)	*95*		*80 - 119*		*06/28/23 12:33*	*1*

Lab Sample ID: LCS 680-785871/4
Matrix: Water
Analysis Batch: 785871

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	250	255		ug/L		102	39 - 160
Benzene	50.0	52.1		ug/L		104	79 - 120
Bromobenzene	50.0	54.0		ug/L		108	80 - 120
Chlorobromomethane	50.0	57.2		ug/L		114	78 - 123
Dichlorobromomethane	50.0	46.5		ug/L		93	79 - 125
Bromoform	50.0	43.5		ug/L		87	66 - 130
Bromomethane	50.0	38.9		ug/L		78	53 - 141
2-Butanone (MEK)	250	316		ug/L		126	56 - 143
n-Butylbenzene	50.0	55.4		ug/L		111	75 - 128
sec-Butylbenzene	50.0	52.9		ug/L		106	77 - 126
tert-Butylbenzene	50.0	52.2		ug/L		104	78 - 124
Carbon disulfide	50.0	42.7		ug/L		85	64 - 133
Carbon tetrachloride	50.0	39.9		ug/L		80	72 - 136
Chlorobenzene	50.0	50.0		ug/L		100	82 - 118
Chloroethane	50.0	41.6		ug/L		83	60 - 138
Chloroform	50.0	48.4		ug/L		97	79 - 124

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

Lab Sample ID: LCS 680-785871/4
Matrix: Water
Analysis Batch: 785871

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloromethane	50.0	38.4		ug/L		77	50 - 139
2-Chlorotoluene	50.0	51.2	M	ug/L		102	79 - 122
4-Chlorotoluene	50.0	50.7	M	ug/L		101	78 - 122
Chlorodibromomethane	50.0	44.5		ug/L		89	74 - 126
1,2-Dibromo-3-Chloropropane	50.0	52.8		ug/L		106	62 - 128
Ethylene Dibromide	50.0	48.6		ug/L		97	75 - 127
Dibromomethane	50.0	47.8		ug/L		96	79 - 123
1,2-Dichlorobenzene	50.0	53.2		ug/L		106	80 - 119
1,3-Dichlorobenzene	50.0	52.3		ug/L		105	80 - 119
1,4-Dichlorobenzene	50.0	50.4		ug/L		101	79 - 118
Dichlorodifluoromethane	50.0	36.5		ug/L		73	32 - 152
1,1-Dichloroethane	50.0	49.8		ug/L		100	77 - 125
1,2-Dichloroethane	50.0	49.3		ug/L		99	73 - 128
cis-1,2-Dichloroethene	50.0	47.8		ug/L		96	78 - 123
trans-1,2-Dichloroethene	50.0	42.9		ug/L		86	75 - 124
1,2-Dichloroethene, Total	100	90.7		ug/L		91	79 - 121
1,1-Dichloroethene	50.0	46.9		ug/L		94	71 - 131
1,2-Dichloropropane	50.0	54.9		ug/L		110	78 - 122
1,3-Dichloropropane	50.0	49.3		ug/L		99	80 - 119
2,2-Dichloropropane	50.0	43.9		ug/L		88	60 - 139
1,1-Dichloropropene	50.0	50.9		ug/L		102	79 - 125
cis-1,3-Dichloropropene	50.0	50.9		ug/L		102	75 - 124
trans-1,3-Dichloropropene	50.0	51.1		ug/L		102	73 - 127
Ethylbenzene	50.0	52.8		ug/L		106	79 - 121
Hexachlorobutadiene	50.0	47.7		ug/L		95	66 - 134
2-Hexanone	250	298		ug/L		119	57 - 139
Isopropylbenzene	50.0	51.4		ug/L		103	72 - 131
4-Isopropyltoluene	50.0	53.6		ug/L		107	77 - 127
Methylene Chloride	50.0	46.6		ug/L		93	74 - 124
4-Methyl-2-pentanone (MIBK)	250	290		ug/L		116	67 - 130
Methyl tert-butyl ether	50.0	48.1	M	ug/L		96	71 - 124
Naphthalene	50.0	49.6		ug/L		99	61 - 128
N-Propylbenzene	50.0	51.6		ug/L		103	76 - 126
Styrene	50.0	54.9		ug/L		110	78 - 123
1,1,1,2-Tetrachloroethane	50.0	47.4		ug/L		95	78 - 124
1,1,2,2-Tetrachloroethane	50.0	54.6		ug/L		109	71 - 121
Tetrachloroethene	50.0	47.5		ug/L		95	74 - 129
Toluene	50.0	53.4		ug/L		107	80 - 121
1,2,3-Trichlorobenzene	50.0	54.2		ug/L		108	69 - 129
1,2,4-Trichlorobenzene	50.0	50.2		ug/L		100	69 - 130
1,1,1-Trichloroethane	50.0	44.9		ug/L		90	74 - 131
1,1,2-Trichloroethane	50.0	49.3		ug/L		99	80 - 119
Trichloroethene	50.0	47.2		ug/L		94	79 - 123
Trichlorofluoromethane	50.0	36.4		ug/L		73	65 - 141
1,2,3-Trichloropropane	50.0	51.3		ug/L		103	73 - 122
1,2,4-Trimethylbenzene	50.0	52.1		ug/L		104	76 - 124
1,3,5-Trimethylbenzene	50.0	51.4		ug/L		103	75 - 124
Vinyl acetate	100	95.6		ug/L		96	54 - 146
Vinyl chloride	50.0	43.9		ug/L		88	58 - 137

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

Lab Sample ID: LCS 680-785871/4
Matrix: Water
Analysis Batch: 785871

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
o-Xylene	50.0	52.5		ug/L		105	78 - 122
m-Xylene & p-Xylene	50.0	50.6		ug/L		101	80 - 121
Xylenes, Total	100	103		ug/L		103	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*101*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*89*		*81 - 118*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*
Dibromofluoromethane (Surr)	*95*		*80 - 119*

Lab Sample ID: LCSD 680-785871/5
Matrix: Water
Analysis Batch: 785871

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
Acetone	250	285		ug/L		114	39 - 160	11	20
Benzene	50.0	50.9		ug/L		102	79 - 120	2	20
Bromobenzene	50.0	54.3		ug/L		109	80 - 120	0	20
Chlorobromomethane	50.0	48.7		ug/L		97	78 - 123	16	20
Dichlorobromomethane	50.0	47.1		ug/L		94	79 - 125	1	20
Bromoform	50.0	43.6		ug/L		87	66 - 130	0	20
Bromomethane	50.0	40.2		ug/L		80	53 - 141	3	20
2-Butanone (MEK)	250	307		ug/L		123	56 - 143	3	20
n-Butylbenzene	50.0	53.0		ug/L		106	75 - 128	4	20
sec-Butylbenzene	50.0	51.8		ug/L		104	77 - 126	2	20
tert-Butylbenzene	50.0	51.3		ug/L		103	78 - 124	2	20
Carbon disulfide	50.0	42.1		ug/L		84	64 - 133	1	20
Carbon tetrachloride	50.0	37.5		ug/L		75	72 - 136	6	20
Chlorobenzene	50.0	49.2		ug/L		98	82 - 118	1	20
Chloroethane	50.0	43.0		ug/L		86	60 - 138	3	20
Chloroform	50.0	47.9		ug/L		96	79 - 124	1	20
Chloromethane	50.0	39.3		ug/L		79	50 - 139	2	20
2-Chlorotoluene	50.0	49.4	M	ug/L		99	79 - 122	4	20
4-Chlorotoluene	50.0	51.6		ug/L		103	78 - 122	2	20
Chlorodibromomethane	50.0	44.8		ug/L		90	74 - 126	1	20
1,2-Dibromo-3-Chloropropane	50.0	54.3		ug/L		109	62 - 128	3	20
Ethylene Dibromide	50.0	49.3		ug/L		99	75 - 127	1	20
Dibromomethane	50.0	48.4		ug/L		97	79 - 123	1	20
1,2-Dichlorobenzene	50.0	52.5		ug/L		105	80 - 119	1	20
1,3-Dichlorobenzene	50.0	52.2		ug/L		104	80 - 119	0	20
1,4-Dichlorobenzene	50.0	50.1		ug/L		100	79 - 118	1	20
Dichlorodifluoromethane	50.0	30.8		ug/L		62	32 - 152	17	20
1,1-Dichloroethane	50.0	49.3		ug/L		99	77 - 125	1	20
1,2-Dichloroethane	50.0	47.1		ug/L		94	73 - 128	4	20
cis-1,2-Dichloroethene	50.0	47.7		ug/L		95	78 - 123	0	20
trans-1,2-Dichloroethene	50.0	45.9		ug/L		92	75 - 124	7	20
1,2-Dichloroethene, Total	100	93.6		ug/L		94	79 - 121	3	20
1,1-Dichloroethene	50.0	45.6		ug/L		91	71 - 131	3	20

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

Lab Sample ID: LCSD 680-785871/5
Matrix: Water
Analysis Batch: 785871

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Dichloropropane	50.0	55.0		ug/L		110	78 - 122	0	20
1,3-Dichloropropane	50.0	49.8		ug/L		100	80 - 119	1	20
2,2-Dichloropropane	50.0	42.6		ug/L		85	60 - 139	3	20
1,1-Dichloropropene	50.0	49.4		ug/L		99	79 - 125	3	20
cis-1,3-Dichloropropene	50.0	51.2		ug/L		102	75 - 124	1	20
trans-1,3-Dichloropropene	50.0	50.7		ug/L		101	73 - 127	1	20
Ethylbenzene	50.0	52.4		ug/L		105	79 - 121	1	20
Hexachlorobutadiene	50.0	48.0		ug/L		96	66 - 134	1	20
2-Hexanone	250	296		ug/L		118	57 - 139	1	20
Isopropylbenzene	50.0	50.5		ug/L		101	72 - 131	2	20
4-Isopropyltoluene	50.0	51.9		ug/L		104	77 - 127	3	20
Methylene Chloride	50.0	49.7		ug/L		99	74 - 124	7	20
4-Methyl-2-pentanone (MIBK)	250	290		ug/L		116	67 - 130	0	20
Methyl tert-butyl ether	50.0	52.7	M	ug/L		105	71 - 124	9	20
Naphthalene	50.0	51.3		ug/L		103	61 - 128	3	20
N-Propylbenzene	50.0	51.4		ug/L		103	76 - 126	0	20
Styrene	50.0	54.6		ug/L		109	78 - 123	1	20
1,1,1,2-Tetrachloroethane	50.0	47.3		ug/L		95	78 - 124	0	20
1,1,2,2-Tetrachloroethane	50.0	54.2		ug/L		108	71 - 121	1	20
Tetrachloroethene	50.0	46.9		ug/L		94	74 - 129	1	20
Toluene	50.0	53.4		ug/L		107	80 - 121	0	20
1,2,3-Trichlorobenzene	50.0	54.8		ug/L		110	69 - 129	1	20
1,2,4-Trichlorobenzene	50.0	52.6		ug/L		105	69 - 130	5	20
1,1,1-Trichloroethane	50.0	43.3		ug/L		87	74 - 131	4	20
1,1,2-Trichloroethane	50.0	51.2		ug/L		102	80 - 119	4	20
Trichloroethene	50.0	47.0		ug/L		94	79 - 123	0	20
Trichlorofluoromethane	50.0	30.6	Q	ug/L		61	65 - 141	18	20
1,2,3-Trichloropropane	50.0	50.1		ug/L		100	73 - 122	2	20
1,2,4-Trimethylbenzene	50.0	51.1		ug/L		102	76 - 124	2	20
1,3,5-Trimethylbenzene	50.0	50.9		ug/L		102	75 - 124	1	20
Vinyl acetate	100	92.0		ug/L		92	54 - 146	4	20
Vinyl chloride	50.0	44.2		ug/L		88	58 - 137	1	20
o-Xylene	50.0	52.4		ug/L		105	78 - 122	0	20
m-Xylene & p-Xylene	50.0	49.8		ug/L		100	80 - 121	2	20
Xylenes, Total	100	102		ug/L		102	79 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*99*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*88*		*81 - 118*
4-Bromofluorobenzene (Surr)	*103*		*85 - 114*
Dibromofluoromethane (Surr)	*95*		*80 - 119*

Lab Sample ID: MB 680-786096/10
Matrix: Water
Analysis Batch: 786096

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		06/29/23 13:26	1

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

Lab Sample ID: MB 680-786096/10
Matrix: Water
Analysis Batch: 786096

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	1.0	U	2.0	1.0	0.27	ug/L		06/29/23 13:26	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		06/29/23 13:26	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/29/23 13:26	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		06/29/23 13:26	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		06/29/23 13:26	1
Bromomethane	10	U	20	10	3.7	ug/L		06/29/23 13:26	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		06/29/23 13:26	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		06/29/23 13:26	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		06/29/23 13:26	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/29/23 13:26	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		06/29/23 13:26	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		06/29/23 13:26	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		06/29/23 13:26	1
Chloroethane	10	U	20	10	4.6	ug/L		06/29/23 13:26	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		06/29/23 13:26	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		06/29/23 13:26	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		06/29/23 13:26	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		06/29/23 13:26	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		06/29/23 13:26	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		06/29/23 13:26	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		06/29/23 13:26	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		06/29/23 13:26	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/29/23 13:26	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/29/23 13:26	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		06/29/23 13:26	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		06/29/23 13:26	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		06/29/23 13:26	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		06/29/23 13:26	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		06/29/23 13:26	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		06/29/23 13:26	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		06/29/23 13:26	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		06/29/23 13:26	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		06/29/23 13:26	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		06/29/23 13:26	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		06/29/23 13:26	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		06/29/23 13:26	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		06/29/23 13:26	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		06/29/23 13:26	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		06/29/23 13:26	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		06/29/23 13:26	1
2-Hexanone	10	U M	20	10	3.2	ug/L		06/29/23 13:26	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		06/29/23 13:26	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		06/29/23 13:26	1
Methylene Chloride	10	U	20	10	3.2	ug/L		06/29/23 13:26	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		06/29/23 13:26	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		06/29/23 13:26	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		06/29/23 13:26	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		06/29/23 13:26	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		06/29/23 13:26	1

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

Lab Sample ID: MB 680-786096/10
Matrix: Water
Analysis Batch: 786096

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		06/29/23 13:26	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		06/29/23 13:26	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		06/29/23 13:26	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		06/29/23 13:26	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		06/29/23 13:26	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		06/29/23 13:26	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		06/29/23 13:26	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		06/29/23 13:26	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		06/29/23 13:26	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		06/29/23 13:26	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		06/29/23 13:26	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		06/29/23 13:26	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		06/29/23 13:26	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		06/29/23 13:26	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		06/29/23 13:26	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		06/29/23 13:26	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		06/29/23 13:26	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		06/29/23 13:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*89 - 112*		*06/29/23 13:26*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*81 - 118*		*06/29/23 13:26*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*06/29/23 13:26*	*1*
Dibromofluoromethane (Surr)	*92*		*80 - 119*		*06/29/23 13:26*	*1*

Lab Sample ID: LCS 680-786096/6
Matrix: Water
Analysis Batch: 786096

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	250	243		ug/L		97	39 - 160
Benzene	50.0	51.3		ug/L		103	79 - 120
Bromobenzene	50.0	55.1		ug/L		110	80 - 120
Chlorobromomethane	50.0	53.6		ug/L		107	78 - 123
Dichlorobromomethane	50.0	49.4		ug/L		99	79 - 125
Bromoform	50.0	47.7		ug/L		95	66 - 130
Bromomethane	50.0	50.8		ug/L		102	53 - 141
2-Butanone (MEK)	250	294		ug/L		118	56 - 143
n-Butylbenzene	50.0	54.9		ug/L		110	75 - 128
sec-Butylbenzene	50.0	52.3		ug/L		105	77 - 126
tert-Butylbenzene	50.0	52.1		ug/L		104	78 - 124
Carbon disulfide	50.0	41.1		ug/L		82	64 - 133
Carbon tetrachloride	50.0	41.5		ug/L		83	72 - 136
Chlorobenzene	50.0	49.0		ug/L		98	82 - 118
Chloroethane	50.0	72.8	Q	ug/L		146	60 - 138
Chloroform	50.0	46.6		ug/L		93	79 - 124
Chloromethane	50.0	41.2		ug/L		82	50 - 139
2-Chlorotoluene	50.0	49.4	M	ug/L		99	79 - 122

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

Lab Sample ID: LCS 680-786096/6
Matrix: Water
Analysis Batch: 786096

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4-Chlorotoluene	50.0	50.6		ug/L		101	78 - 122
Chlorodibromomethane	50.0	46.9		ug/L		94	74 - 126
1,2-Dibromo-3-Chloropropane	50.0	58.9		ug/L		118	62 - 128
Ethylene Dibromide	50.0	50.4		ug/L		101	75 - 127
Dibromomethane	50.0	47.6		ug/L		95	79 - 123
1,2-Dichlorobenzene	50.0	54.3		ug/L		109	80 - 119
1,3-Dichlorobenzene	50.0	53.5		ug/L		107	80 - 119
1,4-Dichlorobenzene	50.0	51.6		ug/L		103	79 - 118
Dichlorodifluoromethane	50.0	36.5		ug/L		73	32 - 152
1,1-Dichloroethane	50.0	44.5		ug/L		89	77 - 125
1,2-Dichloroethane	50.0	49.5		ug/L		99	73 - 128
cis-1,2-Dichloroethene	50.0	44.3		ug/L		89	78 - 123
trans-1,2-Dichloroethene	50.0	43.0		ug/L		86	75 - 124
1,2-Dichloroethene, Total	100	87.4		ug/L		87	79 - 121
1,1-Dichloroethene	50.0	43.5		ug/L		87	71 - 131
1,2-Dichloropropane	50.0	54.9		ug/L		110	78 - 122
1,3-Dichloropropane	50.0	49.8		ug/L		100	80 - 119
2,2-Dichloropropane	50.0	44.6		ug/L		89	60 - 139
1,1-Dichloropropene	50.0	52.5		ug/L		105	79 - 125
cis-1,3-Dichloropropene	50.0	55.2		ug/L		110	75 - 124
trans-1,3-Dichloropropene	50.0	51.8		ug/L		104	73 - 127
Ethylbenzene	50.0	52.3		ug/L		105	79 - 121
Hexachlorobutadiene	50.0	45.3		ug/L		91	66 - 134
2-Hexanone	250	311		ug/L		125	57 - 139
Isopropylbenzene	50.0	50.7		ug/L		101	72 - 131
4-Isopropyltoluene	50.0	53.9		ug/L		108	77 - 127
Methylene Chloride	50.0	44.6		ug/L		89	74 - 124
4-Methyl-2-pentanone (MIBK)	250	301		ug/L		120	67 - 130
Methyl tert-butyl ether	50.0	49.0	M	ug/L		98	71 - 124
Naphthalene	50.0	50.4		ug/L		101	61 - 128
N-Propylbenzene	50.0	51.6		ug/L		103	76 - 126
Styrene	50.0	53.5		ug/L		107	78 - 123
1,1,1,2-Tetrachloroethane	50.0	48.2		ug/L		96	78 - 124
1,1,2,2-Tetrachloroethane	50.0	57.9		ug/L		116	71 - 121
Tetrachloroethene	50.0	47.0		ug/L		94	74 - 129
Toluene	50.0	54.4		ug/L		109	80 - 121
1,2,3-Trichlorobenzene	50.0	55.8		ug/L		112	69 - 129
1,2,4-Trichlorobenzene	50.0	50.8		ug/L		102	69 - 130
1,1,1-Trichloroethane	50.0	44.4		ug/L		89	74 - 131
1,1,2-Trichloroethane	50.0	50.1		ug/L		100	80 - 119
Trichloroethene	50.0	47.2		ug/L		94	79 - 123
Trichlorofluoromethane	50.0	82.5	Q	ug/L		165	65 - 141
1,2,3-Trichloropropane	50.0	51.8		ug/L		104	73 - 122
1,2,4-Trimethylbenzene	50.0	52.8		ug/L		106	76 - 124
1,3,5-Trimethylbenzene	50.0	51.5		ug/L		103	75 - 124
Vinyl acetate	100	100		ug/L		100	54 - 146
Vinyl chloride	50.0	43.2		ug/L		86	58 - 137
o-Xylene	50.0	53.2		ug/L		106	78 - 122
m-Xylene & p-Xylene	50.0	50.0		ug/L		100	80 - 121

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

Lab Sample ID: LCS 680-786096/6
Matrix: Water
Analysis Batch: 786096

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Xylenes, Total			100	103		ug/L		103	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*91*		*81 - 118*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*
Dibromofluoromethane (Surr)	*95*		*80 - 119*

Lab Sample ID: LCSD 680-786096/7
Matrix: Water
Analysis Batch: 786096

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
Acetone			250	277		ug/L		111	39 - 160	13	20
Benzene			50.0	51.2		ug/L		102	79 - 120	0	20
Bromobenzene			50.0	56.7		ug/L		113	80 - 120	3	20
Chlorobromomethane			50.0	49.6		ug/L		99	78 - 123	8	20
Dichlorobromomethane			50.0	47.7		ug/L		95	79 - 125	4	20
Bromoform			50.0	46.7		ug/L		93	66 - 130	2	20
Bromomethane			50.0	41.2	Q	ug/L		82	53 - 141	21	20
2-Butanone (MEK)			250	281		ug/L		112	56 - 143	4	20
n-Butylbenzene			50.0	54.3		ug/L		109	75 - 128	1	20
sec-Butylbenzene			50.0	54.4		ug/L		109	77 - 126	4	20
tert-Butylbenzene			50.0	53.8		ug/L		108	78 - 124	3	20
Carbon disulfide			50.0	40.9		ug/L		82	64 - 133	1	20
Carbon tetrachloride			50.0	40.7		ug/L		81	72 - 136	2	20
Chlorobenzene			50.0	51.1		ug/L		102	82 - 118	4	20
Chloroethane			50.0	35.5	Q	ug/L		71	60 - 138	69	20
Chloroform			50.0	48.3		ug/L		97	79 - 124	4	20
Chloromethane			50.0	33.1	Q	ug/L		66	50 - 139	22	20
2-Chlorotoluene			50.0	51.3	M	ug/L		103	79 - 122	4	20
4-Chlorotoluene			50.0	52.5		ug/L		105	78 - 122	4	20
Chlorodibromomethane			50.0	46.0		ug/L		92	74 - 126	2	20
1,2-Dibromo-3-Chloropropane			50.0	54.9		ug/L		110	62 - 128	7	20
Ethylene Dibromide			50.0	49.7		ug/L		99	75 - 127	1	20
Dibromomethane			50.0	47.3		ug/L		95	79 - 123	1	20
1,2-Dichlorobenzene			50.0	53.5		ug/L		107	80 - 119	1	20
1,3-Dichlorobenzene			50.0	53.0		ug/L		106	80 - 119	1	20
1,4-Dichlorobenzene			50.0	50.5		ug/L		101	79 - 118	2	20
Dichlorodifluoromethane			50.0	30.7		ug/L		61	32 - 152	17	20
1,1-Dichloroethane			50.0	49.3		ug/L		99	77 - 125	10	20
1,2-Dichloroethane			50.0	48.5		ug/L		97	73 - 128	2	20
cis-1,2-Dichloroethene			50.0	47.8		ug/L		96	78 - 123	8	20
trans-1,2-Dichloroethene			50.0	46.9		ug/L		94	75 - 124	9	20
1,2-Dichloroethene, Total			100	94.7		ug/L		95	79 - 121	8	20
1,1-Dichloroethene			50.0	44.6		ug/L		89	71 - 131	3	20
1,2-Dichloropropane			50.0	53.7		ug/L		107	78 - 122	2	20
1,3-Dichloropropane			50.0	48.6		ug/L		97	80 - 119	2	20

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

Lab Sample ID: LCSD 680-786096/7
Matrix: Water
Analysis Batch: 786096

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
2,2-Dichloropropane			50.0	43.8		ug/L		88	60 - 139	2	20
1,1-Dichloropropene			50.0	52.2		ug/L		104	79 - 125	1	20
cis-1,3-Dichloropropene			50.0	53.3		ug/L		107	75 - 124	3	20
trans-1,3-Dichloropropene			50.0	50.3		ug/L		101	73 - 127	3	20
Ethylbenzene			50.0	54.0		ug/L		108	79 - 121	3	20
Hexachlorobutadiene			50.0	46.0		ug/L		92	66 - 134	2	20
2-Hexanone			250	290		ug/L		116	57 - 139	7	20
Isopropylbenzene			50.0	52.4		ug/L		105	72 - 131	3	20
4-Isopropyltoluene			50.0	54.1		ug/L		108	77 - 127	0	20
Methylene Chloride			50.0	49.1		ug/L		98	74 - 124	10	20
4-Methyl-2-pentanone (MIBK)			250	280		ug/L		112	67 - 130	7	20
Methyl tert-butyl ether			50.0	50.3	M	ug/L		101	71 - 124	3	20
Naphthalene			50.0	49.0		ug/L		98	61 - 128	3	20
N-Propylbenzene			50.0	53.0		ug/L		106	76 - 126	3	20
Styrene			50.0	54.6		ug/L		109	78 - 123	2	20
1,1,1,2-Tetrachloroethane			50.0	49.1		ug/L		98	78 - 124	2	20
1,1,2,2-Tetrachloroethane			50.0	55.4		ug/L		111	71 - 121	4	20
Tetrachloroethene			50.0	47.6		ug/L		95	74 - 129	1	20
Toluene			50.0	54.0		ug/L		108	80 - 121	1	20
1,2,3-Trichlorobenzene			50.0	54.0		ug/L		108	69 - 129	3	20
1,2,4-Trichlorobenzene			50.0	51.2		ug/L		102	69 - 130	1	20
1,1,1-Trichloroethane			50.0	45.2		ug/L		90	74 - 131	2	20
1,1,2-Trichloroethane			50.0	49.4		ug/L		99	80 - 119	1	20
Trichloroethene			50.0	47.6		ug/L		95	79 - 123	1	20
Trichlorofluoromethane			50.0	31.8	Q	ug/L		64	65 - 141	89	20
1,2,3-Trichloropropane			50.0	50.6		ug/L		101	73 - 122	2	20
1,2,4-Trimethylbenzene			50.0	53.9		ug/L		108	76 - 124	2	20
1,3,5-Trimethylbenzene			50.0	53.5		ug/L		107	75 - 124	4	20
Vinyl acetate			100	97.5		ug/L		98	54 - 146	3	20
Vinyl chloride			50.0	38.1		ug/L		76	58 - 137	13	20
o-Xylene			50.0	54.1		ug/L		108	78 - 122	2	20
m-Xylene & p-Xylene			50.0	52.3		ug/L		105	80 - 121	4	20
Xylenes, Total			100	106		ug/L		106	79 - 121	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*89*		*81 - 118*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*
Dibromofluoromethane (Surr)	*94*		*80 - 119*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-784395/1-A
Matrix: Water
Analysis Batch: 784671

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 784395

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		06/20/23 16:58	1
Manganese	5.0	U	10	5.0	1.3	ug/L		06/20/23 16:58	1

Method: 6010C - Metals (ICP)

Lab Sample ID: LCS 680-784395/2-A
Matrix: Water
Analysis Batch: 784671

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 784395

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	4990	5080		ug/L		102	87 - 115
Manganese	400	421		ug/L		105	90 - 114

Lab Sample ID: MB 680-784396/1-A
Matrix: Water
Analysis Batch: 784671

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 784396

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		06/20/23 17:24	1
Manganese	5.0	U	10	5.0	1.3	ug/L		06/20/23 17:24	1

Lab Sample ID: LCS 680-784396/2-A
Matrix: Water
Analysis Batch: 784671

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 784396

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	4990	4950		ug/L		99	87 - 115
Manganese	400	420		ug/L		105	90 - 114

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-784394/1-A
Matrix: Water
Analysis Batch: 784687

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 784394

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		06/20/23 13:21	1

Lab Sample ID: LCS 680-784394/2-A
Matrix: Water
Analysis Batch: 784687

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 784394

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	111		ug/L		111	84 - 116

Lab Sample ID: MB 680-784398/1-A
Matrix: Water
Analysis Batch: 784687

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 784398

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		06/20/23 19:31	1

Lab Sample ID: LCS 680-784398/2-A
Matrix: Water
Analysis Batch: 784687

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 784398

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	112		ug/L		112	84 - 116

GC/MS VOA

Analysis Batch: 785871

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236498-1	XSA-12-97X-SPR23	Total/NA	Water	8260D	
680-236498-2	AOC50-RB02-SPR23	Total/NA	Water	8260D	
MB 680-785871/8	Method Blank	Total/NA	Water	8260D	
LCS 680-785871/4	Lab Control Sample	Total/NA	Water	8260D	
LCSD 680-785871/5	Lab Control Sample Dup	Total/NA	Water	8260D	

Analysis Batch: 786096

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236498-3	AOC50-TB-03-SPR23	Total/NA	Water	8260D	
MB 680-786096/10	Method Blank	Total/NA	Water	8260D	
LCS 680-786096/6	Lab Control Sample	Total/NA	Water	8260D	
LCSD 680-786096/7	Lab Control Sample Dup	Total/NA	Water	8260D	

Metals

Prep Batch: 784394

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236498-1	XSA-12-97X-SPR23	Dissolved	Water	3005A	
MB 680-784394/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-784394/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 784395

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236498-1	XSA-12-97X-SPR23	Dissolved	Water	3005A	
MB 680-784395/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-784395/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 784396

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236498-2	AOC50-RB02-SPR23	Dissolved	Water	3005A	
MB 680-784396/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-784396/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 784398

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236498-2	AOC50-RB02-SPR23	Dissolved	Water	3005A	
MB 680-784398/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-784398/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 784671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236498-1	XSA-12-97X-SPR23	Dissolved	Water	6010C	784395
680-236498-2	AOC50-RB02-SPR23	Dissolved	Water	6010C	784396
MB 680-784395/1-A	Method Blank	Total Recoverable	Water	6010C	784395
MB 680-784396/1-A	Method Blank	Total Recoverable	Water	6010C	784396
LCS 680-784395/2-A	Lab Control Sample	Total Recoverable	Water	6010C	784395
LCS 680-784396/2-A	Lab Control Sample	Total Recoverable	Water	6010C	784396

Analysis Batch: 784687

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236498-1	XSA-12-97X-SPR23	Dissolved	Water	6020A	784394

Metals (Continued)

Analysis Batch: 784687 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-236498-2	AOC50-RB02-SPR23	Dissolved	Water	6020A	784398
MB 680-784394/1-A	Method Blank	Total Recoverable	Water	6020A	784394
MB 680-784398/1-A	Method Blank	Total Recoverable	Water	6020A	784398
LCS 680-784394/2-A	Lab Control Sample	Total Recoverable	Water	6020A	784394
LCS 680-784398/2-A	Lab Control Sample	Total Recoverable	Water	6020A	784398

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-236498-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Spring 2023

Client Sample ID: XSA-12-97X-SPR23
Lab Sample ID: 680-236498-1
Date Collected: 06/15/23 14:22
Matrix: Water
Date Received: 06/17/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	785871	06/28/23 18:35	Y1S	EET SAV
	Instrument ID: CMSAJ									
Dissolved	Prep	3005A			25 mL	25 mL	784395	06/20/23 05:29	RR	EET SAV
Dissolved	Analysis	6010C		1			784671	06/20/23 17:16	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	784394	06/20/23 05:29	RR	EET SAV
Dissolved	Analysis	6020A		1			784687	06/20/23 15:03	BWR	EET SAV
	Instrument ID: ICPMSC									

Client Sample ID: AOC50-RB02-SPR23
Lab Sample ID: 680-236498-2
Date Collected: 06/15/23 15:30
Matrix: Water
Date Received: 06/17/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	785871	06/28/23 18:57	Y1S	EET SAV
	Instrument ID: CMSAJ									
Dissolved	Prep	3005A			25 mL	25 mL	784396	06/20/23 05:36	RR	EET SAV
Dissolved	Analysis	6010C		1			784671	06/20/23 18:12	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	784398	06/20/23 05:36	RR	EET SAV
Dissolved	Analysis	6020A		1			784687	06/20/23 20:31	BWR	EET SAV
	Instrument ID: ICPMSC									

Client Sample ID: AOC50-TB-03-SPR23
Lab Sample ID: 680-236498-3
Date Collected: 06/16/23 15:00
Matrix: Water
Date Received: 06/17/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	786096	06/29/23 15:37	Y1S	EET SAV
	Instrument ID: CMSAJ									

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

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-236498-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Spring 2023

Laboratory: Eurofins Savannah

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

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	07-09-23

Method Summary

Client: Seres Engineering & Services LLC
Job ID: 680-236498-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Spring 2023

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds (GC/MS)	SW846	EET SAV
6010C	Metals (ICP)	SW846	EET SAV
6020A	Metals (ICP/MS)	SW846	EET SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET SAV
5030C	Purge and Trap	SW846	EET SAV

Protocol References:

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

Laboratory References:

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

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Heather Levesque
669 Marina Drive, Suite B7, Charleston SC 29492
(843) 619-370-0374, jennifer singer@arcadis com

COC # AOC50_SPR23

US Army Corps of Engineers ®

Project Name Former Fort Devens, Long Term Monitoring	**Laboratory** Eurofins Environment Testing TestAmerica, Savannah, GA	**Event** Seres-Arcadis JV, Long Term Monitoring, AOC 50, Spring 2023
Project Number DEVNS-LTM	**POC** Jerry Lanier, 912-250-0281, jerry lanier@eurofinsus com	
WBS Code.	**Ship to** Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments
A2320B (A) = Alkalinity
E353 2 (A) = Nitrite Nitrate as N
RSK175 (A) = Dissolved Gases
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9034 (A) = Sulfide

Equipment.

Code	Matrix
WG	Ground Water

Code	Container/Preservative
5	1x 125mL plastic, Cool < 6degC
7	2x 250mL plastic, ZnAc/NaOH Cool < 6degC
8	3x 40mL glass VOA Vials HCl, pH < 2 Cool < 6degC
9	1x 250mL, plastic HNO3, pH < 2 Cool < 6degC
10	1x 250mL plastic HNO3, pH < 2 Cool < 6degC
29	3x 40mL glass VOA Vials HCl, pH < 2 Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC
47	1x 500mL, amber glass H2SO4 Cool < 6degC

						Analytical Test Method	A2320B (A)	E353.2 (A)	RSK175 (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW8260B - VOCs	SW9034 (A)	SW9056A - SO4	SW9060A - TOC					
Event Seres-Arcadis JV, Long Term Monitoring, AOC 50, Spring 2023							46	47	8	9	9	29	7	5	10					
	Sample ID	Matrix	Date	Time	Samp Init											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
1	G6M-04-02X-SPR23	WG					X	X	X	X	X	X	X	X	X	G6M-04-02X	N1	80 00	90 00		
2	G6M-04-07X-SPR23	WG					X	X	X	X	X	X	X	X	X	G6M-04-07X	N1	120 00	130 00		
3	G6M-04-10A-SPR23	WG					X	X	X	X	X	X	X	X	X	G6M-04-10A	N1	30 00	40 00		
4	G6M-04-10A-SPR23	WG					X	X	X	X	X	X	X	X	X	G6M-04-10A	MS1	30 00	40 00		
5	G6M-04-10A-SPR23	WG					X	X	X	X	X	X	X	X	X	G6M-04-10A	SD1	30 00	40 00		
6	G6M-07-02X-SPR23	WG					X	X	X	X	X	X	X	X	X	G6M-07-02X	N1	22 50	27 50		
7	G6M-DUP01-SPR23	WG					X	X	X	X	X	X	X	X	X	G6M-07-02X	FD1	22 50	27 50		
8	G6M-13-01X-SPR23	WG					X	X	X	X	X	X	X	X	X	G6M-13-01X	N1	125 00	135 00		
9	G6M-13-02X-SPR23	WG					X	X	X	X	X	X	X	X	X	G6M-13-02X	N1	115 00	125 00		
10	G6M-13-05X-SPR23	WG					X	X	X	X	X	X	X	X	X	G6M-13-05X	N1	45 00	55 00		
11	G6M-97-05B-SPR23	WG					X	X	X	X	X	X	X	X	X	G6M-97-05B	N1	130 00	135 00		
12	XSA-12-96X-SPR23	WG								X	X	X				XSA-12-96X	N1	120 00	130 00		
13	XSA-12-97X-SPR23	WG	6/15/23	14:22	SG					X	X	X				XSA-12-97X	N1	120 00	130 00		
14	AOC50 RB02-SPR23	WG	6/15/23	15.30	SG					X	X	X									
15	Trip Blank	WG	6/16/23	15:00	GS							X									
16																					
17																					
18																					

Turnaround Time Standard

680-236498 Chain of Custody

1.8/1.6 3.6/3.4 5.9/5.7

Relinquished by (Signature) Grace Shum
Date 6/16/2023
Time 16:10
Received by (Signature)

Received by Laboratory (Signature) TM
Date 6-17-23
Time 930

7/11/2023

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-236498-1

Login Number: 236498
List Number: 1
Creator: Sims, Robert D

List Source: Eurofins Savannah

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Heather Levesque
Seres Engineering & Services LLC
669 Marina Drive
Suite B7
Charleston, South Carolina 29492

Generated 11/6/2023 8:33:44 AM

JOB DESCRIPTION

Seres-Arcadis JV, LTM, AOC 50, Fall 2023

JOB NUMBER

680-241926-1

Eurofins Savannah
5102 LaRoche Avenue
Savannah GA 31404

See page two for job notes and contact information.

my EOL

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.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization



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Authorized for release by
Jerry Lanier, Project Manager I
Jerry.Lanier@et.eurofinsus.com
(912)250-0281

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
M	Manual integrated compound.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

GC VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

HPLC/IC

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

General Chemistry

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

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)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: Seres Engineering & Services LLC
Job ID: 680-241926-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-241926-1	AOC50-DUP04-FAL23	Water	10/17/23 15:35	10/19/23 09:56
680-241926-2	G6M-02-11X-FAL23	Water	10/17/23 12:40	10/19/23 09:56
680-241926-3	G6M-03-10X-FAL23	Water	10/17/23 14:20	10/19/23 09:56
680-241926-4	G6M-13-05X-FAL23	Water	10/17/23 11:10	10/19/23 09:56
680-241926-5	G6M-13-06X-FAL23	Water	10/17/23 13:35	10/19/23 09:56
680-241926-6	G6M-95-20X-FAL23	Water	10/17/23 15:35	10/19/23 09:56
680-241926-7	G6M-97-05B-FAL23	Water	10/17/23 11:00	10/19/23 09:56
680-241926-8	AOC5-TB01-FAL23	Water	10/17/23 00:00	10/19/23 09:56

Job ID: 680-241926-1

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-241926-1

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

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

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

Receipt
The samples were received on 10/19/2023 9:56 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.8°C

GC/MS VOA
Method 8260D_DOD5: The initial calibration verification (ICV) associated with analytical batch 680-800657 was outside control limits for Carbon disulfide. Sample results were non-detects and have been reported as qualified data.

(ICV 680-800657/16)

Method 8260D_DOD5: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 680-805173 recovered outside control limits for the following analytes: Chloroethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260D_DOD5: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 680-805173.

Method 8260D_DOD5: The continuing calibration verification (CCV) associated with batch 680-805173 recovered outside acceptance criteria, low biased, for Bromoform and 2,2-Dichloropropane. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

Method 8260D_DOD5: The continuing calibration verification (CCV) associated with batch 680-805173 recovered above the upper control limit for Chloroethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8260D_DOD5: The closing continuing calibration verification (CCVC) associated with batch 680-805173 recovered above the upper control limit for Chloroethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

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

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

HPLC/IC
Method 9056A_OF_28D_D5: The following samples were diluted due to the abundance of non-target analytes: G6M-13-05X-FAL23 (680-241926-4), G6M-13-06X-FAL23 (680-241926-5) and G6M-97-05B-FAL23 (680-241926-7). Elevated reporting limits (RLs) are provided.

Job ID: 680-241926-1 (Continued)

Laboratory: Eurofins Savannah (Continued)

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

Metals

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

General Chemistry

Method 353.2_Pres: The instrument blank for analytical batch 680-805094 contained Nitrate Nitrite as N greater than the method detection limit (MDL), and were not reanalyzed because the result is less than the RL. The data have been qualified and reported.

Method 353.2_Pres: The method blank for analytical batch 680-805094 contained Nitrate Nitrite as N above the method detection limit (MDL). Associated samples were not re-analyzed because the method blank results were less than the reporting limit (RL) OR practical quantitation limit (PQL).

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

Client: Seres Engineering & Services LLC
Job ID: 680-241926-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: AOC50-DUP04-FAL23
Lab Sample ID: 680-241926-1
Date Collected: 10/17/23 15:35
Matrix: Water
Date Received: 10/19/23 09:56

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		10/28/23 19:12	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/28/23 19:12	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/28/23 19:12	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/28/23 19:12	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/28/23 19:12	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		10/28/23 19:12	1
Bromomethane	10	U	20	10	3.7	ug/L		10/28/23 19:12	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/28/23 19:12	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/28/23 19:12	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/28/23 19:12	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/28/23 19:12	1
Carbon disulfide	1.0	U Q	2.0	1.0	0.43	ug/L		10/28/23 19:12	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/28/23 19:12	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/28/23 19:12	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/28/23 19:12	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/28/23 19:12	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/28/23 19:12	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/28/23 19:12	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/28/23 19:12	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/28/23 19:12	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/28/23 19:12	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 19:12	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/28/23 19:12	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/28/23 19:12	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/28/23 19:12	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/28/23 19:12	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/28/23 19:12	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 19:12	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/28/23 19:12	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/28/23 19:12	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/28/23 19:12	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/28/23 19:12	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 19:12	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/28/23 19:12	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/28/23 19:12	1
2,2-Dichloropropane	1.0	U Q	2.0	1.0	0.35	ug/L		10/28/23 19:12	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/28/23 19:12	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/28/23 19:12	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/28/23 19:12	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/28/23 19:12	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/28/23 19:12	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/28/23 19:12	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/28/23 19:12	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/28/23 19:12	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/28/23 19:12	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/28/23 19:12	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/28/23 19:12	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/28/23 19:12	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/28/23 19:12	1

Client Sample ID: AOC50-DUP04-FAL23
Lab Sample ID: 680-241926-1
Date Collected: 10/17/23 15:35
Matrix: Water
Date Received: 10/19/23 09:56

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/28/23 19:12	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/28/23 19:12	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/28/23 19:12	1
Tetrachloroethene	**0.49**	**J**	2.0	1.0	0.35	ug/L		10/28/23 19:12	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/28/23 19:12	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/28/23 19:12	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/28/23 19:12	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/28/23 19:12	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/28/23 19:12	1
Trichloroethene	**0.29**	**J**	1.0	0.50	0.20	ug/L		10/28/23 19:12	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 19:12	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/28/23 19:12	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/28/23 19:12	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/28/23 19:12	1
Vinyl acetate	2.0	U M	2.5	2.0	0.69	ug/L		10/28/23 19:12	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/28/23 19:12	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/28/23 19:12	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/28/23 19:12	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/28/23 19:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*89 - 112*		*10/28/23 19:12*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*10/28/23 19:12*	*1*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*		*10/28/23 19:12*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 119*		*10/28/23 19:12*	*1*

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**1800**		100	50	20	ug/L		10/23/23 14:13	1
Manganese	**130**		10	5.0	1.3	ug/L		10/23/23 14:13	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**9.0**		5.0	3.0	0.86	ug/L		10/23/23 19:02	1

Client: Seres Engineering & Services LLC
Job ID: 680-241926-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-02-11X-FAL23
Lab Sample ID: 680-241926-2
Date Collected: 10/17/23 12:40
Matrix: Water
Date Received: 10/19/23 09:56

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		10/28/23 19:34	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/28/23 19:34	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/28/23 19:34	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/28/23 19:34	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/28/23 19:34	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		10/28/23 19:34	1
Bromomethane	10	U	20	10	3.7	ug/L		10/28/23 19:34	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/28/23 19:34	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/28/23 19:34	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/28/23 19:34	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/28/23 19:34	1
Carbon disulfide	1.0	U Q	2.0	1.0	0.43	ug/L		10/28/23 19:34	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/28/23 19:34	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/28/23 19:34	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/28/23 19:34	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/28/23 19:34	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/28/23 19:34	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/28/23 19:34	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/28/23 19:34	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/28/23 19:34	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/28/23 19:34	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 19:34	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/28/23 19:34	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/28/23 19:34	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/28/23 19:34	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/28/23 19:34	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/28/23 19:34	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 19:34	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/28/23 19:34	1
cis-1,2-Dichloroethene	**0.25**	**J**	2.0	1.0	0.25	ug/L		10/28/23 19:34	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/28/23 19:34	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/28/23 19:34	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 19:34	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/28/23 19:34	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/28/23 19:34	1
2,2-Dichloropropane	1.0	U Q	2.0	1.0	0.35	ug/L		10/28/23 19:34	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/28/23 19:34	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/28/23 19:34	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/28/23 19:34	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/28/23 19:34	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/28/23 19:34	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/28/23 19:34	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/28/23 19:34	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/28/23 19:34	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/28/23 19:34	1
4-Methyl-2-pentanone (MIBK)	10	U M	20	10	2.7	ug/L		10/28/23 19:34	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/28/23 19:34	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/28/23 19:34	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/28/23 19:34	1

Client: Seres Engineering & Services LLC
Job ID: 680-241926-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-02-11X-FAL23
Lab Sample ID: 680-241926-2
Date Collected: 10/17/23 12:40
Matrix: Water
Date Received: 10/19/23 09:56

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/28/23 19:34	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/28/23 19:34	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/28/23 19:34	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/28/23 19:34	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/28/23 19:34	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/28/23 19:34	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/28/23 19:34	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/28/23 19:34	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/28/23 19:34	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/28/23 19:34	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 19:34	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/28/23 19:34	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/28/23 19:34	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/28/23 19:34	1
Vinyl acetate	2.0	U M	2.5	2.0	0.69	ug/L		10/28/23 19:34	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/28/23 19:34	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/28/23 19:34	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/28/23 19:34	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/28/23 19:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*89 - 112*		*10/28/23 19:34*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*		*10/28/23 19:34*	*1*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*		*10/28/23 19:34*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 119*		*10/28/23 19:34*	*1*

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**35000**		100	50	20	ug/L		10/23/23 14:16	1
Manganese	**5700**		10	5.0	1.3	ug/L		10/23/23 14:16	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**680**		5.0	3.0	0.86	ug/L		10/23/23 19:06	1

Client: Seres Engineering & Services LLC
Job ID: 680-241926-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-03-10X-FAL23
Lab Sample ID: 680-241926-3
Date Collected: 10/17/23 14:20
Matrix: Water
Date Received: 10/19/23 09:56

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		10/28/23 19:56	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/28/23 19:56	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/28/23 19:56	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/28/23 19:56	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/28/23 19:56	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		10/28/23 19:56	1
Bromomethane	10	U	20	10	3.7	ug/L		10/28/23 19:56	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/28/23 19:56	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/28/23 19:56	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/28/23 19:56	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/28/23 19:56	1
Carbon disulfide	1.0	U Q	2.0	1.0	0.43	ug/L		10/28/23 19:56	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/28/23 19:56	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/28/23 19:56	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/28/23 19:56	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/28/23 19:56	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/28/23 19:56	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/28/23 19:56	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/28/23 19:56	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/28/23 19:56	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/28/23 19:56	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 19:56	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/28/23 19:56	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/28/23 19:56	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/28/23 19:56	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/28/23 19:56	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/28/23 19:56	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 19:56	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/28/23 19:56	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/28/23 19:56	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/28/23 19:56	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/28/23 19:56	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 19:56	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/28/23 19:56	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/28/23 19:56	1
2,2-Dichloropropane	1.0	U Q	2.0	1.0	0.35	ug/L		10/28/23 19:56	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/28/23 19:56	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/28/23 19:56	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/28/23 19:56	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/28/23 19:56	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/28/23 19:56	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/28/23 19:56	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/28/23 19:56	1
4-Isopropyltoluene	1.0	U M	2.0	1.0	0.44	ug/L		10/28/23 19:56	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/28/23 19:56	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/28/23 19:56	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/28/23 19:56	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/28/23 19:56	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/28/23 19:56	1

Client Sample ID: G6M-03-10X-FAL23
Lab Sample ID: 680-241926-3
Date Collected: 10/17/23 14:20
Matrix: Water
Date Received: 10/19/23 09:56

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/28/23 19:56	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/28/23 19:56	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/28/23 19:56	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/28/23 19:56	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/28/23 19:56	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/28/23 19:56	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/28/23 19:56	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/28/23 19:56	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/28/23 19:56	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/28/23 19:56	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 19:56	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/28/23 19:56	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/28/23 19:56	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/28/23 19:56	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/28/23 19:56	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/28/23 19:56	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/28/23 19:56	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/28/23 19:56	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/28/23 19:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*89 - 112*		*10/28/23 19:56*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*		*10/28/23 19:56*	*1*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*		*10/28/23 19:56*	*1*
Dibromofluoromethane (Surr)	*95*		*80 - 119*		*10/28/23 19:56*	*1*

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**43000**		100	50	20	ug/L		10/23/23 14:22	1
Manganese	**1300**		10	5.0	1.3	ug/L		10/23/23 14:22	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**310**		5.0	3.0	0.86	ug/L		10/23/23 19:10	1

Client: Seres Engineering & Services LLC
Job ID: 680-241926-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-13-05X-FAL23
Lab Sample ID: 680-241926-4
Date Collected: 10/17/23 11:10
Matrix: Water
Date Received: 10/19/23 09:56

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		10/28/23 20:17	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/28/23 20:17	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/28/23 20:17	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/28/23 20:17	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/28/23 20:17	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		10/28/23 20:17	1
Bromomethane	10	U	20	10	3.7	ug/L		10/28/23 20:17	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/28/23 20:17	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/28/23 20:17	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/28/23 20:17	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/28/23 20:17	1
Carbon disulfide	1.0	U Q	2.0	1.0	0.43	ug/L		10/28/23 20:17	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/28/23 20:17	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/28/23 20:17	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/28/23 20:17	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/28/23 20:17	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/28/23 20:17	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/28/23 20:17	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/28/23 20:17	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/28/23 20:17	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/28/23 20:17	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 20:17	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/28/23 20:17	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/28/23 20:17	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/28/23 20:17	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/28/23 20:17	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/28/23 20:17	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 20:17	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/28/23 20:17	1
cis-1,2-Dichloroethene	**33**		2.0	1.0	0.25	ug/L		10/28/23 20:17	1
trans-1,2-Dichloroethene	**0.49**	**J**	2.0	1.0	0.34	ug/L		10/28/23 20:17	1
1,2-Dichloroethene, Total	**33**		2.0	1.0	0.37	ug/L		10/28/23 20:17	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 20:17	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/28/23 20:17	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/28/23 20:17	1
2,2-Dichloropropane	1.0	U Q	2.0	1.0	0.35	ug/L		10/28/23 20:17	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/28/23 20:17	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/28/23 20:17	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/28/23 20:17	1
Ethylbenzene	**0.24**	**J**	1.0	0.50	0.20	ug/L		10/28/23 20:17	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/28/23 20:17	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/28/23 20:17	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/28/23 20:17	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/28/23 20:17	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/28/23 20:17	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/28/23 20:17	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/28/23 20:17	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/28/23 20:17	1
N-Propylbenzene	1.0	U M	2.0	1.0	0.41	ug/L		10/28/23 20:17	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Job ID: 680-241926-1

Client Sample ID: G6M-13-05X-FAL23
Date Collected: 10/17/23 11:10
Date Received: 10/19/23 09:56

Lab Sample ID: 680-241926-4
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	**0.32**	**J M**	2.0	1.0	0.27	ug/L		10/28/23 20:17	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/28/23 20:17	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/28/23 20:17	1
Tetrachloroethene	**10**		2.0	1.0	0.35	ug/L		10/28/23 20:17	1
Toluene	**0.37**	**J**	2.0	1.0	0.25	ug/L		10/28/23 20:17	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/28/23 20:17	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/28/23 20:17	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/28/23 20:17	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/28/23 20:17	1
Trichloroethene	**3.2**		1.0	0.50	0.20	ug/L		10/28/23 20:17	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 20:17	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/28/23 20:17	1
1,2,4-Trimethylbenzene	**0.50**	**J**	2.0	1.0	0.43	ug/L		10/28/23 20:17	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/28/23 20:17	1
Vinyl acetate	2.0	U M	2.5	2.0	0.69	ug/L		10/28/23 20:17	1
Vinyl chloride	**42**		2.0	1.0	0.40	ug/L		10/28/23 20:17	1
o-Xylene	**0.34**	**J M**	2.0	1.0	0.26	ug/L		10/28/23 20:17	1
m-Xylene & p-Xylene	**0.55**	**J**	2.0	1.0	0.49	ug/L		10/28/23 20:17	1
Xylenes, Total	**0.89**	**J**	2.0	1.0	0.49	ug/L		10/28/23 20:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*89 - 112*		*10/28/23 20:17*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*		*10/28/23 20:17*	*1*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*		*10/28/23 20:17*	*1*
Dibromofluoromethane (Surr)	*95*		*80 - 119*		*10/28/23 20:17*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**26**		1.1	0.76	0.30	ug/L		10/25/23 21:57	1
Ethylene	**20**		1.0	0.71	0.31	ug/L		10/25/23 21:57	1
Methane (TCD)	**23000**		390	77	39	ug/L		10/25/23 21:57	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	2.0	U	3.0	2.0	0.80	mg/L		11/05/23 17:14	2

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**70000**		100	50	20	ug/L		10/23/23 14:24	1
Manganese	**6000**		10	5.0	1.3	ug/L		10/23/23 14:24	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**150**		5.0	3.0	0.86	ug/L		10/23/23 19:22	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B-2011)	**64**		5.5	5.0	2.2	mg/L		10/26/23 13:28	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	**0.086**	**J**	0.10	0.025	0.010	mg/L		10/26/23 15:59	1

Client: Seres Engineering & Services LLC
Job ID: 680-241926-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-13-05X-FAL23
Lab Sample ID: 680-241926-4
Date Collected: 10/17/23 11:10
Matrix: Water
Date Received: 10/19/23 09:56

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon (SW846 9060)	5.9		1.5	1.0	0.50	mg/L		11/02/23 08:03	1

Client: Seres Engineering & Services LLC
Job ID: 680-241926-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-13-06X-FAL23
Lab Sample ID: 680-241926-5
Date Collected: 10/17/23 13:35
Matrix: Water
Date Received: 10/19/23 09:56

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		10/28/23 20:39	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/28/23 20:39	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/28/23 20:39	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/28/23 20:39	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/28/23 20:39	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		10/28/23 20:39	1
Bromomethane	10	U	20	10	3.7	ug/L		10/28/23 20:39	1
2-Butanone (MEK)	**7.7**	**J**	25	20	6.4	ug/L		10/28/23 20:39	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/28/23 20:39	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/28/23 20:39	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/28/23 20:39	1
Carbon disulfide	1.0	U Q	2.0	1.0	0.43	ug/L		10/28/23 20:39	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/28/23 20:39	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/28/23 20:39	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/28/23 20:39	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/28/23 20:39	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/28/23 20:39	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/28/23 20:39	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/28/23 20:39	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/28/23 20:39	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/28/23 20:39	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 20:39	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/28/23 20:39	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/28/23 20:39	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/28/23 20:39	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/28/23 20:39	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/28/23 20:39	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 20:39	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/28/23 20:39	1
cis-1,2-Dichloroethene	**1.1**	**J**	2.0	1.0	0.25	ug/L		10/28/23 20:39	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/28/23 20:39	1
1,2-Dichloroethene, Total	**1.1**	**J**	2.0	1.0	0.37	ug/L		10/28/23 20:39	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 20:39	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/28/23 20:39	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/28/23 20:39	1
2,2-Dichloropropane	1.0	U Q	2.0	1.0	0.35	ug/L		10/28/23 20:39	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/28/23 20:39	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/28/23 20:39	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/28/23 20:39	1
Ethylbenzene	**0.97**	**J**	1.0	0.50	0.20	ug/L		10/28/23 20:39	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/28/23 20:39	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/28/23 20:39	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/28/23 20:39	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/28/23 20:39	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/28/23 20:39	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/28/23 20:39	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/28/23 20:39	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/28/23 20:39	1
N-Propylbenzene	**0.42**	**J**	2.0	1.0	0.41	ug/L		10/28/23 20:39	1

Client Sample ID: G6M-13-06X-FAL23
Lab Sample ID: 680-241926-5
Date Collected: 10/17/23 13:35
Matrix: Water
Date Received: 10/19/23 09:56

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U M	2.0	1.0	0.27	ug/L		10/28/23 20:39	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/28/23 20:39	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/28/23 20:39	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/28/23 20:39	1
Toluene	**6.6**		2.0	1.0	0.25	ug/L		10/28/23 20:39	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/28/23 20:39	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/28/23 20:39	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/28/23 20:39	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/28/23 20:39	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/28/23 20:39	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 20:39	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/28/23 20:39	1
1,2,4-Trimethylbenzene	**2.4**		2.0	1.0	0.43	ug/L		10/28/23 20:39	1
1,3,5-Trimethylbenzene	**0.65**	**J**	2.0	1.0	0.28	ug/L		10/28/23 20:39	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/28/23 20:39	1
Vinyl chloride	**0.54**	**J**	2.0	1.0	0.40	ug/L		10/28/23 20:39	1
o-Xylene	**0.53**	**J**	2.0	1.0	0.26	ug/L		10/28/23 20:39	1
m-Xylene & p-Xylene	**0.65**	**J**	2.0	1.0	0.49	ug/L		10/28/23 20:39	1
Xylenes, Total	**1.2**	**J**	2.0	1.0	0.49	ug/L		10/28/23 20:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*89 - 112*		*10/28/23 20:39*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*		*10/28/23 20:39*	*1*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*		*10/28/23 20:39*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 119*		*10/28/23 20:39*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**15**		1.1	0.76	0.30	ug/L		10/25/23 22:10	1
Ethylene	**5.6**		1.0	0.71	0.31	ug/L		10/25/23 22:10	1
Methane (TCD)	**24000**		390	77	39	ug/L		10/25/23 22:10	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	2.0	U	3.0	2.0	0.80	mg/L		11/05/23 17:26	2

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**180000**		100	50	20	ug/L		10/23/23 14:26	1
Manganese	**1300**		10	5.0	1.3	ug/L		10/23/23 14:26	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**390**		5.0	3.0	0.86	ug/L		10/23/23 19:26	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B-2011)	**260**		5.5	5.0	2.2	mg/L		10/26/23 13:38	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	**0.072**	**J**	0.10	0.025	0.010	mg/L		10/26/23 16:10	1

Client: Seres Engineering & Services LLC
Job ID: 680-241926-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-13-06X-FAL23
Lab Sample ID: 680-241926-5
Date Collected: 10/17/23 13:35
Matrix: Water
Date Received: 10/19/23 09:56

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon (SW846 9060)	52		1.5	1.0	0.50	mg/L		11/02/23 08:30	1

Client: Seres Engineering & Services LLC
Job ID: 680-241926-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-95-20X-FAL23
Lab Sample ID: 680-241926-6
Date Collected: 10/17/23 15:35
Matrix: Water
Date Received: 10/19/23 09:56

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		10/28/23 21:01	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/28/23 21:01	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/28/23 21:01	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/28/23 21:01	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/28/23 21:01	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		10/28/23 21:01	1
Bromomethane	10	U	20	10	3.7	ug/L		10/28/23 21:01	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/28/23 21:01	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/28/23 21:01	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/28/23 21:01	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/28/23 21:01	1
Carbon disulfide	1.0	U Q	2.0	1.0	0.43	ug/L		10/28/23 21:01	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/28/23 21:01	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/28/23 21:01	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/28/23 21:01	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/28/23 21:01	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/28/23 21:01	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/28/23 21:01	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/28/23 21:01	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/28/23 21:01	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/28/23 21:01	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 21:01	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/28/23 21:01	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/28/23 21:01	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/28/23 21:01	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/28/23 21:01	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/28/23 21:01	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 21:01	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/28/23 21:01	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/28/23 21:01	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/28/23 21:01	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/28/23 21:01	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 21:01	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/28/23 21:01	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/28/23 21:01	1
2,2-Dichloropropane	1.0	U Q	2.0	1.0	0.35	ug/L		10/28/23 21:01	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/28/23 21:01	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/28/23 21:01	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/28/23 21:01	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/28/23 21:01	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/28/23 21:01	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/28/23 21:01	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/28/23 21:01	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/28/23 21:01	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/28/23 21:01	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/28/23 21:01	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/28/23 21:01	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/28/23 21:01	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/28/23 21:01	1

Client Sample ID: G6M-95-20X-FAL23
Lab Sample ID: 680-241926-6
Date Collected: 10/17/23 15:35
Matrix: Water
Date Received: 10/19/23 09:56

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/28/23 21:01	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/28/23 21:01	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/28/23 21:01	1
Tetrachloroethene	**0.48**	**J**	2.0	1.0	0.35	ug/L		10/28/23 21:01	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/28/23 21:01	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/28/23 21:01	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/28/23 21:01	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/28/23 21:01	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/28/23 21:01	1
Trichloroethene	**0.29**	**J**	1.0	0.50	0.20	ug/L		10/28/23 21:01	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 21:01	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/28/23 21:01	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/28/23 21:01	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/28/23 21:01	1
Vinyl acetate	2.0	U M	2.5	2.0	0.69	ug/L		10/28/23 21:01	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/28/23 21:01	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/28/23 21:01	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/28/23 21:01	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/28/23 21:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*89 - 112*		*10/28/23 21:01*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*		*10/28/23 21:01*	*1*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*		*10/28/23 21:01*	*1*
Dibromofluoromethane (Surr)	*94*		*80 - 119*		*10/28/23 21:01*	*1*

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**1800**		100	50	20	ug/L		10/23/23 14:28	1
Manganese	**120**		10	5.0	1.3	ug/L		10/23/23 14:28	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**8.5**		5.0	3.0	0.86	ug/L		10/23/23 19:30	1

Client: Seres Engineering & Services LLC
Job ID: 680-241926-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-97-05B-FAL23
Lab Sample ID: 680-241926-7
Date Collected: 10/17/23 11:00
Matrix: Water
Date Received: 10/19/23 09:56

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		10/28/23 21:22	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/28/23 21:22	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/28/23 21:22	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/28/23 21:22	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/28/23 21:22	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		10/28/23 21:22	1
Bromomethane	10	U	20	10	3.7	ug/L		10/28/23 21:22	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/28/23 21:22	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/28/23 21:22	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/28/23 21:22	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/28/23 21:22	1
Carbon disulfide	1.0	U Q	2.0	1.0	0.43	ug/L		10/28/23 21:22	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/28/23 21:22	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/28/23 21:22	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/28/23 21:22	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/28/23 21:22	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/28/23 21:22	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/28/23 21:22	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/28/23 21:22	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/28/23 21:22	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/28/23 21:22	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 21:22	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/28/23 21:22	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/28/23 21:22	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/28/23 21:22	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/28/23 21:22	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/28/23 21:22	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 21:22	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/28/23 21:22	1
cis-1,2-Dichloroethene	**3.9**		2.0	1.0	0.25	ug/L		10/28/23 21:22	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/28/23 21:22	1
1,2-Dichloroethene, Total	**3.9**		2.0	1.0	0.37	ug/L		10/28/23 21:22	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 21:22	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/28/23 21:22	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/28/23 21:22	1
2,2-Dichloropropane	1.0	U Q	2.0	1.0	0.35	ug/L		10/28/23 21:22	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/28/23 21:22	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/28/23 21:22	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/28/23 21:22	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/28/23 21:22	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/28/23 21:22	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/28/23 21:22	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/28/23 21:22	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/28/23 21:22	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/28/23 21:22	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/28/23 21:22	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/28/23 21:22	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/28/23 21:22	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/28/23 21:22	1

Client Sample ID: G6M-97-05B-FAL23
Lab Sample ID: 680-241926-7
Date Collected: 10/17/23 11:00
Matrix: Water
Date Received: 10/19/23 09:56

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/28/23 21:22	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/28/23 21:22	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/28/23 21:22	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/28/23 21:22	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/28/23 21:22	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/28/23 21:22	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/28/23 21:22	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/28/23 21:22	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/28/23 21:22	1
Trichloroethene	**0.98**	**J**	1.0	0.50	0.20	ug/L		10/28/23 21:22	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 21:22	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/28/23 21:22	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/28/23 21:22	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/28/23 21:22	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/28/23 21:22	1
Vinyl chloride	**1.1**	**J**	2.0	1.0	0.40	ug/L		10/28/23 21:22	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/28/23 21:22	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/28/23 21:22	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/28/23 21:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*89 - 112*		*10/28/23 21:22*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*		*10/28/23 21:22*	*1*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*		*10/28/23 21:22*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 119*		*10/28/23 21:22*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**16**		1.1	0.76	0.30	ug/L		10/27/23 19:25	1
Ethylene	**4.5**		1.0	0.71	0.31	ug/L		10/27/23 19:25	1
Methane (TCD)	**31000**		390	77	39	ug/L		10/27/23 19:25	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	2.0	U	3.0	2.0	0.80	mg/L		11/05/23 17:39	2

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**41000**		100	50	20	ug/L		10/23/23 14:30	1
Manganese	**3600**		10	5.0	1.3	ug/L		10/23/23 14:30	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**140**		5.0	3.0	0.86	ug/L		10/23/23 19:34	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B-2011)	**120**		5.5	5.0	2.2	mg/L		10/26/23 13:48	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	**0.074**	**J**	0.10	0.025	0.010	mg/L		10/26/23 16:12	1

Client: Seres Engineering & Services LLC
Job ID: 680-241926-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-97-05B-FAL23
Lab Sample ID: 680-241926-7
Date Collected: 10/17/23 11:00
Matrix: Water
Date Received: 10/19/23 09:56

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon (SW846 9060)	4.1		1.5	1.0	0.50	mg/L		11/02/23 09:02	1

Client: Seres Engineering & Services LLC
Job ID: 680-241926-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: AOC5-TB01-FAL23
Lab Sample ID: 680-241926-8
Date Collected: 10/17/23 00:00
Matrix: Water
Date Received: 10/19/23 09:56

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		10/28/23 16:19	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/28/23 16:19	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/28/23 16:19	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/28/23 16:19	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/28/23 16:19	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		10/28/23 16:19	1
Bromomethane	10	U	20	10	3.7	ug/L		10/28/23 16:19	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/28/23 16:19	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/28/23 16:19	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/28/23 16:19	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/28/23 16:19	1
Carbon disulfide	1.0	U Q	2.0	1.0	0.43	ug/L		10/28/23 16:19	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/28/23 16:19	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/28/23 16:19	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/28/23 16:19	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/28/23 16:19	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/28/23 16:19	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/28/23 16:19	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/28/23 16:19	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/28/23 16:19	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/28/23 16:19	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 16:19	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/28/23 16:19	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/28/23 16:19	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/28/23 16:19	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/28/23 16:19	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/28/23 16:19	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 16:19	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/28/23 16:19	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/28/23 16:19	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/28/23 16:19	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/28/23 16:19	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 16:19	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/28/23 16:19	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/28/23 16:19	1
2,2-Dichloropropane	1.0	U Q	2.0	1.0	0.35	ug/L		10/28/23 16:19	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/28/23 16:19	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/28/23 16:19	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/28/23 16:19	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/28/23 16:19	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/28/23 16:19	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/28/23 16:19	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/28/23 16:19	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/28/23 16:19	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/28/23 16:19	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/28/23 16:19	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/28/23 16:19	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/28/23 16:19	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/28/23 16:19	1

Client: Seres Engineering & Services LLC
Job ID: 680-241926-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: AOC5-TB01-FAL23
Lab Sample ID: 680-241926-8
Date Collected: 10/17/23 00:00
Matrix: Water
Date Received: 10/19/23 09:56

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/28/23 16:19	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/28/23 16:19	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/28/23 16:19	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/28/23 16:19	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/28/23 16:19	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/28/23 16:19	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/28/23 16:19	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/28/23 16:19	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/28/23 16:19	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/28/23 16:19	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 16:19	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/28/23 16:19	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/28/23 16:19	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/28/23 16:19	1
Vinyl acetate	2.0	U M	2.5	2.0	0.69	ug/L		10/28/23 16:19	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/28/23 16:19	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/28/23 16:19	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/28/23 16:19	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/28/23 16:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*89 - 112*		*10/28/23 16:19*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*		*10/28/23 16:19*	*1*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*		*10/28/23 16:19*	*1*
Dibromofluoromethane (Surr)	*94*		*80 - 119*		*10/28/23 16:19*	*1*

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

Lab Sample ID: MB 680-805173/8
Matrix: Water
Analysis Batch: 805173

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		10/28/23 15:36	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/28/23 15:36	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/28/23 15:36	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/28/23 15:36	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/28/23 15:36	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/28/23 15:36	1
Bromomethane	10	U	20	10	3.7	ug/L		10/28/23 15:36	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/28/23 15:36	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/28/23 15:36	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/28/23 15:36	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/28/23 15:36	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/28/23 15:36	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/28/23 15:36	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/28/23 15:36	1
Chloroethane	10	U	20	10	4.6	ug/L		10/28/23 15:36	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/28/23 15:36	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/28/23 15:36	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/28/23 15:36	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/28/23 15:36	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/28/23 15:36	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/28/23 15:36	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 15:36	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/28/23 15:36	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/28/23 15:36	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/28/23 15:36	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/28/23 15:36	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/28/23 15:36	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 15:36	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/28/23 15:36	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/28/23 15:36	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/28/23 15:36	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/28/23 15:36	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 15:36	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/28/23 15:36	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/28/23 15:36	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/28/23 15:36	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/28/23 15:36	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/28/23 15:36	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/28/23 15:36	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/28/23 15:36	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/28/23 15:36	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/28/23 15:36	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/28/23 15:36	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/28/23 15:36	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/28/23 15:36	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/28/23 15:36	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/28/23 15:36	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/28/23 15:36	1

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

Lab Sample ID: MB 680-805173/8
Matrix: Water
Analysis Batch: 805173

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/28/23 15:36	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/28/23 15:36	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/28/23 15:36	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/28/23 15:36	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/28/23 15:36	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/28/23 15:36	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/28/23 15:36	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/28/23 15:36	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/28/23 15:36	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/28/23 15:36	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/28/23 15:36	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/28/23 15:36	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/28/23 15:36	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/28/23 15:36	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/28/23 15:36	1
Vinyl acetate	2.0	U M	2.5	2.0	0.69	ug/L		10/28/23 15:36	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/28/23 15:36	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/28/23 15:36	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/28/23 15:36	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/28/23 15:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*89 - 112*		*10/28/23 15:36*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*		*10/28/23 15:36*	*1*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*		*10/28/23 15:36*	*1*
Dibromofluoromethane (Surr)	*93*		*80 - 119*		*10/28/23 15:36*	*1*

Lab Sample ID: LCS 680-805173/4
Matrix: Water
Analysis Batch: 805173

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	250	262		ug/L		105	39 - 160
Benzene	50.0	52.3		ug/L		105	79 - 120
Bromobenzene	50.0	46.4		ug/L		93	80 - 120
Chlorobromomethane	50.0	52.9		ug/L		106	78 - 123
Dichlorobromomethane	50.0	49.8		ug/L		100	79 - 125
Bromoform	50.0	39.8		ug/L		80	66 - 130
Bromomethane	50.0	49.2		ug/L		98	53 - 141
2-Butanone (MEK)	250	228		ug/L		91	56 - 143
n-Butylbenzene	50.0	45.6		ug/L		91	75 - 128
sec-Butylbenzene	50.0	46.8		ug/L		94	77 - 126
tert-Butylbenzene	50.0	45.9		ug/L		92	78 - 124
Carbon disulfide	50.0	46.5		ug/L		93	64 - 133
Carbon tetrachloride	50.0	47.6		ug/L		95	72 - 136
Chlorobenzene	50.0	47.1		ug/L		94	82 - 118
Chloroethane	50.0	81.0	Q	ug/L		162	60 - 138
Chloroform	50.0	50.2		ug/L		100	79 - 124

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

Lab Sample ID: LCS 680-805173/4
Matrix: Water
Analysis Batch: 805173

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloromethane	50.0	53.7		ug/L		107	50 - 139
2-Chlorotoluene	50.0	46.7		ug/L		93	79 - 122
4-Chlorotoluene	50.0	45.7		ug/L		91	78 - 122
Chlorodibromomethane	50.0	48.3		ug/L		97	74 - 126
1,2-Dibromo-3-Chloropropane	50.0	40.2		ug/L		80	62 - 128
Ethylene Dibromide	50.0	52.2		ug/L		104	75 - 127
Dibromomethane	50.0	52.3		ug/L		105	79 - 123
1,2-Dichlorobenzene	50.0	45.3		ug/L		91	80 - 119
1,3-Dichlorobenzene	50.0	45.4		ug/L		91	80 - 119
1,4-Dichlorobenzene	50.0	44.9		ug/L		90	79 - 118
Dichlorodifluoromethane	50.0	55.5		ug/L		111	32 - 152
1,1-Dichloroethane	50.0	53.9		ug/L		108	77 - 125
1,2-Dichloroethane	50.0	52.5		ug/L		105	73 - 128
cis-1,2-Dichloroethene	50.0	51.1		ug/L		102	78 - 123
trans-1,2-Dichloroethene	50.0	50.3		ug/L		101	75 - 124
1,2-Dichloroethene, Total	100	101		ug/L		101	79 - 121
1,1-Dichloroethene	50.0	48.9		ug/L		98	71 - 131
1,2-Dichloropropane	50.0	53.2		ug/L		106	78 - 122
1,3-Dichloropropane	50.0	55.0		ug/L		110	80 - 119
2,2-Dichloropropane	50.0	49.8	M	ug/L		100	60 - 139
1,1-Dichloropropene	50.0	52.3		ug/L		105	79 - 125
cis-1,3-Dichloropropene	50.0	51.6		ug/L		103	75 - 124
trans-1,3-Dichloropropene	50.0	49.9		ug/L		100	73 - 127
Ethylbenzene	50.0	46.7		ug/L		93	79 - 121
Hexachlorobutadiene	50.0	43.5		ug/L		87	66 - 134
2-Hexanone	250	272		ug/L		109	57 - 139
Isopropylbenzene	50.0	46.7		ug/L		93	72 - 131
4-Isopropyltoluene	50.0	45.4		ug/L		91	77 - 127
Methylene Chloride	50.0	51.0		ug/L		102	74 - 124
4-Methyl-2-pentanone (MIBK)	250	275		ug/L		110	67 - 130
Methyl tert-butyl ether	50.0	52.9		ug/L		106	71 - 124
Naphthalene	50.0	43.2		ug/L		86	61 - 128
N-Propylbenzene	50.0	47.1		ug/L		94	76 - 126
Styrene	50.0	45.9		ug/L		92	78 - 123
1,1,1,2-Tetrachloroethane	50.0	44.6		ug/L		89	78 - 124
1,1,2,2-Tetrachloroethane	50.0	47.4		ug/L		95	71 - 121
Tetrachloroethene	50.0	52.3		ug/L		105	74 - 129
Toluene	50.0	52.5		ug/L		105	80 - 121
1,2,3-Trichlorobenzene	50.0	43.9		ug/L		88	69 - 129
1,2,4-Trichlorobenzene	50.0	43.6		ug/L		87	69 - 130
1,1,1-Trichloroethane	50.0	49.4		ug/L		99	74 - 131
1,1,2-Trichloroethane	50.0	52.6		ug/L		105	80 - 119
Trichloroethene	50.0	51.3		ug/L		103	79 - 123
Trichlorofluoromethane	50.0	56.8		ug/L		114	65 - 141
1,2,3-Trichloropropane	50.0	47.5		ug/L		95	73 - 122
1,2,4-Trimethylbenzene	50.0	45.6		ug/L		91	76 - 124
1,3,5-Trimethylbenzene	50.0	45.9		ug/L		92	75 - 124
Vinyl acetate	100	114		ug/L		114	54 - 146
Vinyl chloride	50.0	55.2		ug/L		110	58 - 137

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

Lab Sample ID: LCS 680-805173/4
Matrix: Water
Analysis Batch: 805173

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			50.0	45.8		ug/L		92	78 - 122		
m-Xylene & p-Xylene			50.0	45.6		ug/L		91	80 - 121		
Xylenes, Total			100	91.4		ug/L		91	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*109*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*104*		*81 - 118*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*
Dibromofluoromethane (Surr)	*105*		*80 - 119*

Lab Sample ID: LCSD 680-805173/5
Matrix: Water
Analysis Batch: 805173

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
Acetone			250	280		ug/L		112	39 - 160	7	20
Benzene			50.0	54.4		ug/L		109	79 - 120	4	20
Bromobenzene			50.0	47.8		ug/L		96	80 - 120	3	20
Chlorobromomethane			50.0	55.1		ug/L		110	78 - 123	4	20
Dichlorobromomethane			50.0	51.5		ug/L		103	79 - 125	3	20
Bromoform			50.0	41.6		ug/L		83	66 - 130	4	20
Bromomethane			50.0	51.5		ug/L		103	53 - 141	4	20
2-Butanone (MEK)			250	248		ug/L		99	56 - 143	8	20
n-Butylbenzene			50.0	46.8		ug/L		94	75 - 128	3	20
sec-Butylbenzene			50.0	48.1		ug/L		96	77 - 126	3	20
tert-Butylbenzene			50.0	47.0		ug/L		94	78 - 124	2	20
Carbon disulfide			50.0	48.0		ug/L		96	64 - 133	3	20
Carbon tetrachloride			50.0	48.8		ug/L		98	72 - 136	3	20
Chlorobenzene			50.0	48.1		ug/L		96	82 - 118	2	20
Chloroethane			50.0	84.1	Q	ug/L		168	60 - 138	4	20
Chloroform			50.0	51.5		ug/L		103	79 - 124	3	20
Chloromethane			50.0	55.2		ug/L		110	50 - 139	3	20
2-Chlorotoluene			50.0	47.5		ug/L		95	79 - 122	2	20
4-Chlorotoluene			50.0	47.2		ug/L		94	78 - 122	3	20
Chlorodibromomethane			50.0	50.9		ug/L		102	74 - 126	5	20
1,2-Dibromo-3-Chloropropane			50.0	42.9		ug/L		86	62 - 128	6	20
Ethylene Dibromide			50.0	55.2		ug/L		110	75 - 127	6	20
Dibromomethane			50.0	54.2		ug/L		108	79 - 123	4	20
1,2-Dichlorobenzene			50.0	46.1		ug/L		92	80 - 119	2	20
1,3-Dichlorobenzene			50.0	46.2		ug/L		92	80 - 119	2	20
1,4-Dichlorobenzene			50.0	45.7		ug/L		91	79 - 118	2	20
Dichlorodifluoromethane			50.0	55.1		ug/L		110	32 - 152	1	20
1,1-Dichloroethane			50.0	54.2		ug/L		108	77 - 125	1	20
1,2-Dichloroethane			50.0	55.5		ug/L		111	73 - 128	6	20
cis-1,2-Dichloroethene			50.0	52.4		ug/L		105	78 - 123	3	20
trans-1,2-Dichloroethene			50.0	50.8		ug/L		102	75 - 124	1	20
1,2-Dichloroethene, Total			100	103		ug/L		103	79 - 121	2	20
1,1-Dichloroethene			50.0	49.7		ug/L		99	71 - 131	2	20

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

Lab Sample ID: LCSD 680-805173/5
Matrix: Water
Analysis Batch: 805173

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Dichloropropane			50.0	55.1		ug/L		110	78 - 122	3	20
1,3-Dichloropropane			50.0	58.2		ug/L		116	80 - 119	6	20
2,2-Dichloropropane			50.0	49.6	M	ug/L		99	60 - 139	0	20
1,1-Dichloropropene			50.0	53.1		ug/L		106	79 - 125	2	20
cis-1,3-Dichloropropene			50.0	53.1		ug/L		106	75 - 124	3	20
trans-1,3-Dichloropropene			50.0	52.4		ug/L		105	73 - 127	5	20
Ethylbenzene			50.0	47.8		ug/L		96	79 - 121	2	20
Hexachlorobutadiene			50.0	44.7		ug/L		89	66 - 134	3	20
2-Hexanone			250	289		ug/L		115	57 - 139	6	20
Isopropylbenzene			50.0	47.7		ug/L		95	72 - 131	2	20
4-Isopropyltoluene			50.0	46.2		ug/L		92	77 - 127	2	20
Methylene Chloride			50.0	53.4		ug/L		107	74 - 124	4	20
4-Methyl-2-pentanone (MIBK)			250	291		ug/L		116	67 - 130	5	20
Methyl tert-butyl ether			50.0	55.8		ug/L		112	71 - 124	5	20
Naphthalene			50.0	44.9		ug/L		90	61 - 128	4	20
N-Propylbenzene			50.0	48.2		ug/L		96	76 - 126	2	20
Styrene			50.0	47.2		ug/L		94	78 - 123	3	20
1,1,1,2-Tetrachloroethane			50.0	45.9		ug/L		92	78 - 124	3	20
1,1,2,2-Tetrachloroethane			50.0	49.2		ug/L		98	71 - 121	4	20
Tetrachloroethene			50.0	53.3		ug/L		107	74 - 129	2	20
Toluene			50.0	54.2		ug/L		108	80 - 121	3	20
1,2,3-Trichlorobenzene			50.0	44.8		ug/L		90	69 - 129	2	20
1,2,4-Trichlorobenzene			50.0	45.0		ug/L		90	69 - 130	3	20
1,1,1-Trichloroethane			50.0	50.6		ug/L		101	74 - 131	2	20
1,1,2-Trichloroethane			50.0	55.0		ug/L		110	80 - 119	4	20
Trichloroethene			50.0	53.5		ug/L		107	79 - 123	4	20
Trichlorofluoromethane			50.0	56.9		ug/L		114	65 - 141	0	20
1,2,3-Trichloropropane			50.0	49.3		ug/L		99	73 - 122	4	20
1,2,4-Trimethylbenzene			50.0	46.6		ug/L		93	76 - 124	2	20
1,3,5-Trimethylbenzene			50.0	47.3		ug/L		95	75 - 124	3	20
Vinyl acetate			100	121		ug/L		121	54 - 146	6	20
Vinyl chloride			50.0	55.2		ug/L		110	58 - 137	0	20
o-Xylene			50.0	47.1		ug/L		94	78 - 122	3	20
m-Xylene & p-Xylene			50.0	46.9		ug/L		94	80 - 121	3	20
Xylenes, Total			100	94.0		ug/L		94	79 - 121	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*111*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*109*		*81 - 118*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*
Dibromofluoromethane (Surr)	*109*		*80 - 119*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-804576/8
Matrix: Water
Analysis Batch: 804576

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	0.76	U	1.1	0.76	0.30	ug/L		10/25/23 15:44	1
Ethylene	0.71	U	1.0	0.71	0.31	ug/L		10/25/23 15:44	1
Methane	1.2	U	1.2	1.2	0.57	ug/L		10/25/23 15:44	1

Lab Sample ID: LCS 680-804576/3
Matrix: Water
Analysis Batch: 804576

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methane (TCD)	1920	2030		ug/L		105	73 - 125

Lab Sample ID: LCS 680-804576/6
Matrix: Water
Analysis Batch: 804576

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethane	361	356		ug/L		99	74 - 131
Ethylene	337	320		ug/L		95	72 - 133
Methane	192	183		ug/L		95	73 - 125

Lab Sample ID: LCSD 680-804576/4
Matrix: Water
Analysis Batch: 804576

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
Methane (TCD)	1920	1980		ug/L		103	73 - 125	3	30

Lab Sample ID: LCSD 680-804576/7
Matrix: Water
Analysis Batch: 804576

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
Ethane	361	397		ug/L		110	74 - 131	11	30
Ethylene	337	358		ug/L		106	72 - 133	11	30
Methane	192	204		ug/L		106	73 - 125	11	30

Lab Sample ID: MB 680-805051/8
Matrix: Water
Analysis Batch: 805051

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	0.76	U	1.1	0.76	0.30	ug/L		10/27/23 15:10	1
Ethylene	0.71	U	1.0	0.71	0.31	ug/L		10/27/23 15:10	1
Methane	1.2	U	1.2	1.2	0.57	ug/L		10/27/23 15:10	1

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: LCS 680-805051/3
Matrix: Water
Analysis Batch: 805051

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methane (TCD)	1920	2090		ug/L		109	73 - 125

Lab Sample ID: LCS 680-805051/6
Matrix: Water
Analysis Batch: 805051

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethane	361	351		ug/L		97	74 - 131
Ethylene	337	315		ug/L		94	72 - 133
Methane	192	182		ug/L		94	73 - 125

Lab Sample ID: LCSD 680-805051/4
Matrix: Water
Analysis Batch: 805051

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
Methane (TCD)	1920	2020		ug/L		105	73 - 125	3	30

Lab Sample ID: LCSD 680-805051/7
Matrix: Water
Analysis Batch: 805051

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
Ethane	361	409		ug/L		114	74 - 131	15	30
Ethylene	337	369		ug/L		110	72 - 133	16	30
Methane	192	212		ug/L		110	73 - 125	15	30

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-806505/2
Matrix: Water
Analysis Batch: 806505

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	1.0	U	1.5	1.0	0.40	mg/L		11/05/23 12:20	1

Lab Sample ID: LCS 680-806505/4
Matrix: Water
Analysis Batch: 806505

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	10.0	9.86		mg/L		99	87 - 112

Lab Sample ID: LCSD 680-806505/5
Matrix: Water
Analysis Batch: 806505

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
Sulfate	10.0	9.93		mg/L		99	87 - 112	1	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-803772/1-A
Matrix: Water
Analysis Batch: 804240

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 803772

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/23/23 13:21	1
Manganese	5.0	U	10	5.0	1.3	ug/L		10/23/23 13:21	1

Lab Sample ID: LCS 680-803772/2-A
Matrix: Water
Analysis Batch: 804240

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 803772

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	4990	5260		ug/L		105	87 - 115
Manganese	400	407		ug/L		102	90 - 114

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-803773/1-A
Matrix: Water
Analysis Batch: 804237

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 803773

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		10/23/23 18:33	1

Lab Sample ID: LCS 680-803773/2-A
Matrix: Water
Analysis Batch: 804237

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 803773

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	106		ug/L		106	84 - 116

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 680-804964/4
Matrix: Water
Analysis Batch: 804964

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	5.0	U	5.5	5.0	2.2	mg/L		10/26/23 12:50	1

Lab Sample ID: LCS 680-804964/6
Matrix: Water
Analysis Batch: 804964

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity as CaCO3 to pH 4.5	250	244		mg/L		97	90 - 112

Lab Sample ID: LCSD 680-804964/31
Matrix: Water
Analysis Batch: 804964

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
Total Alkalinity as CaCO3 to pH 4.5	250	252		mg/L		101	90 - 112	3	30

Method: 353.2-1993 R2.0 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 680-805094/15
Matrix: Water
Analysis Batch: 805094

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.0360	J	0.10	0.025	0.010	mg/L		10/26/23 15:50	1

Lab Sample ID: LCS 680-805094/16
Matrix: Water
Analysis Batch: 805094

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	1.00	1.06		mg/L		106	90 - 110

Method: 9060 - Organic Carbon, Total (TOC)

Lab Sample ID: MB 680-806282/2
Matrix: Water
Analysis Batch: 806282

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon	1.0	U	1.5	1.0	0.50	mg/L		11/01/23 22:24	1

Lab Sample ID: LCS 680-806282/3
Matrix: Water
Analysis Batch: 806282

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	20.0	21.1		mg/L		105	80 - 120

Lab Sample ID: LCSD 680-806282/4
Matrix: Water
Analysis Batch: 806282

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
Total Organic Carbon	20.0	21.3		mg/L		106	80 - 120	1	25

GC/MS VOA

Analysis Batch: 805173

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-241926-1	AOC50-DUP04-FAL23	Total/NA	Water	8260D	
680-241926-2	G6M-02-11X-FAL23	Total/NA	Water	8260D	
680-241926-3	G6M-03-10X-FAL23	Total/NA	Water	8260D	
680-241926-4	G6M-13-05X-FAL23	Total/NA	Water	8260D	
680-241926-5	G6M-13-06X-FAL23	Total/NA	Water	8260D	
680-241926-6	G6M-95-20X-FAL23	Total/NA	Water	8260D	
680-241926-7	G6M-97-05B-FAL23	Total/NA	Water	8260D	
680-241926-8	AOC5-TB01-FAL23	Total/NA	Water	8260D	
MB 680-805173/8	Method Blank	Total/NA	Water	8260D	
LCS 680-805173/4	Lab Control Sample	Total/NA	Water	8260D	
LCSD 680-805173/5	Lab Control Sample Dup	Total/NA	Water	8260D	

GC VOA

Analysis Batch: 804576

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-241926-4	G6M-13-05X-FAL23	Total/NA	Water	RSK-175	
680-241926-5	G6M-13-06X-FAL23	Total/NA	Water	RSK-175	
MB 680-804576/8	Method Blank	Total/NA	Water	RSK-175	
LCS 680-804576/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-804576/6	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-804576/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-804576/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	

Analysis Batch: 805051

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-241926-7	G6M-97-05B-FAL23	Total/NA	Water	RSK-175	
MB 680-805051/8	Method Blank	Total/NA	Water	RSK-175	
LCS 680-805051/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-805051/6	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-805051/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-805051/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	

HPLC/IC

Analysis Batch: 806505

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-241926-4	G6M-13-05X-FAL23	Total/NA	Water	9056A	
680-241926-5	G6M-13-06X-FAL23	Total/NA	Water	9056A	
680-241926-7	G6M-97-05B-FAL23	Total/NA	Water	9056A	
MB 680-806505/2	Method Blank	Total/NA	Water	9056A	
LCS 680-806505/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-806505/5	Lab Control Sample Dup	Total/NA	Water	9056A	

Metals

Prep Batch: 803772

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-241926-1	AOC50-DUP04-FAL23	Dissolved	Water	3005A	
680-241926-2	G6M-02-11X-FAL23	Dissolved	Water	3005A	
680-241926-3	G6M-03-10X-FAL23	Dissolved	Water	3005A	
680-241926-4	G6M-13-05X-FAL23	Dissolved	Water	3005A	

Metals (Continued)

Prep Batch: 803772 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-241926-5	G6M-13-06X-FAL23	Dissolved	Water	3005A	
680-241926-6	G6M-95-20X-FAL23	Dissolved	Water	3005A	
680-241926-7	G6M-97-05B-FAL23	Dissolved	Water	3005A	
MB 680-803772/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-803772/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 803773

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-241926-1	AOC50-DUP04-FAL23	Dissolved	Water	3005A	
680-241926-2	G6M-02-11X-FAL23	Dissolved	Water	3005A	
680-241926-3	G6M-03-10X-FAL23	Dissolved	Water	3005A	
680-241926-4	G6M-13-05X-FAL23	Dissolved	Water	3005A	
680-241926-5	G6M-13-06X-FAL23	Dissolved	Water	3005A	
680-241926-6	G6M-95-20X-FAL23	Dissolved	Water	3005A	
680-241926-7	G6M-97-05B-FAL23	Dissolved	Water	3005A	
MB 680-803773/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-803773/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 804237

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-241926-1	AOC50-DUP04-FAL23	Dissolved	Water	6020A	803773
680-241926-2	G6M-02-11X-FAL23	Dissolved	Water	6020A	803773
680-241926-3	G6M-03-10X-FAL23	Dissolved	Water	6020A	803773
680-241926-4	G6M-13-05X-FAL23	Dissolved	Water	6020A	803773
680-241926-5	G6M-13-06X-FAL23	Dissolved	Water	6020A	803773
680-241926-6	G6M-95-20X-FAL23	Dissolved	Water	6020A	803773
680-241926-7	G6M-97-05B-FAL23	Dissolved	Water	6020A	803773
MB 680-803773/1-A	Method Blank	Total Recoverable	Water	6020A	803773
LCS 680-803773/2-A	Lab Control Sample	Total Recoverable	Water	6020A	803773

Analysis Batch: 804240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-241926-1	AOC50-DUP04-FAL23	Dissolved	Water	6010C	803772
680-241926-2	G6M-02-11X-FAL23	Dissolved	Water	6010C	803772
680-241926-3	G6M-03-10X-FAL23	Dissolved	Water	6010C	803772
680-241926-4	G6M-13-05X-FAL23	Dissolved	Water	6010C	803772
680-241926-5	G6M-13-06X-FAL23	Dissolved	Water	6010C	803772
680-241926-6	G6M-95-20X-FAL23	Dissolved	Water	6010C	803772
680-241926-7	G6M-97-05B-FAL23	Dissolved	Water	6010C	803772
MB 680-803772/1-A	Method Blank	Total Recoverable	Water	6010C	803772
LCS 680-803772/2-A	Lab Control Sample	Total Recoverable	Water	6010C	803772

General Chemistry

Analysis Batch: 804964

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-241926-4	G6M-13-05X-FAL23	Total/NA	Water	2320B-2011	
680-241926-5	G6M-13-06X-FAL23	Total/NA	Water	2320B-2011	
680-241926-7	G6M-97-05B-FAL23	Total/NA	Water	2320B-2011	
MB 680-804964/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-804964/6	Lab Control Sample	Total/NA	Water	2320B-2011	

General Chemistry (Continued)

Analysis Batch: 804964 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 680-804964/31	Lab Control Sample Dup	Total/NA	Water	2320B-2011	

Analysis Batch: 805094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-241926-4	G6M-13-05X-FAL23	Total/NA	Water	353.2-1993 R2.0	
680-241926-5	G6M-13-06X-FAL23	Total/NA	Water	353.2-1993 R2.0	
680-241926-7	G6M-97-05B-FAL23	Total/NA	Water	353.2-1993 R2.0	
MB 680-805094/15	Method Blank	Total/NA	Water	353.2-1993 R2.0	
LCS 680-805094/16	Lab Control Sample	Total/NA	Water	353.2-1993 R2.0	

Analysis Batch: 806282

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-241926-4	G6M-13-05X-FAL23	Total/NA	Water	9060	
680-241926-5	G6M-13-06X-FAL23	Total/NA	Water	9060	
680-241926-7	G6M-97-05B-FAL23	Total/NA	Water	9060	
MB 680-806282/2	Method Blank	Total/NA	Water	9060	
LCS 680-806282/3	Lab Control Sample	Total/NA	Water	9060	
LCSD 680-806282/4	Lab Control Sample Dup	Total/NA	Water	9060	

Client Sample ID: AOC50-DUP04-FAL23
Lab Sample ID: 680-241926-1

Date Collected: 10/17/23 15:35
Matrix: Water
Date Received: 10/19/23 09:56

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805173	10/28/23 19:12	P1C	EET SAV
	Instrument ID: CMSAJ									
Dissolved	Prep	3005A			25 mL	25 mL	803772	10/20/23 12:48	RR	EET SAV
Dissolved	Analysis	6010C		1			804240	10/23/23 14:13	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	803773	10/20/23 12:48	RR	EET SAV
Dissolved	Analysis	6020A		1			804237	10/23/23 19:02	BWR	EET SAV
	Instrument ID: ICPMSC									

Client Sample ID: G6M-02-11X-FAL23
Lab Sample ID: 680-241926-2

Date Collected: 10/17/23 12:40
Matrix: Water
Date Received: 10/19/23 09:56

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805173	10/28/23 19:34	P1C	EET SAV
	Instrument ID: CMSAJ									
Dissolved	Prep	3005A			25 mL	25 mL	803772	10/20/23 12:48	RR	EET SAV
Dissolved	Analysis	6010C		1			804240	10/23/23 14:16	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	803773	10/20/23 12:48	RR	EET SAV
Dissolved	Analysis	6020A		1			804237	10/23/23 19:06	BWR	EET SAV
	Instrument ID: ICPMSC									

Client Sample ID: G6M-03-10X-FAL23
Lab Sample ID: 680-241926-3

Date Collected: 10/17/23 14:20
Matrix: Water
Date Received: 10/19/23 09:56

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805173	10/28/23 19:56	P1C	EET SAV
	Instrument ID: CMSAJ									
Dissolved	Prep	3005A			25 mL	25 mL	803772	10/20/23 12:48	RR	EET SAV
Dissolved	Analysis	6010C		1			804240	10/23/23 14:22	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	803773	10/20/23 12:48	RR	EET SAV
Dissolved	Analysis	6020A		1			804237	10/23/23 19:10	BWR	EET SAV
	Instrument ID: ICPMSC									

Client Sample ID: G6M-13-05X-FAL23
Lab Sample ID: 680-241926-4

Date Collected: 10/17/23 11:10
Matrix: Water
Date Received: 10/19/23 09:56

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805173	10/28/23 20:17	P1C	EET SAV
	Instrument ID: CMSAJ									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	804576	10/25/23 21:57	OK	EET SAV
	Instrument ID: CVGU									

Client Sample ID: G6M-13-05X-FAL23

Lab Sample ID: 680-241926-4

Date Collected: 10/17/23 11:10
Matrix: Water
Date Received: 10/19/23 09:56

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		2	5 mL	5 mL	806505	11/05/23 17:14	UI	EET SAV
Dissolved	Prep	3005A			25 mL	25 mL	803772	10/20/23 12:48	RR	EET SAV
Dissolved	Analysis	6010C		1			804240	10/23/23 14:24	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	803773	10/20/23 12:48	RR	EET SAV
Dissolved	Analysis	6020A		1			804237	10/23/23 19:22	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	2320B-2011		1			804964	10/26/23 13:28	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	805094	10/26/23 15:59	AF	EET SAV
	Instrument ID: SEAL 1									
Total/NA	Analysis	9060		1	40 mL	40 mL	806282	11/02/23 08:03	KMB	EET SAV
	Instrument ID: TOC7									

Client Sample ID: G6M-13-06X-FAL23

Lab Sample ID: 680-241926-5

Date Collected: 10/17/23 13:35
Matrix: Water
Date Received: 10/19/23 09:56

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805173	10/28/23 20:39	P1C	EET SAV
	Instrument ID: CMSAJ									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	804576	10/25/23 22:10	OK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		2	5 mL	5 mL	806505	11/05/23 17:26	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			25 mL	25 mL	803772	10/20/23 12:48	RR	EET SAV
Dissolved	Analysis	6010C		1			804240	10/23/23 14:26	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	803773	10/20/23 12:48	RR	EET SAV
Dissolved	Analysis	6020A		1			804237	10/23/23 19:26	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	2320B-2011		1			804964	10/26/23 13:38	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	805094	10/26/23 16:10	AF	EET SAV
	Instrument ID: SEAL 1									
Total/NA	Analysis	9060		1	40 mL	40 mL	806282	11/02/23 08:30	KMB	EET SAV
	Instrument ID: TOC7									

Client Sample ID: G6M-95-20X-FAL23

Lab Sample ID: 680-241926-6

Date Collected: 10/17/23 15:35
Matrix: Water
Date Received: 10/19/23 09:56

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805173	10/28/23 21:01	P1C	EET SAV
	Instrument ID: CMSAJ									

Client Sample ID: G6M-95-20X-FAL23
Lab Sample ID: 680-241926-6

Date Collected: 10/17/23 15:35
Matrix: Water
Date Received: 10/19/23 09:56

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			25 mL	25 mL	803772	10/20/23 12:48	RR	EET SAV
Dissolved	Analysis	6010C		1			804240	10/23/23 14:28	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	803773	10/20/23 12:48	RR	EET SAV
Dissolved	Analysis	6020A		1			804237	10/23/23 19:30	BWR	EET SAV
	Instrument ID: ICPMSC									

Client Sample ID: G6M-97-05B-FAL23
Lab Sample ID: 680-241926-7

Date Collected: 10/17/23 11:00
Matrix: Water
Date Received: 10/19/23 09:56

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805173	10/28/23 21:22	P1C	EET SAV
	Instrument ID: CMSAJ									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	805051	10/27/23 19:25	OK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		2	5 mL	5 mL	806505	11/05/23 17:39	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			25 mL	25 mL	803772	10/20/23 12:48	RR	EET SAV
Dissolved	Analysis	6010C		1			804240	10/23/23 14:30	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	803773	10/20/23 12:48	RR	EET SAV
Dissolved	Analysis	6020A		1			804237	10/23/23 19:34	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	2320B-2011		1			804964	10/26/23 13:48	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	805094	10/26/23 16:12	AF	EET SAV
	Instrument ID: SEAL 1									
Total/NA	Analysis	9060		1	40 mL	40 mL	806282	11/02/23 09:02	KMB	EET SAV
	Instrument ID: TOC7									

Client Sample ID: AOC5-TB01-FAL23
Lab Sample ID: 680-241926-8

Date Collected: 10/17/23 00:00
Matrix: Water
Date Received: 10/19/23 09:56

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805173	10/28/23 16:19	P1C	EET SAV
	Instrument ID: CMSAJ									

Laboratory References:

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

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-241926-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Laboratory: Eurofins Savannah

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

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-22-24

Method Summary

Client: Seres Engineering & Services LLC
Job ID: 680-241926-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds (GC/MS)	SW846	EET SAV
RSK-175	Dissolved Gases (GC)	RSK	EET SAV
9056A	Anions, Ion Chromatography	SW846	EET SAV
6010C	Metals (ICP)	SW846	EET SAV
6020A	Metals (ICP/MS)	SW846	EET SAV
2320B-2011	Alkalinity, Total	SM	EET SAV
353.2-1993 R2.0	Nitrogen, Nitrate-Nitrite	MCAWW	EET SAV
9060	Organic Carbon, Total (TOC)	SW846	EET SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET SAV
5030C	Purge and Trap	SW846	EET SAV

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique , RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

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

CHAIN-OF-CUSTODY RECORD

ARVC
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # AOC50_LTM_FAL23

US Army Corps of Engineers

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023
Project Number: DEVNS-LTM PO 2312 - 00000001	POC: Jerry Lanier, 912-250-0281, jerry.lanier@eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
E353.2 (A) = Nitrite Nitrate as N
RSK175 (A) = Dissolved Gases
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9034 (A) = Sulfide

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
5	1x 125mL plastic, Cool < 6degC
7	2x 250mL plastic, ZnAc/NaOH Cool < 6degC
8	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
10	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
29	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC
47	1x 500mL, amber glass, H2SO4; Cool < 6degC

Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023

	Sample ID	Matrix	Date	Time	Samp Init.	A2320B (A) 46	E353.2 (A) 47	RSK175 (A) 8	SW6010C/FLDFLT (B) 9	SW6020A/FLDFLT (B) 9	SW8260B - VOCs 29	SW9034 (A) 7	SW9056A - SO4 5	SW9060A - TOC 10	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
1	AOC50-DUP01-FAL23	WG							X	X	X				G6M-04-04X	FD1	94.00	104.00	1	
2	AOC50-DUP02-FAL23	WG				X	X	X	X	X	X	X	X	X	G6M-13-02X	FD1	115.00	125.00	1	
3	AOC50-DUP03-FAL23	WG				X	X	X	X	X	X	X	X	X	G6M-07-02X	FD1	22.50	27.50	1	
4	AOC50-DUP04-FAL23	WG	10.17.23	1535	DC				X	X	X				G6M-95-20X	FD1	18.00	23.00	1	
5	G6M-02-01X-FAL23	WG				X	X	X	X	X	X	X	X	X	G6M-02-01X	N1	80.00	95.00	1	
6	G6M-02-04X-FAL23	WG							X	X	X				G6M-02-04X	N1	90.00	105.00	1	
7	G6M-02-06X-FAL23	WG							X	X	X				G6M-02-06X	N1	55.00	65.00	1	
8	G6M-02-07X-FAL23	WG							X	X	X				G6M-02-07X	N1	30.00	40.00	1	
9	G6M-02-08X-FAL23	WG				X	X	X	X	X	X	X	X	X	G6M-02-08X	N1	60.00	70.00	1	
10	G6M-02-11X-FAL23	WG	10.17.23	1240	NM				X	X	X				G6M-02-11X	N1	125.00	135.00	1	
11	G6M-02-13X-FAL23	WG							X	X	X				G6M-02-13X	N1	110.00	120.00	1	
12	G6M-03-07X-FAL23	WG				X	X	X	X	X	X	X	X	X	G6M-03-07X	N1	80.00	90.00	1	
13	G6M-03-10X-FAL23	WG	10.17.23	1420	NM				X	X	X				G6M-03-10X	N1	120.00	135.00	1	
14	G6M-04-01X-FAL23	WG							X	X	X				G6M-04-01X	N1	82.00	92.00	1	
15	G6M-04-02X-FAL23	WG				X	X	X	X	X	X	X	X	X	G6M-04-02X	N1	80.00	90.00	1	
16	G6M-04-03X-FAL23	WG				X	X	X	X	X	X	X	X	X	G6M-04-03X	N1	85.00	95.00	1	
17	G6M-04-04X-FAL23	WG							X	X	X				G6M-04-04X	N1	94.00	104.00	1	
18	G6M-04-06X-FAL23	WG							X	X	X				G6M-04-06X	N1	95.00	136.00	1	
19	G6M-04-07X-FAL23	WG				X	X	X	X	X	X	X	X	X	G6M-04-07X	N1	120.00	130.00	1	
20	G6M-04-09X-FAL23	WG				X	X	X	X	X	X	X	X	X	G6M-04-09X	N1	55.00	65.00	1	

680-241926 Chain of Custody

Relinquished by: (Signature) Dmelin
Date 10-18-23
Time 0732
Received by: (Signature)

Received by Laboratory: (Signature) 10/17/23
Date
Time 11:10

10/18/23 1506
10/18/23 1655 FedEx
10/19/23 0956
0.5/6.8

11/6/2023

CHAIN-OF-CUSTODY RECORD

ARVC
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # AOC50_LTM_FAL23

US Army Corps of Engineers

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023
Project Number: DEVNS-LTM PO 2312 - 00000001	POC: Jerry Lanier, 912-250-0281, jerry.lanier@eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
E353.2 (A) = Nitrite Nitrate as N
RSK175 (A) = Dissolved Gases
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9034 (A) = Sulfide

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
6	1x 125mL plastic, Cool < 6degC
7	2x 250mL plastic, ZnAc/NaOH Cool < 6degC
8	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
10	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
29	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC
47	1x 500mL, amber glass, H2SO4; Cool < 6degC

Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023

						Analytical Test Method	A2320B (A)	E353.2 (A)	RSK175 (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW8260B - VOCs	SW9034 (A)	SW9056A - SO4	SW9060A - TOC			Sample	Depth (ft bgs)			
							46	47	8	9	9	29	7	5	10				Top - Bottom			
	Sample ID	Matrix	Date	Time	Samp Init.												Location ID	Sample Type			Cooler	Comments
21	G6M-04-10A-FAL23	WG					X	X	X	X	X	X	X	X	X		G6M-04-10A	MS1	30.00	40.00	1	
22	G6M-04-10A-FAL23	WG					X	X	X	X	X	X	X	X	X		G6M-04-10A	N1	30.00	40.00	1	
23	G6M-04-10A-FAL23	WG					X	X	X	X	X	X	X	X	X		G6M-04-10A	SD1	30.00	40.00	1	
24	G6M-04-10X-FAL23	WG										X					G6M-04-10X	N1	52.00	62.00	1	
25	G6M-04-13X-FAL23	WG										X					G6M-04-13X	N1	30.00	40.00	1	
26	G6M-04-14X-FAL23	WG								X	X	X					G6M-04-14X	N1	80.00	90.00	1	
27	G6M-04-15X-FAL23	WG								X	X	X					G6M-04-15X	N1	70.00	80.00	1	
28	G6M-07-01X-FAL23	WG					X	X	X	X	X	X	X	X	X		G6M-07-01X	N1	78.00	98.00	1	
29	G6M-07-02X-FAL23	WG					X	X	X	X	X	X	X	X	X		G6M-07-02X	N1	22.50	27.50	1	
30	G6M-13-01X-FAL23	WG					X	X	X	X	X	X	X	X	X		G6M-13-01X	N1	125.00	135.00	1	
31	G6M-13-02X-FAL23	WG					X	X	X	X	X	X	X	X	X		G6M-13-02X	N1	115.00	125.00	1	
32	G6M-13-04X-FAL23	WG								X	X	X					G6M-13-04X	N1	125.00	135.00	1	
33	G6M-13-05X-FAL23	WG	10.17.23	1110	DC		X	X	X	X	X	X	X	X	X		G6M-13-05X	N1	45.00	55.00	1	
34	G6M-13-06X-FAL23	WG	10.17.23	1335	DC		X	X	X	X	X	X	X	X	X		G6M-13-06X	N1	50.00	60.00	1	
35	G6M-95-19X-FAL23	WG										X					G6M-95-19X	N1	48.00	58.00	1	
36	G6M-95-20X-FAL23	WG	10.17.23	1535	DC					X	X	X					G6M-95-20X	N1	18.00	23.00	1	
37	G6M-97-05B-FAL23	WG	10.17.23	1100	AF		X	X	X	X	X	X	X	X	X		G6M-97-05B	N1	130.00	135.00	1	
38	G6M-97-28X-FAL23	WG								X	X						G6M-97-28X	N1	100.00	105.00	1	
39	MW-3-FAL23	WG								X	X	X					MW-3	MS1	126.00	136.00	1	
40	MW-3-FAL23	WG								X	X	X					MW-3	N1	126.00	136.00	1	

Relinquished by: (Signature) Date 10-18-23 Time 0732
Received by: (Signature)

Received by Laboratory: (Signature) Date 10/18/23 Time 11:10

10/18/23 16:00 Fed
10/18/23 16:55 FedEx
10/19/23 0956
0-5/10/23

CHAIN-OF-CUSTODY RECORD

ARVC
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # AOC50_LTM_FAL23

US Army Corps of Engineers

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023
Project Number: DEVNS-LTM PO 2312 - 00000001	POC: Jerry Lanier, 912-250-0281, jerry.lanier@eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
E353.2 (A) = Nitrite Nitrate as N
RSK175 (A) = Dissolved Gases
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9034 (A) = Sulfide

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
5	1x 125mL plastic, Cool < 6degC
7	2x 250mL plastic, ZnAc/NaOH Cool < 6degC
8	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
10	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
29	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC
47	1x 500mL, amber glass, H2SO4; Cool < 6degC

Analytical Test Method

	Sample ID	Matrix	Date	Time	Samp Init.	A2320B (A)	E353.2 (A)	RSK175 (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW8260B - VOCs	SW9034 (A)	SW9056A - SO4	SW9060A - TOC	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
	Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023					46	47	8	9	9	29	7	5	10						
41	MW-3-FAL23	WG							X	X	X				MW-3	SD1	126.00	136.00	1	
42	MW-7-FAL23	WG							X	X	X				MW-7	N1	6.58	135.00	1	
43	XSA-12-95X-FAL23	WG							X	X	X				XSA-12-95X	N1	120.00	130.00	1	
44	XSA-12-96X-FAL23	WG							X	X	X				XSA-12-96X	N1	120.00	130.00	1	
45	XSA-12-97X-FAL23	WG							X	X	X				XSA-12-97X	N1	120.00	130.00	1	
46	XSA-12-98X-FAL23	WG							X	X	X				XSA-12-98X	N1	60.00	70.00	1	
47	AOC5-TripBlank	Lab Water	—	—							X									
48																				
49																				
50																				
51																				
52																				
53																				
54																				
55																				
56																				

Turnaround Time: Standard

Relinquished by: (Signature)
Date
Time
Received by: (Signature)

10-18-23
0732

Received by Laboratory: (Signature)
Date
Time

10/18/23
1100

10/18/23
16:06
10/18/23 16:55 FedEx
10/19/23 0956
0.5/0.8

11/6/2023

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-241926-1

Login Number: 241926

List Source: Eurofins Savannah

List Number: 1

Creator: Johnson, Corey M

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Heather Levesque
Seres Engineering & Services LLC
669 Marina Drive
Suite B7
Charleston, South Carolina 29492

Generated 11/13/2023 9:39:46 AM

JOB DESCRIPTION

Seres-Arcadis JV, LTM, AOC 50, Fall 2023

JOB NUMBER

680-242109-1

Eurofins Savannah
5102 LaRoche Avenue
Savannah GA 31404

See page two for job notes and contact information.

my EOL

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.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization



Generated
11/13/2023 9:39:46 AM

Authorized for release by
Jerry Lanier, Project Manager I
Jerry.Lanier@et.eurofinsus.com
(912)250-0281

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
D	The reported value is from a dilution.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
M	Manual integrated compound.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

GC 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.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

HPLC/IC

Qualifier	Qualifier Description
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	Undetected at the Limit of Detection.

Metals

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.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	Undetected at the Limit of Detection.

General Chemistry

Qualifier	Qualifier Description
D	The reported value is from a dilution.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

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)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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

Sample Summary

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-242109-1	AOC50-DUP02-FAL23	Water	10/20/23 14:25	10/24/23 10:02
680-242109-2	AOC50-DUP03-FAL23	Water	10/18/23 11:00	10/24/23 10:02
680-242109-3	G6M-02-01X-FAL23	Water	10/19/23 14:45	10/24/23 10:02
680-242109-4	G6M-02-04X-FAL23	Water	10/20/23 11:30	10/24/23 10:02
680-242109-5	G6M-02-07X-FAL23	Water	10/18/23 13:30	10/24/23 10:02
680-242109-6	G6M-02-08X-FAL23	Water	10/19/23 11:05	10/24/23 10:02
680-242109-7	G6M-03-07X-FAL23	Water	10/19/23 10:40	10/24/23 10:02
680-242109-8	G6M-04-01X-FAL23	Water	10/20/23 12:00	10/24/23 10:02
680-242109-9	G6M-04-02X-FAL23	Water	10/20/23 09:30	10/24/23 10:02
680-242109-10	G6M-04-03X-FAL23	Water	10/18/23 15:30	10/24/23 10:02
680-242109-11	G6M-04-09X-FAL23	Water	10/19/23 12:30	10/24/23 10:02
680-242109-12	G6M-04-10A-FAL23	Water	10/19/23 14:05	10/24/23 10:02
680-242109-13	G6M-04-10X-FAL23	Water	10/18/23 14:45	10/24/23 10:02
680-242109-14	G6M-04-13X-FAL23	Water	10/18/23 13:35	10/24/23 10:02
680-242109-15	G6M-04-14X-FAL23	Water	10/18/23 10:30	10/24/23 10:02
680-242109-16	G6M-04-15X-FAL23	Water	10/19/23 10:30	10/24/23 10:02
680-242109-17	G6M-07-01X-FAL23	Water	10/20/23 10:15	10/24/23 10:02
680-242109-18	G6M-07-02X-FAL23	Water	10/18/23 11:00	10/24/23 10:02
680-242109-19	G6M-13-01X-FAL23	Water	10/18/23 13:35	10/24/23 10:02
680-242109-20	G6M-13-02X-FAL23	Water	10/20/23 14:25	10/24/23 10:02
680-242109-21	G6M-95-19X-FAL23	Water	10/18/23 09:40	10/24/23 10:02
680-242109-22	G6M-97-28X-FAL23	Water	10/19/23 14:55	10/24/23 10:02
680-242109-23	MW-3-FAL23	Water	10/18/23 11:30	10/24/23 10:02
680-242109-24	MW-7-FAL23	Water	10/18/23 09:55	10/24/23 10:02
680-242109-25	XSA-12-95X-FAL23	Water	10/18/23 15:15	10/24/23 10:02
680-242109-26	XSA-12-98X-FAL23	Water	10/18/23 15:30	10/24/23 10:02

Job ID: 680-242109-1

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-242109-1

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

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

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

Receipt
The samples were received on 10/24/2023 10:02 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 5 coolers at receipt time were 0.8°C, 1.4°C, 1.6°C, 2.6°C and 2.8°C

Receipt Exceptions
The following samples were listed on the Chain of Custody (COC); however, no samples were received due to one cooler which was not received:

Missing samples G6M-04-06X-FAL23, G6M-04-07X-FAL23, G6M-13-04X-FAL23, and G6M-02-06X-FAL23

GC/MS VOA
Method 8260D_DOD5: Surrogate recovery for the following sample was outside the upper control limit: G6M-03-07X-FAL23 (680-242109-7). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8260D_DOD5: The CCV for analytical batch 680-805298 recovered outside control limits for the following analyte(s): 1,2-Dibromo-3-Chloropropane, Carbon disulfide, Chloromethane and Dichlorodifluoromethane. These analytes have been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Method 8260D_DOD5: The laboratory control sample duplicate (LCSD) for analytical batch 680-805298 recovered outside control limits for the following analytes: Bromoform. This analyte was biased high in the LCSD and was not detected in the associated samples; therefore, the data have been reported.

Method 8260D_DOD5: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 680-805298 recovered outside control limits for the following analytes: Acetone, 2-Butanone (MEK) and 2-Hexanone.

Method 8260D_DOD5: The method blank for analytical batch 680-805298 contained 1,2,3-Trichlorobenzene and 1,2,4-Trichlorobenzene above the method detection limit (MDL). Associated samples were not re-analyzed because the method blank results were less than the reporting limit (RL) OR practical quantitation limit (PQL).

Method 8260D_DOD5: The initial calibration verification (ICV) associated with analytical batch 680-805080 was outside control limits for Chloroethane. Sample results were non-detects and have been reported as qualified data.

(ICV 680-805080/15)

Method 8260D_DOD5: Surrogate recovery was outside acceptance limits for the following matrix spike/matrix spike duplicate (MS/MSD) samples: G6M-04-10A-FAL23 (680-242109-12[MS]) and G6M-04-10A-FAL23 (680-242109-12[MSD]). The parent sample's surrogate recovery was within limits. The MS/MSD sample has been qualified and reported.

Job ID: 680-242109-1 (Continued)

Laboratory: Eurofins Savannah (Continued)

Method 8260D_DOD5: The continuing calibration verification (CCV) associated with batch 680-805316 recovered above the upper control limit for Bromomethane, Chloroethane, Dichlorodifluoromethane, 2,2-Dichloropropane, Hexachlorobutadiene, Naphthalene, 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, Vinyl acetate and Vinyl chloride. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8260D_DOD5: The continuing calibration verification (CCV) associated with batch 680-805316 recovered outside acceptance criteria, low biased, for 2-Butanone (MEK). A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

Method 8260D_DOD5: The laboratory control sample (LCS) for analytical batch 680-805316 recovered outside control limits for the following analytes: Bromomethane, Chloroethane, Hexachlorobutadiene, Naphthalene, Toluene, 1,2,3-Trichlorobenzene and 1,2,4-Trichlorobenzene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260D_DOD5: The laboratory control sample duplicate (LCSD) for analytical batch 680-805316 recovered outside control limits for the following analytes: Bromomethane, Chloroethane, Hexachlorobutadiene, Naphthalene, 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene and Vinyl acetate. These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

Method 8260D_DOD5: The method blank for analytical batch 680-805316 contained Hexachlorobutadiene and 1,2,4-Trichlorobenzene above the method detection limit (MDL). Associated samples were not re-analyzed because the method blank results were less than half of the reporting limit (RL) OR practical quantitation limit (PQL).

Method 8260D_DOD5: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 680-805316 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8260D_DOD5: The matrix spike / matrix spike duplicate (MS/MSD) precision for analytical batch 680-805316 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.

Method 8260D_DOD5: The closing continuing calibration verification (CCVC) associated with batch 680-805316 recovered above the upper control limit for Bromomethane, Chloroethane, Naphthalene and 1,2,3-Trichlorobenzene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8260D_DOD5: The reporting limit (RL) provided for the following samples falls below the laboratory's verified standard quantitation limit for 2-Chlorotoluene and Ethylene Dibromide: G6M-04-10A-FAL23 (680-242109-12), G6M-04-13X-FAL23 (680-242109-14), G6M-04-14X-FAL23 (680-242109-15), G6M-07-01X-FAL23 (680-242109-17), G6M-07-02X-FAL23 (680-242109-18), G6M-13-01X-FAL23 (680-242109-19), G6M-13-02X-FAL23 (680-242109-20), G6M-95-19X-FAL23 (680-242109-21), XSA-12-95X-FAL23 (680-242109-25) and XSA-12-98X-FAL23 (680-242109-26). Results reported below the verified standard quantitation limit have less certainty (i.e., are estimated) and must be used at the client's discretion. The continuing calibration blanks and method blanks may not support the lower RL.

Method 8260D_DOD5: Surrogate recovery for the following sample was outside control limits: G6M-04-10X-FAL23 (680-242109-13). Evidence of matrix interferences is not obvious.

Method 8260D_DOD5: Surrogate recovery was outside acceptance limits for the following matrix spike/matrix spike duplicate (MS/MSD) samples: MW-3-FAL23 (680-242109-23[MS]) and MW-3-FAL23 (680-242109-23[MSD]). The parent sample's surrogate recovery was within limits. The MS/MSD sample has been qualified and reported.

Method 8260D_DOD5: The continuing calibration verification (CCV) associated with batch 680-805660 recovered outside acceptance criteria, low biased, for Bromomethane and 1,2-Dibromo-3-Chloropropane. A reporting limit (RL) standard was analyzed, and the target

Job ID: 680-242109-1 (Continued)

Laboratory: Eurofins Savannah (Continued)

analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

Method 8260D_DOD5: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 680-805660 recovered outside control limits for the following analytes: Acetone, 2-Butanone (MEK), Chlorodibromomethane, Ethylene Dibromide, 1,3-Dichloropropane, trans-1,3-Dichloropropene and 2-Hexanone.

Method 8260D_DOD5: The method blank for analytical batch 680-805660 contained 1,2,3-Trichlorobenzene above the method detection limit (MDL). None of the samples associated with this method blank contained the target compound; therefore, re-extraction and/or re-analysis of samples were not performed.

Method 8260D_DOD5: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 680-805660 were outside control limits. Sample matrix interference is suspected.

Method 8260D_DOD5: The matrix spike / matrix spike duplicate (MS/MSD) precision for analytical batch 680-805660 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.

GC VOA

Method RSK_175_DOD5: Due to the high concentration of Methane (TCD), the matrix spike / matrix spike duplicate (MS/MSD) for analytical batch 680-805444 could not be evaluated for accuracy and precision. The associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) met acceptance criteria.

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

HPLC/IC

Method 9056A_OF_28D_D5: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 680-807207 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

Metals

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

General Chemistry

Method 353.2_Pres: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 680-806112 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 9034: The method requirement for no headspace was not met. The following samples were analyzed with headspace in the sample container(s): AOC50-DUP03-FAL23 (680-242109-2), G6M-04-03X-FAL23 (680-242109-10), G6M-13-01X-FAL23 (680-242109-19), (670-29073-B-1), (670-29073-C-1 DU), (670-29073-B-2), (670-29073-C-2 MS) and (670-29073-C-2 MSD).

Method 9034: The method requirement for no headspace was not met. The following samples were analyzed with headspace in the sample container(s): AOC50-DUP02-FAL23 (680-242109-1), G6M-02-01X-FAL23 (680-242109-3), G6M-02-08X-FAL23 (680-242109-6), G6M-03-07X-FAL23 (680-242109-7), G6M-04-02X-FAL23 (680-242109-9), G6M-04-09X-FAL23 (680-242109-11), G6M-04-10A-FAL23 (680-242109-12[MSD]), G6M-07-01X-FAL23 (680-242109-17), G6M-13-02X-FAL23 (680-242109-20), (670-28980-B-1) and (670-28980-C-1 DU).

Method 9060: The spiking solution was inadvertently omitted for the laboratory control sample duplicate (LCSD) associated with batch

Job ID: 680-242109-1 (Continued)

Laboratory: Eurofins Savannah (Continued)

<PrepBatch>; therefore, percent recovery is unavailable. The results have been reported. The MS/MSD recoveries are within acceptance limits and can be used to evaluate matrix performance. .

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

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: AOC50-DUP02-FAL23
Lab Sample ID: 680-242109-1
Date Collected: 10/20/23 14:25
Matrix: Water
Date Received: 10/24/23 10:02

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U Q	25	10	3.7	ug/L		10/30/23 15:01	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 15:01	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/30/23 15:01	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 15:01	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 15:01	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		10/30/23 15:01	1
Bromomethane	10	U	20	10	3.7	ug/L		10/30/23 15:01	1
2-Butanone (MEK)	20	U M Q	25	20	6.4	ug/L		10/30/23 15:01	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/30/23 15:01	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/30/23 15:01	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 15:01	1
Carbon disulfide	1.0	U Q	2.0	1.0	0.43	ug/L		10/30/23 15:01	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/30/23 15:01	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/30/23 15:01	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/30/23 15:01	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 15:01	1
Chloromethane	2.0	U Q	2.5	2.0	0.54	ug/L		10/30/23 15:01	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/30/23 15:01	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 15:01	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/30/23 15:01	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		10/30/23 15:01	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 15:01	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 15:01	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 15:01	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 15:01	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 15:01	1
Dichlorodifluoromethane	1.0	U Q	2.0	1.0	0.36	ug/L		10/30/23 15:01	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 15:01	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/30/23 15:01	1
cis-1,2-Dichloroethene	**7.5**		2.0	1.0	0.25	ug/L		10/30/23 15:01	1
trans-1,2-Dichloroethene	**1.0**	**J**	2.0	1.0	0.34	ug/L		10/30/23 15:01	1
1,2-Dichloroethene, Total	**8.5**		2.0	1.0	0.37	ug/L		10/30/23 15:01	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 15:01	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/30/23 15:01	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 15:01	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/30/23 15:01	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 15:01	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 15:01	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/30/23 15:01	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 15:01	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/30/23 15:01	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		10/30/23 15:01	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 15:01	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/30/23 15:01	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/30/23 15:01	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/30/23 15:01	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/30/23 15:01	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/30/23 15:01	1
N-Propylbenzene	1.0	U M	2.0	1.0	0.41	ug/L		10/30/23 15:01	1

Client Sample ID: AOC50-DUP02-FAL23
Lab Sample ID: 680-242109-1
Date Collected: 10/20/23 14:25
Matrix: Water
Date Received: 10/24/23 10:02

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	**0.28**	**J**	2.0	1.0	0.27	ug/L		10/30/23 15:01	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 15:01	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/30/23 15:01	1
Tetrachloroethene	**0.44**	**J**	2.0	1.0	0.35	ug/L		10/30/23 15:01	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 15:01	1
1,2,3-Trichlorobenzene	2.0	U M	5.0	2.0	0.81	ug/L		10/30/23 15:01	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/30/23 15:01	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/30/23 15:01	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/30/23 15:01	1
Trichloroethene	**3.0**		1.0	0.50	0.20	ug/L		10/30/23 15:01	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 15:01	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/30/23 15:01	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 15:01	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 15:01	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/30/23 15:01	1
Vinyl chloride	**0.54**	**J**	2.0	1.0	0.40	ug/L		10/30/23 15:01	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 15:01	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 15:01	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 15:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*89 - 112*		*10/30/23 15:01*	*1*
1,2-Dichloroethane-d4 (Surr)	*91*		*81 - 118*		*10/30/23 15:01*	*1*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*		*10/30/23 15:01*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 119*		*10/30/23 15:01*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**0.63**	**J**	1.1	0.76	0.30	ug/L		10/31/23 04:15	1
Ethylene	**0.73**	**J**	1.0	0.71	0.31	ug/L		10/31/23 04:15	1
Methane (TCD)	**6200**		390	77	39	ug/L		10/31/23 04:15	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**8.4**		1.5	1.0	0.40	mg/L		11/08/23 20:09	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**1300**		100	50	20	ug/L		10/26/23 10:41	1
Manganese	**12000**		10	5.0	1.3	ug/L		10/26/23 10:41	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**25**		5.0	3.0	0.86	ug/L		10/25/23 21:34	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B-2011)	**96**		5.5	5.0	2.2	mg/L		11/01/23 16:07	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	0.025	U	0.10	0.025	0.010	mg/L		11/01/23 17:00	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: AOC50-DUP02-FAL23
Lab Sample ID: 680-242109-1
Date Collected: 10/20/23 14:25
Matrix: Water
Date Received: 10/24/23 10:02

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfide (SW846 9034)	1.7	U	2.6	1.7	0.86	mg/L		10/26/23 09:45	1
Total Organic Carbon (SW846 9060)	**1.1**	**J Q**	1.5	1.0	0.50	mg/L		11/09/23 07:34	1

Client Sample ID: AOC50-DUP03-FAL23
Lab Sample ID: 680-242109-2
Date Collected: 10/18/23 11:00
Matrix: Water
Date Received: 10/24/23 10:02

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U Q	25	10	3.7	ug/L		10/30/23 15:25	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 15:25	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/30/23 15:25	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 15:25	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 15:25	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		10/30/23 15:25	1
Bromomethane	10	U	20	10	3.7	ug/L		10/30/23 15:25	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		10/30/23 15:25	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/30/23 15:25	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/30/23 15:25	1
tert-Butylbenzene	1.0	U M	2.0	1.0	0.43	ug/L		10/30/23 15:25	1
Carbon disulfide	1.0	U Q	2.0	1.0	0.43	ug/L		10/30/23 15:25	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/30/23 15:25	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/30/23 15:25	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/30/23 15:25	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 15:25	1
Chloromethane	2.0	U Q	2.5	2.0	0.54	ug/L		10/30/23 15:25	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/30/23 15:25	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 15:25	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/30/23 15:25	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		10/30/23 15:25	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 15:25	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 15:25	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 15:25	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 15:25	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 15:25	1
Dichlorodifluoromethane	1.0	U Q	2.0	1.0	0.36	ug/L		10/30/23 15:25	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 15:25	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/30/23 15:25	1
cis-1,2-Dichloroethene	**0.94**	**J**	2.0	1.0	0.25	ug/L		10/30/23 15:25	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 15:25	1
1,2-Dichloroethene, Total	**0.94**	**J**	2.0	1.0	0.37	ug/L		10/30/23 15:25	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 15:25	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/30/23 15:25	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 15:25	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/30/23 15:25	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 15:25	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 15:25	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/30/23 15:25	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 15:25	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/30/23 15:25	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		10/30/23 15:25	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 15:25	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/30/23 15:25	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/30/23 15:25	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/30/23 15:25	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/30/23 15:25	1
Naphthalene	**3.5**	**J**	10	5.0	2.4	ug/L		10/30/23 15:25	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 15:25	1

Client Sample ID: AOC50-DUP03-FAL23
Lab Sample ID: 680-242109-2

Date Collected: 10/18/23 11:00
Matrix: Water
Date Received: 10/24/23 10:02

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 15:25	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 15:25	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/30/23 15:25	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/30/23 15:25	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 15:25	1
1,2,3-Trichlorobenzene	2.0	U M	5.0	2.0	0.81	ug/L		10/30/23 15:25	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/30/23 15:25	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/30/23 15:25	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/30/23 15:25	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 15:25	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 15:25	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/30/23 15:25	1
1,2,4-Trimethylbenzene	**0.88**	**J**	2.0	1.0	0.43	ug/L		10/30/23 15:25	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 15:25	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/30/23 15:25	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/30/23 15:25	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 15:25	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 15:25	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 15:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*89 - 112*		*10/30/23 15:25*	*1*
1,2-Dichloroethane-d4 (Surr)	*90*		*81 - 118*		*10/30/23 15:25*	*1*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*		*10/30/23 15:25*	*1*
Dibromofluoromethane (Surr)	*94*		*80 - 119*		*10/30/23 15:25*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**1.7**		1.1	0.76	0.30	ug/L		10/28/23 02:32	1
Ethylene	**1.7**		1.0	0.71	0.31	ug/L		10/28/23 02:32	1
Methane (TCD)	**14000**		390	77	39	ug/L		10/28/23 02:32	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	1.0	U	1.5	1.0	0.40	mg/L		11/08/23 20:22	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**88000**		100	50	20	ug/L		10/25/23 13:47	1
Manganese	**2700**		10	5.0	1.3	ug/L		10/25/23 13:47	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**29**		5.0	3.0	0.86	ug/L		10/25/23 22:39	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B-2011)	**80**		5.5	5.0	2.2	mg/L		10/31/23 21:29	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	0.025	U	0.10	0.025	0.010	mg/L		11/01/23 17:02	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: AOC50-DUP03-FAL23
Lab Sample ID: 680-242109-2
Date Collected: 10/18/23 11:00
Matrix: Water
Date Received: 10/24/23 10:02

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfide (SW846 9034)	1.7	U	2.5	1.7	0.83	mg/L		10/25/23 13:01	1
Total Organic Carbon (SW846 9060)	**93**	**D**	15	10	5.0	mg/L		11/10/23 14:13	10

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-02-01X-FAL23
Lab Sample ID: 680-242109-3
Date Collected: 10/19/23 14:45
Matrix: Water
Date Received: 10/24/23 10:02

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U Q	25	10	3.7	ug/L		10/30/23 15:48	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 15:48	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/30/23 15:48	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 15:48	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 15:48	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		10/30/23 15:48	1
Bromomethane	10	U	20	10	3.7	ug/L		10/30/23 15:48	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		10/30/23 15:48	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/30/23 15:48	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/30/23 15:48	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 15:48	1
Carbon disulfide	1.0	U Q	2.0	1.0	0.43	ug/L		10/30/23 15:48	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/30/23 15:48	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/30/23 15:48	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/30/23 15:48	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 15:48	1
Chloromethane	2.0	U Q	2.5	2.0	0.54	ug/L		10/30/23 15:48	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/30/23 15:48	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 15:48	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/30/23 15:48	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		10/30/23 15:48	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 15:48	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 15:48	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 15:48	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 15:48	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 15:48	1
Dichlorodifluoromethane	1.0	U Q	2.0	1.0	0.36	ug/L		10/30/23 15:48	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 15:48	1
1,2-Dichloroethane	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 15:48	1
cis-1,2-Dichloroethene	**2.0**		2.0	1.0	0.25	ug/L		10/30/23 15:48	1
trans-1,2-Dichloroethene	1.0	U M	2.0	1.0	0.34	ug/L		10/30/23 15:48	1
1,2-Dichloroethene, Total	**2.2**		2.0	1.0	0.37	ug/L		10/30/23 15:48	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 15:48	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/30/23 15:48	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 15:48	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/30/23 15:48	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 15:48	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 15:48	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/30/23 15:48	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 15:48	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/30/23 15:48	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		10/30/23 15:48	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 15:48	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/30/23 15:48	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/30/23 15:48	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/30/23 15:48	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/30/23 15:48	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/30/23 15:48	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 15:48	1

Client Sample ID: G6M-02-01X-FAL23
Lab Sample ID: 680-242109-3
Date Collected: 10/19/23 14:45
Matrix: Water
Date Received: 10/24/23 10:02

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 15:48	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 15:48	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/30/23 15:48	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/30/23 15:48	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 15:48	1
1,2,3-Trichlorobenzene	2.0	U M	5.0	2.0	0.81	ug/L		10/30/23 15:48	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/30/23 15:48	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/30/23 15:48	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/30/23 15:48	1
Trichloroethene	**6.3**		1.0	0.50	0.20	ug/L		10/30/23 15:48	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 15:48	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/30/23 15:48	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 15:48	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 15:48	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/30/23 15:48	1
Vinyl chloride	**1.4**	**J**	2.0	1.0	0.40	ug/L		10/30/23 15:48	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 15:48	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 15:48	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 15:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*103*		*89 - 112*		*10/30/23 15:48*	*1*
1,2-Dichloroethane-d4 (Surr)	*84*		*81 - 118*		*10/30/23 15:48*	*1*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*		*10/30/23 15:48*	*1*
Dibromofluoromethane (Surr)	*90*		*80 - 119*		*10/30/23 15:48*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**0.40**	**J**	1.1	0.76	0.30	ug/L		10/29/23 17:50	1
Ethylene	**9.0**		1.0	0.71	0.31	ug/L		10/29/23 17:50	1
Methane (TCD)	**19000**		390	77	39	ug/L		10/29/23 17:50	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**8.0**		1.5	1.0	0.40	mg/L		11/08/23 20:35	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**19000**		100	50	20	ug/L		10/26/23 10:43	1
Manganese	**1900**		10	5.0	1.3	ug/L		10/26/23 10:43	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**250**		5.0	3.0	0.86	ug/L		10/25/23 21:37	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B-2011)	**130**		5.5	5.0	2.2	mg/L		11/01/23 20:43	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	0.025	U	0.10	0.025	0.010	mg/L		11/01/23 17:04	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-02-01X-FAL23
Lab Sample ID: 680-242109-3
Date Collected: 10/19/23 14:45
Matrix: Water
Date Received: 10/24/23 10:02

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfide (SW846 9034)	1.8	U	2.7	1.8	0.89	mg/L		10/26/23 09:45	1
Total Organic Carbon (SW846 9060)	**2.9**	**Q**	1.5	1.0	0.50	mg/L		11/09/23 08:10	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-02-04X-FAL23
Lab Sample ID: 680-242109-4
Date Collected: 10/20/23 11:30
Matrix: Water
Date Received: 10/24/23 10:02

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U Q	25	10	3.7	ug/L		10/30/23 16:11	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 16:11	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/30/23 16:11	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 16:11	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 16:11	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		10/30/23 16:11	1
Bromomethane	10	U	20	10	3.7	ug/L		10/30/23 16:11	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		10/30/23 16:11	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/30/23 16:11	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/30/23 16:11	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 16:11	1
Carbon disulfide	1.0	U Q	2.0	1.0	0.43	ug/L		10/30/23 16:11	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/30/23 16:11	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/30/23 16:11	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/30/23 16:11	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 16:11	1
Chloromethane	2.0	U Q	2.5	2.0	0.54	ug/L		10/30/23 16:11	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/30/23 16:11	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 16:11	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/30/23 16:11	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		10/30/23 16:11	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 16:11	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 16:11	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 16:11	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 16:11	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 16:11	1
Dichlorodifluoromethane	1.0	U Q	2.0	1.0	0.36	ug/L		10/30/23 16:11	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 16:11	1
1,2-Dichloroethane	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 16:11	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 16:11	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 16:11	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/30/23 16:11	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 16:11	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/30/23 16:11	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 16:11	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/30/23 16:11	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 16:11	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 16:11	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/30/23 16:11	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 16:11	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/30/23 16:11	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		10/30/23 16:11	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 16:11	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/30/23 16:11	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/30/23 16:11	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/30/23 16:11	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/30/23 16:11	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/30/23 16:11	1
N-Propylbenzene	1.0	U M	2.0	1.0	0.41	ug/L		10/30/23 16:11	1

Client Sample ID: G6M-02-04X-FAL23
Lab Sample ID: 680-242109-4
Date Collected: 10/20/23 11:30
Matrix: Water
Date Received: 10/24/23 10:02

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 16:11	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 16:11	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/30/23 16:11	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/30/23 16:11	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 16:11	1
1,2,3-Trichlorobenzene	2.0	U M	5.0	2.0	0.81	ug/L		10/30/23 16:11	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/30/23 16:11	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/30/23 16:11	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/30/23 16:11	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 16:11	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 16:11	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/30/23 16:11	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 16:11	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 16:11	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/30/23 16:11	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/30/23 16:11	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 16:11	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 16:11	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 16:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*89 - 112*		*10/30/23 16:11*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*		*10/30/23 16:11*	*1*
4-Bromofluorobenzene (Surr)	*103*		*85 - 114*		*10/30/23 16:11*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 119*		*10/30/23 16:11*	*1*

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**43000**		100	50	20	ug/L		10/25/23 13:49	1
Manganese	**1900**		10	5.0	1.3	ug/L		10/25/23 13:49	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**530**		5.0	3.0	0.86	ug/L		10/25/23 22:42	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-02-07X-FAL23
Lab Sample ID: 680-242109-5
Date Collected: 10/18/23 13:30
Matrix: Water
Date Received: 10/24/23 10:02

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U Q	25	10	3.7	ug/L		10/30/23 16:35	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 16:35	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/30/23 16:35	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 16:35	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 16:35	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		10/30/23 16:35	1
Bromomethane	10	U	20	10	3.7	ug/L		10/30/23 16:35	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		10/30/23 16:35	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/30/23 16:35	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/30/23 16:35	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 16:35	1
Carbon disulfide	1.0	U Q	2.0	1.0	0.43	ug/L		10/30/23 16:35	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/30/23 16:35	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/30/23 16:35	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/30/23 16:35	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 16:35	1
Chloromethane	2.0	U Q	2.5	2.0	0.54	ug/L		10/30/23 16:35	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/30/23 16:35	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 16:35	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/30/23 16:35	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		10/30/23 16:35	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 16:35	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 16:35	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 16:35	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 16:35	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 16:35	1
Dichlorodifluoromethane	1.0	U Q	2.0	1.0	0.36	ug/L		10/30/23 16:35	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 16:35	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/30/23 16:35	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 16:35	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 16:35	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/30/23 16:35	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 16:35	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/30/23 16:35	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 16:35	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/30/23 16:35	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 16:35	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 16:35	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/30/23 16:35	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 16:35	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/30/23 16:35	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		10/30/23 16:35	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 16:35	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/30/23 16:35	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/30/23 16:35	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/30/23 16:35	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/30/23 16:35	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/30/23 16:35	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 16:35	1

Client Sample ID: G6M-02-07X-FAL23
Lab Sample ID: 680-242109-5
Date Collected: 10/18/23 13:30
Matrix: Water
Date Received: 10/24/23 10:02

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 16:35	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 16:35	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/30/23 16:35	1
Tetrachloroethene	**0.44**	**J**	2.0	1.0	0.35	ug/L		10/30/23 16:35	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 16:35	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/30/23 16:35	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/30/23 16:35	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/30/23 16:35	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/30/23 16:35	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 16:35	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 16:35	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/30/23 16:35	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 16:35	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 16:35	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/30/23 16:35	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/30/23 16:35	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 16:35	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 16:35	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 16:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*107*		*89 - 112*		*10/30/23 16:35*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*10/30/23 16:35*	*1*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*		*10/30/23 16:35*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*10/30/23 16:35*	*1*

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/25/23 13:51	1
Manganese	**14**		10	5.0	1.3	ug/L		10/25/23 13:51	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**1.3**	**J**	5.0	3.0	0.86	ug/L		10/25/23 22:45	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-02-08X-FAL23
Lab Sample ID: 680-242109-6
Date Collected: 10/19/23 11:05
Matrix: Water
Date Received: 10/24/23 10:02

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U Q	25	10	3.7	ug/L		10/30/23 16:58	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 16:58	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/30/23 16:58	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 16:58	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 16:58	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		10/30/23 16:58	1
Bromomethane	10	U	20	10	3.7	ug/L		10/30/23 16:58	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		10/30/23 16:58	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/30/23 16:58	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/30/23 16:58	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 16:58	1
Carbon disulfide	1.0	U Q	2.0	1.0	0.43	ug/L		10/30/23 16:58	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/30/23 16:58	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/30/23 16:58	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/30/23 16:58	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 16:58	1
Chloromethane	2.0	U Q	2.5	2.0	0.54	ug/L		10/30/23 16:58	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/30/23 16:58	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 16:58	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/30/23 16:58	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		10/30/23 16:58	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 16:58	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 16:58	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 16:58	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 16:58	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 16:58	1
Dichlorodifluoromethane	1.0	U Q	2.0	1.0	0.36	ug/L		10/30/23 16:58	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 16:58	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/30/23 16:58	1
cis-1,2-Dichloroethene	**0.60**	**J**	2.0	1.0	0.25	ug/L		10/30/23 16:58	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 16:58	1
1,2-Dichloroethene, Total	**0.60**	**J**	2.0	1.0	0.37	ug/L		10/30/23 16:58	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 16:58	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/30/23 16:58	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 16:58	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/30/23 16:58	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 16:58	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 16:58	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/30/23 16:58	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 16:58	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/30/23 16:58	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		10/30/23 16:58	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 16:58	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/30/23 16:58	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/30/23 16:58	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/30/23 16:58	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/30/23 16:58	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/30/23 16:58	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 16:58	1

Client Sample ID: G6M-02-08X-FAL23
Lab Sample ID: 680-242109-6
Date Collected: 10/19/23 11:05
Matrix: Water
Date Received: 10/24/23 10:02

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 16:58	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 16:58	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/30/23 16:58	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/30/23 16:58	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 16:58	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/30/23 16:58	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/30/23 16:58	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/30/23 16:58	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/30/23 16:58	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 16:58	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 16:58	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/30/23 16:58	1
1,2,4-Trimethylbenzene	**0.61**	**J**	2.0	1.0	0.43	ug/L		10/30/23 16:58	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 16:58	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/30/23 16:58	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/30/23 16:58	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 16:58	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 16:58	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 16:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*105*		*89 - 112*		*10/30/23 16:58*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*81 - 118*		*10/30/23 16:58*	*1*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*10/30/23 16:58*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*10/30/23 16:58*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**9.5**		1.1	0.76	0.30	ug/L		10/29/23 18:03	1
Ethylene	**2.8**		1.0	0.71	0.31	ug/L		10/29/23 18:03	1
Methane (TCD)	**29000**		390	77	39	ug/L		10/29/23 18:03	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	1.0	U	1.5	1.0	0.40	mg/L		11/08/23 20:47	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**23000**		100	50	20	ug/L		10/26/23 10:45	1
Manganese	**540**		10	5.0	1.3	ug/L		10/26/23 10:45	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**150**		5.0	3.0	0.86	ug/L		10/25/23 21:40	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B-2011)	**41**		5.5	5.0	2.2	mg/L		11/01/23 20:53	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	0.025	U	0.10	0.025	0.010	mg/L		11/01/23 17:06	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-02-08X-FAL23
Lab Sample ID: 680-242109-6
Date Collected: 10/19/23 11:05
Matrix: Water
Date Received: 10/24/23 10:02

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfide (SW846 9034)	1.7	U	2.5	1.7	0.83	mg/L		10/26/23 09:45	1
Total Organic Carbon (SW846 9060)	**8.7**	**Q**	1.5	1.0	0.50	mg/L		11/09/23 08:26	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-03-07X-FAL23
Lab Sample ID: 680-242109-7
Date Collected: 10/19/23 10:40
Matrix: Water
Date Received: 10/24/23 10:02

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U Q	25	10	3.7	ug/L		10/30/23 17:21	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 17:21	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/30/23 17:21	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 17:21	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 17:21	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		10/30/23 17:21	1
Bromomethane	10	U	20	10	3.7	ug/L		10/30/23 17:21	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		10/30/23 17:21	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/30/23 17:21	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/30/23 17:21	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 17:21	1
Carbon disulfide	1.0	U Q	2.0	1.0	0.43	ug/L		10/30/23 17:21	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/30/23 17:21	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/30/23 17:21	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/30/23 17:21	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 17:21	1
Chloromethane	2.0	U Q	2.5	2.0	0.54	ug/L		10/30/23 17:21	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/30/23 17:21	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 17:21	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/30/23 17:21	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		10/30/23 17:21	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 17:21	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 17:21	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 17:21	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 17:21	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 17:21	1
Dichlorodifluoromethane	1.0	U Q	2.0	1.0	0.36	ug/L		10/30/23 17:21	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 17:21	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/30/23 17:21	1
cis-1,2-Dichloroethene	**0.34**	**J**	2.0	1.0	0.25	ug/L		10/30/23 17:21	1
trans-1,2-Dichloroethene	1.0	U M	2.0	1.0	0.34	ug/L		10/30/23 17:21	1
1,2-Dichloroethene, Total	**0.51**	**J**	2.0	1.0	0.37	ug/L		10/30/23 17:21	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 17:21	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/30/23 17:21	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 17:21	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/30/23 17:21	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 17:21	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 17:21	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/30/23 17:21	1
Ethylbenzene	0.50	U M	1.0	0.50	0.20	ug/L		10/30/23 17:21	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/30/23 17:21	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		10/30/23 17:21	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 17:21	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/30/23 17:21	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/30/23 17:21	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/30/23 17:21	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/30/23 17:21	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/30/23 17:21	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 17:21	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Job ID: 680-242109-1

Client Sample ID: G6M-03-07X-FAL23

Date Collected: 10/19/23 10:40
Date Received: 10/24/23 10:02

Lab Sample ID: 680-242109-7

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 17:21	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 17:21	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/30/23 17:21	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/30/23 17:21	1
Toluene	**0.45**	**J**	2.0	1.0	0.25	ug/L		10/30/23 17:21	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/30/23 17:21	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/30/23 17:21	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/30/23 17:21	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/30/23 17:21	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 17:21	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 17:21	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/30/23 17:21	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 17:21	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 17:21	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/30/23 17:21	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/30/23 17:21	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 17:21	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 17:21	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 17:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*115*	*Q*	*89 - 112*		*10/30/23 17:21*	*1*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*		*10/30/23 17:21*	*1*
4-Bromofluorobenzene (Surr)	*104*		*85 - 114*		*10/30/23 17:21*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 119*		*10/30/23 17:21*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**4.0**		1.1	0.76	0.30	ug/L		10/29/23 18:16	1
Ethylene	0.71	U	1.0	0.71	0.31	ug/L		10/29/23 18:16	1
Methane (TCD)	**25000**		390	77	39	ug/L		10/29/23 18:16	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	1.0	U	1.5	1.0	0.40	mg/L		11/08/23 22:29	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**99000**		100	50	20	ug/L		10/25/23 13:53	1
Manganese	**2300**		10	5.0	1.3	ug/L		10/25/23 13:53	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**570**		5.0	3.0	0.86	ug/L		10/25/23 22:54	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B-2011)	**150**		5.5	5.0	2.2	mg/L		11/01/23 20:33	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	0.025	U	0.10	0.025	0.010	mg/L		11/01/23 17:07	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-03-07X-FAL23
Lab Sample ID: 680-242109-7
Date Collected: 10/19/23 10:40
Matrix: Water
Date Received: 10/24/23 10:02

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfide (SW846 9034)	1.7	U	2.5	1.7	0.83	mg/L		10/26/23 09:45	1
Total Organic Carbon (SW846 9060)	**19**	**Q**	1.5	1.0	0.50	mg/L		11/09/23 08:43	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-04-01X-FAL23
Lab Sample ID: 680-242109-8
Date Collected: 10/20/23 12:00
Matrix: Water
Date Received: 10/24/23 10:02

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U Q	25	10	3.7	ug/L		10/30/23 17:45	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 17:45	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/30/23 17:45	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 17:45	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 17:45	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		10/30/23 17:45	1
Bromomethane	10	U	20	10	3.7	ug/L		10/30/23 17:45	1
2-Butanone (MEK)	20	U M Q	25	20	6.4	ug/L		10/30/23 17:45	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/30/23 17:45	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/30/23 17:45	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 17:45	1
Carbon disulfide	1.0	U Q	2.0	1.0	0.43	ug/L		10/30/23 17:45	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/30/23 17:45	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/30/23 17:45	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/30/23 17:45	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 17:45	1
Chloromethane	2.0	U Q	2.5	2.0	0.54	ug/L		10/30/23 17:45	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/30/23 17:45	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 17:45	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/30/23 17:45	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		10/30/23 17:45	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 17:45	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 17:45	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 17:45	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 17:45	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 17:45	1
Dichlorodifluoromethane	1.0	U Q	2.0	1.0	0.36	ug/L		10/30/23 17:45	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 17:45	1
1,2-Dichloroethane	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 17:45	1
cis-1,2-Dichloroethene	**0.40**	**J**	2.0	1.0	0.25	ug/L		10/30/23 17:45	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 17:45	1
1,2-Dichloroethene, Total	**0.40**	**J**	2.0	1.0	0.37	ug/L		10/30/23 17:45	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 17:45	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/30/23 17:45	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 17:45	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/30/23 17:45	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 17:45	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 17:45	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/30/23 17:45	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 17:45	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/30/23 17:45	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		10/30/23 17:45	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 17:45	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/30/23 17:45	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/30/23 17:45	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/30/23 17:45	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/30/23 17:45	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/30/23 17:45	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 17:45	1

Client Sample ID: G6M-04-01X-FAL23
Lab Sample ID: 680-242109-8
Date Collected: 10/20/23 12:00
Matrix: Water
Date Received: 10/24/23 10:02

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 17:45	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 17:45	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/30/23 17:45	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/30/23 17:45	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 17:45	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/30/23 17:45	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/30/23 17:45	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/30/23 17:45	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/30/23 17:45	1
Trichloroethene	**0.47**	**J**	1.0	0.50	0.20	ug/L		10/30/23 17:45	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 17:45	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/30/23 17:45	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 17:45	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 17:45	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/30/23 17:45	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/30/23 17:45	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 17:45	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 17:45	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 17:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*89 - 112*		*10/30/23 17:45*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*81 - 118*		*10/30/23 17:45*	*1*
4-Bromofluorobenzene (Surr)	*91*		*85 - 114*		*10/30/23 17:45*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*10/30/23 17:45*	*1*

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**33000**		100	50	20	ug/L		10/25/23 14:00	1
Manganese	**8100**		10	5.0	1.3	ug/L		10/25/23 14:00	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**600**		5.0	3.0	0.86	ug/L		10/25/23 22:57	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-04-02X-FAL23
Lab Sample ID: 680-242109-9
Date Collected: 10/20/23 09:30
Matrix: Water
Date Received: 10/24/23 10:02

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	**9.8**	**J Q**	25	10	3.7	ug/L		10/30/23 18:08	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 18:08	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/30/23 18:08	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 18:08	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 18:08	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		10/30/23 18:08	1
Bromomethane	10	U	20	10	3.7	ug/L		10/30/23 18:08	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		10/30/23 18:08	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/30/23 18:08	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/30/23 18:08	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 18:08	1
Carbon disulfide	1.0	U M Q	2.0	1.0	0.43	ug/L		10/30/23 18:08	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/30/23 18:08	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/30/23 18:08	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/30/23 18:08	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 18:08	1
Chloromethane	2.0	U Q	2.5	2.0	0.54	ug/L		10/30/23 18:08	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/30/23 18:08	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 18:08	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/30/23 18:08	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		10/30/23 18:08	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 18:08	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 18:08	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 18:08	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 18:08	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 18:08	1
Dichlorodifluoromethane	1.0	U Q	2.0	1.0	0.36	ug/L		10/30/23 18:08	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 18:08	1
1,2-Dichloroethane	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 18:08	1
cis-1,2-Dichloroethene	**46**		2.0	1.0	0.25	ug/L		10/30/23 18:08	1
trans-1,2-Dichloroethene	**0.62**	**J**	2.0	1.0	0.34	ug/L		10/30/23 18:08	1
1,2-Dichloroethene, Total	**47**		2.0	1.0	0.37	ug/L		10/30/23 18:08	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 18:08	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/30/23 18:08	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 18:08	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/30/23 18:08	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 18:08	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 18:08	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/30/23 18:08	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 18:08	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/30/23 18:08	1
2-Hexanone	**3.8**	**J Q**	20	10	3.2	ug/L		10/30/23 18:08	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 18:08	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/30/23 18:08	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/30/23 18:08	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/30/23 18:08	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/30/23 18:08	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/30/23 18:08	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 18:08	1

Client Sample ID: G6M-04-02X-FAL23
Lab Sample ID: 680-242109-9
Date Collected: 10/20/23 09:30
Matrix: Water
Date Received: 10/24/23 10:02

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 18:08	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 18:08	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/30/23 18:08	1
Tetrachloroethene	**9.9**		2.0	1.0	0.35	ug/L		10/30/23 18:08	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 18:08	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/30/23 18:08	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/30/23 18:08	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/30/23 18:08	1
1,1,2-Trichloroethane	1.0	U M	2.0	1.0	0.32	ug/L		10/30/23 18:08	1
Trichloroethene	**26**	**M**	1.0	0.50	0.20	ug/L		10/30/23 18:08	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 18:08	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/30/23 18:08	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 18:08	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 18:08	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/30/23 18:08	1
Vinyl chloride	**8.1**		2.0	1.0	0.40	ug/L		10/30/23 18:08	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 18:08	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 18:08	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 18:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*109*		*89 - 112*		*10/30/23 18:08*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*81 - 118*		*10/30/23 18:08*	*1*
4-Bromofluorobenzene (Surr)	*88*		*85 - 114*		*10/30/23 18:08*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*10/30/23 18:08*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**7.3**		1.1	0.76	0.30	ug/L		10/31/23 04:27	1
Ethylene	**17**		1.0	0.71	0.31	ug/L		10/31/23 04:27	1
Methane (TCD)	**26000**		390	77	39	ug/L		10/31/23 04:27	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**5.1**		1.5	1.0	0.40	mg/L		11/08/23 22:41	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**24000**		100	50	20	ug/L		10/25/23 14:02	1
Manganese	**13000**		10	5.0	1.3	ug/L		10/25/23 14:02	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**48**		5.0	3.0	0.86	ug/L		10/25/23 23:00	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B-2011)	**120**		5.5	5.0	2.2	mg/L		11/02/23 15:19	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	0.025	U	0.10	0.025	0.010	mg/L		11/01/23 17:08	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-04-02X-FAL23
Lab Sample ID: 680-242109-9
Date Collected: 10/20/23 09:30
Matrix: Water
Date Received: 10/24/23 10:02

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfide (SW846 9034)	1.7	U	2.5	1.7	0.83	mg/L		10/26/23 09:45	1
Total Organic Carbon (SW846 9060)	**5.7**	**Q**	1.5	1.0	0.50	mg/L		11/09/23 09:02	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Job ID: 680-242109-1

Client Sample ID: G6M-04-03X-FAL23
Date Collected: 10/18/23 15:30
Date Received: 10/24/23 10:02

Lab Sample ID: 680-242109-10
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U Q	25	10	3.7	ug/L		10/30/23 18:31	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 18:31	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/30/23 18:31	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 18:31	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 18:31	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		10/30/23 18:31	1
Bromomethane	10	U	20	10	3.7	ug/L		10/30/23 18:31	1
2-Butanone (MEK)	20	U M Q	25	20	6.4	ug/L		10/30/23 18:31	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/30/23 18:31	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/30/23 18:31	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 18:31	1
Carbon disulfide	1.0	U Q	2.0	1.0	0.43	ug/L		10/30/23 18:31	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/30/23 18:31	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/30/23 18:31	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/30/23 18:31	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 18:31	1
Chloromethane	2.0	U Q	2.5	2.0	0.54	ug/L		10/30/23 18:31	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/30/23 18:31	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 18:31	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/30/23 18:31	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		10/30/23 18:31	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 18:31	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 18:31	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 18:31	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 18:31	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 18:31	1
Dichlorodifluoromethane	1.0	U Q	2.0	1.0	0.36	ug/L		10/30/23 18:31	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 18:31	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/30/23 18:31	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 18:31	1
trans-1,2-Dichloroethene	1.0	U M	2.0	1.0	0.34	ug/L		10/30/23 18:31	1
1,2-Dichloroethene, Total	**0.42**	**J**	2.0	1.0	0.37	ug/L		10/30/23 18:31	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 18:31	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/30/23 18:31	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 18:31	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/30/23 18:31	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 18:31	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 18:31	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/30/23 18:31	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 18:31	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/30/23 18:31	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		10/30/23 18:31	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 18:31	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/30/23 18:31	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/30/23 18:31	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/30/23 18:31	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/30/23 18:31	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/30/23 18:31	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 18:31	1

Client Sample ID: G6M-04-03X-FAL23
Lab Sample ID: 680-242109-10
Date Collected: 10/18/23 15:30
Matrix: Water
Date Received: 10/24/23 10:02

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 18:31	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 18:31	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/30/23 18:31	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/30/23 18:31	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 18:31	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/30/23 18:31	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/30/23 18:31	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/30/23 18:31	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/30/23 18:31	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 18:31	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 18:31	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/30/23 18:31	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 18:31	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 18:31	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/30/23 18:31	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/30/23 18:31	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 18:31	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 18:31	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 18:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*89 - 112*		*10/30/23 18:31*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*10/30/23 18:31*	*1*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*		*10/30/23 18:31*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 119*		*10/30/23 18:31*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**4.6**		1.1	0.76	0.30	ug/L		10/28/23 02:44	1
Ethylene	0.71	U	1.0	0.71	0.31	ug/L		10/28/23 02:44	1
Methane (TCD)	**33000**		390	77	39	ug/L		10/28/23 02:44	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**7.1**		1.5	1.0	0.40	mg/L		11/08/23 22:54	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**50000**		100	50	20	ug/L		10/25/23 14:04	1
Manganese	**3900**		10	5.0	1.3	ug/L		10/25/23 14:04	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**410**		5.0	3.0	0.86	ug/L		10/25/23 23:03	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B-2011)	**140**		5.5	5.0	2.2	mg/L		10/31/23 21:48	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	**0.023**	**J**	0.10	0.025	0.010	mg/L		11/02/23 14:08	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-04-03X-FAL23
Lab Sample ID: 680-242109-10
Date Collected: 10/18/23 15:30
Matrix: Water
Date Received: 10/24/23 10:02

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfide (SW846 9034)	1.8	U	2.7	1.8	0.89	mg/L		10/25/23 13:01	1
Total Organic Carbon (SW846 9060)	**5.5**	**Q**	1.5	1.0	0.50	mg/L		11/09/23 09:21	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-04-09X-FAL23
Lab Sample ID: 680-242109-11
Date Collected: 10/19/23 12:30
Matrix: Water
Date Received: 10/24/23 10:02

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U Q	25	10	3.7	ug/L		10/30/23 18:55	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 18:55	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/30/23 18:55	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 18:55	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 18:55	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		10/30/23 18:55	1
Bromomethane	10	U	20	10	3.7	ug/L		10/30/23 18:55	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		10/30/23 18:55	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/30/23 18:55	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/30/23 18:55	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 18:55	1
Carbon disulfide	1.0	U Q	2.0	1.0	0.43	ug/L		10/30/23 18:55	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/30/23 18:55	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/30/23 18:55	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/30/23 18:55	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 18:55	1
Chloromethane	2.0	U Q	2.5	2.0	0.54	ug/L		10/30/23 18:55	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/30/23 18:55	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 18:55	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/30/23 18:55	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		10/30/23 18:55	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 18:55	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 18:55	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 18:55	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 18:55	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 18:55	1
Dichlorodifluoromethane	1.0	U Q	2.0	1.0	0.36	ug/L		10/30/23 18:55	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 18:55	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/30/23 18:55	1
cis-1,2-Dichloroethene	**0.54**	**J**	2.0	1.0	0.25	ug/L		10/30/23 18:55	1
trans-1,2-Dichloroethene	1.0	U M	2.0	1.0	0.34	ug/L		10/30/23 18:55	1
1,2-Dichloroethene, Total	**0.79**	**J**	2.0	1.0	0.37	ug/L		10/30/23 18:55	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 18:55	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/30/23 18:55	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 18:55	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/30/23 18:55	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 18:55	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 18:55	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/30/23 18:55	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 18:55	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/30/23 18:55	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		10/30/23 18:55	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 18:55	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/30/23 18:55	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/30/23 18:55	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/30/23 18:55	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/30/23 18:55	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/30/23 18:55	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 18:55	1

Client Sample ID: G6M-04-09X-FAL23
Lab Sample ID: 680-242109-11
Date Collected: 10/19/23 12:30
Matrix: Water
Date Received: 10/24/23 10:02

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 18:55	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 18:55	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/30/23 18:55	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/30/23 18:55	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 18:55	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/30/23 18:55	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/30/23 18:55	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/30/23 18:55	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/30/23 18:55	1
Trichloroethene	**0.29**	**J**	1.0	0.50	0.20	ug/L		10/30/23 18:55	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 18:55	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/30/23 18:55	1
1,2,4-Trimethylbenzene	**1.1**	**J**	2.0	1.0	0.43	ug/L		10/30/23 18:55	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 18:55	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/30/23 18:55	1
Vinyl chloride	**0.77**	**J**	2.0	1.0	0.40	ug/L		10/30/23 18:55	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 18:55	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 18:55	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 18:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*89 - 112*		*10/30/23 18:55*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*81 - 118*		*10/30/23 18:55*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*10/30/23 18:55*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 119*		*10/30/23 18:55*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**4.8**		1.1	0.76	0.30	ug/L		10/29/23 18:29	1
Ethylene	**3.7**		1.0	0.71	0.31	ug/L		10/29/23 18:29	1
Methane (TCD)	**26000**		390	77	39	ug/L		10/29/23 18:29	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	1.0	U	1.5	1.0	0.40	mg/L		11/08/23 23:06	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**83000**		100	50	20	ug/L		10/25/23 14:06	1
Manganese	**5400**		10	5.0	1.3	ug/L		10/25/23 14:06	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**410**		5.0	3.0	0.86	ug/L		10/25/23 23:06	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B-2011)	**150**		5.5	5.0	2.2	mg/L		11/01/23 21:12	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	0.025	U	0.10	0.025	0.010	mg/L		11/02/23 14:10	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-04-09X-FAL23
Lab Sample ID: 680-242109-11
Date Collected: 10/19/23 12:30
Matrix: Water
Date Received: 10/24/23 10:02

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfide (SW846 9034)	1.7	U	2.5	1.7	0.83	mg/L		10/26/23 09:45	1
Total Organic Carbon (SW846 9060)	**8.3**	**Q**	1.5	1.0	0.50	mg/L		11/09/23 09:40	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-04-10A-FAL23
Lab Sample ID: 680-242109-12
Date Collected: 10/19/23 14:05
Matrix: Water
Date Received: 10/24/23 10:02

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	20	U	50	20	7.4	ug/L		10/30/23 13:53	2
Benzene	2.0	U	4.0	2.0	0.54	ug/L		10/30/23 13:53	2
Bromobenzene	1.0	U	2.0	1.0	0.48	ug/L		10/30/23 13:53	2
Chlorobromomethane	2.0	U J1	4.0	2.0	0.68	ug/L		10/30/23 13:53	2
Dichlorobromomethane	2.0	U J1	4.0	2.0	0.50	ug/L		10/30/23 13:53	2
Bromoform	4.0	U	5.0	4.0	1.2	ug/L		10/30/23 13:53	2
Bromomethane	20	U Q J1	40	20	7.4	ug/L		10/30/23 13:53	2
2-Butanone (MEK)	40	U Q J1	50	40	13	ug/L		10/30/23 13:53	2
n-Butylbenzene	4.0	U	5.0	4.0	1.0	ug/L		10/30/23 13:53	2
sec-Butylbenzene	4.0	U	5.0	4.0	1.1	ug/L		10/30/23 13:53	2
tert-Butylbenzene	2.0	U	4.0	2.0	0.86	ug/L		10/30/23 13:53	2
Carbon disulfide	2.0	U	4.0	2.0	0.86	ug/L		10/30/23 13:53	2
Carbon tetrachloride	2.0	U	4.0	2.0	0.60	ug/L		10/30/23 13:53	2
Chlorobenzene	1.0	U	2.0	1.0	0.30	ug/L		10/30/23 13:53	2
Chloroethane	20	U Q J1	40	20	9.2	ug/L		10/30/23 13:53	2
Chloroform	2.0	U	4.0	2.0	0.54	ug/L		10/30/23 13:53	2
Chloromethane	4.0	U	5.0	4.0	1.1	ug/L		10/30/23 13:53	2
2-Chlorotoluene	1.0	U	2.0	1.0	0.50	ug/L		10/30/23 13:53	2
4-Chlorotoluene	2.0	U	4.0	2.0	0.82	ug/L		10/30/23 13:53	2
Chlorodibromomethane	2.0	U	4.0	2.0	0.78	ug/L		10/30/23 13:53	2
1,2-Dibromo-3-Chloropropane	10	U J1	20	10	3.6	ug/L		10/30/23 13:53	2
Ethylene Dibromide	2.0	U	4.0	2.0	0.66	ug/L		10/30/23 13:53	2
Dibromomethane	2.0	U J1	4.0	2.0	0.68	ug/L		10/30/23 13:53	2
1,2-Dichlorobenzene	2.0	U	4.0	2.0	0.62	ug/L		10/30/23 13:53	2
1,3-Dichlorobenzene	2.0	U	4.0	2.0	0.62	ug/L		10/30/23 13:53	2
1,4-Dichlorobenzene	2.0	U	4.0	2.0	0.62	ug/L		10/30/23 13:53	2
Dichlorodifluoromethane	2.0	U Q	4.0	2.0	0.72	ug/L		10/30/23 13:53	2
1,1-Dichloroethane	2.0	U	4.0	2.0	0.66	ug/L		10/30/23 13:53	2
1,2-Dichloroethane	2.0	U M	4.0	2.0	0.50	ug/L		10/30/23 13:53	2
cis-1,2-Dichloroethene	**11**	**D**	4.0	2.0	0.50	ug/L		10/30/23 13:53	2
trans-1,2-Dichloroethene	2.0	U	4.0	2.0	0.68	ug/L		10/30/23 13:53	2
1,2-Dichloroethene, Total	**11**	**D**	4.0	2.0	0.74	ug/L		10/30/23 13:53	2
1,1-Dichloroethene	2.0	U	4.0	2.0	0.66	ug/L		10/30/23 13:53	2
1,2-Dichloropropane	1.0	U	2.0	1.0	0.44	ug/L		10/30/23 13:53	2
1,3-Dichloropropane	2.0	U J1	4.0	2.0	0.72	ug/L		10/30/23 13:53	2
2,2-Dichloropropane	2.0	U Q	4.0	2.0	0.70	ug/L		10/30/23 13:53	2
1,1-Dichloropropene	2.0	U	4.0	2.0	0.56	ug/L		10/30/23 13:53	2
cis-1,3-Dichloropropene	2.0	U	4.0	2.0	0.52	ug/L		10/30/23 13:53	2
trans-1,3-Dichloropropene	2.0	U	4.0	2.0	0.46	ug/L		10/30/23 13:53	2
Ethylbenzene	1.0	U	2.0	1.0	0.40	ug/L		10/30/23 13:53	2
Hexachlorobutadiene	2.0	U Q	10	2.0	0.44	ug/L		10/30/23 13:53	2
2-Hexanone	20	U	40	20	6.4	ug/L		10/30/23 13:53	2
Isopropylbenzene	2.0	U	4.0	2.0	0.52	ug/L		10/30/23 13:53	2
4-Isopropyltoluene	2.0	U	4.0	2.0	0.88	ug/L		10/30/23 13:53	2
Methylene Chloride	20	U	40	20	6.4	ug/L		10/30/23 13:53	2
4-Methyl-2-pentanone (MIBK)	20	U J1	40	20	5.4	ug/L		10/30/23 13:53	2
Methyl tert-butyl ether	4.0	U	10	4.0	1.6	ug/L		10/30/23 13:53	2
Naphthalene	10	U Q J1	20	10	4.8	ug/L		10/30/23 13:53	2
N-Propylbenzene	2.0	U	4.0	2.0	0.82	ug/L		10/30/23 13:53	2

Client Sample ID: G6M-04-10A-FAL23
Lab Sample ID: 680-242109-12
Date Collected: 10/19/23 14:05
Matrix: Water
Date Received: 10/24/23 10:02

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	2.0	U	4.0	2.0	0.54	ug/L		10/30/23 13:53	2
1,1,1,2-Tetrachloroethane	2.0	U	4.0	2.0	0.72	ug/L		10/30/23 13:53	2
1,1,2,2-Tetrachloroethane	2.0	U	4.0	2.0	0.80	ug/L		10/30/23 13:53	2
Tetrachloroethene	2.0	U	4.0	2.0	0.70	ug/L		10/30/23 13:53	2
Toluene	2.0	U Q	4.0	2.0	0.50	ug/L		10/30/23 13:53	2
1,2,3-Trichlorobenzene	4.0	U Q J1	10	4.0	1.6	ug/L		10/30/23 13:53	2
1,2,4-Trichlorobenzene	4.0	U Q J1	10	4.0	1.1	ug/L		10/30/23 13:53	2
1,1,1-Trichloroethane	1.0	U	2.0	1.0	0.42	ug/L		10/30/23 13:53	2
1,1,2-Trichloroethane	2.0	U J1	4.0	2.0	0.64	ug/L		10/30/23 13:53	2
Trichloroethene	**9.4**	**D**	2.0	1.0	0.40	ug/L		10/30/23 13:53	2
Trichlorofluoromethane	2.0	U	4.0	2.0	0.66	ug/L		10/30/23 13:53	2
1,2,3-Trichloropropane	2.0	U	4.0	2.0	0.96	ug/L		10/30/23 13:53	2
1,2,4-Trimethylbenzene	2.0	U	4.0	2.0	0.86	ug/L		10/30/23 13:53	2
1,3,5-Trimethylbenzene	**1.9**	**J D**	4.0	2.0	0.56	ug/L		10/30/23 13:53	2
Vinyl acetate	4.0	U Q J1	5.0	4.0	1.4	ug/L		10/30/23 13:53	2
Vinyl chloride	**3.0**		2.0	1.0	0.40	ug/L		11/01/23 01:34	1
o-Xylene	2.0	U	4.0	2.0	0.52	ug/L		10/30/23 13:53	2
m-Xylene & p-Xylene	2.0	U	4.0	2.0	0.98	ug/L		10/30/23 13:53	2
Xylenes, Total	2.0	U	4.0	2.0	0.98	ug/L		10/30/23 13:53	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*89 - 112*		*10/30/23 13:53*	*2*
Toluene-d8 (Surr)	*112*		*89 - 112*		*11/01/23 01:34*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*		*10/30/23 13:53*	*2*
1,2-Dichloroethane-d4 (Surr)	*89*		*81 - 118*		*11/01/23 01:34*	*1*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*		*10/30/23 13:53*	*2*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*11/01/23 01:34*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*10/30/23 13:53*	*2*
Dibromofluoromethane (Surr)	*100*		*80 - 119*		*11/01/23 01:34*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**6.2**		1.1	0.76	0.30	ug/L		10/29/23 18:42	1
Ethylene	**9.5**		1.0	0.71	0.31	ug/L		10/29/23 18:42	1
Methane (TCD)	**18000**		390	77	39	ug/L		10/29/23 18:42	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	1.0	U J1	1.5	1.0	0.40	mg/L		11/08/23 21:51	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**85000**	**J1**	100	50	20	ug/L		10/25/23 13:36	1
Manganese	**860**		10	5.0	1.3	ug/L		10/25/23 13:36	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**310**		5.0	3.0	0.86	ug/L		10/25/23 22:24	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-04-10A-FAL23
Lab Sample ID: 680-242109-12
Date Collected: 10/19/23 14:05
Matrix: Water
Date Received: 10/24/23 10:02

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B-2011)	**200**		5.5	5.0	2.2	mg/L		11/01/23 21:03	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	0.025	U J1	0.10	0.025	0.010	mg/L		11/02/23 14:03	1
Sulfide (SW846 9034)	1.6	U	2.4	1.6	0.81	mg/L		10/26/23 09:45	1
Total Organic Carbon (SW846 9060)	**18**	**Q**	1.5	1.0	0.50	mg/L		11/09/23 10:32	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-04-10X-FAL23
Lab Sample ID: 680-242109-13
Date Collected: 10/18/23 14:45
Matrix: Water
Date Received: 10/24/23 10:02

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U Q	25	10	3.7	ug/L		11/01/23 01:57	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		11/01/23 01:57	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		11/01/23 01:57	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		11/01/23 01:57	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		11/01/23 01:57	1
Bromoform	2.0	U M	2.5	2.0	0.59	ug/L		11/01/23 01:57	1
Bromomethane	10	U Q	20	10	3.7	ug/L		11/01/23 01:57	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		11/01/23 01:57	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		11/01/23 01:57	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		11/01/23 01:57	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		11/01/23 01:57	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		11/01/23 01:57	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		11/01/23 01:57	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		11/01/23 01:57	1
Chloroethane	10	U Q	20	10	4.6	ug/L		11/01/23 01:57	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		11/01/23 01:57	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		11/01/23 01:57	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		11/01/23 01:57	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		11/01/23 01:57	1
Chlorodibromomethane	1.0	U Q	2.0	1.0	0.39	ug/L		11/01/23 01:57	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		11/01/23 01:57	1
Ethylene Dibromide	1.0	U Q	2.0	1.0	0.33	ug/L		11/01/23 01:57	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		11/01/23 01:57	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/01/23 01:57	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/01/23 01:57	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/01/23 01:57	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		11/01/23 01:57	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		11/01/23 01:57	1
1,2-Dichloroethane	1.0	U	2.0	1.0	0.25	ug/L		11/01/23 01:57	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		11/01/23 01:57	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		11/01/23 01:57	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		11/01/23 01:57	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		11/01/23 01:57	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		11/01/23 01:57	1
1,3-Dichloropropane	1.0	U Q	2.0	1.0	0.36	ug/L		11/01/23 01:57	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		11/01/23 01:57	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		11/01/23 01:57	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		11/01/23 01:57	1
trans-1,3-Dichloropropene	1.0	U Q	2.0	1.0	0.23	ug/L		11/01/23 01:57	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		11/01/23 01:57	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		11/01/23 01:57	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		11/01/23 01:57	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		11/01/23 01:57	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		11/01/23 01:57	1
Methylene Chloride	10	U	20	10	3.2	ug/L		11/01/23 01:57	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		11/01/23 01:57	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		11/01/23 01:57	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		11/01/23 01:57	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		11/01/23 01:57	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-04-10X-FAL23
Lab Sample ID: 680-242109-13
Date Collected: 10/18/23 14:45
Matrix: Water
Date Received: 10/24/23 10:02

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		11/01/23 01:57	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		11/01/23 01:57	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		11/01/23 01:57	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		11/01/23 01:57	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		11/01/23 01:57	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		11/01/23 01:57	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		11/01/23 01:57	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		11/01/23 01:57	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		11/01/23 01:57	1
Trichloroethene	**0.29**	**J**	1.0	0.50	0.20	ug/L		11/01/23 01:57	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		11/01/23 01:57	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		11/01/23 01:57	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		11/01/23 01:57	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		11/01/23 01:57	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		11/01/23 01:57	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		11/01/23 01:57	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		11/01/23 01:57	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		11/01/23 01:57	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		11/01/23 01:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*113*	*Q*	*89 - 112*		*11/01/23 01:57*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*81 - 118*		*11/01/23 01:57*	*1*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*11/01/23 01:57*	*1*
Dibromofluoromethane (Surr)	*95*		*80 - 119*		*11/01/23 01:57*	*1*

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-04-13X-FAL23
Lab Sample ID: 680-242109-14
Date Collected: 10/18/23 13:35
Matrix: Water
Date Received: 10/24/23 10:02

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		10/30/23 14:31	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 14:31	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/30/23 14:31	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 14:31	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 14:31	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/30/23 14:31	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/30/23 14:31	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		10/30/23 14:31	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/30/23 14:31	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/30/23 14:31	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 14:31	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 14:31	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/30/23 14:31	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/30/23 14:31	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/30/23 14:31	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 14:31	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/30/23 14:31	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/30/23 14:31	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 14:31	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/30/23 14:31	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/30/23 14:31	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 14:31	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 14:31	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 14:31	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 14:31	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 14:31	1
Dichlorodifluoromethane	1.0	U Q	2.0	1.0	0.36	ug/L		10/30/23 14:31	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 14:31	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/30/23 14:31	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 14:31	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 14:31	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/30/23 14:31	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 14:31	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/30/23 14:31	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 14:31	1
2,2-Dichloropropane	1.0	U Q	2.0	1.0	0.35	ug/L		10/30/23 14:31	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 14:31	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 14:31	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/30/23 14:31	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 14:31	1
Hexachlorobutadiene	1.0	U Q	5.0	1.0	0.22	ug/L		10/30/23 14:31	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/30/23 14:31	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 14:31	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/30/23 14:31	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/30/23 14:31	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/30/23 14:31	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/30/23 14:31	1
Naphthalene	5.0	U Q	10	5.0	2.4	ug/L		10/30/23 14:31	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 14:31	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-04-13X-FAL23
Lab Sample ID: 680-242109-14
Date Collected: 10/18/23 13:35
Matrix: Water
Date Received: 10/24/23 10:02

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 14:31	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 14:31	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/30/23 14:31	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/30/23 14:31	1
Toluene	1.0	U Q	2.0	1.0	0.25	ug/L		10/30/23 14:31	1
1,2,3-Trichlorobenzene	2.0	U Q	5.0	2.0	0.81	ug/L		10/30/23 14:31	1
1,2,4-Trichlorobenzene	2.0	U Q	5.0	2.0	0.53	ug/L		10/30/23 14:31	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/30/23 14:31	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/30/23 14:31	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 14:31	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 14:31	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/30/23 14:31	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 14:31	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 14:31	1
Vinyl acetate	2.0	U Q	2.5	2.0	0.69	ug/L		10/30/23 14:31	1
Vinyl chloride	1.0	U Q	2.0	1.0	0.40	ug/L		10/30/23 14:31	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 14:31	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 14:31	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 14:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*89 - 112*		*10/30/23 14:31*	*1*
1,2-Dichloroethane-d4 (Surr)	*81*		*81 - 118*		*10/30/23 14:31*	*1*
4-Bromofluorobenzene (Surr)	*104*		*85 - 114*		*10/30/23 14:31*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 119*		*10/30/23 14:31*	*1*

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-04-14X-FAL23
Lab Sample ID: 680-242109-15
Date Collected: 10/18/23 10:30
Matrix: Water
Date Received: 10/24/23 10:02

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		10/30/23 14:50	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 14:50	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/30/23 14:50	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 14:50	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 14:50	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/30/23 14:50	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/30/23 14:50	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		10/30/23 14:50	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/30/23 14:50	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/30/23 14:50	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 14:50	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 14:50	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/30/23 14:50	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/30/23 14:50	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/30/23 14:50	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 14:50	1
Chloromethane	2.0	U M	2.5	2.0	0.54	ug/L		10/30/23 14:50	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/30/23 14:50	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 14:50	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/30/23 14:50	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/30/23 14:50	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 14:50	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 14:50	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 14:50	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 14:50	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 14:50	1
Dichlorodifluoromethane	1.0	U Q	2.0	1.0	0.36	ug/L		10/30/23 14:50	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 14:50	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/30/23 14:50	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 14:50	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 14:50	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/30/23 14:50	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 14:50	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/30/23 14:50	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 14:50	1
2,2-Dichloropropane	1.0	U Q	2.0	1.0	0.35	ug/L		10/30/23 14:50	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 14:50	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 14:50	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/30/23 14:50	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 14:50	1
Hexachlorobutadiene	1.0	U Q	5.0	1.0	0.22	ug/L		10/30/23 14:50	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/30/23 14:50	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 14:50	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/30/23 14:50	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/30/23 14:50	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/30/23 14:50	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/30/23 14:50	1
Naphthalene	5.0	U Q	10	5.0	2.4	ug/L		10/30/23 14:50	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 14:50	1

Client Sample ID: G6M-04-14X-FAL23
Lab Sample ID: 680-242109-15
Date Collected: 10/18/23 10:30
Matrix: Water
Date Received: 10/24/23 10:02

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 14:50	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 14:50	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/30/23 14:50	1
Tetrachloroethene	**0.35**	**J**	2.0	1.0	0.35	ug/L		10/30/23 14:50	1
Toluene	1.0	U Q	2.0	1.0	0.25	ug/L		10/30/23 14:50	1
1,2,3-Trichlorobenzene	2.0	U Q	5.0	2.0	0.81	ug/L		10/30/23 14:50	1
1,2,4-Trichlorobenzene	2.0	U Q	5.0	2.0	0.53	ug/L		10/30/23 14:50	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/30/23 14:50	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/30/23 14:50	1
Trichloroethene	0.50	U M	1.0	0.50	0.20	ug/L		10/30/23 14:50	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 14:50	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/30/23 14:50	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 14:50	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 14:50	1
Vinyl acetate	2.0	U Q	2.5	2.0	0.69	ug/L		10/30/23 14:50	1
Vinyl chloride	1.0	U Q	2.0	1.0	0.40	ug/L		10/30/23 14:50	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 14:50	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 14:50	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 14:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*89 - 112*		*10/30/23 14:50*	*1*
1,2-Dichloroethane-d4 (Surr)	*81*		*81 - 118*		*10/30/23 14:50*	*1*
4-Bromofluorobenzene (Surr)	*105*		*85 - 114*		*10/30/23 14:50*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 119*		*10/30/23 14:50*	*1*

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/25/23 14:08	1
Manganese	**4.9**	**J**	10	5.0	1.3	ug/L		10/25/23 14:08	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**8.7**		5.0	3.0	0.86	ug/L		10/25/23 23:08	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-04-15X-FAL23
Lab Sample ID: 680-242109-16
Date Collected: 10/19/23 10:30
Matrix: Water
Date Received: 10/24/23 10:02

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U Q	25	10	3.7	ug/L		11/01/23 02:21	1
Benzene	**0.41**	**J M**	2.0	1.0	0.27	ug/L		11/01/23 02:21	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		11/01/23 02:21	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		11/01/23 02:21	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		11/01/23 02:21	1
Bromoform	2.0	U M	2.5	2.0	0.59	ug/L		11/01/23 02:21	1
Bromomethane	10	U Q	20	10	3.7	ug/L		11/01/23 02:21	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		11/01/23 02:21	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		11/01/23 02:21	1
sec-Butylbenzene	2.0	U M	2.5	2.0	0.53	ug/L		11/01/23 02:21	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		11/01/23 02:21	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		11/01/23 02:21	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		11/01/23 02:21	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		11/01/23 02:21	1
Chloroethane	10	U Q	20	10	4.6	ug/L		11/01/23 02:21	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		11/01/23 02:21	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		11/01/23 02:21	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		11/01/23 02:21	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		11/01/23 02:21	1
Chlorodibromomethane	1.0	U Q	2.0	1.0	0.39	ug/L		11/01/23 02:21	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		11/01/23 02:21	1
Ethylene Dibromide	1.0	U Q	2.0	1.0	0.33	ug/L		11/01/23 02:21	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		11/01/23 02:21	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/01/23 02:21	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/01/23 02:21	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/01/23 02:21	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		11/01/23 02:21	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		11/01/23 02:21	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		11/01/23 02:21	1
cis-1,2-Dichloroethene	**0.66**	**J**	2.0	1.0	0.25	ug/L		11/01/23 02:21	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		11/01/23 02:21	1
1,2-Dichloroethene, Total	**0.66**	**J**	2.0	1.0	0.37	ug/L		11/01/23 02:21	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		11/01/23 02:21	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		11/01/23 02:21	1
1,3-Dichloropropane	1.0	U Q	2.0	1.0	0.36	ug/L		11/01/23 02:21	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		11/01/23 02:21	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		11/01/23 02:21	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		11/01/23 02:21	1
trans-1,3-Dichloropropene	1.0	U Q	2.0	1.0	0.23	ug/L		11/01/23 02:21	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		11/01/23 02:21	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		11/01/23 02:21	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		11/01/23 02:21	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		11/01/23 02:21	1
4-Isopropyltoluene	1.0	U M	2.0	1.0	0.44	ug/L		11/01/23 02:21	1
Methylene Chloride	10	U	20	10	3.2	ug/L		11/01/23 02:21	1
4-Methyl-2-pentanone (MIBK)	10	U M	20	10	2.7	ug/L		11/01/23 02:21	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		11/01/23 02:21	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		11/01/23 02:21	1
N-Propylbenzene	1.0	U M	2.0	1.0	0.41	ug/L		11/01/23 02:21	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-04-15X-FAL23
Lab Sample ID: 680-242109-16
Date Collected: 10/19/23 10:30
Matrix: Water
Date Received: 10/24/23 10:02

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		11/01/23 02:21	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		11/01/23 02:21	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		11/01/23 02:21	1
Tetrachloroethene	**1.8**	**J**	2.0	1.0	0.35	ug/L		11/01/23 02:21	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		11/01/23 02:21	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		11/01/23 02:21	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		11/01/23 02:21	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		11/01/23 02:21	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		11/01/23 02:21	1
Trichloroethene	**0.60**	**J**	1.0	0.50	0.20	ug/L		11/01/23 02:21	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		11/01/23 02:21	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		11/01/23 02:21	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		11/01/23 02:21	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		11/01/23 02:21	1
Vinyl acetate	2.0	U M	2.5	2.0	0.69	ug/L		11/01/23 02:21	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		11/01/23 02:21	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		11/01/23 02:21	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		11/01/23 02:21	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		11/01/23 02:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*89 - 112*		*11/01/23 02:21*	*1*
1,2-Dichloroethane-d4 (Surr)	*90*		*81 - 118*		*11/01/23 02:21*	*1*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*		*11/01/23 02:21*	*1*
Dibromofluoromethane (Surr)	*94*		*80 - 119*		*11/01/23 02:21*	*1*

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**2000**		100	50	20	ug/L		10/25/23 14:10	1
Manganese	**570**		10	5.0	1.3	ug/L		10/25/23 14:10	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**55**		5.0	3.0	0.86	ug/L		10/25/23 23:11	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-07-01X-FAL23
Lab Sample ID: 680-242109-17
Date Collected: 10/20/23 10:15
Matrix: Water
Date Received: 10/24/23 10:02

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		10/30/23 15:28	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 15:28	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/30/23 15:28	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 15:28	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 15:28	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/30/23 15:28	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/30/23 15:28	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		10/30/23 15:28	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/30/23 15:28	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/30/23 15:28	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 15:28	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 15:28	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/30/23 15:28	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/30/23 15:28	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/30/23 15:28	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 15:28	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/30/23 15:28	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/30/23 15:28	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 15:28	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/30/23 15:28	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/30/23 15:28	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 15:28	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 15:28	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 15:28	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 15:28	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 15:28	1
Dichlorodifluoromethane	1.0	U Q	2.0	1.0	0.36	ug/L		10/30/23 15:28	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 15:28	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/30/23 15:28	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 15:28	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 15:28	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/30/23 15:28	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 15:28	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/30/23 15:28	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 15:28	1
2,2-Dichloropropane	1.0	U Q	2.0	1.0	0.35	ug/L		10/30/23 15:28	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 15:28	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 15:28	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/30/23 15:28	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 15:28	1
Hexachlorobutadiene	1.0	U Q	5.0	1.0	0.22	ug/L		10/30/23 15:28	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/30/23 15:28	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 15:28	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/30/23 15:28	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/30/23 15:28	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/30/23 15:28	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/30/23 15:28	1
Naphthalene	5.0	U Q	10	5.0	2.4	ug/L		10/30/23 15:28	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 15:28	1

Client Sample ID: G6M-07-01X-FAL23
Lab Sample ID: 680-242109-17
Date Collected: 10/20/23 10:15
Matrix: Water
Date Received: 10/24/23 10:02

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 15:28	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 15:28	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/30/23 15:28	1
Tetrachloroethene	**11**		2.0	1.0	0.35	ug/L		10/30/23 15:28	1
Toluene	1.0	U Q	2.0	1.0	0.25	ug/L		10/30/23 15:28	1
1,2,3-Trichlorobenzene	2.0	U Q	5.0	2.0	0.81	ug/L		10/30/23 15:28	1
1,2,4-Trichlorobenzene	2.0	U Q	5.0	2.0	0.53	ug/L		10/30/23 15:28	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/30/23 15:28	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/30/23 15:28	1
Trichloroethene	**0.67**	**J**	1.0	0.50	0.20	ug/L		10/30/23 15:28	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 15:28	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/30/23 15:28	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 15:28	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 15:28	1
Vinyl acetate	2.0	U Q	2.5	2.0	0.69	ug/L		10/30/23 15:28	1
Vinyl chloride	1.0	U Q	2.0	1.0	0.40	ug/L		10/30/23 15:28	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 15:28	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 15:28	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 15:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*89 - 112*		*10/30/23 15:28*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*		*10/30/23 15:28*	*1*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*		*10/30/23 15:28*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 119*		*10/30/23 15:28*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	0.76	U	1.1	0.76	0.30	ug/L		10/31/23 04:40	1
Ethylene	0.71	U	1.0	0.71	0.31	ug/L		10/31/23 04:40	1
Methane	**41**		1.2	1.2	0.57	ug/L		10/31/23 04:40	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**14**		1.5	1.0	0.40	mg/L		11/08/23 23:19	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**23**	**J**	100	50	20	ug/L		10/26/23 10:52	1
Manganese	**34**		10	5.0	1.3	ug/L		10/26/23 10:52	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**1.6**	**J**	5.0	3.0	0.86	ug/L		10/25/23 21:49	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B-2011)	**49**		5.5	5.0	2.2	mg/L		11/02/23 15:46	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	**1.0**		0.10	0.025	0.010	mg/L		11/02/23 14:12	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-07-01X-FAL23
Lab Sample ID: 680-242109-17
Date Collected: 10/20/23 10:15
Matrix: Water
Date Received: 10/24/23 10:02

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfide (SW846 9034)	1.7	U	2.5	1.7	0.83	mg/L		10/26/23 09:45	1
Total Organic Carbon (SW846 9060)	**0.77**	**J Q**	1.5	1.0	0.50	mg/L		11/09/23 10:51	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-07-02X-FAL23
Lab Sample ID: 680-242109-18
Date Collected: 10/18/23 11:00
Matrix: Water
Date Received: 10/24/23 10:02

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		10/30/23 15:47	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 15:47	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/30/23 15:47	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 15:47	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 15:47	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/30/23 15:47	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/30/23 15:47	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		10/30/23 15:47	1
n-Butylbenzene	**1.1**	**J**	2.5	2.0	0.52	ug/L		10/30/23 15:47	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/30/23 15:47	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 15:47	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 15:47	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/30/23 15:47	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/30/23 15:47	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/30/23 15:47	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 15:47	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/30/23 15:47	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/30/23 15:47	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 15:47	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/30/23 15:47	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/30/23 15:47	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 15:47	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 15:47	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 15:47	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 15:47	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 15:47	1
Dichlorodifluoromethane	1.0	U Q	2.0	1.0	0.36	ug/L		10/30/23 15:47	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 15:47	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/30/23 15:47	1
cis-1,2-Dichloroethene	**1.1**	**J**	2.0	1.0	0.25	ug/L		10/30/23 15:47	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 15:47	1
1,2-Dichloroethene, Total	**1.1**	**J**	2.0	1.0	0.37	ug/L		10/30/23 15:47	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 15:47	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/30/23 15:47	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 15:47	1
2,2-Dichloropropane	1.0	U Q	2.0	1.0	0.35	ug/L		10/30/23 15:47	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 15:47	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 15:47	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/30/23 15:47	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 15:47	1
Hexachlorobutadiene	1.0	U Q	5.0	1.0	0.22	ug/L		10/30/23 15:47	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/30/23 15:47	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 15:47	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/30/23 15:47	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/30/23 15:47	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/30/23 15:47	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/30/23 15:47	1
Naphthalene	**3.2**	**J**	10	5.0	2.4	ug/L		11/01/23 02:44	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 15:47	1

Client Sample ID: G6M-07-02X-FAL23
Lab Sample ID: 680-242109-18
Date Collected: 10/18/23 11:00
Matrix: Water
Date Received: 10/24/23 10:02

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 15:47	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 15:47	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/30/23 15:47	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/30/23 15:47	1
Toluene	1.0	U Q	2.0	1.0	0.25	ug/L		10/30/23 15:47	1
1,2,3-Trichlorobenzene	2.0	U Q	5.0	2.0	0.81	ug/L		10/30/23 15:47	1
1,2,4-Trichlorobenzene	2.0	U Q	5.0	2.0	0.53	ug/L		10/30/23 15:47	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/30/23 15:47	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/30/23 15:47	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 15:47	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 15:47	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/30/23 15:47	1
1,2,4-Trimethylbenzene	**1.1**	**J**	2.0	1.0	0.43	ug/L		10/30/23 15:47	1
1,3,5-Trimethylbenzene	**0.93**	**J**	2.0	1.0	0.28	ug/L		10/30/23 15:47	1
Vinyl acetate	2.0	U Q	2.5	2.0	0.69	ug/L		10/30/23 15:47	1
Vinyl chloride	1.0	U Q	2.0	1.0	0.40	ug/L		10/30/23 15:47	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 15:47	1
m-Xylene & p-Xylene	**0.78**	**J**	2.0	1.0	0.49	ug/L		10/30/23 15:47	1
Xylenes, Total	**0.78**	**J**	2.0	1.0	0.49	ug/L		10/30/23 15:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*89 - 112*		*10/30/23 15:47*	*1*
Toluene-d8 (Surr)	*108*		*89 - 112*		*11/01/23 02:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*		*10/30/23 15:47*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*		*11/01/23 02:44*	*1*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*		*10/30/23 15:47*	*1*
4-Bromofluorobenzene (Surr)	*91*		*85 - 114*		*11/01/23 02:44*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*10/30/23 15:47*	*1*
Dibromofluoromethane (Surr)	*92*		*80 - 119*		*11/01/23 02:44*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**1.7**		1.1	0.76	0.30	ug/L		10/28/23 02:57	1
Ethylene	**1.7**		1.0	0.71	0.31	ug/L		10/28/23 02:57	1
Methane (TCD)	**14000**		390	77	39	ug/L		10/28/23 02:57	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	1.0	U	1.5	1.0	0.40	mg/L		11/08/23 23:32	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**93000**		100	50	20	ug/L		10/26/23 10:54	1
Manganese	**2800**		10	5.0	1.3	ug/L		10/26/23 10:54	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**25**		5.0	3.0	0.86	ug/L		10/25/23 21:51	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-07-02X-FAL23
Lab Sample ID: 680-242109-18
Date Collected: 10/18/23 11:00
Matrix: Water
Date Received: 10/24/23 10:02

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B-2011)	**81**		5.5	5.0	2.2	mg/L		10/31/23 21:55	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	0.025	U	0.10	0.025	0.010	mg/L		11/02/23 14:14	1
Sulfide (SW846 9034)	1.6	U	2.4	1.6	0.81	mg/L		10/25/23 13:01	1
Total Organic Carbon (SW846 9060)	**95**	**D**	15	10	5.0	mg/L		11/10/23 14:30	10

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-13-01X-FAL23
Lab Sample ID: 680-242109-19
Date Collected: 10/18/23 13:35
Matrix: Water
Date Received: 10/24/23 10:02

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		10/30/23 16:06	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 16:06	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/30/23 16:06	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 16:06	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 16:06	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/30/23 16:06	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/30/23 16:06	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		10/30/23 16:06	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/30/23 16:06	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/30/23 16:06	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 16:06	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 16:06	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/30/23 16:06	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/30/23 16:06	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/30/23 16:06	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 16:06	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/30/23 16:06	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/30/23 16:06	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 16:06	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/30/23 16:06	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/30/23 16:06	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 16:06	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 16:06	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 16:06	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 16:06	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 16:06	1
Dichlorodifluoromethane	1.0	U Q	2.0	1.0	0.36	ug/L		10/30/23 16:06	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 16:06	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/30/23 16:06	1
cis-1,2-Dichloroethene	**0.60**	**J**	2.0	1.0	0.25	ug/L		10/30/23 16:06	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 16:06	1
1,2-Dichloroethene, Total	**0.60**	**J**	2.0	1.0	0.37	ug/L		10/30/23 16:06	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 16:06	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/30/23 16:06	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 16:06	1
2,2-Dichloropropane	1.0	U Q	2.0	1.0	0.35	ug/L		10/30/23 16:06	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 16:06	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 16:06	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/30/23 16:06	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 16:06	1
Hexachlorobutadiene	1.0	U Q	5.0	1.0	0.22	ug/L		10/30/23 16:06	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/30/23 16:06	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 16:06	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/30/23 16:06	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/30/23 16:06	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/30/23 16:06	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/30/23 16:06	1
Naphthalene	5.0	U Q	10	5.0	2.4	ug/L		10/30/23 16:06	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 16:06	1

Client Sample ID: G6M-13-01X-FAL23
Lab Sample ID: 680-242109-19
Date Collected: 10/18/23 13:35
Matrix: Water
Date Received: 10/24/23 10:02

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 16:06	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 16:06	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/30/23 16:06	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/30/23 16:06	1
Toluene	1.0	U Q	2.0	1.0	0.25	ug/L		10/30/23 16:06	1
1,2,3-Trichlorobenzene	2.0	U Q	5.0	2.0	0.81	ug/L		10/30/23 16:06	1
1,2,4-Trichlorobenzene	2.0	U Q	5.0	2.0	0.53	ug/L		10/30/23 16:06	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/30/23 16:06	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/30/23 16:06	1
Trichloroethene	**0.42**	**J**	1.0	0.50	0.20	ug/L		10/30/23 16:06	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 16:06	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/30/23 16:06	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 16:06	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 16:06	1
Vinyl acetate	2.0	U Q	2.5	2.0	0.69	ug/L		10/30/23 16:06	1
Vinyl chloride	1.0	U Q	2.0	1.0	0.40	ug/L		10/30/23 16:06	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 16:06	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 16:06	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 16:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*103*		*89 - 112*		*10/30/23 16:06*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*81 - 118*		*10/30/23 16:06*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*10/30/23 16:06*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 119*		*10/30/23 16:06*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	0.76	U	1.1	0.76	0.30	ug/L		10/28/23 03:10	1
Ethylene	0.71	U	1.0	0.71	0.31	ug/L		10/28/23 03:10	1
Methane (TCD)	**680**		390	77	39	ug/L		10/28/23 03:10	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**14**		1.5	1.0	0.40	mg/L		11/08/23 23:44	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**6500**		100	50	20	ug/L		10/26/23 10:56	1
Manganese	**3900**		10	5.0	1.3	ug/L		10/26/23 10:56	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**220**		5.0	3.0	0.86	ug/L		10/25/23 21:54	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B-2011)	**79**		5.5	5.0	2.2	mg/L		10/31/23 21:38	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	0.025	U	0.10	0.025	0.010	mg/L		11/02/23 14:15	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-13-01X-FAL23
Lab Sample ID: 680-242109-19
Date Collected: 10/18/23 13:35
Matrix: Water
Date Received: 10/24/23 10:02

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfide (SW846 9034)	1.7	U	2.6	1.7	0.86	mg/L		10/25/23 13:01	1
Total Organic Carbon (SW846 9060)	**1.5**	**Q**	1.5	1.0	0.50	mg/L		11/09/23 11:27	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-13-02X-FAL23
Lab Sample ID: 680-242109-20
Date Collected: 10/20/23 14:25
Matrix: Water
Date Received: 10/24/23 10:02

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		10/30/23 16:25	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 16:25	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/30/23 16:25	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 16:25	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 16:25	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/30/23 16:25	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/30/23 16:25	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		10/30/23 16:25	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/30/23 16:25	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/30/23 16:25	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 16:25	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 16:25	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/30/23 16:25	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/30/23 16:25	1
Chloroethane	10	U M Q	20	10	4.6	ug/L		11/01/23 03:07	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 16:25	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/30/23 16:25	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/30/23 16:25	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 16:25	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/30/23 16:25	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/30/23 16:25	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 16:25	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 16:25	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 16:25	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 16:25	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 16:25	1
Dichlorodifluoromethane	1.0	U Q	2.0	1.0	0.36	ug/L		10/30/23 16:25	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 16:25	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/30/23 16:25	1
cis-1,2-Dichloroethene	**11**		2.0	1.0	0.25	ug/L		10/30/23 16:25	1
trans-1,2-Dichloroethene	**1.4**	**J**	2.0	1.0	0.34	ug/L		10/30/23 16:25	1
1,2-Dichloroethene, Total	**13**		2.0	1.0	0.37	ug/L		10/30/23 16:25	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 16:25	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/30/23 16:25	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 16:25	1
2,2-Dichloropropane	1.0	U Q	2.0	1.0	0.35	ug/L		10/30/23 16:25	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 16:25	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 16:25	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/30/23 16:25	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 16:25	1
Hexachlorobutadiene	1.0	U Q	5.0	1.0	0.22	ug/L		10/30/23 16:25	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/30/23 16:25	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 16:25	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/30/23 16:25	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/30/23 16:25	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/30/23 16:25	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/30/23 16:25	1
Naphthalene	5.0	U Q	10	5.0	2.4	ug/L		10/30/23 16:25	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 16:25	1

Client Sample ID: G6M-13-02X-FAL23
Lab Sample ID: 680-242109-20
Date Collected: 10/20/23 14:25
Matrix: Water
Date Received: 10/24/23 10:02

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 16:25	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 16:25	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/30/23 16:25	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/30/23 16:25	1
Toluene	1.0	U Q	2.0	1.0	0.25	ug/L		10/30/23 16:25	1
1,2,3-Trichlorobenzene	2.0	U Q	5.0	2.0	0.81	ug/L		10/30/23 16:25	1
1,2,4-Trichlorobenzene	2.0	U Q	5.0	2.0	0.53	ug/L		10/30/23 16:25	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/30/23 16:25	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/30/23 16:25	1
Trichloroethene	**3.3**		1.0	0.50	0.20	ug/L		10/30/23 16:25	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 16:25	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/30/23 16:25	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 16:25	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 16:25	1
Vinyl acetate	2.0	U Q	2.5	2.0	0.69	ug/L		10/30/23 16:25	1
Vinyl chloride	**0.58**	**J**	2.0	1.0	0.40	ug/L		11/01/23 03:07	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 16:25	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 16:25	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 16:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*89 - 112*		*10/30/23 16:25*	*1*
Toluene-d8 (Surr)	*96*		*89 - 112*		*11/01/23 03:07*	*1*
1,2-Dichloroethane-d4 (Surr)	*82*		*81 - 118*		*10/30/23 16:25*	*1*
1,2-Dichloroethane-d4 (Surr)	*91*		*81 - 118*		*11/01/23 03:07*	*1*
4-Bromofluorobenzene (Surr)	*103*		*85 - 114*		*10/30/23 16:25*	*1*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*		*11/01/23 03:07*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*10/30/23 16:25*	*1*
Dibromofluoromethane (Surr)	*89*		*80 - 119*		*11/01/23 03:07*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**0.87**	**J**	1.1	0.76	0.30	ug/L		10/31/23 04:53	1
Ethylene	0.71	U	1.0	0.71	0.31	ug/L		10/31/23 04:53	1
Methane (TCD)	**8800**		390	77	39	ug/L		10/31/23 04:53	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**8.9**		1.5	1.0	0.40	mg/L		11/08/23 23:57	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**1500**		100	50	20	ug/L		10/26/23 10:58	1
Manganese	**12000**		10	5.0	1.3	ug/L		10/26/23 10:58	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**27**		5.0	3.0	0.86	ug/L		10/25/23 21:57	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-13-02X-FAL23
Lab Sample ID: 680-242109-20
Date Collected: 10/20/23 14:25
Matrix: Water
Date Received: 10/24/23 10:02

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B-2011)	**83**		5.5	5.0	2.2	mg/L		11/02/23 15:37	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	0.025	U	0.10	0.025	0.010	mg/L		11/02/23 14:17	1
Sulfide (SW846 9034)	1.7	U	2.5	1.7	0.83	mg/L		10/26/23 09:45	1
Total Organic Carbon (SW846 9060)	**1.0**	**J Q**	1.5	1.0	0.50	mg/L		11/09/23 11:45	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-95-19X-FAL23
Lab Sample ID: 680-242109-21
Date Collected: 10/18/23 09:40
Matrix: Water
Date Received: 10/24/23 10:02

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		10/30/23 16:44	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 16:44	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/30/23 16:44	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 16:44	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 16:44	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/30/23 16:44	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/30/23 16:44	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		10/30/23 16:44	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/30/23 16:44	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/30/23 16:44	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 16:44	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 16:44	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/30/23 16:44	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/30/23 16:44	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/30/23 16:44	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 16:44	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/30/23 16:44	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/30/23 16:44	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 16:44	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/30/23 16:44	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/30/23 16:44	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 16:44	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 16:44	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 16:44	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 16:44	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 16:44	1
Dichlorodifluoromethane	1.0	U Q	2.0	1.0	0.36	ug/L		10/30/23 16:44	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 16:44	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/30/23 16:44	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 16:44	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 16:44	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/30/23 16:44	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 16:44	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/30/23 16:44	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 16:44	1
2,2-Dichloropropane	1.0	U Q	2.0	1.0	0.35	ug/L		10/30/23 16:44	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 16:44	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 16:44	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/30/23 16:44	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 16:44	1
Hexachlorobutadiene	1.0	U Q	5.0	1.0	0.22	ug/L		10/30/23 16:44	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/30/23 16:44	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 16:44	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/30/23 16:44	1
Methylene Chloride	10	U M	20	10	3.2	ug/L		10/30/23 16:44	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/30/23 16:44	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/30/23 16:44	1
Naphthalene	5.0	U Q	10	5.0	2.4	ug/L		10/30/23 16:44	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 16:44	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-95-19X-FAL23
Lab Sample ID: 680-242109-21
Date Collected: 10/18/23 09:40
Matrix: Water
Date Received: 10/24/23 10:02

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 16:44	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 16:44	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/30/23 16:44	1
Tetrachloroethene	**1.0**	**J**	2.0	1.0	0.35	ug/L		10/30/23 16:44	1
Toluene	1.0	U Q	2.0	1.0	0.25	ug/L		10/30/23 16:44	1
1,2,3-Trichlorobenzene	2.0	U Q	5.0	2.0	0.81	ug/L		10/30/23 16:44	1
1,2,4-Trichlorobenzene	2.0	U Q	5.0	2.0	0.53	ug/L		10/30/23 16:44	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/30/23 16:44	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/30/23 16:44	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 16:44	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 16:44	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/30/23 16:44	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 16:44	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 16:44	1
Vinyl acetate	2.0	U Q	2.5	2.0	0.69	ug/L		10/30/23 16:44	1
Vinyl chloride	1.0	U Q	2.0	1.0	0.40	ug/L		10/30/23 16:44	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 16:44	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 16:44	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 16:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*103*		*89 - 112*		*10/30/23 16:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*81 - 118*		*10/30/23 16:44*	*1*
4-Bromofluorobenzene (Surr)	*105*		*85 - 114*		*10/30/23 16:44*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*10/30/23 16:44*	*1*

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-97-28X-FAL23
Lab Sample ID: 680-242109-22
Date Collected: 10/19/23 14:55
Matrix: Water
Date Received: 10/24/23 10:02

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	9300		100	50	20	ug/L		10/26/23 11:01	1
Manganese	6200		10	5.0	1.3	ug/L		10/26/23 11:01	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	120		5.0	3.0	0.86	ug/L		10/25/23 22:00	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: MW-3-FAL23
Lab Sample ID: 680-242109-23
Date Collected: 10/18/23 11:30
Matrix: Water
Date Received: 10/24/23 10:02

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U Q	25	10	3.7	ug/L		11/01/23 03:30	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		11/01/23 03:30	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		11/01/23 03:30	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		11/01/23 03:30	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		11/01/23 03:30	1
Bromoform	2.0	U M	2.5	2.0	0.59	ug/L		11/01/23 03:30	1
Bromomethane	10	U Q	20	10	3.7	ug/L		11/01/23 03:30	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		11/01/23 03:30	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		11/01/23 03:30	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		11/01/23 03:30	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		11/01/23 03:30	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		11/01/23 03:30	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		11/01/23 03:30	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		11/01/23 03:30	1
Chloroethane	10	U Q	20	10	4.6	ug/L		11/01/23 03:30	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		11/01/23 03:30	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		11/01/23 03:30	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		11/01/23 03:30	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		11/01/23 03:30	1
Chlorodibromomethane	1.0	U Q	2.0	1.0	0.39	ug/L		11/01/23 03:30	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		11/01/23 03:30	1
Ethylene Dibromide	1.0	U Q	2.0	1.0	0.33	ug/L		11/01/23 03:30	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		11/01/23 03:30	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/01/23 03:30	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/01/23 03:30	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/01/23 03:30	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		11/01/23 03:30	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		11/01/23 03:30	1
1,2-Dichloroethane	1.0	U	2.0	1.0	0.25	ug/L		11/01/23 03:30	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		11/01/23 03:30	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		11/01/23 03:30	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		11/01/23 03:30	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		11/01/23 03:30	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		11/01/23 03:30	1
1,3-Dichloropropane	1.0	U Q	2.0	1.0	0.36	ug/L		11/01/23 03:30	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		11/01/23 03:30	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		11/01/23 03:30	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		11/01/23 03:30	1
trans-1,3-Dichloropropene	1.0	U Q	2.0	1.0	0.23	ug/L		11/01/23 03:30	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		11/01/23 03:30	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		11/01/23 03:30	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		11/01/23 03:30	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		11/01/23 03:30	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		11/01/23 03:30	1
Methylene Chloride	10	U	20	10	3.2	ug/L		11/01/23 03:30	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		11/01/23 03:30	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		11/01/23 03:30	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		11/01/23 03:30	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		11/01/23 03:30	1

Client Sample ID: MW-3-FAL23
Lab Sample ID: 680-242109-23
Date Collected: 10/18/23 11:30
Matrix: Water
Date Received: 10/24/23 10:02

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		11/01/23 03:30	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		11/01/23 03:30	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		11/01/23 03:30	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		11/01/23 03:30	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		11/01/23 03:30	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		11/01/23 03:30	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		11/01/23 03:30	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		11/01/23 03:30	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		11/01/23 03:30	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		11/01/23 03:30	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		11/01/23 03:30	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		11/01/23 03:30	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		11/01/23 03:30	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		11/01/23 03:30	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		11/01/23 03:30	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		11/01/23 03:30	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		11/01/23 03:30	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		11/01/23 03:30	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		11/01/23 03:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*89 - 112*		*11/01/23 03:30*	*1*
1,2-Dichloroethane-d4 (Surr)	*90*		*81 - 118*		*11/01/23 03:30*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*11/01/23 03:30*	*1*
Dibromofluoromethane (Surr)	*93*		*80 - 119*		*11/01/23 03:30*	*1*

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**52000**	**J1**	100	50	20	ug/L		10/26/23 10:30	1
Manganese	**11000**	**J1**	10	5.0	1.3	ug/L		10/26/23 10:30	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**650**	**J1**	5.0	3.0	0.86	ug/L		10/25/23 21:19	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: MW-7-FAL23
Lab Sample ID: 680-242109-24
Date Collected: 10/18/23 09:55
Matrix: Water
Date Received: 10/24/23 10:02

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U Q	25	10	3.7	ug/L		11/01/23 03:54	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		11/01/23 03:54	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		11/01/23 03:54	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		11/01/23 03:54	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		11/01/23 03:54	1
Bromoform	2.0	U M	2.5	2.0	0.59	ug/L		11/01/23 03:54	1
Bromomethane	10	U Q	20	10	3.7	ug/L		11/01/23 03:54	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		11/01/23 03:54	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		11/01/23 03:54	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		11/01/23 03:54	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		11/01/23 03:54	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		11/01/23 03:54	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		11/01/23 03:54	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		11/01/23 03:54	1
Chloroethane	10	U Q	20	10	4.6	ug/L		11/01/23 03:54	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		11/01/23 03:54	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		11/01/23 03:54	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		11/01/23 03:54	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		11/01/23 03:54	1
Chlorodibromomethane	1.0	U Q	2.0	1.0	0.39	ug/L		11/01/23 03:54	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		11/01/23 03:54	1
Ethylene Dibromide	1.0	U Q	2.0	1.0	0.33	ug/L		11/01/23 03:54	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		11/01/23 03:54	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/01/23 03:54	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/01/23 03:54	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/01/23 03:54	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		11/01/23 03:54	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		11/01/23 03:54	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		11/01/23 03:54	1
cis-1,2-Dichloroethene	**0.56**	**J**	2.0	1.0	0.25	ug/L		11/01/23 03:54	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		11/01/23 03:54	1
1,2-Dichloroethene, Total	**0.56**	**J**	2.0	1.0	0.37	ug/L		11/01/23 03:54	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		11/01/23 03:54	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		11/01/23 03:54	1
1,3-Dichloropropane	1.0	U Q	2.0	1.0	0.36	ug/L		11/01/23 03:54	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		11/01/23 03:54	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		11/01/23 03:54	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		11/01/23 03:54	1
trans-1,3-Dichloropropene	1.0	U Q	2.0	1.0	0.23	ug/L		11/01/23 03:54	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		11/01/23 03:54	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		11/01/23 03:54	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		11/01/23 03:54	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		11/01/23 03:54	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		11/01/23 03:54	1
Methylene Chloride	10	U	20	10	3.2	ug/L		11/01/23 03:54	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		11/01/23 03:54	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		11/01/23 03:54	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		11/01/23 03:54	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		11/01/23 03:54	1

Client Sample ID: MW-7-FAL23
Lab Sample ID: 680-242109-24
Date Collected: 10/18/23 09:55
Matrix: Water
Date Received: 10/24/23 10:02

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		11/01/23 03:54	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		11/01/23 03:54	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		11/01/23 03:54	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		11/01/23 03:54	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		11/01/23 03:54	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		11/01/23 03:54	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		11/01/23 03:54	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		11/01/23 03:54	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		11/01/23 03:54	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		11/01/23 03:54	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		11/01/23 03:54	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		11/01/23 03:54	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		11/01/23 03:54	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		11/01/23 03:54	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		11/01/23 03:54	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		11/01/23 03:54	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		11/01/23 03:54	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		11/01/23 03:54	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		11/01/23 03:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*108*		*89 - 112*		*11/01/23 03:54*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*81 - 118*		*11/01/23 03:54*	*1*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*11/01/23 03:54*	*1*
Dibromofluoromethane (Surr)	*94*		*80 - 119*		*11/01/23 03:54*	*1*

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**33000**		100	50	20	ug/L		10/26/23 11:03	1
Manganese	**15000**		10	5.0	1.3	ug/L		10/26/23 11:03	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**570**		5.0	3.0	0.86	ug/L		10/25/23 22:03	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: XSA-12-95X-FAL23
Lab Sample ID: 680-242109-25
Date Collected: 10/18/23 15:15
Matrix: Water
Date Received: 10/24/23 10:02

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		10/30/23 17:41	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 17:41	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/30/23 17:41	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 17:41	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 17:41	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/30/23 17:41	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/30/23 17:41	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		10/30/23 17:41	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/30/23 17:41	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/30/23 17:41	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 17:41	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 17:41	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/30/23 17:41	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/30/23 17:41	1
Chloroethane	10	U Q	20	10	4.6	ug/L		11/01/23 04:17	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 17:41	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/30/23 17:41	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/30/23 17:41	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 17:41	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/30/23 17:41	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/30/23 17:41	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 17:41	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 17:41	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 17:41	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 17:41	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 17:41	1
Dichlorodifluoromethane	1.0	U Q	2.0	1.0	0.36	ug/L		10/30/23 17:41	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 17:41	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/30/23 17:41	1
cis-1,2-Dichloroethene	**2.2**		2.0	1.0	0.25	ug/L		10/30/23 17:41	1
trans-1,2-Dichloroethene	**0.61**	**J**	2.0	1.0	0.34	ug/L		10/30/23 17:41	1
1,2-Dichloroethene, Total	**2.8**		2.0	1.0	0.37	ug/L		10/30/23 17:41	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 17:41	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/30/23 17:41	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 17:41	1
2,2-Dichloropropane	1.0	U Q	2.0	1.0	0.35	ug/L		10/30/23 17:41	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 17:41	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 17:41	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/30/23 17:41	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 17:41	1
Hexachlorobutadiene	1.0	U Q	5.0	1.0	0.22	ug/L		10/30/23 17:41	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/30/23 17:41	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 17:41	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/30/23 17:41	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/30/23 17:41	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/30/23 17:41	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/30/23 17:41	1
Naphthalene	5.0	U Q	10	5.0	2.4	ug/L		10/30/23 17:41	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 17:41	1

Client Sample ID: XSA-12-95X-FAL23
Lab Sample ID: 680-242109-25
Date Collected: 10/18/23 15:15
Matrix: Water
Date Received: 10/24/23 10:02

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 17:41	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 17:41	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/30/23 17:41	1
Tetrachloroethene	**1.5**	**J**	2.0	1.0	0.35	ug/L		10/30/23 17:41	1
Toluene	1.0	U Q	2.0	1.0	0.25	ug/L		10/30/23 17:41	1
1,2,3-Trichlorobenzene	2.0	U Q	5.0	2.0	0.81	ug/L		10/30/23 17:41	1
1,2,4-Trichlorobenzene	2.0	U Q	5.0	2.0	0.53	ug/L		10/30/23 17:41	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/30/23 17:41	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/30/23 17:41	1
Trichloroethene	**0.74**	**J**	1.0	0.50	0.20	ug/L		10/30/23 17:41	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 17:41	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/30/23 17:41	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 17:41	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 17:41	1
Vinyl acetate	2.0	U Q	2.5	2.0	0.69	ug/L		10/30/23 17:41	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		11/01/23 04:17	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 17:41	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 17:41	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 17:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*89 - 112*		*10/30/23 17:41*	*1*
Toluene-d8 (Surr)	*110*		*89 - 112*		*11/01/23 04:17*	*1*
1,2-Dichloroethane-d4 (Surr)	*81*		*81 - 118*		*10/30/23 17:41*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*		*11/01/23 04:17*	*1*
4-Bromofluorobenzene (Surr)	*106*		*85 - 114*		*10/30/23 17:41*	*1*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*		*11/01/23 04:17*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 119*		*10/30/23 17:41*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 119*		*11/01/23 04:17*	*1*

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**1500**		100	50	20	ug/L		10/26/23 11:05	1
Manganese	**15000**		10	5.0	1.3	ug/L		10/26/23 11:05	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**3.1**	**J**	5.0	3.0	0.86	ug/L		10/25/23 22:06	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: XSA-12-98X-FAL23
Lab Sample ID: 680-242109-26
Date Collected: 10/18/23 15:30
Matrix: Water
Date Received: 10/24/23 10:02

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		10/30/23 18:00	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 18:00	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/30/23 18:00	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 18:00	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 18:00	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/30/23 18:00	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/30/23 18:00	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		10/30/23 18:00	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/30/23 18:00	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/30/23 18:00	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 18:00	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 18:00	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/30/23 18:00	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/30/23 18:00	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/30/23 18:00	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 18:00	1
Chloromethane	2.0	U M	2.5	2.0	0.54	ug/L		10/30/23 18:00	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/30/23 18:00	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 18:00	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/30/23 18:00	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/30/23 18:00	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 18:00	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 18:00	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 18:00	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 18:00	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 18:00	1
Dichlorodifluoromethane	1.0	U Q	2.0	1.0	0.36	ug/L		10/30/23 18:00	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 18:00	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/30/23 18:00	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 18:00	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 18:00	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/30/23 18:00	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 18:00	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/30/23 18:00	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 18:00	1
2,2-Dichloropropane	1.0	U Q	2.0	1.0	0.35	ug/L		10/30/23 18:00	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 18:00	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 18:00	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/30/23 18:00	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 18:00	1
Hexachlorobutadiene	1.0	U Q	5.0	1.0	0.22	ug/L		10/30/23 18:00	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/30/23 18:00	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 18:00	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/30/23 18:00	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/30/23 18:00	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/30/23 18:00	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/30/23 18:00	1
Naphthalene	5.0	U Q	10	5.0	2.4	ug/L		10/30/23 18:00	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 18:00	1

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: XSA-12-98X-FAL23
Lab Sample ID: 680-242109-26
Date Collected: 10/18/23 15:30
Matrix: Water
Date Received: 10/24/23 10:02

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 18:00	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 18:00	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/30/23 18:00	1
Tetrachloroethene	**1.0**	**J**	2.0	1.0	0.35	ug/L		10/30/23 18:00	1
Toluene	1.0	U Q	2.0	1.0	0.25	ug/L		10/30/23 18:00	1
1,2,3-Trichlorobenzene	2.0	U Q	5.0	2.0	0.81	ug/L		10/30/23 18:00	1
1,2,4-Trichlorobenzene	2.0	U Q	5.0	2.0	0.53	ug/L		10/30/23 18:00	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/30/23 18:00	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/30/23 18:00	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 18:00	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 18:00	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/30/23 18:00	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 18:00	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 18:00	1
Vinyl acetate	2.0	U Q	2.5	2.0	0.69	ug/L		10/30/23 18:00	1
Vinyl chloride	1.0	U Q	2.0	1.0	0.40	ug/L		10/30/23 18:00	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 18:00	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 18:00	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 18:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*89 - 112*		*10/30/23 18:00*	*1*
1,2-Dichloroethane-d4 (Surr)	*84*		*81 - 118*		*10/30/23 18:00*	*1*
4-Bromofluorobenzene (Surr)	*105*		*85 - 114*		*10/30/23 18:00*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 119*		*10/30/23 18:00*	*1*

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**160**		100	50	20	ug/L		10/26/23 11:07	1
Manganese	**14**		10	5.0	1.3	ug/L		10/26/23 11:07	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**1.4**	**J**	5.0	3.0	0.86	ug/L		10/25/23 22:09	1

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

Lab Sample ID: MB 680-805298/7
Matrix: Water
Analysis Batch: 805298

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		10/30/23 13:14	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 13:14	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/30/23 13:14	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 13:14	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 13:14	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/30/23 13:14	1
Bromomethane	10	U	20	10	3.7	ug/L		10/30/23 13:14	1
2-Butanone (MEK)	20	U M	25	20	6.4	ug/L		10/30/23 13:14	1
n-Butylbenzene	2.0	U M	2.5	2.0	0.52	ug/L		10/30/23 13:14	1
sec-Butylbenzene	2.0	U M	2.5	2.0	0.53	ug/L		10/30/23 13:14	1
tert-Butylbenzene	1.0	U M	2.0	1.0	0.43	ug/L		10/30/23 13:14	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 13:14	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/30/23 13:14	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/30/23 13:14	1
Chloroethane	10	U	20	10	4.6	ug/L		10/30/23 13:14	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 13:14	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/30/23 13:14	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/30/23 13:14	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 13:14	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/30/23 13:14	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/30/23 13:14	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 13:14	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 13:14	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 13:14	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 13:14	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 13:14	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 13:14	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 13:14	1
1,2-Dichloroethane	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 13:14	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 13:14	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 13:14	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/30/23 13:14	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 13:14	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/30/23 13:14	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 13:14	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/30/23 13:14	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 13:14	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 13:14	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/30/23 13:14	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 13:14	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/30/23 13:14	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/30/23 13:14	1
Isopropylbenzene	1.0	U M	2.0	1.0	0.26	ug/L		10/30/23 13:14	1
4-Isopropyltoluene	1.0	U M	2.0	1.0	0.44	ug/L		10/30/23 13:14	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/30/23 13:14	1
4-Methyl-2-pentanone (MIBK)	10	U M	20	10	2.7	ug/L		10/30/23 13:14	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/30/23 13:14	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/30/23 13:14	1

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

Lab Sample ID: MB 680-805298/7
Matrix: Water
Analysis Batch: 805298

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
N-Propylbenzene	1.0	U M	2.0	1.0	0.41	ug/L		10/30/23 13:14	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 13:14	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 13:14	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/30/23 13:14	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/30/23 13:14	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 13:14	1
1,2,3-Trichlorobenzene	1.58	J	5.0	2.0	0.81	ug/L		10/30/23 13:14	1
1,2,4-Trichlorobenzene	1.93	J	5.0	2.0	0.53	ug/L		10/30/23 13:14	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/30/23 13:14	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/30/23 13:14	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 13:14	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 13:14	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/30/23 13:14	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 13:14	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 13:14	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/30/23 13:14	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/30/23 13:14	1
o-Xylene	1.0	U M	2.0	1.0	0.26	ug/L		10/30/23 13:14	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 13:14	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 13:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*103*		*89 - 112*		*10/30/23 13:14*	*1*
1,2-Dichloroethane-d4 (Surr)	*90*		*81 - 118*		*10/30/23 13:14*	*1*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*		*10/30/23 13:14*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*10/30/23 13:14*	*1*

Lab Sample ID: LCS 680-805298/3
Matrix: Water
Analysis Batch: 805298

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	250	257		ug/L		103	39 - 160
Benzene	50.0	52.4		ug/L		105	79 - 120
Bromobenzene	50.0	56.7		ug/L		113	80 - 120
Chlorobromomethane	50.0	54.5		ug/L		109	78 - 123
Dichlorobromomethane	50.0	55.7		ug/L		111	79 - 125
Bromoform	50.0	63.1		ug/L		126	66 - 130
Bromomethane	50.0	54.2		ug/L		108	53 - 141
2-Butanone (MEK)	250	254		ug/L		102	56 - 143
n-Butylbenzene	50.0	47.7		ug/L		95	75 - 128
sec-Butylbenzene	50.0	48.0		ug/L		96	77 - 126
tert-Butylbenzene	50.0	50.6		ug/L		101	78 - 124
Carbon disulfide	50.0	59.9		ug/L		120	64 - 133
Carbon tetrachloride	50.0	58.0		ug/L		116	72 - 136
Chlorobenzene	50.0	51.6		ug/L		103	82 - 118
Chloroethane	50.0	51.4		ug/L		103	60 - 138
Chloroform	50.0	52.9		ug/L		106	79 - 124

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

Lab Sample ID: LCS 680-805298/3
Matrix: Water
Analysis Batch: 805298

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloromethane	50.0	62.5		ug/L		125	50 - 139
2-Chlorotoluene	50.0	54.0		ug/L		108	79 - 122
4-Chlorotoluene	50.0	52.9		ug/L		106	78 - 122
Chlorodibromomethane	50.0	57.5		ug/L		115	74 - 126
1,2-Dibromo-3-Chloropropane	50.0	42.5		ug/L		85	62 - 128
Ethylene Dibromide	50.0	53.6		ug/L		107	75 - 127
Dibromomethane	50.0	52.7		ug/L		105	79 - 123
1,2-Dichlorobenzene	50.0	50.7		ug/L		101	80 - 119
1,3-Dichlorobenzene	50.0	53.6		ug/L		107	80 - 119
1,4-Dichlorobenzene	50.0	52.4		ug/L		105	79 - 118
Dichlorodifluoromethane	50.0	66.7		ug/L		133	32 - 152
1,1-Dichloroethane	50.0	54.7		ug/L		109	77 - 125
1,2-Dichloroethane	50.0	54.1		ug/L		108	73 - 128
cis-1,2-Dichloroethene	50.0	55.4		ug/L		111	78 - 123
trans-1,2-Dichloroethene	50.0	57.0		ug/L		114	75 - 124
1,2-Dichloroethene, Total	100	112		ug/L		112	79 - 121
1,1-Dichloroethene	50.0	57.5		ug/L		115	71 - 131
1,2-Dichloropropane	50.0	52.2		ug/L		104	78 - 122
1,3-Dichloropropane	50.0	52.4		ug/L		105	80 - 119
2,2-Dichloropropane	50.0	55.2		ug/L		110	60 - 139
1,1-Dichloropropene	50.0	54.8		ug/L		110	79 - 125
cis-1,3-Dichloropropene	50.0	54.4		ug/L		109	75 - 124
trans-1,3-Dichloropropene	50.0	54.5		ug/L		109	73 - 127
Ethylbenzene	50.0	51.1		ug/L		102	79 - 121
Hexachlorobutadiene	50.0	48.1		ug/L		96	66 - 134
2-Hexanone	250	263		ug/L		105	57 - 139
Isopropylbenzene	50.0	52.4		ug/L		105	72 - 131
4-Isopropyltoluene	50.0	50.2		ug/L		100	77 - 127
Methylene Chloride	50.0	53.4		ug/L		107	74 - 124
4-Methyl-2-pentanone (MIBK)	250	262		ug/L		105	67 - 130
Methyl tert-butyl ether	50.0	52.5		ug/L		105	71 - 124
Naphthalene	50.0	47.2		ug/L		94	61 - 128
N-Propylbenzene	50.0	52.5		ug/L		105	76 - 126
Styrene	50.0	54.5		ug/L		109	78 - 123
1,1,1,2-Tetrachloroethane	50.0	54.3		ug/L		109	78 - 124
1,1,2,2-Tetrachloroethane	50.0	54.5		ug/L		109	71 - 121
Tetrachloroethene	50.0	55.9		ug/L		112	74 - 129
Toluene	50.0	52.7		ug/L		105	80 - 121
1,2,3-Trichlorobenzene	50.0	47.2		ug/L		94	69 - 129
1,2,4-Trichlorobenzene	50.0	49.4		ug/L		99	69 - 130
1,1,1-Trichloroethane	50.0	55.8		ug/L		112	74 - 131
1,1,2-Trichloroethane	50.0	53.6		ug/L		107	80 - 119
Trichloroethene	50.0	54.0		ug/L		108	79 - 123
Trichlorofluoromethane	50.0	49.0		ug/L		98	65 - 141
1,2,3-Trichloropropane	50.0	53.7		ug/L		107	73 - 122
1,2,4-Trimethylbenzene	50.0	50.0		ug/L		100	76 - 124
1,3,5-Trimethylbenzene	50.0	51.7		ug/L		103	75 - 124
Vinyl acetate	100	102		ug/L		102	54 - 146
Vinyl chloride	50.0	59.7		ug/L		119	58 - 137

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

Lab Sample ID: LCS 680-805298/3
Matrix: Water
Analysis Batch: 805298

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			50.0	53.4		ug/L		107	78 - 122		
m-Xylene & p-Xylene			50.0	51.2		ug/L		102	80 - 121		
Xylenes, Total			100	105		ug/L		105	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*98*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*104*		*81 - 118*
4-Bromofluorobenzene (Surr)	*107*		*85 - 114*
Dibromofluoromethane (Surr)	*105*		*80 - 119*

Lab Sample ID: LCSD 680-805298/4
Matrix: Water
Analysis Batch: 805298

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
Acetone			250	321	Q	ug/L		128	39 - 160	22	20
Benzene			50.0	53.3		ug/L		107	79 - 120	2	20
Bromobenzene			50.0	58.1		ug/L		116	80 - 120	2	20
Chlorobromomethane			50.0	55.8		ug/L		112	78 - 123	2	20
Dichlorobromomethane			50.0	56.3		ug/L		113	79 - 125	1	20
Bromoform			50.0	66.7	Q	ug/L		133	66 - 130	6	20
Bromomethane			50.0	51.6		ug/L		103	53 - 141	5	20
2-Butanone (MEK)			250	316	Q	ug/L		126	56 - 143	22	20
n-Butylbenzene			50.0	52.2		ug/L		104	75 - 128	9	20
sec-Butylbenzene			50.0	55.4		ug/L		111	77 - 126	14	20
tert-Butylbenzene			50.0	56.5		ug/L		113	78 - 124	11	20
Carbon disulfide			50.0	58.9		ug/L		118	64 - 133	2	20
Carbon tetrachloride			50.0	56.6		ug/L		113	72 - 136	2	20
Chlorobenzene			50.0	52.2		ug/L		104	82 - 118	1	20
Chloroethane			50.0	49.7		ug/L		99	60 - 138	3	20
Chloroform			50.0	53.7		ug/L		107	79 - 124	1	20
Chloromethane			50.0	60.4		ug/L		121	50 - 139	3	20
2-Chlorotoluene			50.0	56.7		ug/L		113	79 - 122	5	20
4-Chlorotoluene			50.0	56.4		ug/L		113	78 - 122	6	20
Chlorodibromomethane			50.0	60.5		ug/L		121	74 - 126	5	20
1,2-Dibromo-3-Chloropropane			50.0	46.5		ug/L		93	62 - 128	9	20
Ethylene Dibromide			50.0	58.9		ug/L		118	75 - 127	9	20
Dibromomethane			50.0	55.7		ug/L		111	79 - 123	6	20
1,2-Dichlorobenzene			50.0	50.7		ug/L		101	80 - 119	0	20
1,3-Dichlorobenzene			50.0	53.4		ug/L		107	80 - 119	0	20
1,4-Dichlorobenzene			50.0	52.5		ug/L		105	79 - 118	0	20
Dichlorodifluoromethane			50.0	60.9		ug/L		122	32 - 152	9	20
1,1-Dichloroethane			50.0	53.8		ug/L		108	77 - 125	2	20
1,2-Dichloroethane			50.0	56.9		ug/L		114	73 - 128	5	20
cis-1,2-Dichloroethene			50.0	55.1		ug/L		110	78 - 123	0	20
trans-1,2-Dichloroethene			50.0	56.2		ug/L		112	75 - 124	1	20
1,2-Dichloroethene, Total			100	111		ug/L		111	79 - 121	1	20
1,1-Dichloroethene			50.0	55.3		ug/L		111	71 - 131	4	20

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

Lab Sample ID: LCSD 680-805298/4
Matrix: Water
Analysis Batch: 805298

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Dichloropropane	50.0	53.8		ug/L		108	78 - 122	3	20
1,3-Dichloropropane	50.0	56.1		ug/L		112	80 - 119	7	20
2,2-Dichloropropane	50.0	54.7		ug/L		109	60 - 139	1	20
1,1-Dichloropropene	50.0	54.0		ug/L		108	79 - 125	1	20
cis-1,3-Dichloropropene	50.0	56.6		ug/L		113	75 - 124	4	20
trans-1,3-Dichloropropene	50.0	57.7		ug/L		115	73 - 127	6	20
Ethylbenzene	50.0	52.5		ug/L		105	79 - 121	3	20
Hexachlorobutadiene	50.0	48.2		ug/L		96	66 - 134	0	20
2-Hexanone	250	331	Q	ug/L		132	57 - 139	23	20
Isopropylbenzene	50.0	56.3		ug/L		113	72 - 131	7	20
4-Isopropyltoluene	50.0	55.0		ug/L		110	77 - 127	9	20
Methylene Chloride	50.0	52.5		ug/L		105	74 - 124	2	20
4-Methyl-2-pentanone (MIBK)	250	319		ug/L		128	67 - 130	19	20
Methyl tert-butyl ether	50.0	57.3		ug/L		115	71 - 124	9	20
Naphthalene	50.0	49.7		ug/L		99	61 - 128	5	20
N-Propylbenzene	50.0	57.9		ug/L		116	76 - 126	10	20
Styrene	50.0	56.1		ug/L		112	78 - 123	3	20
1,1,1,2-Tetrachloroethane	50.0	55.0		ug/L		110	78 - 124	1	20
1,1,2,2-Tetrachloroethane	50.0	56.7		ug/L		113	71 - 121	4	20
Tetrachloroethene	50.0	56.5		ug/L		113	74 - 129	1	20
Toluene	50.0	54.1		ug/L		108	80 - 121	3	20
1,2,3-Trichlorobenzene	50.0	46.5		ug/L		93	69 - 129	1	20
1,2,4-Trichlorobenzene	50.0	48.6		ug/L		97	69 - 130	2	20
1,1,1-Trichloroethane	50.0	54.8		ug/L		110	74 - 131	2	20
1,1,2-Trichloroethane	50.0	57.7		ug/L		115	80 - 119	7	20
Trichloroethene	50.0	54.0		ug/L		108	79 - 123	0	20
Trichlorofluoromethane	50.0	46.0		ug/L		92	65 - 141	6	20
1,2,3-Trichloropropane	50.0	60.4		ug/L		121	73 - 122	12	20
1,2,4-Trimethylbenzene	50.0	55.4		ug/L		111	76 - 124	10	20
1,3,5-Trimethylbenzene	50.0	56.1		ug/L		112	75 - 124	8	20
Vinyl acetate	100	117		ug/L		117	54 - 146	13	20
Vinyl chloride	50.0	55.9		ug/L		112	58 - 137	6	20
o-Xylene	50.0	55.0		ug/L		110	78 - 122	3	20
m-Xylene & p-Xylene	50.0	53.3		ug/L		107	80 - 121	4	20
Xylenes, Total	100	108		ug/L		108	79 - 121	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*98*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*107*		*81 - 118*
4-Bromofluorobenzene (Surr)	*105*		*85 - 114*
Dibromofluoromethane (Surr)	*106*		*80 - 119*

Lab Sample ID: MB 680-805316/7
Matrix: Water
Analysis Batch: 805316

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		10/30/23 12:47	1

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

Lab Sample ID: MB 680-805316/7
Matrix: Water
Analysis Batch: 805316

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 12:47	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/30/23 12:47	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 12:47	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 12:47	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/30/23 12:47	1
Bromomethane	10	U	20	10	3.7	ug/L		10/30/23 12:47	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/30/23 12:47	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/30/23 12:47	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/30/23 12:47	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 12:47	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 12:47	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/30/23 12:47	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/30/23 12:47	1
Chloroethane	10	U	20	10	4.6	ug/L		10/30/23 12:47	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 12:47	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/30/23 12:47	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/30/23 12:47	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 12:47	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/30/23 12:47	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/30/23 12:47	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 12:47	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 12:47	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 12:47	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 12:47	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/30/23 12:47	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 12:47	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 12:47	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/30/23 12:47	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 12:47	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/30/23 12:47	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/30/23 12:47	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 12:47	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/30/23 12:47	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 12:47	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/30/23 12:47	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 12:47	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 12:47	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/30/23 12:47	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 12:47	1
Hexachlorobutadiene	0.668	J	5.0	1.0	0.22	ug/L		10/30/23 12:47	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/30/23 12:47	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 12:47	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/30/23 12:47	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/30/23 12:47	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/30/23 12:47	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/30/23 12:47	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/30/23 12:47	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/30/23 12:47	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/30/23 12:47	1

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

Lab Sample ID: MB 680-805316/7
Matrix: Water
Analysis Batch: 805316

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/30/23 12:47	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/30/23 12:47	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/30/23 12:47	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/30/23 12:47	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/30/23 12:47	1
1,2,4-Trichlorobenzene	1.08	J	5.0	2.0	0.53	ug/L		10/30/23 12:47	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/30/23 12:47	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/30/23 12:47	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/30/23 12:47	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/30/23 12:47	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/30/23 12:47	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/30/23 12:47	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/30/23 12:47	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/30/23 12:47	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/30/23 12:47	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/30/23 12:47	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 12:47	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/30/23 12:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*89 - 112*		*10/30/23 12:47*	*1*
1,2-Dichloroethane-d4 (Surr)	*84*		*81 - 118*		*10/30/23 12:47*	*1*
4-Bromofluorobenzene (Surr)	*104*		*85 - 114*		*10/30/23 12:47*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 119*		*10/30/23 12:47*	*1*

Lab Sample ID: LCS 680-805316/4
Matrix: Water
Analysis Batch: 805316

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	250	204		ug/L		82	39 - 160
Benzene	50.0	59.6		ug/L		119	79 - 120
Bromobenzene	50.0	49.9		ug/L		100	80 - 120
Chlorobromomethane	50.0	55.3		ug/L		111	78 - 123
Dichlorobromomethane	50.0	57.1		ug/L		114	79 - 125
Bromoform	50.0	42.2		ug/L		84	66 - 130
Bromomethane	50.0	71.1	Q	ug/L		142	53 - 141
2-Butanone (MEK)	250	178		ug/L		71	56 - 143
n-Butylbenzene	50.0	47.4		ug/L		95	75 - 128
sec-Butylbenzene	50.0	47.7		ug/L		95	77 - 126
tert-Butylbenzene	50.0	45.6		ug/L		91	78 - 124
Carbon disulfide	50.0	60.6		ug/L		121	64 - 133
Carbon tetrachloride	50.0	54.3		ug/L		109	72 - 136
Chlorobenzene	50.0	49.6		ug/L		99	82 - 118
Chloroethane	50.0	107	Q	ug/L		214	60 - 138
Chloroform	50.0	52.0		ug/L		104	79 - 124
Chloromethane	50.0	58.5		ug/L		117	50 - 139
2-Chlorotoluene	50.0	51.6		ug/L		103	79 - 122

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

Lab Sample ID: LCS 680-805316/4
Matrix: Water
Analysis Batch: 805316

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4-Chlorotoluene	50.0	47.3		ug/L		95	78 - 122
Chlorodibromomethane	50.0	49.8		ug/L		100	74 - 126
1,2-Dibromo-3-Chloropropane	50.0	53.7		ug/L		107	62 - 128
Ethylene Dibromide	50.0	54.4		ug/L		109	75 - 127
Dibromomethane	50.0	56.3		ug/L		113	79 - 123
1,2-Dichlorobenzene	50.0	52.0		ug/L		104	80 - 119
1,3-Dichlorobenzene	50.0	49.5		ug/L		99	80 - 119
1,4-Dichlorobenzene	50.0	48.4		ug/L		97	79 - 118
Dichlorodifluoromethane	50.0	63.7		ug/L		127	32 - 152
1,1-Dichloroethane	50.0	57.8		ug/L		116	77 - 125
1,2-Dichloroethane	50.0	49.8		ug/L		100	73 - 128
cis-1,2-Dichloroethene	50.0	56.2		ug/L		112	78 - 123
trans-1,2-Dichloroethene	50.0	59.8		ug/L		120	75 - 124
1,2-Dichloroethene, Total	100	116		ug/L		116	79 - 121
1,1-Dichloroethene	50.0	58.0		ug/L		116	71 - 131
1,2-Dichloropropane	50.0	58.5		ug/L		117	78 - 122
1,3-Dichloropropane	50.0	58.1		ug/L		116	80 - 119
2,2-Dichloropropane	50.0	62.0		ug/L		124	60 - 139
1,1-Dichloropropene	50.0	59.2		ug/L		118	79 - 125
cis-1,3-Dichloropropene	50.0	52.5		ug/L		105	75 - 124
trans-1,3-Dichloropropene	50.0	49.8		ug/L		100	73 - 127
Ethylbenzene	50.0	47.0		ug/L		94	79 - 121
Hexachlorobutadiene	50.0	70.7	Q	ug/L		141	66 - 134
2-Hexanone	250	210		ug/L		84	57 - 139
Isopropylbenzene	50.0	47.1		ug/L		94	72 - 131
4-Isopropyltoluene	50.0	47.0		ug/L		94	77 - 127
Methylene Chloride	50.0	59.7		ug/L		119	74 - 124
4-Methyl-2-pentanone (MIBK)	250	235		ug/L		94	67 - 130
Methyl tert-butyl ether	50.0	48.7		ug/L		97	71 - 124
Naphthalene	50.0	76.1	Q	ug/L		152	61 - 128
N-Propylbenzene	50.0	48.9		ug/L		98	76 - 126
Styrene	50.0	46.8		ug/L		94	78 - 123
1,1,1,2-Tetrachloroethane	50.0	45.1		ug/L		90	78 - 124
1,1,2,2-Tetrachloroethane	50.0	49.2		ug/L		98	71 - 121
Tetrachloroethene	50.0	56.8		ug/L		114	74 - 129
Toluene	50.0	60.8	Q	ug/L		122	80 - 121
1,2,3-Trichlorobenzene	50.0	83.4	Q	ug/L		167	69 - 129
1,2,4-Trichlorobenzene	50.0	69.1	Q	ug/L		138	69 - 130
1,1,1-Trichloroethane	50.0	54.5		ug/L		109	74 - 131
1,1,2-Trichloroethane	50.0	57.7		ug/L		115	80 - 119
Trichloroethene	50.0	55.0		ug/L		110	79 - 123
Trichlorofluoromethane	50.0	48.4		ug/L		97	65 - 141
1,2,3-Trichloropropane	50.0	49.8		ug/L		100	73 - 122
1,2,4-Trimethylbenzene	50.0	46.2		ug/L		92	76 - 124
1,3,5-Trimethylbenzene	50.0	46.3		ug/L		93	75 - 124
Vinyl acetate	100	134		ug/L		134	54 - 146
Vinyl chloride	50.0	61.4		ug/L		123	58 - 137
o-Xylene	50.0	46.6		ug/L		93	78 - 122
m-Xylene & p-Xylene	50.0	48.7		ug/L		97	80 - 121

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

Lab Sample ID: LCS 680-805316/4
Matrix: Water
Analysis Batch: 805316

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Xylenes, Total			100	95.3		ug/L		95	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*112*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*
Dibromofluoromethane (Surr)	*105*		*80 - 119*

Lab Sample ID: LCSD 680-805316/5
Matrix: Water
Analysis Batch: 805316

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
Acetone			250	221		ug/L		89	39 - 160	8	20
Benzene			50.0	56.9		ug/L		114	79 - 120	5	20
Bromobenzene			50.0	52.6		ug/L		105	80 - 120	5	20
Chlorobromomethane			50.0	60.2		ug/L		120	78 - 123	8	20
Dichlorobromomethane			50.0	59.2		ug/L		118	79 - 125	4	20
Bromoform			50.0	45.6		ug/L		91	66 - 130	8	20
Bromomethane			50.0	72.4	Q	ug/L		145	53 - 141	2	20
2-Butanone (MEK)			250	181		ug/L		72	56 - 143	2	20
n-Butylbenzene			50.0	44.7		ug/L		89	75 - 128	6	20
sec-Butylbenzene			50.0	47.3		ug/L		95	77 - 126	1	20
tert-Butylbenzene			50.0	47.1		ug/L		94	78 - 124	3	20
Carbon disulfide			50.0	58.8		ug/L		118	64 - 133	3	20
Carbon tetrachloride			50.0	58.1		ug/L		116	72 - 136	7	20
Chlorobenzene			50.0	50.7		ug/L		101	82 - 118	2	20
Chloroethane			50.0	98.2	Q	ug/L		196	60 - 138	9	20
Chloroform			50.0	53.4		ug/L		107	79 - 124	3	20
Chloromethane			50.0	57.7		ug/L		115	50 - 139	1	20
2-Chlorotoluene			50.0	51.6		ug/L		103	79 - 122	0	20
4-Chlorotoluene			50.0	47.0		ug/L		94	78 - 122	1	20
Chlorodibromomethane			50.0	53.7		ug/L		107	74 - 126	8	20
1,2-Dibromo-3-Chloropropane			50.0	56.0		ug/L		112	62 - 128	4	20
Ethylene Dibromide			50.0	56.8		ug/L		114	75 - 127	4	20
Dibromomethane			50.0	58.6		ug/L		117	79 - 123	4	20
1,2-Dichlorobenzene			50.0	52.6		ug/L		105	80 - 119	1	20
1,3-Dichlorobenzene			50.0	50.0		ug/L		100	80 - 119	1	20
1,4-Dichlorobenzene			50.0	48.7		ug/L		97	79 - 118	1	20
Dichlorodifluoromethane			50.0	61.9		ug/L		124	32 - 152	3	20
1,1-Dichloroethane			50.0	57.9		ug/L		116	77 - 125	0	20
1,2-Dichloroethane			50.0	55.4		ug/L		111	73 - 128	11	20
cis-1,2-Dichloroethene			50.0	57.9		ug/L		116	78 - 123	3	20
trans-1,2-Dichloroethene			50.0	59.0		ug/L		118	75 - 124	1	20
1,2-Dichloroethene, Total			100	117		ug/L		117	79 - 121	1	20
1,1-Dichloroethene			50.0	57.1		ug/L		114	71 - 131	2	20
1,2-Dichloropropane			50.0	57.9		ug/L		116	78 - 122	1	20
1,3-Dichloropropane			50.0	58.9		ug/L		118	80 - 119	1	20

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

Lab Sample ID: LCSD 680-805316/5
Matrix: Water
Analysis Batch: 805316

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
2,2-Dichloropropane	50.0	63.0		ug/L		126	60 - 139	2	20
1,1-Dichloropropene	50.0	57.6		ug/L		115	79 - 125	3	20
cis-1,3-Dichloropropene	50.0	52.1		ug/L		104	75 - 124	1	20
trans-1,3-Dichloropropene	50.0	51.3		ug/L		103	73 - 127	3	20
Ethylbenzene	50.0	46.2		ug/L		92	79 - 121	2	20
Hexachlorobutadiene	50.0	70.8	Q	ug/L		142	66 - 134	0	20
2-Hexanone	250	247		ug/L		99	57 - 139	16	20
Isopropylbenzene	50.0	47.0		ug/L		94	72 - 131	0	20
4-Isopropyltoluene	50.0	46.8		ug/L		94	77 - 127	0	20
Methylene Chloride	50.0	59.5		ug/L		119	74 - 124	0	20
4-Methyl-2-pentanone (MIBK)	250	284		ug/L		114	67 - 130	19	20
Methyl tert-butyl ether	50.0	51.2		ug/L		102	71 - 124	5	20
Naphthalene	50.0	78.4	Q	ug/L		157	61 - 128	3	20
N-Propylbenzene	50.0	48.1		ug/L		96	76 - 126	2	20
Styrene	50.0	47.3		ug/L		95	78 - 123	1	20
1,1,1,2-Tetrachloroethane	50.0	48.9		ug/L		98	78 - 124	8	20
1,1,2,2-Tetrachloroethane	50.0	48.6		ug/L		97	71 - 121	1	20
Tetrachloroethene	50.0	59.1		ug/L		118	74 - 129	4	20
Toluene	50.0	60.6		ug/L		121	80 - 121	0	20
1,2,3-Trichlorobenzene	50.0	83.9	Q	ug/L		168	69 - 129	1	20
1,2,4-Trichlorobenzene	50.0	70.3	Q	ug/L		141	69 - 130	2	20
1,1,1-Trichloroethane	50.0	56.9		ug/L		114	74 - 131	4	20
1,1,2-Trichloroethane	50.0	58.3		ug/L		117	80 - 119	1	20
Trichloroethene	50.0	59.4		ug/L		119	79 - 123	8	20
Trichlorofluoromethane	50.0	47.6		ug/L		95	65 - 141	2	20
1,2,3-Trichloropropane	50.0	53.1		ug/L		106	73 - 122	6	20
1,2,4-Trimethylbenzene	50.0	46.9		ug/L		94	76 - 124	1	20
1,3,5-Trimethylbenzene	50.0	46.5		ug/L		93	75 - 124	0	20
Vinyl acetate	100	153	Q	ug/L		153	54 - 146	13	20
Vinyl chloride	50.0	59.8		ug/L		120	58 - 137	3	20
o-Xylene	50.0	46.9		ug/L		94	78 - 122	1	20
m-Xylene & p-Xylene	50.0	48.2		ug/L		96	80 - 121	1	20
Xylenes, Total	100	95.1		ug/L		95	79 - 121	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*112*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*103*		*81 - 118*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*
Dibromofluoromethane (Surr)	*109*		*80 - 119*

Lab Sample ID: 680-242109-12 MS
Matrix: Water
Analysis Batch: 805316

Client Sample ID: G6M-04-10A-FAL23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	20	U	500	541	D	ug/L		108	39 - 160
Benzene	2.0	U	100	114	D	ug/L		114	79 - 120
Bromobenzene	1.0	U	100	104	D	ug/L		104	80 - 120

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

Lab Sample ID: 680-242109-12 MS
Matrix: Water
Analysis Batch: 805316

Client Sample ID: G6M-04-10A-FAL23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chlorobromomethane	2.0	U J1	100	121	D	ug/L		121	78 - 123
Dichlorobromomethane	2.0	U J1	100	122	D	ug/L		122	79 - 125
Bromoform	4.0	U	100	98.2	D	ug/L		98	66 - 130
Bromomethane	20	U Q J1	100	168	D J1	ug/L		168	53 - 141
2-Butanone (MEK)	40	U Q J1	500	481	D	ug/L		96	56 - 143
n-Butylbenzene	4.0	U	100	78.8	D	ug/L		79	75 - 128
sec-Butylbenzene	4.0	U	100	87.4	D	ug/L		87	77 - 126
tert-Butylbenzene	2.0	U	100	89.2	D	ug/L		89	78 - 124
Carbon disulfide	2.0	U	100	111	D	ug/L		111	64 - 133
Carbon tetrachloride	2.0	U	100	118	D	ug/L		118	72 - 136
Chlorobenzene	1.0	U	100	101	D	ug/L		101	82 - 118
Chloroethane	20	U Q J1	100	281	D J1	ug/L		281	60 - 138
Chloroform	2.0	U	100	107	D	ug/L		107	79 - 124
Chloromethane	4.0	U	100	113	D	ug/L		113	50 - 139
2-Chlorotoluene	1.0	U	100	100	D	ug/L		100	79 - 122
4-Chlorotoluene	2.0	U	100	91.0	D	ug/L		91	78 - 122
Chlorodibromomethane	2.0	U	100	114	D	ug/L		114	74 - 126
1,2-Dibromo-3-Chloropropane	10	U J1	100	133	D J1	ug/L		133	62 - 128
Ethylene Dibromide	2.0	U	100	119	D	ug/L		119	75 - 127
Dibromomethane	2.0	U J1	100	122	D	ug/L		122	79 - 123
1,2-Dichlorobenzene	2.0	U	100	103	D	ug/L		103	80 - 119
1,3-Dichlorobenzene	2.0	U	100	96.6	D	ug/L		97	80 - 119
1,4-Dichlorobenzene	2.0	U	100	95.1	D	ug/L		95	79 - 118
Dichlorodifluoromethane	2.0	U Q	100	106	D	ug/L		106	32 - 152
1,1-Dichloroethane	2.0	U	100	116	D	ug/L		116	77 - 125
1,2-Dichloroethane	2.0	U M	100	114	D	ug/L		114	73 - 128
cis-1,2-Dichloroethene	11	D	100	128	D	ug/L		117	78 - 123
trans-1,2-Dichloroethene	2.0	U	100	117	D	ug/L		117	75 - 124
1,2-Dichloroethene, Total	11	D	200	245	D	ug/L		117	79 - 121
1,1-Dichloroethene	2.0	U	100	113	D	ug/L		113	71 - 131
1,2-Dichloropropane	1.0	U	100	118	D	ug/L		118	78 - 122
1,3-Dichloropropane	2.0	U J1	100	124	D J1	ug/L		124	80 - 119
2,2-Dichloropropane	2.0	U Q	100	118	D	ug/L		118	60 - 139
1,1-Dichloropropene	2.0	U	100	112	D	ug/L		112	79 - 125
cis-1,3-Dichloropropene	2.0	U	100	102	D	ug/L		102	75 - 124
trans-1,3-Dichloropropene	2.0	U	100	104	D	ug/L		104	73 - 127
Ethylbenzene	1.0	U	100	90.4	D	ug/L		90	79 - 121
Hexachlorobutadiene	2.0	U Q	100	112	D	ug/L		112	66 - 134
2-Hexanone	20	U	500	615	D	ug/L		123	57 - 139
Isopropylbenzene	2.0	U	100	90.9	D	ug/L		91	72 - 131
4-Isopropyltoluene	2.0	U	100	85.1	D	ug/L		85	77 - 127
Methylene Chloride	20	U	100	117	D	ug/L		117	74 - 124
4-Methyl-2-pentanone (MIBK)	20	U J1	500	709	D J1	ug/L		142	67 - 130
Methyl tert-butyl ether	4.0	U	100	105	D	ug/L		105	71 - 124
Naphthalene	10	U Q J1	100	189	D J1	ug/L		189	61 - 128
N-Propylbenzene	2.0	U	100	91.8	D	ug/L		92	76 - 126
Styrene	2.0	U	100	92.9	D	ug/L		93	78 - 123
1,1,1,2-Tetrachloroethane	2.0	U	100	98.6	D	ug/L		99	78 - 124
1,1,2,2-Tetrachloroethane	2.0	U	100	113	D	ug/L		113	71 - 121

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

Lab Sample ID: 680-242109-12 MS
Matrix: Water
Analysis Batch: 805316

Client Sample ID: G6M-04-10A-FAL23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Tetrachloroethene	2.0	U	100	111	D	ug/L		111	74 - 129
Toluene	2.0	U Q	100	119	D	ug/L		119	80 - 121
1,2,3-Trichlorobenzene	4.0	U Q J1	100	183	D J1	ug/L		183	69 - 129
1,2,4-Trichlorobenzene	4.0	U Q J1	100	137	D J1	ug/L		137	69 - 130
1,1,1-Trichloroethane	1.0	U	100	113	D	ug/L		113	74 - 131
1,1,2-Trichloroethane	2.0	U J1	100	124	D J1	ug/L		124	80 - 119
Trichloroethene	9.4	D	100	126	D	ug/L		116	79 - 123
Trichlorofluoromethane	2.0	U	100	101	D	ug/L		101	65 - 141
1,2,3-Trichloropropane	2.0	U	100	112	D	ug/L		112	73 - 122
1,2,4-Trimethylbenzene	2.0	U	100	90.7	D	ug/L		91	76 - 124
1,3,5-Trimethylbenzene	1.9	J D	100	90.0	D	ug/L		88	75 - 124
Vinyl acetate	4.0	U Q J1	200	341	D J1	ug/L		171	54 - 146
Vinyl chloride	4.5	D Q	100	129	D	ug/L		124	58 - 137
o-Xylene	2.0	U	100	91.7	D	ug/L		92	78 - 122
m-Xylene & p-Xylene	2.0	U	100	94.8	D	ug/L		95	80 - 121
Xylenes, Total	2.0	U	200	187	D	ug/L		93	79 - 121

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*115*	*Q*	*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*107*		*81 - 118*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*
Dibromofluoromethane (Surr)	*114*		*80 - 119*

Lab Sample ID: 680-242109-12 MSD
Matrix: Water
Analysis Batch: 805316

Client Sample ID: G6M-04-10A-FAL23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetone	20	U	500	633	D	ug/L		127	39 - 160	16	20
Benzene	2.0	U	100	115	D	ug/L		115	79 - 120	1	20
Bromobenzene	1.0	U	100	104	D	ug/L		104	80 - 120	1	20
Chlorobromomethane	2.0	U J1	100	124	D J1	ug/L		124	78 - 123	3	20
Dichlorobromomethane	2.0	U J1	100	127	D J1	ug/L		127	79 - 125	4	20
Bromoform	4.0	U	100	101	D	ug/L		101	66 - 130	3	20
Bromomethane	20	U Q J1	100	666	J1 D	ug/L		666	53 - 141	119	20
2-Butanone (MEK)	40	U Q J1	500	597	D J1	ug/L		119	56 - 143	22	20
n-Butylbenzene	4.0	U	100	79.6	D	ug/L		80	75 - 128	1	20
sec-Butylbenzene	4.0	U	100	84.5	D	ug/L		84	77 - 126	3	20
tert-Butylbenzene	2.0	U	100	86.1	D	ug/L		86	78 - 124	4	20
Carbon disulfide	2.0	U	100	113	D	ug/L		113	64 - 133	2	20
Carbon tetrachloride	2.0	U	100	118	D	ug/L		118	72 - 136	0	20
Chlorobenzene	1.0	U	100	99.6	D	ug/L		100	82 - 118	1	20
Chloroethane	20	U Q J1	100	802	J1 D	ug/L		802	60 - 138	96	20
Chloroform	2.0	U	100	109	D	ug/L		109	79 - 124	2	20
Chloromethane	4.0	U	100	115	D	ug/L		115	50 - 139	2	20
2-Chlorotoluene	1.0	U	100	99.1	D	ug/L		99	79 - 122	1	20
4-Chlorotoluene	2.0	U	100	90.3	D	ug/L		90	78 - 122	1	20
Chlorodibromomethane	2.0	U	100	119	D	ug/L		119	74 - 126	4	20

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

Lab Sample ID: 680-242109-12 MSD
Matrix: Water
Analysis Batch: 805316

Client Sample ID: G6M-04-10A-FAL23
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-Dibromo-3-Chloropropane	10	U J1	100	147	D J1	ug/L		147	62 - 128	10	20
Ethylene Dibromide	2.0	U	100	123	D	ug/L		123	75 - 127	3	20
Dibromomethane	2.0	U J1	100	127	D J1	ug/L		127	79 - 123	4	20
1,2-Dichlorobenzene	2.0	U	100	103	D	ug/L		103	80 - 119	0	20
1,3-Dichlorobenzene	2.0	U	100	97.6	D	ug/L		98	80 - 119	1	20
1,4-Dichlorobenzene	2.0	U	100	93.7	D	ug/L		94	79 - 118	1	20
Dichlorodifluoromethane	2.0	U Q	100	107	D	ug/L		107	32 - 152	1	20
1,1-Dichloroethane	2.0	U	100	116	D	ug/L		116	77 - 125	0	20
1,2-Dichloroethane	2.0	U M	100	118	D	ug/L		118	73 - 128	4	20
cis-1,2-Dichloroethene	11	D	100	129	D	ug/L		118	78 - 123	1	20
trans-1,2-Dichloroethene	2.0	U	100	119	D	ug/L		119	75 - 124	1	20
1,2-Dichloroethene, Total	11	D	200	248	D	ug/L		118	79 - 121	1	20
1,1-Dichloroethene	2.0	U	100	115	D	ug/L		115	71 - 131	1	20
1,2-Dichloropropane	1.0	U	100	120	D	ug/L		120	78 - 122	2	20
1,3-Dichloropropane	2.0	U J1	100	129	D J1	ug/L		129	80 - 119	4	20
2,2-Dichloropropane	2.0	U Q	100	119	D	ug/L		119	60 - 139	1	20
1,1-Dichloropropene	2.0	U	100	113	D	ug/L		113	79 - 125	1	20
cis-1,3-Dichloropropene	2.0	U	100	106	D	ug/L		106	75 - 124	4	20
trans-1,3-Dichloropropene	2.0	U	100	109	D	ug/L		109	73 - 127	5	20
Ethylbenzene	1.0	U	100	88.9	D	ug/L		89	79 - 121	2	20
Hexachlorobutadiene	2.0	U Q	100	108	D	ug/L		108	66 - 134	4	20
2-Hexanone	20	U	500	683	D	ug/L		137	57 - 139	10	20
Isopropylbenzene	2.0	U	100	88.4	D	ug/L		88	72 - 131	3	20
4-Isopropyltoluene	2.0	U	100	84.8	D	ug/L		85	77 - 127	0	20
Methylene Chloride	20	U	100	120	D	ug/L		120	74 - 124	3	20
4-Methyl-2-pentanone (MIBK)	20	U J1	500	834	D J1	ug/L		167	67 - 130	16	20
Methyl tert-butyl ether	4.0	U	100	115	D	ug/L		115	71 - 124	10	20
Naphthalene	10	U Q J1	100	221	D J1	ug/L		221	61 - 128	16	20
N-Propylbenzene	2.0	U	100	89.3	D	ug/L		89	76 - 126	3	20
Styrene	2.0	U	100	91.3	D	ug/L		91	78 - 123	2	20
1,1,1,2-Tetrachloroethane	2.0	U	100	97.4	D	ug/L		97	78 - 124	1	20
1,1,2,2-Tetrachloroethane	2.0	U	100	117	D	ug/L		117	71 - 121	3	20
Tetrachloroethene	2.0	U	100	111	D	ug/L		111	74 - 129	0	20
Toluene	2.0	U Q	100	120	D	ug/L		120	80 - 121	1	20
1,2,3-Trichlorobenzene	4.0	U Q J1	100	203	D J1	ug/L		203	69 - 129	11	20
1,2,4-Trichlorobenzene	4.0	U Q J1	100	144	D J1	ug/L		144	69 - 130	5	20
1,1,1-Trichloroethane	1.0	U	100	113	D	ug/L		113	74 - 131	0	20
1,1,2-Trichloroethane	2.0	U J1	100	131	D J1	ug/L		131	80 - 119	5	20
Trichloroethene	9.4	D	100	127	D	ug/L		117	79 - 123	1	20
Trichlorofluoromethane	2.0	U	100	96.9	D	ug/L		97	65 - 141	4	20
1,2,3-Trichloropropane	2.0	U	100	116	D	ug/L		116	73 - 122	3	20
1,2,4-Trimethylbenzene	2.0	U	100	89.7	D	ug/L		90	76 - 124	1	20
1,3,5-Trimethylbenzene	1.9	J D	100	87.3	D	ug/L		85	75 - 124	3	20
Vinyl acetate	4.0	U Q J1	200	393	D J1	ug/L		196	54 - 146	14	20
Vinyl chloride	4.5	D Q	100	133	D	ug/L		128	58 - 137	3	20
o-Xylene	2.0	U	100	90.3	D	ug/L		90	78 - 122	2	20
m-Xylene & p-Xylene	2.0	U	100	92.1	D	ug/L		92	80 - 121	3	20
Xylenes, Total	2.0	U	200	182	D	ug/L		91	79 - 121	2	20

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

Lab Sample ID: 680-242109-12 MSD
Matrix: Water
Analysis Batch: 805316

Client Sample ID: G6M-04-10A-FAL23
Prep Type: Total/NA

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Toluene-d8 (Surr)	*116*	*Q*	*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*111*		*81 - 118*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*
Dibromofluoromethane (Surr)	*115*		*80 - 119*

Lab Sample ID: MB 680-805660/26
Matrix: Water
Analysis Batch: 805660

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		10/31/23 21:42	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/31/23 21:42	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/31/23 21:42	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/31/23 21:42	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/31/23 21:42	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/31/23 21:42	1
Bromomethane	10	U	20	10	3.7	ug/L		10/31/23 21:42	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/31/23 21:42	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/31/23 21:42	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/31/23 21:42	1
tert-Butylbenzene	1.0	U M	2.0	1.0	0.43	ug/L		10/31/23 21:42	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/31/23 21:42	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/31/23 21:42	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/31/23 21:42	1
Chloroethane	10	U	20	10	4.6	ug/L		10/31/23 21:42	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/31/23 21:42	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/31/23 21:42	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/31/23 21:42	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/31/23 21:42	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/31/23 21:42	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/31/23 21:42	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/31/23 21:42	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/31/23 21:42	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/31/23 21:42	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/31/23 21:42	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/31/23 21:42	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/31/23 21:42	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/31/23 21:42	1
1,2-Dichloroethane	1.0	U	2.0	1.0	0.25	ug/L		10/31/23 21:42	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/31/23 21:42	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/31/23 21:42	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/31/23 21:42	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/31/23 21:42	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/31/23 21:42	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/31/23 21:42	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/31/23 21:42	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/31/23 21:42	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/31/23 21:42	1

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

Lab Sample ID: MB 680-805660/26
Matrix: Water
Analysis Batch: 805660

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/31/23 21:42	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/31/23 21:42	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/31/23 21:42	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/31/23 21:42	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/31/23 21:42	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/31/23 21:42	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/31/23 21:42	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/31/23 21:42	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/31/23 21:42	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/31/23 21:42	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/31/23 21:42	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/31/23 21:42	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/31/23 21:42	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/31/23 21:42	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/31/23 21:42	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/31/23 21:42	1
1,2,3-Trichlorobenzene	1.47	J	5.0	2.0	0.81	ug/L		10/31/23 21:42	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/31/23 21:42	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/31/23 21:42	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/31/23 21:42	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/31/23 21:42	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/31/23 21:42	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/31/23 21:42	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/31/23 21:42	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/31/23 21:42	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/31/23 21:42	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/31/23 21:42	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/31/23 21:42	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/31/23 21:42	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/31/23 21:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*89 - 112*		*10/31/23 21:42*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*81 - 118*		*10/31/23 21:42*	*1*
4-Bromofluorobenzene (Surr)	*109*		*85 - 114*		*10/31/23 21:42*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 119*		*10/31/23 21:42*	*1*

Lab Sample ID: LCS 680-805660/4
Matrix: Water
Analysis Batch: 805660

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	250	233		ug/L		93	39 - 160
Benzene	50.0	50.9		ug/L		102	79 - 120
Bromobenzene	50.0	54.7		ug/L		109	80 - 120
Chlorobromomethane	50.0	52.5		ug/L		105	78 - 123
Dichlorobromomethane	50.0	53.9		ug/L		108	79 - 125
Bromoform	50.0	61.8		ug/L		124	66 - 130

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

Lab Sample ID: LCS 680-805660/4
Matrix: Water
Analysis Batch: 805660

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromomethane	50.0	38.0		ug/L		76	53 - 141
2-Butanone (MEK)	250	267		ug/L		107	56 - 143
n-Butylbenzene	50.0	48.7		ug/L		97	75 - 128
sec-Butylbenzene	50.0	54.4		ug/L		109	77 - 126
tert-Butylbenzene	50.0	56.4		ug/L		113	78 - 124
Carbon disulfide	50.0	47.9		ug/L		96	64 - 133
Carbon tetrachloride	50.0	56.2		ug/L		112	72 - 136
Chlorobenzene	50.0	49.8		ug/L		100	82 - 118
Chloroethane	50.0	37.9		ug/L		76	60 - 138
Chloroform	50.0	52.1		ug/L		104	79 - 124
Chloromethane	50.0	41.2		ug/L		82	50 - 139
2-Chlorotoluene	50.0	54.0		ug/L		108	79 - 122
4-Chlorotoluene	50.0	52.9		ug/L		106	78 - 122
Chlorodibromomethane	50.0	48.5		ug/L		97	74 - 126
1,2-Dibromo-3-Chloropropane	50.0	40.5		ug/L		81	62 - 128
Ethylene Dibromide	50.0	46.1		ug/L		92	75 - 127
Dibromomethane	50.0	51.6		ug/L		103	79 - 123
1,2-Dichlorobenzene	50.0	47.5		ug/L		95	80 - 119
1,3-Dichlorobenzene	50.0	49.7		ug/L		99	80 - 119
1,4-Dichlorobenzene	50.0	49.3		ug/L		99	79 - 118
Dichlorodifluoromethane	50.0	45.5		ug/L		91	32 - 152
1,1-Dichloroethane	50.0	48.3		ug/L		97	77 - 125
1,2-Dichloroethane	50.0	54.1		ug/L		108	73 - 128
cis-1,2-Dichloroethene	50.0	53.8		ug/L		108	78 - 123
trans-1,2-Dichloroethene	50.0	48.5		ug/L		97	75 - 124
1,2-Dichloroethene, Total	100	102		ug/L		102	79 - 121
1,1-Dichloroethene	50.0	47.6		ug/L		95	71 - 131
1,2-Dichloropropane	50.0	50.7		ug/L		101	78 - 122
1,3-Dichloropropane	50.0	44.7		ug/L		89	80 - 119
2,2-Dichloropropane	50.0	55.5		ug/L		111	60 - 139
1,1-Dichloropropene	50.0	53.3		ug/L		107	79 - 125
cis-1,3-Dichloropropene	50.0	52.0		ug/L		104	75 - 124
trans-1,3-Dichloropropene	50.0	46.6		ug/L		93	73 - 127
Ethylbenzene	50.0	50.1		ug/L		100	79 - 121
Hexachlorobutadiene	50.0	51.1		ug/L		102	66 - 134
2-Hexanone	250	251		ug/L		100	57 - 139
Isopropylbenzene	50.0	54.0		ug/L		108	72 - 131
4-Isopropyltoluene	50.0	51.1		ug/L		102	77 - 127
Methylene Chloride	50.0	43.8		ug/L		88	74 - 124
4-Methyl-2-pentanone (MIBK)	250	269		ug/L		108	67 - 130
Methyl tert-butyl ether	50.0	45.9		ug/L		92	71 - 124
Naphthalene	50.0	46.4		ug/L		93	61 - 128
N-Propylbenzene	50.0	54.3		ug/L		109	76 - 126
Styrene	50.0	54.2		ug/L		108	78 - 123
1,1,1,2-Tetrachloroethane	50.0	52.2		ug/L		104	78 - 124
1,1,2,2-Tetrachloroethane	50.0	52.4		ug/L		105	71 - 121
Tetrachloroethene	50.0	46.4		ug/L		93	74 - 129
Toluene	50.0	47.7		ug/L		95	80 - 121
1,2,3-Trichlorobenzene	50.0	44.8		ug/L		90	69 - 129

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

Lab Sample ID: LCS 680-805660/4
Matrix: Water
Analysis Batch: 805660

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,2,4-Trichlorobenzene			50.0	45.9		ug/L		92	69 - 130		
1,1,1-Trichloroethane			50.0	55.0		ug/L		110	74 - 131		
1,1,2-Trichloroethane			50.0	45.2		ug/L		90	80 - 119		
Trichloroethene			50.0	52.9		ug/L		106	79 - 123		
Trichlorofluoromethane			50.0	40.2		ug/L		80	65 - 141		
1,2,3-Trichloropropane			50.0	55.5		ug/L		111	73 - 122		
1,2,4-Trimethylbenzene			50.0	53.6		ug/L		107	76 - 124		
1,3,5-Trimethylbenzene			50.0	52.4		ug/L		105	75 - 124		
Vinyl acetate			100	103		ug/L		103	54 - 146		
Vinyl chloride			50.0	42.1		ug/L		84	58 - 137		
o-Xylene			50.0	52.3		ug/L		105	78 - 122		
m-Xylene & p-Xylene			50.0	50.7		ug/L		101	80 - 121		
Xylenes, Total			100	103		ug/L		103	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*106*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*103*		*81 - 118*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*
Dibromofluoromethane (Surr)	*104*		*80 - 119*

Lab Sample ID: LCSD 680-805660/5
Matrix: Water
Analysis Batch: 805660

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
Acetone			250	305	Q	ug/L		122	39 - 160	27	20
Benzene			50.0	51.2		ug/L		102	79 - 120	1	20
Bromobenzene			50.0	55.0		ug/L		110	80 - 120	1	20
Chlorobromomethane			50.0	54.2		ug/L		108	78 - 123	3	20
Dichlorobromomethane			50.0	55.1		ug/L		110	79 - 125	2	20
Bromoform			50.0	65.0		ug/L		130	66 - 130	5	20
Bromomethane			50.0	43.8		ug/L		88	53 - 141	14	20
2-Butanone (MEK)			250	334	Q	ug/L		134	56 - 143	22	20
n-Butylbenzene			50.0	47.5		ug/L		95	75 - 128	2	20
sec-Butylbenzene			50.0	54.7		ug/L		109	77 - 126	0	20
tert-Butylbenzene			50.0	51.9		ug/L		104	78 - 124	8	20
Carbon disulfide			50.0	52.0		ug/L		104	64 - 133	8	20
Carbon tetrachloride			50.0	54.0		ug/L		108	72 - 136	4	20
Chlorobenzene			50.0	48.7		ug/L		97	82 - 118	2	20
Chloroethane			50.0	42.3		ug/L		85	60 - 138	11	20
Chloroform			50.0	51.8		ug/L		104	79 - 124	1	20
Chloromethane			50.0	47.0		ug/L		94	50 - 139	13	20
2-Chlorotoluene			50.0	52.6		ug/L		105	79 - 122	3	20
4-Chlorotoluene			50.0	52.5		ug/L		105	78 - 122	1	20
Chlorodibromomethane			50.0	62.4	Q	ug/L		125	74 - 126	25	20
1,2-Dibromo-3-Chloropropane			50.0	41.9		ug/L		84	62 - 128	3	20
Ethylene Dibromide			50.0	57.9	Q	ug/L		116	75 - 127	23	20
Dibromomethane			50.0	55.2		ug/L		110	79 - 123	7	20

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

Lab Sample ID: LCSD 680-805660/5
Matrix: Water
Analysis Batch: 805660

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Dichlorobenzene	50.0	46.8		ug/L		94	80 - 119	2	20
1,3-Dichlorobenzene	50.0	51.3		ug/L		103	80 - 119	3	20
1,4-Dichlorobenzene	50.0	49.0		ug/L		98	79 - 118	1	20
Dichlorodifluoromethane	50.0	47.9		ug/L		96	32 - 152	5	20
1,1-Dichloroethane	50.0	53.5		ug/L		107	77 - 125	10	20
1,2-Dichloroethane	50.0	55.4		ug/L		111	73 - 128	2	20
cis-1,2-Dichloroethene	50.0	57.9		ug/L		116	78 - 123	7	20
trans-1,2-Dichloroethene	50.0	53.8		ug/L		108	75 - 124	10	20
1,2-Dichloroethene, Total	100	112		ug/L		112	79 - 121	9	20
1,1-Dichloroethene	50.0	52.4		ug/L		105	71 - 131	10	20
1,2-Dichloropropane	50.0	52.0		ug/L		104	78 - 122	3	20
1,3-Dichloropropane	50.0	55.1	Q	ug/L		110	80 - 119	21	20
2,2-Dichloropropane	50.0	58.5		ug/L		117	60 - 139	5	20
1,1-Dichloropropene	50.0	51.8		ug/L		104	79 - 125	3	20
cis-1,3-Dichloropropene	50.0	55.4		ug/L		111	75 - 124	6	20
trans-1,3-Dichloropropene	50.0	57.4	Q	ug/L		115	73 - 127	21	20
Ethylbenzene	50.0	48.4		ug/L		97	79 - 121	4	20
Hexachlorobutadiene	50.0	41.8		ug/L		84	66 - 134	20	20
2-Hexanone	250	342	Q	ug/L		137	57 - 139	31	20
Isopropylbenzene	50.0	50.9		ug/L		102	72 - 131	6	20
4-Isopropyltoluene	50.0	52.0		ug/L		104	77 - 127	2	20
Methylene Chloride	50.0	50.1		ug/L		100	74 - 124	13	20
4-Methyl-2-pentanone (MIBK)	250	322		ug/L		129	67 - 130	18	20
Methyl tert-butyl ether	50.0	55.4		ug/L		111	71 - 124	19	20
Naphthalene	50.0	44.5		ug/L		89	61 - 128	4	20
N-Propylbenzene	50.0	52.2		ug/L		104	76 - 126	4	20
Styrene	50.0	53.5		ug/L		107	78 - 123	1	20
1,1,1,2-Tetrachloroethane	50.0	51.5		ug/L		103	78 - 124	1	20
1,1,2,2-Tetrachloroethane	50.0	54.9		ug/L		110	71 - 121	5	20
Tetrachloroethene	50.0	52.4		ug/L		105	74 - 129	12	20
Toluene	50.0	52.0		ug/L		104	80 - 121	9	20
1,2,3-Trichlorobenzene	50.0	41.9		ug/L		84	69 - 129	7	20
1,2,4-Trichlorobenzene	50.0	42.0		ug/L		84	69 - 130	9	20
1,1,1-Trichloroethane	50.0	52.9		ug/L		106	74 - 131	4	20
1,1,2-Trichloroethane	50.0	55.5		ug/L		111	80 - 119	20	20
Trichloroethene	50.0	51.9		ug/L		104	79 - 123	2	20
Trichlorofluoromethane	50.0	42.8		ug/L		86	65 - 141	6	20
1,2,3-Trichloropropane	50.0	59.4		ug/L		119	73 - 122	7	20
1,2,4-Trimethylbenzene	50.0	54.8		ug/L		110	76 - 124	2	20
1,3,5-Trimethylbenzene	50.0	53.3		ug/L		107	75 - 124	2	20
Vinyl acetate	100	119		ug/L		119	54 - 146	14	20
Vinyl chloride	50.0	46.9		ug/L		94	58 - 137	11	20
o-Xylene	50.0	51.3		ug/L		103	78 - 122	2	20
m-Xylene & p-Xylene	50.0	49.3		ug/L		99	80 - 121	3	20
Xylenes, Total	100	101		ug/L		101	79 - 121	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*96*		*89 - 112*

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

Lab Sample ID: LCSD 680-805660/5
Matrix: Water
Analysis Batch: 805660

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*108*		*81 - 118*
4-Bromofluorobenzene (Surr)	*104*		*85 - 114*
Dibromofluoromethane (Surr)	*106*		*80 - 119*

Lab Sample ID: 680-242109-23 MS
Matrix: Water
Analysis Batch: 805660

Client Sample ID: MW-3-FAL23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	10	U Q J1	250	199		ug/L		80	39 - 160
Benzene	1.0	U J1	50.0	45.4		ug/L		91	79 - 120
Bromobenzene	0.50	U J1	50.0	52.7		ug/L		105	80 - 120
Chlorobromomethane	1.0	U J1	50.0	44.8		ug/L		90	78 - 123
Dichlorobromomethane	1.0	U J1	50.0	44.1		ug/L		88	79 - 125
Bromoform	2.0	U M J1	50.0	56.9		ug/L		114	66 - 130
Bromomethane	10	U Q J1	50.0	44.3		ug/L		89	53 - 141
2-Butanone (MEK)	20	U Q J1	250	203		ug/L		81	56 - 143
n-Butylbenzene	2.0	U J1	50.0	41.5		ug/L		83	75 - 128
sec-Butylbenzene	2.0	U	50.0	48.0		ug/L		96	77 - 126
tert-Butylbenzene	1.0	U	50.0	48.6		ug/L		97	78 - 124
Carbon disulfide	1.0	U	50.0	48.4		ug/L		97	64 - 133
Carbon tetrachloride	1.0	U J1	50.0	48.3		ug/L		97	72 - 136
Chlorobenzene	0.50	U J1	50.0	43.9		ug/L		88	82 - 118
Chloroethane	10	U Q J1	50.0	59.3		ug/L		119	60 - 138
Chloroform	1.0	U J1	50.0	43.5		ug/L		87	79 - 124
Chloromethane	2.0	U J1	50.0	47.8		ug/L		96	50 - 139
2-Chlorotoluene	0.50	U J1	50.0	51.1		ug/L		102	79 - 122
4-Chlorotoluene	1.0	U	50.0	51.3		ug/L		103	78 - 122
Chlorodibromomethane	1.0	U Q J1	50.0	43.3		ug/L		87	74 - 126
1,2-Dibromo-3-Chloropropane	5.0	U Q J1	50.0	29.3	J1	ug/L		59	62 - 128
Ethylene Dibromide	1.0	U Q J1	50.0	40.4		ug/L		81	75 - 127
Dibromomethane	1.0	U J1	50.0	43.5		ug/L		87	79 - 123
1,2-Dichlorobenzene	1.0	U J1	50.0	41.1		ug/L		82	80 - 119
1,3-Dichlorobenzene	1.0	U J1	50.0	43.7		ug/L		87	80 - 119
1,4-Dichlorobenzene	1.0	U J1	50.0	43.8		ug/L		88	79 - 118
Dichlorodifluoromethane	1.0	U	50.0	43.9		ug/L		88	32 - 152
1,1-Dichloroethane	1.0	U J1	50.0	44.0		ug/L		88	77 - 125
1,2-Dichloroethane	1.0	U J1	50.0	42.1		ug/L		84	73 - 128
cis-1,2-Dichloroethene	1.0	U J1	50.0	43.9		ug/L		88	78 - 123
trans-1,2-Dichloroethene	1.0	U J1	50.0	46.2		ug/L		92	75 - 124
1,2-Dichloroethene, Total	1.0	U J1	100	90.1		ug/L		90	79 - 121
1,1-Dichloroethene	1.0	U J1	50.0	46.0		ug/L		92	71 - 131
1,2-Dichloropropane	0.50	U J1	50.0	41.9		ug/L		84	78 - 122
1,3-Dichloropropane	1.0	U Q J1	50.0	39.2	J1	ug/L		78	80 - 119
2,2-Dichloropropane	1.0	U J1	50.0	39.1		ug/L		78	60 - 139
1,1-Dichloropropene	1.0	U J1	50.0	48.1		ug/L		96	79 - 125
cis-1,3-Dichloropropene	1.0	U J1	50.0	40.3		ug/L		81	75 - 124
trans-1,3-Dichloropropene	1.0	U Q J1	50.0	40.1		ug/L		80	73 - 127

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

Lab Sample ID: 680-242109-23 MS
Matrix: Water
Analysis Batch: 805660

Client Sample ID: MW-3-FAL23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	0.50	U J1	50.0	44.6		ug/L		89	79 - 121
Hexachlorobutadiene	1.0	U J1	50.0	40.0		ug/L		80	66 - 134
2-Hexanone	10	U Q J1	250	210		ug/L		84	57 - 139
Isopropylbenzene	1.0	U J1	50.0	55.3		ug/L		111	72 - 131
4-Isopropyltoluene	1.0	U J1	50.0	44.1		ug/L		88	77 - 127
Methylene Chloride	10	U J1	50.0	43.2		ug/L		86	74 - 124
4-Methyl-2-pentanone (MIBK)	10	U J1	250	198		ug/L		79	67 - 130
Methyl tert-butyl ether	2.0	U J1	50.0	41.7		ug/L		83	71 - 124
Naphthalene	5.0	U J1	50.0	35.7		ug/L		71	61 - 128
N-Propylbenzene	1.0	U	50.0	51.6		ug/L		103	76 - 126
Styrene	1.0	U J1	50.0	47.3		ug/L		95	78 - 123
1,1,1,2-Tetrachloroethane	1.0	U J1	50.0	46.0		ug/L		92	78 - 124
1,1,2,2-Tetrachloroethane	1.0	U J1	50.0	50.3		ug/L		101	71 - 121
Tetrachloroethene	1.0	U J1	50.0	43.9		ug/L		88	74 - 129
Toluene	1.0	U J1	50.0	41.3		ug/L		83	80 - 121
1,2,3-Trichlorobenzene	2.0	U J1	50.0	36.1		ug/L		72	69 - 129
1,2,4-Trichlorobenzene	2.0	U J1	50.0	38.3		ug/L		77	69 - 130
1,1,1-Trichloroethane	0.50	U J1	50.0	46.6		ug/L		93	74 - 131
1,1,2-Trichloroethane	1.0	U J1	50.0	40.1		ug/L		80	80 - 119
Trichloroethene	0.50	U J1	50.0	44.4		ug/L		89	79 - 123
Trichlorofluoromethane	1.0	U J1	50.0	39.4		ug/L		79	65 - 141
1,2,3-Trichloropropane	1.0	U J1	50.0	52.5		ug/L		105	73 - 122
1,2,4-Trimethylbenzene	1.0	U	50.0	46.9		ug/L		94	76 - 124
1,3,5-Trimethylbenzene	1.0	U	50.0	50.0		ug/L		100	75 - 124
Vinyl acetate	2.0	U J1	100	77.5		ug/L		78	54 - 146
Vinyl chloride	1.0	U	50.0	48.1		ug/L		96	58 - 137
o-Xylene	1.0	U J1	50.0	45.7		ug/L		91	78 - 122
m-Xylene & p-Xylene	1.0	U J1	50.0	44.8		ug/L		90	80 - 121
Xylenes, Total	1.0	U J1	100	90.5		ug/L		91	79 - 121

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*87*	*Q*	*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*
Dibromofluoromethane (Surr)	*87*		*80 - 119*

Lab Sample ID: 680-242109-23 MSD
Matrix: Water
Analysis Batch: 805660

Client Sample ID: MW-3-FAL23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetone	10	U Q J1	250	369	J1	ug/L		148	39 - 160	60	20
Benzene	1.0	U J1	50.0	58.7	J1	ug/L		117	79 - 120	26	20
Bromobenzene	0.50	U J1	50.0	66.4	J1	ug/L		133	80 - 120	23	20
Chlorobromomethane	1.0	U J1	50.0	67.8	J1	ug/L		136	78 - 123	41	20
Dichlorobromomethane	1.0	U J1	50.0	65.5	J1	ug/L		131	79 - 125	39	20
Bromoform	2.0	U M J1	50.0	92.0	J1	ug/L		184	66 - 130	47	20
Bromomethane	10	U Q J1	50.0	54.6	J1	ug/L		109	53 - 141	21	20

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

Lab Sample ID: 680-242109-23 MSD
Client Sample ID: MW-3-FAL23
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 805660

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-Butanone (MEK)	20	U Q J1	250	426	J1	ug/L		170	56 - 143	71	20
n-Butylbenzene	2.0	U J1	50.0	51.2	J1	ug/L		102	75 - 128	21	20
sec-Butylbenzene	2.0	U	50.0	53.1		ug/L		106	77 - 126	10	20
tert-Butylbenzene	1.0	U	50.0	59.3		ug/L		119	78 - 124	20	20
Carbon disulfide	1.0	U	50.0	59.2		ug/L		118	64 - 133	20	20
Carbon tetrachloride	1.0	U J1	50.0	66.5	J1	ug/L		133	72 - 136	32	20
Chlorobenzene	0.50	U J1	50.0	57.2	J1	ug/L		114	82 - 118	26	20
Chloroethane	10	U Q J1	50.0	81.1	J1	ug/L		162	60 - 138	31	20
Chloroform	1.0	U J1	50.0	66.0	J1	ug/L		132	79 - 124	41	20
Chloromethane	2.0	U J1	50.0	59.6	J1	ug/L		119	50 - 139	22	20
2-Chlorotoluene	0.50	U J1	50.0	62.2	J1	ug/L		124	79 - 122	20	20
4-Chlorotoluene	1.0	U	50.0	58.5		ug/L		117	78 - 122	13	20
Chlorodibromomethane	1.0	U Q J1	50.0	71.5	J1	ug/L		143	74 - 126	49	20
1,2-Dibromo-3-Chloropropane	5.0	U Q J1	50.0	59.1	J1	ug/L		118	62 - 128	67	20
Ethylene Dibromide	1.0	U Q J1	50.0	67.5	J1	ug/L		135	75 - 127	50	20
Dibromomethane	1.0	U J1	50.0	63.9	J1	ug/L		128	79 - 123	38	20
1,2-Dichlorobenzene	1.0	U J1	50.0	59.3	J1	ug/L		119	80 - 119	36	20
1,3-Dichlorobenzene	1.0	U J1	50.0	57.8	J1	ug/L		116	80 - 119	28	20
1,4-Dichlorobenzene	1.0	U J1	50.0	56.8	J1	ug/L		114	79 - 118	26	20
Dichlorodifluoromethane	1.0	U	50.0	51.8		ug/L		104	32 - 152	17	20
1,1-Dichloroethane	1.0	U J1	50.0	65.4	J1	ug/L		131	77 - 125	39	20
1,2-Dichloroethane	1.0	U J1	50.0	64.3	J1	ug/L		129	73 - 128	42	20
cis-1,2-Dichloroethene	1.0	U J1	50.0	69.2	J1	ug/L		138	78 - 123	45	20
trans-1,2-Dichloroethene	1.0	U J1	50.0	64.3	J1	ug/L		129	75 - 124	33	20
1,2-Dichloroethene, Total	1.0	U J1	100	133	J1	ug/L		133	79 - 121	39	20
1,1-Dichloroethene	1.0	U J1	50.0	61.4	J1	ug/L		123	71 - 131	29	20
1,2-Dichloropropane	0.50	U J1	50.0	61.3	J1	ug/L		123	78 - 122	38	20
1,3-Dichloropropane	1.0	U Q J1	50.0	64.3	J1	ug/L		129	80 - 119	48	20
2,2-Dichloropropane	1.0	U J1	50.0	61.8	J1	ug/L		124	60 - 139	45	20
1,1-Dichloropropene	1.0	U J1	50.0	60.2	J1	ug/L		120	79 - 125	22	20
cis-1,3-Dichloropropene	1.0	U J1	50.0	63.3	J1	ug/L		127	75 - 124	44	20
trans-1,3-Dichloropropene	1.0	U Q J1	50.0	64.4	J1	ug/L		129	73 - 127	46	20
Ethylbenzene	0.50	U J1	50.0	60.0	J1	ug/L		120	79 - 121	30	20
Hexachlorobutadiene	1.0	U J1	50.0	49.7	J1	ug/L		99	66 - 134	22	20
2-Hexanone	10	U Q J1	250	419	J1	ug/L		168	57 - 139	67	20
Isopropylbenzene	1.0	U J1	50.0	68.1	J1	ug/L		136	72 - 131	21	20
4-Isopropyltoluene	1.0	U J1	50.0	54.6	J1	ug/L		109	77 - 127	21	20
Methylene Chloride	10	U J1	50.0	61.0	J1	ug/L		122	74 - 124	34	20
4-Methyl-2-pentanone (MIBK)	10	U J1	250	400	J1	ug/L		160	67 - 130	68	20
Methyl tert-butyl ether	2.0	U J1	50.0	72.2	J1	ug/L		144	71 - 124	53	20
Naphthalene	5.0	U J1	50.0	58.6	J1	ug/L		117	61 - 128	49	20
N-Propylbenzene	1.0	U	50.0	60.3		ug/L		121	76 - 126	16	20
Styrene	1.0	U J1	50.0	70.4	J1	ug/L		141	78 - 123	39	20
1,1,1,2-Tetrachloroethane	1.0	U J1	50.0	67.9	J1	ug/L		136	78 - 124	39	20
1,1,2,2-Tetrachloroethane	1.0	U J1	50.0	80.5	J1	ug/L		161	71 - 121	46	20
Tetrachloroethene	1.0	U J1	50.0	57.9	J1	ug/L		116	74 - 129	28	20
Toluene	1.0	U J1	50.0	59.4	J1	ug/L		119	80 - 121	36	20
1,2,3-Trichlorobenzene	2.0	U J1	50.0	53.0	J1	ug/L		106	69 - 129	38	20
1,2,4-Trichlorobenzene	2.0	U J1	50.0	52.3	J1	ug/L		105	69 - 130	31	20

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

Lab Sample ID: 680-242109-23 MSD
Matrix: Water
Analysis Batch: 805660

Client Sample ID: MW-3-FAL23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane	0.50	U J1	50.0	67.2	J1	ug/L		134	74 - 131	36	20
1,1,2-Trichloroethane	1.0	U J1	50.0	66.1	J1	ug/L		132	80 - 119	49	20
Trichloroethene	0.50	U J1	50.0	58.5	J1	ug/L		117	79 - 123	27	20
Trichlorofluoromethane	1.0	U J1	50.0	49.9	J1	ug/L		100	65 - 141	23	20
1,2,3-Trichloropropane	1.0	U J1	50.0	76.6	J1	ug/L		153	73 - 122	37	20
1,2,4-Trimethylbenzene	1.0	U	50.0	55.1		ug/L		110	76 - 124	16	20
1,3,5-Trimethylbenzene	1.0	U	50.0	57.0		ug/L		114	75 - 124	13	20
Vinyl acetate	2.0	U J1	100	137	J1	ug/L		137	54 - 146	56	20
Vinyl chloride	1.0	U	50.0	57.0		ug/L		114	58 - 137	17	20
o-Xylene	1.0	U J1	50.0	69.2	J1	ug/L		138	78 - 122	41	20
m-Xylene & p-Xylene	1.0	U J1	50.0	60.6	J1	ug/L		121	80 - 121	30	20
Xylenes, Total	1.0	U J1	100	130	J1	ug/L		130	79 - 121	36	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*111*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*126*	*Q*	*81 - 118*
4-Bromofluorobenzene (Surr)	*140*	*Q*	*85 - 114*
Dibromofluoromethane (Surr)	*132*	*Q*	*80 - 119*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-805200/8
Matrix: Water
Analysis Batch: 805200

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	0.76	U	1.1	0.76	0.30	ug/L		10/28/23 22:59	1
Ethylene	0.71	U	1.0	0.71	0.31	ug/L		10/28/23 22:59	1
Methane	1.2	U	1.2	1.2	0.57	ug/L		10/28/23 22:59	1

Lab Sample ID: LCS 680-805200/3
Matrix: Water
Analysis Batch: 805200

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methane (TCD)	1920	2000		ug/L		104	73 - 125

Lab Sample ID: LCS 680-805200/6
Matrix: Water
Analysis Batch: 805200

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethane	361	415		ug/L		115	74 - 131
Ethylene	337	373		ug/L		111	72 - 133
Methane	192	211		ug/L		110	73 - 125

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: LCSD 680-805200/4
Matrix: Water
Analysis Batch: 805200

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
Methane (TCD)			1920	2070		ug/L		108	73 - 125	3	30

Lab Sample ID: LCSD 680-805200/7
Matrix: Water
Analysis Batch: 805200

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
Ethane			361	375		ug/L		104	74 - 131	10	30
Ethylene			337	334		ug/L		99	72 - 133	11	30
Methane			192	189		ug/L		99	73 - 125	11	30

Lab Sample ID: MB 680-805260/37
Matrix: Water
Analysis Batch: 805260

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	0.76	U	1.1	0.76	0.30	ug/L		10/27/23 22:26	1
Ethylene	0.71	U	1.0	0.71	0.31	ug/L		10/27/23 22:26	1
Methane	1.2	U	1.2	1.2	0.57	ug/L		10/27/23 22:26	1

Lab Sample ID: LCS 680-805260/33
Matrix: Water
Analysis Batch: 805260

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methane (TCD)			1920	2050		ug/L		107	73 - 125

Lab Sample ID: LCS 680-805260/35
Matrix: Water
Analysis Batch: 805260

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethane			361	353		ug/L		98	74 - 131
Ethylene			337	321		ug/L		95	72 - 133
Methane			192	184		ug/L		96	73 - 125

Lab Sample ID: LCSD 680-805260/34
Matrix: Water
Analysis Batch: 805260

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
Methane (TCD)			1920	2070		ug/L		108	73 - 125	1	30

Lab Sample ID: LCSD 680-805260/36
Matrix: Water
Analysis Batch: 805260

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
Ethane			361	360		ug/L		100	74 - 131	2	30
Ethylene			337	323		ug/L		96	72 - 133	1	30

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: LCSD 680-805260/36
Matrix: Water
Analysis Batch: 805260

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
Methane			192	187		ug/L		97	73 - 125	2	30

Lab Sample ID: MB 680-805444/38
Matrix: Water
Analysis Batch: 805444

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	0.76	U	1.1	0.76	0.30	ug/L		10/30/23 23:17	1
Ethylene	0.71	U	1.0	0.71	0.31	ug/L		10/30/23 23:17	1
Methane	1.2	U	1.2	1.2	0.57	ug/L		10/30/23 23:17	1

Lab Sample ID: LCS 680-805444/34
Matrix: Water
Analysis Batch: 805444

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Methane (TCD)			1920	2070		ug/L		107	73 - 125		

Lab Sample ID: LCS 680-805444/36
Matrix: Water
Analysis Batch: 805444

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Ethane			361	378		ug/L		105	74 - 131		
Ethylene			337	337		ug/L		100	72 - 133		
Methane			192	195		ug/L		101	73 - 125		

Lab Sample ID: LCSD 680-805444/35
Matrix: Water
Analysis Batch: 805444

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
Methane (TCD)			1920	2080		ug/L		108	73 - 125	1	30

Lab Sample ID: LCSD 680-805444/37
Matrix: Water
Analysis Batch: 805444

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
Ethane			361	359		ug/L		99	74 - 131	5	30
Ethylene			337	319		ug/L		95	72 - 133	5	30
Methane			192	183		ug/L		95	73 - 125	6	30

Lab Sample ID: 680-242109-12 MS
Matrix: Water
Analysis Batch: 805444

Client Sample ID: G6M-04-10A-FAL23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Ethane	6.2		361	354		ug/L		96	74 - 131		
Ethylene	9.5		337	318		ug/L		92	72 - 133		

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: 680-242109-12 MS
Matrix: Water
Analysis Batch: 805444

Client Sample ID: G6M-04-10A-FAL23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Methane (TCD)	18000		192	16500	4	ug/L		-635	73 - 125

Lab Sample ID: 680-242109-12 MSD
Matrix: Water
Analysis Batch: 805444

Client Sample ID: G6M-04-10A-FAL23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ethane	6.2		361	394		ug/L		107	74 - 131	11	30
Ethylene	9.5		337	349		ug/L		101	72 - 133	9	30
Methane (TCD)	18000		192	21300	4	ug/L		1906	73 - 125	26	30

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-807207/106
Matrix: Water
Analysis Batch: 807207

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	1.0	U	1.5	1.0	0.40	mg/L		11/08/23 21:13	1

Lab Sample ID: LCS 680-807207/107
Matrix: Water
Analysis Batch: 807207

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	10.0	9.67		mg/L		97	87 - 112

Lab Sample ID: LCSD 680-807207/108
Matrix: Water
Analysis Batch: 807207

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
Sulfate	10.0	9.67		mg/L		97	87 - 112	0	15

Lab Sample ID: 680-242109-12 MS
Matrix: Water
Analysis Batch: 807207

Client Sample ID: G6M-04-10A-FAL23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	1.0	U J1	10.0	8.47	J1	mg/L		85	87 - 112

Lab Sample ID: 680-242109-12 MSD
Matrix: Water
Analysis Batch: 807207

Client Sample ID: G6M-04-10A-FAL23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	1.0	U J1	10.0	8.26	J1	mg/L		83	87 - 112	3	15

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

Lab Sample ID: MB 680-807208/50
Matrix: Water
Analysis Batch: 807208

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	1.0	U	1.5	1.0	0.40	mg/L		11/08/23 14:40	1

Lab Sample ID: LCS 680-807208/78
Matrix: Water
Analysis Batch: 807208

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	10.0	9.80		mg/L		98	87 - 112

Lab Sample ID: LCSD 680-807208/79
Matrix: Water
Analysis Batch: 807208

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
Sulfate	10.0	9.84		mg/L		98	87 - 112	0	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-804422/1-A
Matrix: Water
Analysis Batch: 804905

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 804422

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/26/23 10:26	1
Manganese	5.0	U	10	5.0	1.3	ug/L		10/26/23 10:26	1

Lab Sample ID: LCS 680-804422/2-A
Matrix: Water
Analysis Batch: 804905

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 804422

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	4990	5180		ug/L		104	87 - 115
Manganese	400	412		ug/L		103	90 - 114

Lab Sample ID: MB 680-804428/1-A
Matrix: Water
Analysis Batch: 804706

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 804428

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/25/23 13:28	1
Manganese	5.0	U	10	5.0	1.3	ug/L		10/25/23 13:28	1

Lab Sample ID: LCS 680-804428/2-A
Matrix: Water
Analysis Batch: 804706

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 804428

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	4990	5020		ug/L		101	87 - 115
Manganese	400	408		ug/L		102	90 - 114

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

Lab Sample ID: 680-242109-23 MS
Matrix: Water
Analysis Batch: 804905

Client Sample ID: MW-3-FAL23
Prep Type: Dissolved
Prep Batch: 804422

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	52000	J1	4990	52500	4	ug/L		18	87 - 115
Manganese	11000	J1	400	10800	4	ug/L		-115	90 - 114

Lab Sample ID: 680-242109-23 MSD
Matrix: Water
Analysis Batch: 804905

Client Sample ID: MW-3-FAL23
Prep Type: Dissolved
Prep Batch: 804422

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	52000	J1	4990	52500	4	ug/L		16	87 - 115	0	20
Manganese	11000	J1	400	10800	4	ug/L		-125	90 - 114	0	20

Lab Sample ID: 680-242109-12 MS
Matrix: Water
Analysis Batch: 804706

Client Sample ID: G6M-04-10A-FAL23
Prep Type: Dissolved
Prep Batch: 804428

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	85000	J1	4990	86400	4	ug/L		37	87 - 115
Manganese	860		400	1230		ug/L		93	90 - 114

Lab Sample ID: 680-242109-12 MSD
Matrix: Water
Analysis Batch: 804706

Client Sample ID: G6M-04-10A-FAL23
Prep Type: Dissolved
Prep Batch: 804428

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	85000	J1	4990	88800	4	ug/L		85	87 - 115	3	20
Manganese	860		400	1260		ug/L		100	90 - 114	2	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-804423/1-A
Matrix: Water
Analysis Batch: 804735

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 804423

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		10/25/23 21:13	1

Lab Sample ID: LCS 680-804423/2-A
Matrix: Water
Analysis Batch: 804735

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 804423

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	103		ug/L		103	84 - 116

Lab Sample ID: MB 680-804431/1-A
Matrix: Water
Analysis Batch: 804735

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 804431

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		10/25/23 22:18	1

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

Lab Sample ID: LCS 680-804431/2-A
Matrix: Water
Analysis Batch: 804735

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 804431

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic			100	100		ug/L		100	84 - 116		

Lab Sample ID: 680-242109-23 MS
Matrix: Water
Analysis Batch: 804735

Client Sample ID: MW-3-FAL23
Prep Type: Dissolved
Prep Batch: 804423

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic	650	J1	100	690	4	ug/L		39	84 - 116		

Lab Sample ID: 680-242109-23 MSD
Matrix: Water
Analysis Batch: 804735

Client Sample ID: MW-3-FAL23
Prep Type: Dissolved
Prep Batch: 804423

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	650	J1	100	692	4	ug/L		41	84 - 116	0	20

Lab Sample ID: 680-242109-12 MS
Matrix: Water
Analysis Batch: 804735

Client Sample ID: G6M-04-10A-FAL23
Prep Type: Dissolved
Prep Batch: 804431

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic	310		100	413		ug/L		102	84 - 116		

Lab Sample ID: 680-242109-12 MSD
Matrix: Water
Analysis Batch: 804735

Client Sample ID: G6M-04-10A-FAL23
Prep Type: Dissolved
Prep Batch: 804431

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	310		100	420		ug/L		110	84 - 116	2	20

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 680-805737/4
Matrix: Water
Analysis Batch: 805737

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	5.0	U	5.5	5.0	2.2	mg/L		10/31/23 18:28	1

Lab Sample ID: LCS 680-805737/6
Matrix: Water
Analysis Batch: 805737

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Alkalinity as CaCO3 to pH 4.5			250	251		mg/L		100	90 - 112		

Method: 2320B-2011 - Alkalinity, Total (Continued)

Lab Sample ID: LCSD 680-805737/31
Matrix: Water
Analysis Batch: 805737

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
Total Alkalinity as CaCO3 to pH 4.5			250	254		mg/L		102	90 - 112	1	30

Lab Sample ID: MB 680-806051/4
Matrix: Water
Analysis Batch: 806051

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	5.0	U	5.5	5.0	2.2	mg/L		11/01/23 14:15	1

Lab Sample ID: LCS 680-806051/6
Matrix: Water
Analysis Batch: 806051

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Alkalinity as CaCO3 to pH 4.5			250	246		mg/L		98	90 - 112		

Lab Sample ID: LCSD 680-806051/31
Matrix: Water
Analysis Batch: 806051

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
Total Alkalinity as CaCO3 to pH 4.5			250	249		mg/L		100	90 - 112	1	30

Lab Sample ID: MB 680-806069/4
Matrix: Water
Analysis Batch: 806069

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	5.0	U	5.5	5.0	2.2	mg/L		11/01/23 19:40	1

Lab Sample ID: LCS 680-806069/6
Matrix: Water
Analysis Batch: 806069

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Alkalinity as CaCO3 to pH 4.5			250	246		mg/L		98	90 - 112		

Lab Sample ID: LCSD 680-806069/31
Matrix: Water
Analysis Batch: 806069

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
Total Alkalinity as CaCO3 to pH 4.5			250	249		mg/L		100	90 - 112	1	30

Method: 2320B-2011 - Alkalinity, Total (Continued)

Lab Sample ID: MB 680-806261/4
Matrix: Water
Analysis Batch: 806261

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	5.0	U	5.5	5.0	2.2	mg/L		11/02/23 13:11	1

Lab Sample ID: LCS 680-806261/6
Matrix: Water
Analysis Batch: 806261

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity as CaCO3 to pH 4.5	250	246		mg/L		98	90 - 112

Lab Sample ID: LCSD 680-806261/31
Matrix: Water
Analysis Batch: 806261

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
Total Alkalinity as CaCO3 to pH 4.5	250	247		mg/L		99	90 - 112	0	30

Lab Sample ID: 680-242109-9 DU
Matrix: Water
Analysis Batch: 806261

Client Sample ID: G6M-04-02X-FAL23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Alkalinity as CaCO3 to pH 4.5	120		119		mg/L		1	30

Method: 353.2-1993 R2.0 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 680-806110/6
Matrix: Water
Analysis Batch: 806110

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.025	U	0.10	0.025	0.010	mg/L		11/01/23 16:22	1

Lab Sample ID: LCS 680-806110/7
Matrix: Water
Analysis Batch: 806110

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	1.00	1.06		mg/L		106	90 - 110

Lab Sample ID: MB 680-806112/17
Matrix: Water
Analysis Batch: 806112

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.025	U	0.10	0.025	0.010	mg/L		11/02/23 12:25	1

Method: 353.2-1993 R2.0 - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: LCS 680-806112/18
Matrix: Water
Analysis Batch: 806112

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Nitrate Nitrite as N			1.00	1.03		mg/L		103	90 - 110		

Lab Sample ID: 680-242109-12 MS
Matrix: Water
Analysis Batch: 806112

Client Sample ID: G6M-04-10A-FAL23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Nitrate Nitrite as N	0.025	U J1	1.00	0.747	J1	mg/L		75	90 - 110		

Lab Sample ID: 680-242109-12 MSD
Matrix: Water
Analysis Batch: 806112

Client Sample ID: G6M-04-10A-FAL23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate Nitrite as N	0.025	U J1	1.00	0.758	J1	mg/L		76	90 - 110	1	10

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 680-804567/1
Matrix: Water
Analysis Batch: 804567

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfide	2.0	U	3.0	2.0	1.0	mg/L		10/25/23 13:01	1

Lab Sample ID: LCS 680-804567/2
Matrix: Water
Analysis Batch: 804567

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Sulfide			10.0	9.56		mg/L		96	75 - 125		

Lab Sample ID: LCSD 680-804567/3
Matrix: Water
Analysis Batch: 804567

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
Sulfide			10.0	8.83		mg/L		88	75 - 125	8	30

Lab Sample ID: MB 680-804726/1
Matrix: Water
Analysis Batch: 804726

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfide	2.0	U	3.0	2.0	1.0	mg/L		10/26/23 09:45	1

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric) (Continued)

Lab Sample ID: LCS 680-804726/2
Matrix: Water
Analysis Batch: 804726

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Sulfide			10.0	9.39		mg/L		94	75 - 125		

Lab Sample ID: LCSD 680-804726/3
Matrix: Water
Analysis Batch: 804726

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
Sulfide			10.0	8.88		mg/L		89	75 - 125	6	30

Lab Sample ID: 680-242109-12 MS
Matrix: Water
Analysis Batch: 804726

Client Sample ID: G6M-04-10A-FAL23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Sulfide	1.6	U	6.50	7.47		mg/L		115	75 - 125		

Lab Sample ID: 680-242109-12 MSD
Matrix: Water
Analysis Batch: 804726

Client Sample ID: G6M-04-10A-FAL23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	1.6	U	7.43	8.00		mg/L		108	75 - 125	7	30

Method: 9060 - Organic Carbon, Total (TOC)

Lab Sample ID: MB 680-807418/2
Matrix: Water
Analysis Batch: 807418

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon	1.0	U	1.5	1.0	0.50	mg/L		11/09/23 05:55	1

Lab Sample ID: LCS 680-807418/3
Matrix: Water
Analysis Batch: 807418

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Organic Carbon			20.0	19.1		mg/L		96	80 - 120		

Lab Sample ID: LCSD 680-807418/4
Matrix: Water
Analysis Batch: 807418

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
Total Organic Carbon			20.0	1.0	U Q	mg/L		0	80 - 120	200	25

Method: 9060 - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: 680-242109-12 MS
Client Sample ID: G6M-04-10A-FAL23
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 807418

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	18	Q	20.0	37.3		mg/L		97	80 - 120

Lab Sample ID: 680-242109-12 MSD
Client Sample ID: G6M-04-10A-FAL23
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 807418

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Organic Carbon	18	Q	20.0	37.4		mg/L		98	80 - 120	0	25

Lab Sample ID: MB 680-807771/3
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 807771

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon	1.0	U	1.5	1.0	0.50	mg/L		11/10/23 10:42	1

Lab Sample ID: LCS 680-807771/4
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 807771

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	20.0	18.1		mg/L		90	80 - 120

Lab Sample ID: LCSD 680-807771/5
Client Sample ID: Lab Control Sample Dup
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 807771

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Organic Carbon	20.0	18.2		mg/L		91	80 - 120	0	25

GC/MS VOA

Analysis Batch: 805298

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242109-1	AOC50-DUP02-FAL23	Total/NA	Water	8260D	
680-242109-2	AOC50-DUP03-FAL23	Total/NA	Water	8260D	
680-242109-3	G6M-02-01X-FAL23	Total/NA	Water	8260D	
680-242109-4	G6M-02-04X-FAL23	Total/NA	Water	8260D	
680-242109-5	G6M-02-07X-FAL23	Total/NA	Water	8260D	
680-242109-6	G6M-02-08X-FAL23	Total/NA	Water	8260D	
680-242109-7	G6M-03-07X-FAL23	Total/NA	Water	8260D	
680-242109-8	G6M-04-01X-FAL23	Total/NA	Water	8260D	
680-242109-9	G6M-04-02X-FAL23	Total/NA	Water	8260D	
680-242109-10	G6M-04-03X-FAL23	Total/NA	Water	8260D	
680-242109-11	G6M-04-09X-FAL23	Total/NA	Water	8260D	
MB 680-805298/7	Method Blank	Total/NA	Water	8260D	
LCS 680-805298/3	Lab Control Sample	Total/NA	Water	8260D	
LCSD 680-805298/4	Lab Control Sample Dup	Total/NA	Water	8260D	

Analysis Batch: 805316

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242109-12	G6M-04-10A-FAL23	Total/NA	Water	8260D	
680-242109-14	G6M-04-13X-FAL23	Total/NA	Water	8260D	
680-242109-15	G6M-04-14X-FAL23	Total/NA	Water	8260D	
680-242109-17	G6M-07-01X-FAL23	Total/NA	Water	8260D	
680-242109-18	G6M-07-02X-FAL23	Total/NA	Water	8260D	
680-242109-19	G6M-13-01X-FAL23	Total/NA	Water	8260D	
680-242109-20	G6M-13-02X-FAL23	Total/NA	Water	8260D	
680-242109-21	G6M-95-19X-FAL23	Total/NA	Water	8260D	
680-242109-25	XSA-12-95X-FAL23	Total/NA	Water	8260D	
680-242109-26	XSA-12-98X-FAL23	Total/NA	Water	8260D	
MB 680-805316/7	Method Blank	Total/NA	Water	8260D	
LCS 680-805316/4	Lab Control Sample	Total/NA	Water	8260D	
LCSD 680-805316/5	Lab Control Sample Dup	Total/NA	Water	8260D	
680-242109-12 MS	G6M-04-10A-FAL23	Total/NA	Water	8260D	
680-242109-12 MSD	G6M-04-10A-FAL23	Total/NA	Water	8260D	

Analysis Batch: 805660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242109-12	G6M-04-10A-FAL23	Total/NA	Water	8260D	
680-242109-13	G6M-04-10X-FAL23	Total/NA	Water	8260D	
680-242109-16	G6M-04-15X-FAL23	Total/NA	Water	8260D	
680-242109-18	G6M-07-02X-FAL23	Total/NA	Water	8260D	
680-242109-20	G6M-13-02X-FAL23	Total/NA	Water	8260D	
680-242109-23	MW-3-FAL23	Total/NA	Water	8260D	
680-242109-24	MW-7-FAL23	Total/NA	Water	8260D	
680-242109-25	XSA-12-95X-FAL23	Total/NA	Water	8260D	
MB 680-805660/26	Method Blank	Total/NA	Water	8260D	
LCS 680-805660/4	Lab Control Sample	Total/NA	Water	8260D	
LCSD 680-805660/5	Lab Control Sample Dup	Total/NA	Water	8260D	
680-242109-23 MS	MW-3-FAL23	Total/NA	Water	8260D	
680-242109-23 MSD	MW-3-FAL23	Total/NA	Water	8260D	

GC VOA

Analysis Batch: 805200

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242109-3	G6M-02-01X-FAL23	Total/NA	Water	RSK-175	
680-242109-6	G6M-02-08X-FAL23	Total/NA	Water	RSK-175	
680-242109-7	G6M-03-07X-FAL23	Total/NA	Water	RSK-175	
680-242109-11	G6M-04-09X-FAL23	Total/NA	Water	RSK-175	
680-242109-12	G6M-04-10A-FAL23	Total/NA	Water	RSK-175	
MB 680-805200/8	Method Blank	Total/NA	Water	RSK-175	
LCS 680-805200/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-805200/6	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-805200/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-805200/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	

Analysis Batch: 805260

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242109-2	AOC50-DUP03-FAL23	Total/NA	Water	RSK-175	
680-242109-10	G6M-04-03X-FAL23	Total/NA	Water	RSK-175	
680-242109-18	G6M-07-02X-FAL23	Total/NA	Water	RSK-175	
680-242109-19	G6M-13-01X-FAL23	Total/NA	Water	RSK-175	
MB 680-805260/37	Method Blank	Total/NA	Water	RSK-175	
LCS 680-805260/33	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-805260/35	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-805260/34	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-805260/36	Lab Control Sample Dup	Total/NA	Water	RSK-175	

Analysis Batch: 805444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242109-1	AOC50-DUP02-FAL23	Total/NA	Water	RSK-175	
680-242109-9	G6M-04-02X-FAL23	Total/NA	Water	RSK-175	
680-242109-17	G6M-07-01X-FAL23	Total/NA	Water	RSK-175	
680-242109-20	G6M-13-02X-FAL23	Total/NA	Water	RSK-175	
MB 680-805444/38	Method Blank	Total/NA	Water	RSK-175	
LCS 680-805444/34	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-805444/36	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-805444/35	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-805444/37	Lab Control Sample Dup	Total/NA	Water	RSK-175	
680-242109-12 MS	G6M-04-10A-FAL23	Total/NA	Water	RSK-175	
680-242109-12 MSD	G6M-04-10A-FAL23	Total/NA	Water	RSK-175	

HPLC/IC

Analysis Batch: 807207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242109-7	G6M-03-07X-FAL23	Total/NA	Water	9056A	
680-242109-9	G6M-04-02X-FAL23	Total/NA	Water	9056A	
680-242109-10	G6M-04-03X-FAL23	Total/NA	Water	9056A	
680-242109-11	G6M-04-09X-FAL23	Total/NA	Water	9056A	
680-242109-12	G6M-04-10A-FAL23	Total/NA	Water	9056A	
680-242109-17	G6M-07-01X-FAL23	Total/NA	Water	9056A	
680-242109-18	G6M-07-02X-FAL23	Total/NA	Water	9056A	
680-242109-19	G6M-13-01X-FAL23	Total/NA	Water	9056A	
680-242109-20	G6M-13-02X-FAL23	Total/NA	Water	9056A	
MB 680-807207/106	Method Blank	Total/NA	Water	9056A	

HPLC/IC (Continued)

Analysis Batch: 807207 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 680-807207/107	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-807207/108	Lab Control Sample Dup	Total/NA	Water	9056A	
680-242109-12 MS	G6M-04-10A-FAL23	Total/NA	Water	9056A	
680-242109-12 MSD	G6M-04-10A-FAL23	Total/NA	Water	9056A	

Analysis Batch: 807208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242109-1	AOC50-DUP02-FAL23	Total/NA	Water	9056A	
680-242109-2	AOC50-DUP03-FAL23	Total/NA	Water	9056A	
680-242109-3	G6M-02-01X-FAL23	Total/NA	Water	9056A	
680-242109-6	G6M-02-08X-FAL23	Total/NA	Water	9056A	
MB 680-807208/50	Method Blank	Total/NA	Water	9056A	
LCS 680-807208/78	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-807208/79	Lab Control Sample Dup	Total/NA	Water	9056A	

Metals

Prep Batch: 804422

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242109-1	AOC50-DUP02-FAL23	Dissolved	Water	3005A	
680-242109-3	G6M-02-01X-FAL23	Dissolved	Water	3005A	
680-242109-6	G6M-02-08X-FAL23	Dissolved	Water	3005A	
680-242109-17	G6M-07-01X-FAL23	Dissolved	Water	3005A	
680-242109-18	G6M-07-02X-FAL23	Dissolved	Water	3005A	
680-242109-19	G6M-13-01X-FAL23	Dissolved	Water	3005A	
680-242109-20	G6M-13-02X-FAL23	Dissolved	Water	3005A	
680-242109-22	G6M-97-28X-FAL23	Dissolved	Water	3005A	
680-242109-23	MW-3-FAL23	Dissolved	Water	3005A	
680-242109-24	MW-7-FAL23	Dissolved	Water	3005A	
680-242109-25	XSA-12-95X-FAL23	Dissolved	Water	3005A	
680-242109-26	XSA-12-98X-FAL23	Dissolved	Water	3005A	
MB 680-804422/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-804422/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-242109-23 MS	MW-3-FAL23	Dissolved	Water	3005A	
680-242109-23 MSD	MW-3-FAL23	Dissolved	Water	3005A	

Prep Batch: 804423

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242109-1	AOC50-DUP02-FAL23	Dissolved	Water	3005A	
680-242109-3	G6M-02-01X-FAL23	Dissolved	Water	3005A	
680-242109-6	G6M-02-08X-FAL23	Dissolved	Water	3005A	
680-242109-17	G6M-07-01X-FAL23	Dissolved	Water	3005A	
680-242109-18	G6M-07-02X-FAL23	Dissolved	Water	3005A	
680-242109-19	G6M-13-01X-FAL23	Dissolved	Water	3005A	
680-242109-20	G6M-13-02X-FAL23	Dissolved	Water	3005A	
680-242109-22	G6M-97-28X-FAL23	Dissolved	Water	3005A	
680-242109-23	MW-3-FAL23	Dissolved	Water	3005A	
680-242109-24	MW-7-FAL23	Dissolved	Water	3005A	
680-242109-25	XSA-12-95X-FAL23	Dissolved	Water	3005A	
680-242109-26	XSA-12-98X-FAL23	Dissolved	Water	3005A	
MB 680-804423/1-A	Method Blank	Total Recoverable	Water	3005A	

Metals (Continued)

Prep Batch: 804423 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 680-804423/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-242109-23 MS	MW-3-FAL23	Dissolved	Water	3005A	
680-242109-23 MSD	MW-3-FAL23	Dissolved	Water	3005A	

Prep Batch: 804428

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242109-2	AOC50-DUP03-FAL23	Dissolved	Water	3005A	
680-242109-4	G6M-02-04X-FAL23	Dissolved	Water	3005A	
680-242109-5	G6M-02-07X-FAL23	Dissolved	Water	3005A	
680-242109-7	G6M-03-07X-FAL23	Dissolved	Water	3005A	
680-242109-8	G6M-04-01X-FAL23	Dissolved	Water	3005A	
680-242109-9	G6M-04-02X-FAL23	Dissolved	Water	3005A	
680-242109-10	G6M-04-03X-FAL23	Dissolved	Water	3005A	
680-242109-11	G6M-04-09X-FAL23	Dissolved	Water	3005A	
680-242109-12	G6M-04-10A-FAL23	Dissolved	Water	3005A	
680-242109-15	G6M-04-14X-FAL23	Dissolved	Water	3005A	
680-242109-16	G6M-04-15X-FAL23	Dissolved	Water	3005A	
MB 680-804428/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-804428/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-242109-12 MS	G6M-04-10A-FAL23	Dissolved	Water	3005A	
680-242109-12 MSD	G6M-04-10A-FAL23	Dissolved	Water	3005A	

Prep Batch: 804431

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242109-2	AOC50-DUP03-FAL23	Dissolved	Water	3005A	
680-242109-4	G6M-02-04X-FAL23	Dissolved	Water	3005A	
680-242109-5	G6M-02-07X-FAL23	Dissolved	Water	3005A	
680-242109-7	G6M-03-07X-FAL23	Dissolved	Water	3005A	
680-242109-8	G6M-04-01X-FAL23	Dissolved	Water	3005A	
680-242109-9	G6M-04-02X-FAL23	Dissolved	Water	3005A	
680-242109-10	G6M-04-03X-FAL23	Dissolved	Water	3005A	
680-242109-11	G6M-04-09X-FAL23	Dissolved	Water	3005A	
680-242109-12	G6M-04-10A-FAL23	Dissolved	Water	3005A	
680-242109-15	G6M-04-14X-FAL23	Dissolved	Water	3005A	
680-242109-16	G6M-04-15X-FAL23	Dissolved	Water	3005A	
MB 680-804431/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-804431/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-242109-12 MS	G6M-04-10A-FAL23	Dissolved	Water	3005A	
680-242109-12 MSD	G6M-04-10A-FAL23	Dissolved	Water	3005A	

Analysis Batch: 804706

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242109-2	AOC50-DUP03-FAL23	Dissolved	Water	6010C	804428
680-242109-4	G6M-02-04X-FAL23	Dissolved	Water	6010C	804428
680-242109-5	G6M-02-07X-FAL23	Dissolved	Water	6010C	804428
680-242109-7	G6M-03-07X-FAL23	Dissolved	Water	6010C	804428
680-242109-8	G6M-04-01X-FAL23	Dissolved	Water	6010C	804428
680-242109-9	G6M-04-02X-FAL23	Dissolved	Water	6010C	804428
680-242109-10	G6M-04-03X-FAL23	Dissolved	Water	6010C	804428
680-242109-11	G6M-04-09X-FAL23	Dissolved	Water	6010C	804428
680-242109-12	G6M-04-10A-FAL23	Dissolved	Water	6010C	804428

Metals (Continued)

Analysis Batch: 804706 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242109-15	G6M-04-14X-FAL23	Dissolved	Water	6010C	804428
680-242109-16	G6M-04-15X-FAL23	Dissolved	Water	6010C	804428
MB 680-804428/1-A	Method Blank	Total Recoverable	Water	6010C	804428
LCS 680-804428/2-A	Lab Control Sample	Total Recoverable	Water	6010C	804428
680-242109-12 MS	G6M-04-10A-FAL23	Dissolved	Water	6010C	804428
680-242109-12 MSD	G6M-04-10A-FAL23	Dissolved	Water	6010C	804428

Analysis Batch: 804735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242109-1	AOC50-DUP02-FAL23	Dissolved	Water	6020A	804423
680-242109-2	AOC50-DUP03-FAL23	Dissolved	Water	6020A	804431
680-242109-3	G6M-02-01X-FAL23	Dissolved	Water	6020A	804423
680-242109-4	G6M-02-04X-FAL23	Dissolved	Water	6020A	804431
680-242109-5	G6M-02-07X-FAL23	Dissolved	Water	6020A	804431
680-242109-6	G6M-02-08X-FAL23	Dissolved	Water	6020A	804423
680-242109-7	G6M-03-07X-FAL23	Dissolved	Water	6020A	804431
680-242109-8	G6M-04-01X-FAL23	Dissolved	Water	6020A	804431
680-242109-9	G6M-04-02X-FAL23	Dissolved	Water	6020A	804431
680-242109-10	G6M-04-03X-FAL23	Dissolved	Water	6020A	804431
680-242109-11	G6M-04-09X-FAL23	Dissolved	Water	6020A	804431
680-242109-12	G6M-04-10A-FAL23	Dissolved	Water	6020A	804431
680-242109-15	G6M-04-14X-FAL23	Dissolved	Water	6020A	804431
680-242109-16	G6M-04-15X-FAL23	Dissolved	Water	6020A	804431
680-242109-17	G6M-07-01X-FAL23	Dissolved	Water	6020A	804423
680-242109-18	G6M-07-02X-FAL23	Dissolved	Water	6020A	804423
680-242109-19	G6M-13-01X-FAL23	Dissolved	Water	6020A	804423
680-242109-20	G6M-13-02X-FAL23	Dissolved	Water	6020A	804423
680-242109-22	G6M-97-28X-FAL23	Dissolved	Water	6020A	804423
680-242109-23	MW-3-FAL23	Dissolved	Water	6020A	804423
680-242109-24	MW-7-FAL23	Dissolved	Water	6020A	804423
680-242109-25	XSA-12-95X-FAL23	Dissolved	Water	6020A	804423
680-242109-26	XSA-12-98X-FAL23	Dissolved	Water	6020A	804423
MB 680-804423/1-A	Method Blank	Total Recoverable	Water	6020A	804423
MB 680-804431/1-A	Method Blank	Total Recoverable	Water	6020A	804431
LCS 680-804423/2-A	Lab Control Sample	Total Recoverable	Water	6020A	804423
LCS 680-804431/2-A	Lab Control Sample	Total Recoverable	Water	6020A	804431
680-242109-12 MS	G6M-04-10A-FAL23	Dissolved	Water	6020A	804431
680-242109-12 MSD	G6M-04-10A-FAL23	Dissolved	Water	6020A	804431
680-242109-23 MS	MW-3-FAL23	Dissolved	Water	6020A	804423
680-242109-23 MSD	MW-3-FAL23	Dissolved	Water	6020A	804423

Analysis Batch: 804905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242109-1	AOC50-DUP02-FAL23	Dissolved	Water	6010C	804422
680-242109-3	G6M-02-01X-FAL23	Dissolved	Water	6010C	804422
680-242109-6	G6M-02-08X-FAL23	Dissolved	Water	6010C	804422
680-242109-17	G6M-07-01X-FAL23	Dissolved	Water	6010C	804422
680-242109-18	G6M-07-02X-FAL23	Dissolved	Water	6010C	804422
680-242109-19	G6M-13-01X-FAL23	Dissolved	Water	6010C	804422
680-242109-20	G6M-13-02X-FAL23	Dissolved	Water	6010C	804422
680-242109-22	G6M-97-28X-FAL23	Dissolved	Water	6010C	804422

Metals (Continued)

Analysis Batch: 804905 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242109-23	MW-3-FAL23	Dissolved	Water	6010C	804422
680-242109-24	MW-7-FAL23	Dissolved	Water	6010C	804422
680-242109-25	XSA-12-95X-FAL23	Dissolved	Water	6010C	804422
680-242109-26	XSA-12-98X-FAL23	Dissolved	Water	6010C	804422
MB 680-804422/1-A	Method Blank	Total Recoverable	Water	6010C	804422
LCS 680-804422/2-A	Lab Control Sample	Total Recoverable	Water	6010C	804422
680-242109-23 MS	MW-3-FAL23	Dissolved	Water	6010C	804422
680-242109-23 MSD	MW-3-FAL23	Dissolved	Water	6010C	804422

General Chemistry

Analysis Batch: 804567

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242109-2	AOC50-DUP03-FAL23	Total/NA	Water	9034	
680-242109-10	G6M-04-03X-FAL23	Total/NA	Water	9034	
680-242109-18	G6M-07-02X-FAL23	Total/NA	Water	9034	
680-242109-19	G6M-13-01X-FAL23	Total/NA	Water	9034	
MB 680-804567/1	Method Blank	Total/NA	Water	9034	
LCS 680-804567/2	Lab Control Sample	Total/NA	Water	9034	
LCSD 680-804567/3	Lab Control Sample Dup	Total/NA	Water	9034	

Analysis Batch: 804726

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242109-1	AOC50-DUP02-FAL23	Total/NA	Water	9034	
680-242109-3	G6M-02-01X-FAL23	Total/NA	Water	9034	
680-242109-6	G6M-02-08X-FAL23	Total/NA	Water	9034	
680-242109-7	G6M-03-07X-FAL23	Total/NA	Water	9034	
680-242109-9	G6M-04-02X-FAL23	Total/NA	Water	9034	
680-242109-11	G6M-04-09X-FAL23	Total/NA	Water	9034	
680-242109-12	G6M-04-10A-FAL23	Total/NA	Water	9034	
680-242109-17	G6M-07-01X-FAL23	Total/NA	Water	9034	
680-242109-20	G6M-13-02X-FAL23	Total/NA	Water	9034	
MB 680-804726/1	Method Blank	Total/NA	Water	9034	
LCS 680-804726/2	Lab Control Sample	Total/NA	Water	9034	
LCSD 680-804726/3	Lab Control Sample Dup	Total/NA	Water	9034	
680-242109-12 MS	G6M-04-10A-FAL23	Total/NA	Water	9034	
680-242109-12 MSD	G6M-04-10A-FAL23	Total/NA	Water	9034	

Analysis Batch: 805737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242109-2	AOC50-DUP03-FAL23	Total/NA	Water	2320B-2011	
680-242109-10	G6M-04-03X-FAL23	Total/NA	Water	2320B-2011	
680-242109-18	G6M-07-02X-FAL23	Total/NA	Water	2320B-2011	
680-242109-19	G6M-13-01X-FAL23	Total/NA	Water	2320B-2011	
MB 680-805737/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-805737/6	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-805737/31	Lab Control Sample Dup	Total/NA	Water	2320B-2011	

Analysis Batch: 806051

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242109-1	AOC50-DUP02-FAL23	Total/NA	Water	2320B-2011	

General Chemistry (Continued)

Analysis Batch: 806051 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-806051/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-806051/6	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-806051/31	Lab Control Sample Dup	Total/NA	Water	2320B-2011	

Analysis Batch: 806069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242109-3	G6M-02-01X-FAL23	Total/NA	Water	2320B-2011	
680-242109-6	G6M-02-08X-FAL23	Total/NA	Water	2320B-2011	
680-242109-7	G6M-03-07X-FAL23	Total/NA	Water	2320B-2011	
680-242109-11	G6M-04-09X-FAL23	Total/NA	Water	2320B-2011	
680-242109-12	G6M-04-10A-FAL23	Total/NA	Water	2320B-2011	
MB 680-806069/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-806069/6	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-806069/31	Lab Control Sample Dup	Total/NA	Water	2320B-2011	

Analysis Batch: 806110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242109-1	AOC50-DUP02-FAL23	Total/NA	Water	353.2-1993 R2.0	
680-242109-2	AOC50-DUP03-FAL23	Total/NA	Water	353.2-1993 R2.0	
680-242109-3	G6M-02-01X-FAL23	Total/NA	Water	353.2-1993 R2.0	
680-242109-6	G6M-02-08X-FAL23	Total/NA	Water	353.2-1993 R2.0	
680-242109-7	G6M-03-07X-FAL23	Total/NA	Water	353.2-1993 R2.0	
680-242109-9	G6M-04-02X-FAL23	Total/NA	Water	353.2-1993 R2.0	
MB 680-806110/6	Method Blank	Total/NA	Water	353.2-1993 R2.0	
LCS 680-806110/7	Lab Control Sample	Total/NA	Water	353.2-1993 R2.0	

Analysis Batch: 806112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242109-10	G6M-04-03X-FAL23	Total/NA	Water	353.2-1993 R2.0	
680-242109-11	G6M-04-09X-FAL23	Total/NA	Water	353.2-1993 R2.0	
680-242109-12	G6M-04-10A-FAL23	Total/NA	Water	353.2-1993 R2.0	
680-242109-17	G6M-07-01X-FAL23	Total/NA	Water	353.2-1993 R2.0	
680-242109-18	G6M-07-02X-FAL23	Total/NA	Water	353.2-1993 R2.0	
680-242109-19	G6M-13-01X-FAL23	Total/NA	Water	353.2-1993 R2.0	
680-242109-20	G6M-13-02X-FAL23	Total/NA	Water	353.2-1993 R2.0	
MB 680-806112/17	Method Blank	Total/NA	Water	353.2-1993 R2.0	
LCS 680-806112/18	Lab Control Sample	Total/NA	Water	353.2-1993 R2.0	
680-242109-12 MS	G6M-04-10A-FAL23	Total/NA	Water	353.2-1993 R2.0	
680-242109-12 MSD	G6M-04-10A-FAL23	Total/NA	Water	353.2-1993 R2.0	

Analysis Batch: 806261

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242109-9	G6M-04-02X-FAL23	Total/NA	Water	2320B-2011	
680-242109-17	G6M-07-01X-FAL23	Total/NA	Water	2320B-2011	
680-242109-20	G6M-13-02X-FAL23	Total/NA	Water	2320B-2011	
MB 680-806261/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-806261/6	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-806261/31	Lab Control Sample Dup	Total/NA	Water	2320B-2011	
680-242109-9 DU	G6M-04-02X-FAL23	Total/NA	Water	2320B-2011	

General Chemistry

Analysis Batch: 807418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242109-1	AOC50-DUP02-FAL23	Total/NA	Water	9060	
680-242109-3	G6M-02-01X-FAL23	Total/NA	Water	9060	
680-242109-6	G6M-02-08X-FAL23	Total/NA	Water	9060	
680-242109-7	G6M-03-07X-FAL23	Total/NA	Water	9060	
680-242109-9	G6M-04-02X-FAL23	Total/NA	Water	9060	
680-242109-10	G6M-04-03X-FAL23	Total/NA	Water	9060	
680-242109-11	G6M-04-09X-FAL23	Total/NA	Water	9060	
680-242109-12	G6M-04-10A-FAL23	Total/NA	Water	9060	
680-242109-17	G6M-07-01X-FAL23	Total/NA	Water	9060	
680-242109-19	G6M-13-01X-FAL23	Total/NA	Water	9060	
680-242109-20	G6M-13-02X-FAL23	Total/NA	Water	9060	
MB 680-807418/2	Method Blank	Total/NA	Water	9060	
LCS 680-807418/3	Lab Control Sample	Total/NA	Water	9060	
LCSD 680-807418/4	Lab Control Sample Dup	Total/NA	Water	9060	
680-242109-12 MS	G6M-04-10A-FAL23	Total/NA	Water	9060	
680-242109-12 MSD	G6M-04-10A-FAL23	Total/NA	Water	9060	

Analysis Batch: 807771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242109-2	AOC50-DUP03-FAL23	Total/NA	Water	9060	
680-242109-18	G6M-07-02X-FAL23	Total/NA	Water	9060	
MB 680-807771/3	Method Blank	Total/NA	Water	9060	
LCS 680-807771/4	Lab Control Sample	Total/NA	Water	9060	
LCSD 680-807771/5	Lab Control Sample Dup	Total/NA	Water	9060	

Client Sample ID: AOC50-DUP02-FAL23

Lab Sample ID: 680-242109-1

Date Collected: 10/20/23 14:25

Matrix: Water

Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805298	10/30/23 15:01	UI	EET SAV
	Instrument ID: CMSAB									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	805444	10/31/23 04:15	OK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	807208	11/08/23 20:09	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			25 mL	25 mL	804422	10/25/23 06:48	RR	EET SAV
Dissolved	Analysis	6010C		1			804905	10/26/23 10:41	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	804423	10/25/23 06:48	RR	EET SAV
Dissolved	Analysis	6020A		1			804735	10/25/23 21:34	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			806051	11/01/23 16:07	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	806110	11/01/23 17:00	AF	EET SAV
	Instrument ID: SEAL 1									
Total/NA	Analysis	9034		1	290 mL	290 mL	804726	10/26/23 09:45	JAS	EET SAV
	Instrument ID: NoEquip									
Total/NA	Analysis	9060		1	40 mL	40 mL	807418	11/09/23 07:34	KMB	EET SAV
	Instrument ID: TOC7									

Client Sample ID: AOC50-DUP03-FAL23

Lab Sample ID: 680-242109-2

Date Collected: 10/18/23 11:00

Matrix: Water

Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805298	10/30/23 15:25	UI	EET SAV
	Instrument ID: CMSAB									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	805260	10/28/23 02:32	OK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	807208	11/08/23 20:22	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			25 mL	25 mL	804428	10/25/23 07:50	RR	EET SAV
Dissolved	Analysis	6010C		1			804706	10/25/23 13:47	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	804431	10/25/23 07:50	RR	EET SAV
Dissolved	Analysis	6020A		1			804735	10/25/23 22:39	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			805737	10/31/23 21:29	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	806110	11/01/23 17:02	AF	EET SAV
	Instrument ID: SEAL 1									
Total/NA	Analysis	9034		1	300 mL	300 mL	804567	10/25/23 13:01	JAS	EET SAV
	Instrument ID: NoEquip									

Client Sample ID: AOC50-DUP03-FAL23
Lab Sample ID: 680-242109-2

Date Collected: 10/18/23 11:00
Matrix: Water
Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060		10	40 mL	40 mL	807771	11/10/23 14:13	KMB	EET SAV

Client Sample ID: G6M-02-01X-FAL23
Lab Sample ID: 680-242109-3

Date Collected: 10/19/23 14:45
Matrix: Water
Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805298	10/30/23 15:48	UI	EET SAV
	Instrument ID: CMSAB									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	805200	10/29/23 17:50	OK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	807208	11/08/23 20:35	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			25 mL	25 mL	804422	10/25/23 06:48	RR	EET SAV
Dissolved	Analysis	6010C		1			804905	10/26/23 10:43	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	804423	10/25/23 06:48	RR	EET SAV
Dissolved	Analysis	6020A		1			804735	10/25/23 21:37	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			806069	11/01/23 20:43	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	806110	11/01/23 17:04	AF	EET SAV
	Instrument ID: SEAL 1									
Total/NA	Analysis	9034		1	280 mL	280 mL	804726	10/26/23 09:45	JAS	EET SAV
	Instrument ID: NoEquip									
Total/NA	Analysis	9060		1	40 mL	40 mL	807418	11/09/23 08:10	KMB	EET SAV
	Instrument ID: TOC7									

Client Sample ID: G6M-02-04X-FAL23
Lab Sample ID: 680-242109-4

Date Collected: 10/20/23 11:30
Matrix: Water
Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805298	10/30/23 16:11	UI	EET SAV
	Instrument ID: CMSAB									
Dissolved	Prep	3005A			25 mL	25 mL	804428	10/25/23 07:50	RR	EET SAV
Dissolved	Analysis	6010C		1			804706	10/25/23 13:49	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	804431	10/25/23 07:50	RR	EET SAV
Dissolved	Analysis	6020A		1			804735	10/25/23 22:42	BWR	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-02-07X-FAL23

Lab Sample ID: 680-242109-5

Date Collected: 10/18/23 13:30
Matrix: Water
Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805298	10/30/23 16:35	UI	EET SAV
	Instrument ID: CMSAB									
Dissolved	Prep	3005A			25 mL	25 mL	804428	10/25/23 07:50	RR	EET SAV
Dissolved	Analysis	6010C		1			804706	10/25/23 13:51	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	804431	10/25/23 07:50	RR	EET SAV
Dissolved	Analysis	6020A		1			804735	10/25/23 22:45	BWR	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-02-08X-FAL23

Lab Sample ID: 680-242109-6

Date Collected: 10/19/23 11:05
Matrix: Water
Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805298	10/30/23 16:58	UI	EET SAV
	Instrument ID: CMSAB									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	805200	10/29/23 18:03	OK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	807208	11/08/23 20:47	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			25 mL	25 mL	804422	10/25/23 06:48	RR	EET SAV
Dissolved	Analysis	6010C		1			804905	10/26/23 10:45	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	804423	10/25/23 06:48	RR	EET SAV
Dissolved	Analysis	6020A		1			804735	10/25/23 21:40	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			806069	11/01/23 20:53	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	806110	11/01/23 17:06	AF	EET SAV
	Instrument ID: SEAL 1									
Total/NA	Analysis	9034		1	300 mL	300 mL	804726	10/26/23 09:45	JAS	EET SAV
	Instrument ID: NoEquip									
Total/NA	Analysis	9060		1	40 mL	40 mL	807418	11/09/23 08:26	KMB	EET SAV
	Instrument ID: TOC7									

Client Sample ID: G6M-03-07X-FAL23

Lab Sample ID: 680-242109-7

Date Collected: 10/19/23 10:40
Matrix: Water
Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805298	10/30/23 17:21	UI	EET SAV
	Instrument ID: CMSAB									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	805200	10/29/23 18:16	OK	EET SAV
	Instrument ID: CVGU									

Client Sample ID: G6M-03-07X-FAL23
Lab Sample ID: 680-242109-7

Date Collected: 10/19/23 10:40
Matrix: Water
Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	807207	11/08/23 22:29	UI	EET SAV
Dissolved	Prep	3005A			25 mL	25 mL	804428	10/25/23 07:50	RR	EET SAV
Dissolved	Analysis	6010C		1			804706	10/25/23 13:53	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	804431	10/25/23 07:50	RR	EET SAV
Dissolved	Analysis	6020A		1			804735	10/25/23 22:54	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			806069	11/01/23 20:33	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	806110	11/01/23 17:07	AF	EET SAV
	Instrument ID: SEAL 1									
Total/NA	Analysis	9034		1	300 mL	300 mL	804726	10/26/23 09:45	JAS	EET SAV
	Instrument ID: NoEquip									
Total/NA	Analysis	9060		1	40 mL	40 mL	807418	11/09/23 08:43	KMB	EET SAV
	Instrument ID: TOC7									

Client Sample ID: G6M-04-01X-FAL23
Lab Sample ID: 680-242109-8

Date Collected: 10/20/23 12:00
Matrix: Water
Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805298	10/30/23 17:45	UI	EET SAV
	Instrument ID: CMSAB									
Dissolved	Prep	3005A			25 mL	25 mL	804428	10/25/23 07:50	RR	EET SAV
Dissolved	Analysis	6010C		1			804706	10/25/23 14:00	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	804431	10/25/23 07:50	RR	EET SAV
Dissolved	Analysis	6020A		1			804735	10/25/23 22:57	BWR	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-04-02X-FAL23
Lab Sample ID: 680-242109-9

Date Collected: 10/20/23 09:30
Matrix: Water
Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805298	10/30/23 18:08	UI	EET SAV
	Instrument ID: CMSAB									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	805444	10/31/23 04:27	OK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	807207	11/08/23 22:41	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			25 mL	25 mL	804428	10/25/23 07:50	RR	EET SAV
Dissolved	Analysis	6010C		1			804706	10/25/23 14:02	BJB	EET SAV
	Instrument ID: ICPH									

Client Sample ID: G6M-04-02X-FAL23
Lab Sample ID: 680-242109-9

Date Collected: 10/20/23 09:30
Matrix: Water
Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			25 mL	125 mL	804431	10/25/23 07:50	RR	EET SAV
Dissolved	Analysis	6020A		1			804735	10/25/23 23:00	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			806261	11/02/23 15:19	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	806110	11/01/23 17:08	AF	EET SAV
	Instrument ID: SEAL 1									
Total/NA	Analysis	9034		1	300 mL	300 mL	804726	10/26/23 09:45	JAS	EET SAV
	Instrument ID: NoEquip									
Total/NA	Analysis	9060		1	40 mL	40 mL	807418	11/09/23 09:02	KMB	EET SAV
	Instrument ID: TOC7									

Client Sample ID: G6M-04-03X-FAL23
Lab Sample ID: 680-242109-10

Date Collected: 10/18/23 15:30
Matrix: Water
Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805298	10/30/23 18:31	UI	EET SAV
	Instrument ID: CMSAB									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	805260	10/28/23 02:44	OK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	807207	11/08/23 22:54	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			25 mL	25 mL	804428	10/25/23 07:50	RR	EET SAV
Dissolved	Analysis	6010C		1			804706	10/25/23 14:04	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	804431	10/25/23 07:50	RR	EET SAV
Dissolved	Analysis	6020A		1			804735	10/25/23 23:03	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			805737	10/31/23 21:48	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	806112	11/02/23 14:08	AF	EET SAV
	Instrument ID: SEAL 1									
Total/NA	Analysis	9034		1	280 mL	280 mL	804567	10/25/23 13:01	JAS	EET SAV
	Instrument ID: NoEquip									
Total/NA	Analysis	9060		1	40 mL	40 mL	807418	11/09/23 09:21	KMB	EET SAV
	Instrument ID: TOC7									

Client Sample ID: G6M-04-09X-FAL23
Lab Sample ID: 680-242109-11

Date Collected: 10/19/23 12:30
Matrix: Water
Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805298	10/30/23 18:55	UI	EET SAV
	Instrument ID: CMSAB									

Client Sample ID: G6M-04-09X-FAL23
Lab Sample ID: 680-242109-11

Date Collected: 10/19/23 12:30
Matrix: Water
Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	805200	10/29/23 18:29	OK	EET SAV
Total/NA	Analysis	9056A		1	5 mL	5 mL	807207	11/08/23 23:06	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			25 mL	25 mL	804428	10/25/23 07:50	RR	EET SAV
Dissolved	Analysis	6010C		1			804706	10/25/23 14:06	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	804431	10/25/23 07:50	RR	EET SAV
Dissolved	Analysis	6020A		1			804735	10/25/23 23:06	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			806069	11/01/23 21:12	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	806112	11/02/23 14:10	AF	EET SAV
	Instrument ID: SEAL 1									
Total/NA	Analysis	9034		1	300 mL	300 mL	804726	10/26/23 09:45	JAS	EET SAV
	Instrument ID: NoEquip									
Total/NA	Analysis	9060		1	40 mL	40 mL	807418	11/09/23 09:40	KMB	EET SAV
	Instrument ID: TOC7									

Client Sample ID: G6M-04-10A-FAL23
Lab Sample ID: 680-242109-12

Date Collected: 10/19/23 14:05
Matrix: Water
Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805660	11/01/23 01:34	Y1S	EET SAV
	Instrument ID: CMSAB									
Total/NA	Analysis	8260D		2	5 mL	5 mL	805316	10/30/23 13:53	Y1S	EET SAV
	Instrument ID: CMSU									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	805200	10/29/23 18:42	OK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	807207	11/08/23 21:51	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			25 mL	25 mL	804428	10/25/23 07:50	RR	EET SAV
Dissolved	Analysis	6010C		1			804706	10/25/23 13:36	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	804431	10/25/23 07:50	RR	EET SAV
Dissolved	Analysis	6020A		1			804735	10/25/23 22:24	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			806069	11/01/23 21:03	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	806112	11/02/23 14:03	AF	EET SAV
	Instrument ID: SEAL 1									
Total/NA	Analysis	9034		1	310 mL	310 mL	804726	10/26/23 09:45	JAS	EET SAV
	Instrument ID: NoEquip									

Client Sample ID: G6M-04-10A-FAL23
Lab Sample ID: 680-242109-12

Date Collected: 10/19/23 14:05
Matrix: Water
Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060		1	40 mL	40 mL	807418	11/09/23 10:32	KMB	EET SAV

Client Sample ID: G6M-04-10X-FAL23
Lab Sample ID: 680-242109-13

Date Collected: 10/18/23 14:45
Matrix: Water
Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805660	11/01/23 01:57	Y1S	EET SAV
	Instrument ID: CMSAB									

Client Sample ID: G6M-04-13X-FAL23
Lab Sample ID: 680-242109-14

Date Collected: 10/18/23 13:35
Matrix: Water
Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805316	10/30/23 14:31	Y1S	EET SAV
	Instrument ID: CMSU									

Client Sample ID: G6M-04-14X-FAL23
Lab Sample ID: 680-242109-15

Date Collected: 10/18/23 10:30
Matrix: Water
Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805316	10/30/23 14:50	Y1S	EET SAV
	Instrument ID: CMSU									
Dissolved	Prep	3005A			25 mL	25 mL	804428	10/25/23 07:50	RR	EET SAV
Dissolved	Analysis	6010C		1			804706	10/25/23 14:08	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	804431	10/25/23 07:50	RR	EET SAV
Dissolved	Analysis	6020A		1			804735	10/25/23 23:08	BWR	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-04-15X-FAL23
Lab Sample ID: 680-242109-16

Date Collected: 10/19/23 10:30
Matrix: Water
Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805660	11/01/23 02:21	Y1S	EET SAV
	Instrument ID: CMSAB									
Dissolved	Prep	3005A			25 mL	25 mL	804428	10/25/23 07:50	RR	EET SAV
Dissolved	Analysis	6010C		1			804706	10/25/23 14:10	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	804431	10/25/23 07:50	RR	EET SAV
Dissolved	Analysis	6020A		1			804735	10/25/23 23:11	BWR	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-07-01X-FAL23

Lab Sample ID: 680-242109-17

Date Collected: 10/20/23 10:15

Matrix: Water

Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805316	10/30/23 15:28	Y1S	EET SAV
	Instrument ID: CMSU									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	805444	10/31/23 04:40	OK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	807207	11/08/23 23:19	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			25 mL	25 mL	804422	10/25/23 06:48	RR	EET SAV
Dissolved	Analysis	6010C		1			804905	10/26/23 10:52	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	804423	10/25/23 06:48	RR	EET SAV
Dissolved	Analysis	6020A		1			804735	10/25/23 21:49	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			806261	11/02/23 15:46	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	806112	11/02/23 14:12	AF	EET SAV
	Instrument ID: SEAL 1									
Total/NA	Analysis	9034		1	300 mL	300 mL	804726	10/26/23 09:45	JAS	EET SAV
	Instrument ID: NoEquip									
Total/NA	Analysis	9060		1	40 mL	40 mL	807418	11/09/23 10:51	KMB	EET SAV
	Instrument ID: TOC7									

Client Sample ID: G6M-07-02X-FAL23

Lab Sample ID: 680-242109-18

Date Collected: 10/18/23 11:00

Matrix: Water

Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805660	11/01/23 02:44	Y1S	EET SAV
	Instrument ID: CMSAB									
Total/NA	Analysis	8260D		1	5 mL	5 mL	805316	10/30/23 15:47	Y1S	EET SAV
	Instrument ID: CMSU									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	805260	10/28/23 02:57	OK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	807207	11/08/23 23:32	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			25 mL	25 mL	804422	10/25/23 06:48	RR	EET SAV
Dissolved	Analysis	6010C		1			804905	10/26/23 10:54	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	804423	10/25/23 06:48	RR	EET SAV
Dissolved	Analysis	6020A		1			804735	10/25/23 21:51	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			805737	10/31/23 21:55	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	806112	11/02/23 14:14	AF	EET SAV
	Instrument ID: SEAL 1									

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-07-02X-FAL23
Lab Sample ID: 680-242109-18
Date Collected: 10/18/23 11:00
Matrix: Water
Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9034		1	310 mL	310 mL	804567	10/25/23 13:01	JAS	EET SAV
Total/NA	Analysis	9060		10	40 mL	40 mL	807771	11/10/23 14:30	KMB	EET SAV
	Instrument ID: TOC7									

Client Sample ID: G6M-13-01X-FAL23
Lab Sample ID: 680-242109-19
Date Collected: 10/18/23 13:35
Matrix: Water
Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805316	10/30/23 16:06	Y1S	EET SAV
	Instrument ID: CMSU									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	805260	10/28/23 03:10	OK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	807207	11/08/23 23:44	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			25 mL	25 mL	804422	10/25/23 06:48	RR	EET SAV
Dissolved	Analysis	6010C		1			804905	10/26/23 10:56	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	804423	10/25/23 06:48	RR	EET SAV
Dissolved	Analysis	6020A		1			804735	10/25/23 21:54	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			805737	10/31/23 21:38	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	806112	11/02/23 14:15	AF	EET SAV
	Instrument ID: SEAL 1									
Total/NA	Analysis	9034		1	290 mL	290 mL	804567	10/25/23 13:01	JAS	EET SAV
	Instrument ID: NoEquip									
Total/NA	Analysis	9060		1	40 mL	40 mL	807418	11/09/23 11:27	KMB	EET SAV
	Instrument ID: TOC7									

Client Sample ID: G6M-13-02X-FAL23
Lab Sample ID: 680-242109-20
Date Collected: 10/20/23 14:25
Matrix: Water
Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805660	11/01/23 03:07	Y1S	EET SAV
	Instrument ID: CMSAB									
Total/NA	Analysis	8260D		1	5 mL	5 mL	805316	10/30/23 16:25	Y1S	EET SAV
	Instrument ID: CMSU									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	805444	10/31/23 04:53	OK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	807207	11/08/23 23:57	UI	EET SAV
	Instrument ID: CICK									

Client Sample ID: G6M-13-02X-FAL23
Lab Sample ID: 680-242109-20

Date Collected: 10/20/23 14:25
Matrix: Water
Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			25 mL	25 mL	804422	10/25/23 06:48	RR	EET SAV
Dissolved	Analysis	6010C		1			804905	10/26/23 10:58	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	804423	10/25/23 06:48	RR	EET SAV
Dissolved	Analysis	6020A		1			804735	10/25/23 21:57	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			806261	11/02/23 15:37	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	806112	11/02/23 14:17	AF	EET SAV
	Instrument ID: SEAL 1									
Total/NA	Analysis	9034		1	300 mL	300 mL	804726	10/26/23 09:45	JAS	EET SAV
	Instrument ID: NoEquip									
Total/NA	Analysis	9060		1	40 mL	40 mL	807418	11/09/23 11:45	KMB	EET SAV
	Instrument ID: TOC7									

Client Sample ID: G6M-95-19X-FAL23
Lab Sample ID: 680-242109-21

Date Collected: 10/18/23 09:40
Matrix: Water
Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805316	10/30/23 16:44	Y1S	EET SAV
	Instrument ID: CMSU									

Client Sample ID: G6M-97-28X-FAL23
Lab Sample ID: 680-242109-22

Date Collected: 10/19/23 14:55
Matrix: Water
Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			25 mL	25 mL	804422	10/25/23 06:48	RR	EET SAV
Dissolved	Analysis	6010C		1			804905	10/26/23 11:01	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	804423	10/25/23 06:48	RR	EET SAV
Dissolved	Analysis	6020A		1			804735	10/25/23 22:00	BWR	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: MW-3-FAL23
Lab Sample ID: 680-242109-23

Date Collected: 10/18/23 11:30
Matrix: Water
Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805660	11/01/23 03:30	Y1S	EET SAV
	Instrument ID: CMSAB									
Dissolved	Prep	3005A			25 mL	25 mL	804422	10/25/23 06:48	RR	EET SAV
Dissolved	Analysis	6010C		1			804905	10/26/23 10:30	BJB	EET SAV
	Instrument ID: ICPH									

Client Sample ID: MW-3-FAL23
Lab Sample ID: 680-242109-23

Date Collected: 10/18/23 11:30
Matrix: Water
Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			25 mL	125 mL	804423	10/25/23 06:48	RR	EET SAV
Dissolved	Analysis	6020A		1			804735	10/25/23 21:19	BWR	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: MW-7-FAL23
Lab Sample ID: 680-242109-24

Date Collected: 10/18/23 09:55
Matrix: Water
Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805660	11/01/23 03:54	Y1S	EET SAV
	Instrument ID: CMSAB									
Dissolved	Prep	3005A			25 mL	25 mL	804422	10/25/23 06:48	RR	EET SAV
Dissolved	Analysis	6010C		1			804905	10/26/23 11:03	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	804423	10/25/23 06:48	RR	EET SAV
Dissolved	Analysis	6020A		1			804735	10/25/23 22:03	BWR	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: XSA-12-95X-FAL23
Lab Sample ID: 680-242109-25

Date Collected: 10/18/23 15:15
Matrix: Water
Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805660	11/01/23 04:17	Y1S	EET SAV
	Instrument ID: CMSAB									
Total/NA	Analysis	8260D		1	5 mL	5 mL	805316	10/30/23 17:41	Y1S	EET SAV
	Instrument ID: CMSU									
Dissolved	Prep	3005A			25 mL	25 mL	804422	10/25/23 06:48	RR	EET SAV
Dissolved	Analysis	6010C		1			804905	10/26/23 11:05	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	804423	10/25/23 06:48	RR	EET SAV
Dissolved	Analysis	6020A		1			804735	10/25/23 22:06	BWR	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: XSA-12-98X-FAL23
Lab Sample ID: 680-242109-26

Date Collected: 10/18/23 15:30
Matrix: Water
Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	805316	10/30/23 18:00	Y1S	EET SAV
	Instrument ID: CMSU									
Dissolved	Prep	3005A			25 mL	25 mL	804422	10/25/23 06:48	RR	EET SAV
Dissolved	Analysis	6010C		1			804905	10/26/23 11:07	BJB	EET SAV
	Instrument ID: ICPH									

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: XSA-12-98X-FAL23
Lab Sample ID: 680-242109-26
Date Collected: 10/18/23 15:30
Matrix: Water
Date Received: 10/24/23 10:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			25 mL	125 mL	804423	10/25/23 06:48	RR	EET SAV
Dissolved	Analysis	6020A		1			804735	10/25/23 22:09	BWR	EET SAV
	Instrument ID: ICPMSD									

Laboratory References:

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

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Laboratory: Eurofins Savannah

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

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-22-24

Method Summary

Client: Seres Engineering & Services LLC
Job ID: 680-242109-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds (GC/MS)	SW846	EET SAV
RSK-175	Dissolved Gases (GC)	RSK	EET SAV
9056A	Anions, Ion Chromatography	SW846	EET SAV
6010C	Metals (ICP)	SW846	EET SAV
6020A	Metals (ICP/MS)	SW846	EET SAV
2320B-2011	Alkalinity, Total	SM	EET SAV
353.2-1993 R2.0	Nitrogen, Nitrate-Nitrite	MCAWW	EET SAV
9034	Sulfide, Acid Soluble and Insoluble (Titrimetric)	SW846	EET SAV
9060	Organic Carbon, Total (TOC)	SW846	EET SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET SAV
5030C	Purge and Trap	SW846	EET SAV

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique , RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

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

CHAIN-OF-CUSTODY RECORD

ARVC
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # AOC50_LTM_FAL23

US Army Corps of Engineers

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023
Project Number: DEVNS-LTM PO 2312 - 00000001	POC: Jerry Lanier, 912-250-0281, jerry.lanier@eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
E353.2 (A) = Nitrite Nitrate as N
RSK175 (A) = Dissolved Gases
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9034 (A) = Sulfide

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
5	1x 125mL plastic, Cool < 6degC
7	2x 250mL plastic, ZnAc/NaOH Cool < 6degC
8	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
10	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
29	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC
47	1x 500mL, amber glass, H2SO4; Cool < 6degC

Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: A2320B (A)	E353.2 (A)	RSK175 (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW8260B - VOCs	SW9034 (A)	SW9056A - SO4	SW9060A - TOC	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
						46	47	8	9	9	29	7	5	10						
1	AOC50-DUP01-FAL23	WG							X	X	X				G6M-04-04X	FD1	94.00	104.00	1	
2	AOC50-DUP02-FAL23	WG	10.20.23	1425	DC	X	X	X	X	X	X	X	X	X	G6M-13-02X	FD1	115.00	125.00	1	
3	AOC50-DUP03-FAL23	WG	10.18.23	1100	DC	X	X	X	X	X	X	X	X	X	G6M-07-02X	FD1	22.50	27.50	1	
4	AOC50-DUP04-FAL23	WG							X	X	X				G6M-95-20X	FD1	18.00	23.00	1	
5	G6M-02-01X-FAL23	WG	10.19.23	1445	FM	X	X	X	X	X	X	X	X	X	G6M-02-01X	N1	80.00	95.00	1	
6	G6M-02-04X-FAL23	WG	10.20.23	1130	AF				X	X	X				G6M-02-04X	N1	90.00	105.00	1	
7	G6M-02-06X-FAL23	WG	10.20.23	1430	NM				X	X	X				G6M-02-06X	N1	55.00	65.00	1	
8	G6M-02-07X-FAL23	WG	10.18.23	1330	FM				X	X	X				G6M-02-07X	N1	30.00	40.00	1	
9	G6M-02-08X-FAL23	WG	10.19.23	1105	DC	X	X	X	X	X	X	X	X	X	G6M-02-08X	N1	60.00	70.00	1	
10	G6M-02-11X-FAL23	WG							X	X	X				G6M-02-11X	N1	125.00	135.00	1	
11	G6M-02-13X-FAL23	WG							X	X	X				G6M-02-13X	N1	110.00	120.00	1	
12	G6M-03-07X-FAL23	WG	10.19.23	1040	AF	X	X	X	X	X	X	X	X	X	G6M-03-07X	N1	80.00	90.00	1	
13	G6M-03-10X-FAL23	WG							X	X	X				G6M-03-10X	N1	120.00	135.00	1	
14	G6M-04-01X-FAL23	WG	10.20.23	1200	FM				X	X	X				G6M-04-01X	N1	82.00	92.00	1	
15	G6M-04-02X-FAL23	WG	10.20.23	0930	AF	X	X	X	X	X	X	X	X	X	G6M-04-02X	N1	80.00	90.00	1	
16	G6M-04-03X-FAL23	WG	~~10.18.23~~	~~1530~~	~~AF~~	X	X	X	X	X	X	X	X	X	G6M-04-03X	N1	85.00	95.00	1	
17	G6M-04-04X-FAL23	WG	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~				X	X	X				G6M-04-04X	N1	94.00	104.00	1	
18	G6M-04-06X-FAL23	WG	10.19.23	1030	NM				X	X	X				G6M-04-06X	N1	95.00	136.00	1	
19	G6M-04-07X-FAL23	WG	10.19.23	1205	NM	X	X	X	X	X	X	X	X	X	G6M-04-07X	N1	120.00	130.00	1	
20	G6M-04-09X-FAL23	WG	10.19.23	1230	FM	X	X	X	X	X	X	X	X	X	G6M-04-09X	N1	55.00	65.00	1	

680-242109 Chain of Custody

G6M-04-03X 10-[illegible]23 1530 AF

Relinquished by: (Signature) Date Time Received by: (Signature)

10-20-23 1515

Received by Laboratory: (Signature) Date 10/20/23 Time 1525

* G6M-04-03X 10-18-23 at 1530

C. Mruno 10/24/23 1002

CHAIN-OF-CUSTODY RECORD

ARVC
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # AOC50_LTM_FAL23

US Army Corps of Engineers

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023
Project Number: DEVNS-LTM PO 2312 - 00000001	POC: Jerry Lanier, 912-250-0281, jerry.lanier@eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
E353.2 (A) = Nitrite Nitrate as N
RSK175 (A) = Dissolved Gases
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9034 (A) = Sulfide

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
6	1x 125mL plastic, Cool < 6degC
7	2x 250mL plastic, ZnAc/NaOH Cool < 6degC
8	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
10	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
29	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC
47	1x 500mL, amber glass, H2SO4; Cool < 6degC

Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023

						Analytical Test Method	A2320B (A)	E353.2 (A)	RSK175 (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW8260B - VOCs	SW9034 (A)	SW9056A - SO4	SW9060A - TOC			Depth (ft bgs)			
							46	47	8	9	9	29	7	5	10						
	Sample ID	Matrix	Date	Time	Samp Init.												Location ID	Sample Type	Top	Bottom	Cooler	Comments
21	G6M-04-10A-FAL23	WG	10.19.23	1405	DC		X	X	X	X	X	X	X	X	X		G6M-04-10A	MS1	30.00	40.00	1	
22	G6M-04-10A-FAL23	WG	10.19.23	1405	DC		X	X	X	X	X	X	X	X	X		G6M-04-10A	N1	30.00	40.00	1	
23	G6M-04-10A-FAL23	WG	10.19.23	1405	DC		X	X	X	X	X	X	X	X	X		G6M-04-10A	SD1	30.00	40.00	1	
24	G6M-04-10X-FAL23	WG	10.18.23	1445	DC							X					G6M-04-10X	N1	52.00	62.00	1	
25	G6M-04-13X-FAL23	WG	10.18.23	1335	DC							X					G6M-04-13X	N1	30.00	40.00	1	
26	G6M-04-14X-FAL23	WG	10.18.23	1030	NM					X	X	X					G6M-04-14X	N1	80.00	90.00	1	
27	G6M-04-15X-FAL23	WG	10.19.23	1030	FM					X	X	X					G6M-04-15X	N1	70.00	80.00	1	
28	G6M-07-01X-FAL23	WG	10-20-23	1015	FM		X	X	X	X	X	X	X	X	X		G6M-07-01X	N1	78.00	98.00	1	
29	G6M-07-02X-FAL23	WG	10.18.23	1100	DC		X	X	X	X	X	X	X	X	X		G6M-07-02X	N1	22.50	27.50	1	
30	G6M-13-01X-FAL23	WG	10.18.23	1335	AF		X	X	X	X	X	X	X	X	X		G6M-13-01X	N1	125.00	135.00	1	
31	G6M-13-02X-FAL23	WG	10.20.23	1925	AF		X	X	X	X	X	X	X	X	X		G6M-13-02X	N1	115.00	125.00	1	
32	G6M-13-04X-FAL23	WG	10-19-23	1420	NM					X	X	X					G6M-13-04X	N1	125.00	135.00	1	
33	G6M-13-05X-FAL23	WG					X	X	X	X	X	X	X	X	X		G6M-13-05X	N1	45.00	55.00	1	
34	G6M-13-06X-FAL23	WG					X	X	X	X	X	X	X	X	X		G6M-13-06X	N1	50.00	60.00	1	
35	G6M-95-19X-FAL23	WG	10.18.23	0940	DC							X					G6M-95-19X	N1	48.00	58.00	1	
36	G6M-95-20X-FAL23	WG								X	X	X					G6M-95-20X	N1	18.00	23.00	1	
37	G6M-97-05B-FAL23	WG					X	X	X	X	X	X	X	X	X		G6M-97-05B	N1	130.00	135.00	1	
38	G6M-97-28X-FAL23	WG	10.19.23	1455	AF					X	X						G6M-97-28X	N1	100.00	105.00	1	
39	MW-3-FAL23	WG								X	X	X					MW-3	MS1	126.00	136.00	1	
40	MW-3-FAL23	WG								X	X	X					MW-3	N1	126.00	136.00	1	

Relinquished by: (Signature) Drane Clop
Date 10-20-23
Time 1515
Received by: (Signature)

Received by Laboratory: (Signature) Brian Hartman
Date 10/20/23
Time 1725

C. Mmuo 10/24/23 1002
23/2.4 0.5/0.8 2.5/2.8 1.1/1.1 1.5/1.6

11/13/2023

CHAIN-OF-CUSTODY RECORD

ARVC
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # AOC50_LTM_FAL23

US Army Corps of Engineers

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023
Project Number: DEVNS-LTM PO 2312 - 00000001	POC: Jerry Lanier, 912-250-0281, jerry.lanier@eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
E353.2 (A) = Nitrite Nitrate as N
RSK175 (A) = Dissolved Gases
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9034 (A) = Sulfide

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
5	1x 125mL plastic, Cool < 6degC
7	2x 250mL plastic, ZnAc/NaOH Cool < 6degC
8	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
10	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
29	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC
47	1x 500mL, amber glass, H2SO4; Cool < 6degC

Analytical Test Method

	A2320B (A)	E353.2 (A)	RSK175 (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW8260B - VOCs	SW9034 (A)	SW9056A - SO4	SW9060A - TOC
Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023	46	47	8	9	9	29	7	5	10

	Sample ID	Matrix	Date	Time	Samp Init.	A2320B (A)	E353.2 (A)	RSK175 (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW8260B - VOCs	SW9034 (A)	SW9056A - SO4	SW9060A - TOC	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
41	MW-3-FAL23	WG	10.18.23	1130	AF				X	X	X				MW-3	SD1	126.00	136.00	1	
42	MW-7-FAL23	WG	10.18.23	955	AF				X	X	X				MW-7	N1	6.58	135.00	1	
43	XSA-12-95X-FAL23	WG	10.18.23	1515	NM				X	X	X				XSA-12-95X	N1	120.00	130.00	1	
44	XSA-12-96X-FAL23	WG	[illegible]	[illegible]	[illegible]				X	X	X				XSA-12-96X	N1	120.00	130.00	1	
45	XSA-12-97X-FAL23	WG							X	X	X				XSA-12-97X	N1	120.00	130.00	1	
46	XSA-12-98X-FAL23	WG	10.18.23	1530	FM				X	X	X				XSA-12-98X	N1	60.00	70.00	1	
47																				
48																				
49																				
50																				
51																				
52																				
53																				
54																				
55																				
56																				

Turnaround Time: Standard

Relinquished by: (Signature) Diane Clyne
Date 10-20-23
Time 1515
Received by: (Signature)

Received by Laboratory: (Signature) Bill Harvey
Date 10/20/23
Time 1515

C. M[illegible] 10/24/23 1002
2.3/2.6 0.5/0.8 2.5/2.8 1.1/1.4 1.5/1.6

11/13/2023

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-242109-1

Login Number: 242109

List Source: Eurofins Savannah

List Number: 1

Creator: Munro, Caroline

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Heather Levesque
Seres Engineering & Services LLC
669 Marina Drive
Suite B7
Charleston, South Carolina 29492

Generated 11/8/2023 4:45:55 PM

JOB DESCRIPTION

Seres-Arcadis JV, LTM, AOC 50, Fall 2023

JOB NUMBER

680-242433-1

Eurofins Savannah
5102 LaRoche Avenue
Savannah GA 31404

See page two for job notes and contact information.

myEOL

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.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization



Generated
11/8/2023 4:45:55 PM

Authorized for release by
Jerry Lanier, Project Manager I
Jerry.Lanier@et.eurofinsus.com
(912)250-0281

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
M	Manual integrated compound.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

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

Sample Summary

Client: Seres Engineering & Services LLC
Job ID: 680-242433-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-242433-1	AOC50-DUP01-FAL23	Water	10/23/23 14:50	11/01/23 10:12
680-242433-2	G6M-02-13X-FAL23	Water	10/23/23 13:00	11/01/23 10:12
680-242433-3	G6M-04-04X-FAL23	Water	10/23/23 14:50	11/01/23 10:12

Job ID: 680-242433-1

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-242433-1

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

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

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

Receipt
The samples were received on 11/1/2023 10:12 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.2°C

Receipt Exceptions
The following samples were submitted for analysis; however, it was not listed on the Chain-of-Custody (COC): AOC50-DUP01-FAL23 (680-242433-1), G6M-02-13X-FAL23 (680-242433-2) and G6M-04-04X-FAL23 (680-242433-3)

Sample 1 not listed as collected on COC. Logged per sample labels.

GC/MS VOA
Method 8260D_DOD5: The continuing calibration verification (CCV) associated with batch 680-806425 recovered above the upper control limit for Bromomethane and Chloroethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8260D_DOD5: The continuing calibration verification (CCV) associated with batch 680-806425 recovered outside acceptance criteria, low biased, for 2-Butanone (MEK). A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

Method 8260D_DOD5: The laboratory control sample (LCS) for analytical batch 680-806425 recovered outside control limits for the following analytes: Chloroethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260D_DOD5: The laboratory control sample duplicate (LCSD) for analytical batch 680-806425 recovered outside control limits for the following analytes: Bromomethane and Chloroethane. These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

Method 8260D_DOD5: The continuing calibration verification (CCVC) associated with batch 680-806425 recovered outside acceptance criteria, low biased, for 2-Butanone (MEK). A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

Method 8260D_DOD5: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 680-806425 recovered outside control limits for the following analytes: Bromomethane.

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

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

Client: Seres Engineering & Services LLC
Job ID: 680-242433-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: AOC50-DUP01-FAL23
Lab Sample ID: 680-242433-1
Date Collected: 10/23/23 14:50
Matrix: Water
Date Received: 11/01/23 10:12

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		11/04/23 21:56	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		11/04/23 21:56	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		11/04/23 21:56	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		11/04/23 21:56	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		11/04/23 21:56	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		11/04/23 21:56	1
Bromomethane	10	U Q	20	10	3.7	ug/L		11/04/23 21:56	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		11/04/23 21:56	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		11/04/23 21:56	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		11/04/23 21:56	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		11/04/23 21:56	1
Carbon disulfide	1.0	U Q	2.0	1.0	0.43	ug/L		11/04/23 21:56	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		11/04/23 21:56	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		11/04/23 21:56	1
Chloroethane	10	U Q	20	10	4.6	ug/L		11/04/23 21:56	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		11/04/23 21:56	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		11/04/23 21:56	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		11/04/23 21:56	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		11/04/23 21:56	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		11/04/23 21:56	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		11/04/23 21:56	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		11/04/23 21:56	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		11/04/23 21:56	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/04/23 21:56	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/04/23 21:56	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/04/23 21:56	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		11/04/23 21:56	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		11/04/23 21:56	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		11/04/23 21:56	1
cis-1,2-Dichloroethene	**0.35**	**J**	2.0	1.0	0.25	ug/L		11/04/23 21:56	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		11/04/23 21:56	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		11/04/23 21:56	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		11/04/23 21:56	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		11/04/23 21:56	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		11/04/23 21:56	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		11/04/23 21:56	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		11/04/23 21:56	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		11/04/23 21:56	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		11/04/23 21:56	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		11/04/23 21:56	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		11/04/23 21:56	1
2-Hexanone	10	U	20	10	3.2	ug/L		11/04/23 21:56	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		11/04/23 21:56	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		11/04/23 21:56	1
Methylene Chloride	10	U	20	10	3.2	ug/L		11/04/23 21:56	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		11/04/23 21:56	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		11/04/23 21:56	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		11/04/23 21:56	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		11/04/23 21:56	1

Client Sample ID: AOC50-DUP01-FAL23
Lab Sample ID: 680-242433-1
Date Collected: 10/23/23 14:50
Matrix: Water
Date Received: 11/01/23 10:12

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		11/04/23 21:56	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		11/04/23 21:56	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		11/04/23 21:56	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		11/04/23 21:56	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		11/04/23 21:56	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		11/04/23 21:56	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		11/04/23 21:56	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		11/04/23 21:56	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		11/04/23 21:56	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		11/04/23 21:56	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		11/04/23 21:56	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		11/04/23 21:56	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		11/04/23 21:56	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		11/04/23 21:56	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		11/04/23 21:56	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		11/04/23 21:56	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		11/04/23 21:56	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		11/04/23 21:56	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		11/04/23 21:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*89 - 112*		*11/04/23 21:56*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*81 - 118*		*11/04/23 21:56*	*1*
4-Bromofluorobenzene (Surr)	*91*		*85 - 114*		*11/04/23 21:56*	*1*
Dibromofluoromethane (Surr)	*95*		*80 - 119*		*11/04/23 21:56*	*1*

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**59000**		100	50	20	ug/L		11/02/23 15:56	1
Manganese	**15000**		10	5.0	1.3	ug/L		11/02/23 15:56	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**380**		5.0	3.0	0.86	ug/L		11/03/23 03:33	1

Client: Seres Engineering & Services LLC
Job ID: 680-242433-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-02-13X-FAL23
Lab Sample ID: 680-242433-2
Date Collected: 10/23/23 13:00
Matrix: Water
Date Received: 11/01/23 10:12

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		11/04/23 22:17	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		11/04/23 22:17	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		11/04/23 22:17	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		11/04/23 22:17	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		11/04/23 22:17	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		11/04/23 22:17	1
Bromomethane	10	U Q	20	10	3.7	ug/L		11/04/23 22:17	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		11/04/23 22:17	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		11/04/23 22:17	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		11/04/23 22:17	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		11/04/23 22:17	1
Carbon disulfide	1.0	U Q	2.0	1.0	0.43	ug/L		11/04/23 22:17	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		11/04/23 22:17	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		11/04/23 22:17	1
Chloroethane	10	U Q	20	10	4.6	ug/L		11/04/23 22:17	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		11/04/23 22:17	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		11/04/23 22:17	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		11/04/23 22:17	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		11/04/23 22:17	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		11/04/23 22:17	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		11/04/23 22:17	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		11/04/23 22:17	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		11/04/23 22:17	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/04/23 22:17	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/04/23 22:17	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/04/23 22:17	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		11/04/23 22:17	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		11/04/23 22:17	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		11/04/23 22:17	1
cis-1,2-Dichloroethene	**0.32**	**J M**	2.0	1.0	0.25	ug/L		11/04/23 22:17	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		11/04/23 22:17	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		11/04/23 22:17	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		11/04/23 22:17	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		11/04/23 22:17	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		11/04/23 22:17	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		11/04/23 22:17	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		11/04/23 22:17	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		11/04/23 22:17	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		11/04/23 22:17	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		11/04/23 22:17	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		11/04/23 22:17	1
2-Hexanone	10	U	20	10	3.2	ug/L		11/04/23 22:17	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		11/04/23 22:17	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		11/04/23 22:17	1
Methylene Chloride	10	U	20	10	3.2	ug/L		11/04/23 22:17	1
4-Methyl-2-pentanone (MIBK)	10	U M	20	10	2.7	ug/L		11/04/23 22:17	1
Methyl tert-butyl ether	**1.5**	**J**	5.0	2.0	0.81	ug/L		11/04/23 22:17	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		11/04/23 22:17	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		11/04/23 22:17	1

Client Sample ID: G6M-02-13X-FAL23
Lab Sample ID: 680-242433-2
Date Collected: 10/23/23 13:00
Matrix: Water
Date Received: 11/01/23 10:12

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		11/04/23 22:17	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		11/04/23 22:17	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		11/04/23 22:17	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		11/04/23 22:17	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		11/04/23 22:17	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		11/04/23 22:17	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		11/04/23 22:17	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		11/04/23 22:17	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		11/04/23 22:17	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		11/04/23 22:17	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		11/04/23 22:17	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		11/04/23 22:17	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		11/04/23 22:17	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		11/04/23 22:17	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		11/04/23 22:17	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		11/04/23 22:17	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		11/04/23 22:17	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		11/04/23 22:17	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		11/04/23 22:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*89 - 112*		*11/04/23 22:17*	*1*
1,2-Dichloroethane-d4 (Surr)	*85*		*81 - 118*		*11/04/23 22:17*	*1*
4-Bromofluorobenzene (Surr)	*91*		*85 - 114*		*11/04/23 22:17*	*1*
Dibromofluoromethane (Surr)	*94*		*80 - 119*		*11/04/23 22:17*	*1*

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**11000**		100	50	20	ug/L		11/02/23 15:54	1
Manganese	**15000**		10	5.0	1.3	ug/L		11/02/23 15:54	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**310**		5.0	3.0	0.86	ug/L		11/03/23 03:29	1

Client: Seres Engineering & Services LLC
Job ID: 680-242433-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-04-04X-FAL23
Lab Sample ID: 680-242433-3
Date Collected: 10/23/23 14:50
Matrix: Water
Date Received: 11/01/23 10:12

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		11/04/23 22:39	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		11/04/23 22:39	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		11/04/23 22:39	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		11/04/23 22:39	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		11/04/23 22:39	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		11/04/23 22:39	1
Bromomethane	10	U Q	20	10	3.7	ug/L		11/04/23 22:39	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		11/04/23 22:39	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		11/04/23 22:39	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		11/04/23 22:39	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		11/04/23 22:39	1
Carbon disulfide	1.0	U Q	2.0	1.0	0.43	ug/L		11/04/23 22:39	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		11/04/23 22:39	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		11/04/23 22:39	1
Chloroethane	10	U Q	20	10	4.6	ug/L		11/04/23 22:39	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		11/04/23 22:39	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		11/04/23 22:39	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		11/04/23 22:39	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		11/04/23 22:39	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		11/04/23 22:39	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		11/04/23 22:39	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		11/04/23 22:39	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		11/04/23 22:39	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/04/23 22:39	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/04/23 22:39	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/04/23 22:39	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		11/04/23 22:39	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		11/04/23 22:39	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		11/04/23 22:39	1
cis-1,2-Dichloroethene	**0.30**	**J M**	2.0	1.0	0.25	ug/L		11/04/23 22:39	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		11/04/23 22:39	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		11/04/23 22:39	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		11/04/23 22:39	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		11/04/23 22:39	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		11/04/23 22:39	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		11/04/23 22:39	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		11/04/23 22:39	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		11/04/23 22:39	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		11/04/23 22:39	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		11/04/23 22:39	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		11/04/23 22:39	1
2-Hexanone	10	U	20	10	3.2	ug/L		11/04/23 22:39	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		11/04/23 22:39	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		11/04/23 22:39	1
Methylene Chloride	10	U	20	10	3.2	ug/L		11/04/23 22:39	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		11/04/23 22:39	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		11/04/23 22:39	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		11/04/23 22:39	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		11/04/23 22:39	1

Client Sample ID: G6M-04-04X-FAL23
Lab Sample ID: 680-242433-3
Date Collected: 10/23/23 14:50
Matrix: Water
Date Received: 11/01/23 10:12

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		11/04/23 22:39	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		11/04/23 22:39	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		11/04/23 22:39	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		11/04/23 22:39	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		11/04/23 22:39	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		11/04/23 22:39	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		11/04/23 22:39	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		11/04/23 22:39	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		11/04/23 22:39	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		11/04/23 22:39	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		11/04/23 22:39	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		11/04/23 22:39	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		11/04/23 22:39	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		11/04/23 22:39	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		11/04/23 22:39	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		11/04/23 22:39	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		11/04/23 22:39	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		11/04/23 22:39	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		11/04/23 22:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*89 - 112*		*11/04/23 22:39*	*1*
1,2-Dichloroethane-d4 (Surr)	*85*		*81 - 118*		*11/04/23 22:39*	*1*
4-Bromofluorobenzene (Surr)	*91*		*85 - 114*		*11/04/23 22:39*	*1*
Dibromofluoromethane (Surr)	*95*		*80 - 119*		*11/04/23 22:39*	*1*

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**62000**		100	50	20	ug/L		11/02/23 15:52	1
Manganese	**15000**		10	5.0	1.3	ug/L		11/02/23 15:52	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**380**		5.0	3.0	0.86	ug/L		11/03/23 03:25	1

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

Lab Sample ID: MB 680-806425/8
Matrix: Water
Analysis Batch: 806425

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		11/04/23 16:33	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		11/04/23 16:33	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		11/04/23 16:33	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		11/04/23 16:33	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		11/04/23 16:33	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		11/04/23 16:33	1
Bromomethane	10	U	20	10	3.7	ug/L		11/04/23 16:33	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		11/04/23 16:33	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		11/04/23 16:33	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		11/04/23 16:33	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		11/04/23 16:33	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		11/04/23 16:33	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		11/04/23 16:33	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		11/04/23 16:33	1
Chloroethane	10	U	20	10	4.6	ug/L		11/04/23 16:33	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		11/04/23 16:33	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		11/04/23 16:33	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		11/04/23 16:33	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		11/04/23 16:33	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		11/04/23 16:33	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		11/04/23 16:33	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		11/04/23 16:33	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		11/04/23 16:33	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/04/23 16:33	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/04/23 16:33	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/04/23 16:33	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		11/04/23 16:33	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		11/04/23 16:33	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		11/04/23 16:33	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		11/04/23 16:33	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		11/04/23 16:33	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		11/04/23 16:33	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		11/04/23 16:33	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		11/04/23 16:33	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		11/04/23 16:33	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		11/04/23 16:33	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		11/04/23 16:33	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		11/04/23 16:33	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		11/04/23 16:33	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		11/04/23 16:33	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		11/04/23 16:33	1
2-Hexanone	10	U	20	10	3.2	ug/L		11/04/23 16:33	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		11/04/23 16:33	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		11/04/23 16:33	1
Methylene Chloride	10	U	20	10	3.2	ug/L		11/04/23 16:33	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		11/04/23 16:33	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		11/04/23 16:33	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		11/04/23 16:33	1

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

Lab Sample ID: MB 680-806425/8
Matrix: Water
Analysis Batch: 806425

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		11/04/23 16:33	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		11/04/23 16:33	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		11/04/23 16:33	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		11/04/23 16:33	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		11/04/23 16:33	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		11/04/23 16:33	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		11/04/23 16:33	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		11/04/23 16:33	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		11/04/23 16:33	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		11/04/23 16:33	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		11/04/23 16:33	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		11/04/23 16:33	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		11/04/23 16:33	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		11/04/23 16:33	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		11/04/23 16:33	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		11/04/23 16:33	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		11/04/23 16:33	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		11/04/23 16:33	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		11/04/23 16:33	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		11/04/23 16:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*89 - 112*		*11/04/23 16:33*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*81 - 118*		*11/04/23 16:33*	*1*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*		*11/04/23 16:33*	*1*
Dibromofluoromethane (Surr)	*94*		*80 - 119*		*11/04/23 16:33*	*1*

Lab Sample ID: LCS 680-806425/4
Matrix: Water
Analysis Batch: 806425

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	250	220		ug/L		88	39 - 160
Benzene	50.0	48.8		ug/L		98	79 - 120
Bromobenzene	50.0	48.7		ug/L		97	80 - 120
Chlorobromomethane	50.0	49.6		ug/L		99	78 - 123
Dichlorobromomethane	50.0	46.9		ug/L		94	79 - 125
Bromoform	50.0	44.8		ug/L		90	66 - 130
Bromomethane	50.0	60.3		ug/L		121	53 - 141
2-Butanone (MEK)	250	187		ug/L		75	56 - 143
n-Butylbenzene	50.0	51.6		ug/L		103	75 - 128
sec-Butylbenzene	50.0	50.2		ug/L		100	77 - 126
tert-Butylbenzene	50.0	48.7		ug/L		97	78 - 124
Carbon disulfide	50.0	45.5		ug/L		91	64 - 133
Carbon tetrachloride	50.0	47.6		ug/L		95	72 - 136
Chlorobenzene	50.0	49.3		ug/L		99	82 - 118
Chloroethane	50.0	75.4	Q	ug/L		151	60 - 138
Chloroform	50.0	45.1		ug/L		90	79 - 124

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

Lab Sample ID: LCS 680-806425/4
Matrix: Water
Analysis Batch: 806425

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloromethane	50.0	50.5		ug/L		101	50 - 139
2-Chlorotoluene	50.0	49.1		ug/L		98	79 - 122
4-Chlorotoluene	50.0	47.9		ug/L		96	78 - 122
Chlorodibromomethane	50.0	47.7		ug/L		95	74 - 126
1,2-Dibromo-3-Chloropropane	50.0	41.8		ug/L		84	62 - 128
Ethylene Dibromide	50.0	48.3		ug/L		97	75 - 127
Dibromomethane	50.0	47.8		ug/L		96	79 - 123
1,2-Dichlorobenzene	50.0	49.3		ug/L		99	80 - 119
1,3-Dichlorobenzene	50.0	49.2		ug/L		98	80 - 119
1,4-Dichlorobenzene	50.0	49.2		ug/L		98	79 - 118
Dichlorodifluoromethane	50.0	49.4		ug/L		99	32 - 152
1,1-Dichloroethane	50.0	48.6		ug/L		97	77 - 125
1,2-Dichloroethane	50.0	48.2		ug/L		96	73 - 128
cis-1,2-Dichloroethene	50.0	46.8		ug/L		94	78 - 123
trans-1,2-Dichloroethene	50.0	46.4		ug/L		93	75 - 124
1,2-Dichloroethene, Total	100	93.3		ug/L		93	79 - 121
1,1-Dichloroethene	50.0	44.7		ug/L		89	71 - 131
1,2-Dichloropropane	50.0	49.5		ug/L		99	78 - 122
1,3-Dichloropropane	50.0	50.9		ug/L		102	80 - 119
2,2-Dichloropropane	50.0	47.5		ug/L		95	60 - 139
1,1-Dichloropropene	50.0	48.4		ug/L		97	79 - 125
cis-1,3-Dichloropropene	50.0	49.1		ug/L		98	75 - 124
trans-1,3-Dichloropropene	50.0	48.0		ug/L		96	73 - 127
Ethylbenzene	50.0	49.9		ug/L		100	79 - 121
Hexachlorobutadiene	50.0	50.5		ug/L		101	66 - 134
2-Hexanone	250	235		ug/L		94	57 - 139
Isopropylbenzene	50.0	49.6		ug/L		99	72 - 131
4-Isopropyltoluene	50.0	49.9		ug/L		100	77 - 127
Methylene Chloride	50.0	46.9		ug/L		94	74 - 124
4-Methyl-2-pentanone (MIBK)	250	239		ug/L		96	67 - 130
Methyl tert-butyl ether	50.0	48.2		ug/L		96	71 - 124
Naphthalene	50.0	41.6		ug/L		83	61 - 128
N-Propylbenzene	50.0	50.0		ug/L		100	76 - 126
Styrene	50.0	47.5		ug/L		95	78 - 123
1,1,1,2-Tetrachloroethane	50.0	48.2		ug/L		96	78 - 124
1,1,2,2-Tetrachloroethane	50.0	48.4		ug/L		97	71 - 121
Tetrachloroethene	50.0	49.1		ug/L		98	74 - 129
Toluene	50.0	49.1		ug/L		98	80 - 121
1,2,3-Trichlorobenzene	50.0	42.7		ug/L		85	69 - 129
1,2,4-Trichlorobenzene	50.0	46.7		ug/L		93	69 - 130
1,1,1-Trichloroethane	50.0	47.4		ug/L		95	74 - 131
1,1,2-Trichloroethane	50.0	48.6		ug/L		97	80 - 119
Trichloroethene	50.0	48.4		ug/L		97	79 - 123
Trichlorofluoromethane	50.0	48.3		ug/L		97	65 - 141
1,2,3-Trichloropropane	50.0	47.7		ug/L		95	73 - 122
1,2,4-Trimethylbenzene	50.0	48.6		ug/L		97	76 - 124
1,3,5-Trimethylbenzene	50.0	48.6		ug/L		97	75 - 124
Vinyl acetate	100	107		ug/L		107	54 - 146
Vinyl chloride	50.0	52.2		ug/L		104	58 - 137

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

Lab Sample ID: LCS 680-806425/4
Matrix: Water
Analysis Batch: 806425

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			50.0	48.5		ug/L		97	78 - 122		
m-Xylene & p-Xylene			50.0	49.2		ug/L		98	80 - 121		
Xylenes, Total			100	97.7		ug/L		98	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*97*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*91*		*81 - 118*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*
Dibromofluoromethane (Surr)	*94*		*80 - 119*

Lab Sample ID: LCSD 680-806425/5
Matrix: Water
Analysis Batch: 806425

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
Acetone			250	212		ug/L		85	39 - 160	4	20
Benzene			50.0	47.7		ug/L		95	79 - 120	2	20
Bromobenzene			50.0	53.1		ug/L		106	80 - 120	9	20
Chlorobromomethane			50.0	44.7		ug/L		89	78 - 123	10	20
Dichlorobromomethane			50.0	44.9		ug/L		90	79 - 125	4	20
Bromoform			50.0	49.3		ug/L		99	66 - 130	9	20
Bromomethane			50.0	80.2	Q	ug/L		160	53 - 141	28	20
2-Butanone (MEK)			250	163		ug/L		65	56 - 143	14	20
n-Butylbenzene			50.0	47.5		ug/L		95	75 - 128	8	20
sec-Butylbenzene			50.0	52.7		ug/L		105	77 - 126	5	20
tert-Butylbenzene			50.0	51.8		ug/L		104	78 - 124	6	20
Carbon disulfide			50.0	43.6		ug/L		87	64 - 133	4	20
Carbon tetrachloride			50.0	45.1		ug/L		90	72 - 136	5	20
Chlorobenzene			50.0	52.3		ug/L		105	82 - 118	6	20
Chloroethane			50.0	73.5	Q	ug/L		147	60 - 138	2	20
Chloroform			50.0	43.2		ug/L		86	79 - 124	4	20
Chloromethane			50.0	44.0		ug/L		88	50 - 139	14	20
2-Chlorotoluene			50.0	52.2		ug/L		104	79 - 122	6	20
4-Chlorotoluene			50.0	51.9		ug/L		104	78 - 122	8	20
Chlorodibromomethane			50.0	48.0		ug/L		96	74 - 126	1	20
1,2-Dibromo-3-Chloropropane			50.0	43.9		ug/L		88	62 - 128	5	20
Ethylene Dibromide			50.0	49.5		ug/L		99	75 - 127	3	20
Dibromomethane			50.0	46.3		ug/L		93	79 - 123	3	20
1,2-Dichlorobenzene			50.0	49.4		ug/L		99	80 - 119	0	20
1,3-Dichlorobenzene			50.0	49.5		ug/L		99	80 - 119	1	20
1,4-Dichlorobenzene			50.0	49.0		ug/L		98	79 - 118	0	20
Dichlorodifluoromethane			50.0	44.8		ug/L		90	32 - 152	10	20
1,1-Dichloroethane			50.0	45.3		ug/L		91	77 - 125	7	20
1,2-Dichloroethane			50.0	43.1		ug/L		86	73 - 128	11	20
cis-1,2-Dichloroethene			50.0	45.7		ug/L		91	78 - 123	2	20
trans-1,2-Dichloroethene			50.0	44.8		ug/L		90	75 - 124	4	20
1,2-Dichloroethene, Total			100	90.5		ug/L		90	79 - 121	3	20
1,1-Dichloroethene			50.0	44.0		ug/L		88	71 - 131	1	20

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

Lab Sample ID: LCSD 680-806425/5
Matrix: Water
Analysis Batch: 806425

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Dichloropropane	50.0	47.4		ug/L		95	78 - 122	4	20
1,3-Dichloropropane	50.0	49.2		ug/L		98	80 - 119	3	20
2,2-Dichloropropane	50.0	42.6	M	ug/L		85	60 - 139	11	20
1,1-Dichloropropene	50.0	46.0		ug/L		92	79 - 125	5	20
cis-1,3-Dichloropropene	50.0	47.4		ug/L		95	75 - 124	3	20
trans-1,3-Dichloropropene	50.0	46.2		ug/L		92	73 - 127	4	20
Ethylbenzene	50.0	51.3		ug/L		103	79 - 121	3	20
Hexachlorobutadiene	50.0	51.8		ug/L		104	66 - 134	3	20
2-Hexanone	250	213		ug/L		85	57 - 139	10	20
Isopropylbenzene	50.0	51.7		ug/L		103	72 - 131	4	20
4-Isopropyltoluene	50.0	48.5		ug/L		97	77 - 127	3	20
Methylene Chloride	50.0	45.2		ug/L		90	74 - 124	4	20
4-Methyl-2-pentanone (MIBK)	250	218		ug/L		87	67 - 130	9	20
Methyl tert-butyl ether	50.0	45.3		ug/L		91	71 - 124	6	20
Naphthalene	50.0	44.5		ug/L		89	61 - 128	7	20
N-Propylbenzene	50.0	52.9		ug/L		106	76 - 126	6	20
Styrene	50.0	50.3		ug/L		101	78 - 123	6	20
1,1,1,2-Tetrachloroethane	50.0	50.4		ug/L		101	78 - 124	4	20
1,1,2,2-Tetrachloroethane	50.0	49.3		ug/L		99	71 - 121	2	20
Tetrachloroethene	50.0	52.8		ug/L		106	74 - 129	7	20
Toluene	50.0	49.2		ug/L		98	80 - 121	0	20
1,2,3-Trichlorobenzene	50.0	48.1		ug/L		96	69 - 129	12	20
1,2,4-Trichlorobenzene	50.0	48.3		ug/L		97	69 - 130	3	20
1,1,1-Trichloroethane	50.0	43.8		ug/L		88	74 - 131	8	20
1,1,2-Trichloroethane	50.0	47.7		ug/L		95	80 - 119	2	20
Trichloroethene	50.0	48.4		ug/L		97	79 - 123	0	20
Trichlorofluoromethane	50.0	48.1		ug/L		96	65 - 141	1	20
1,2,3-Trichloropropane	50.0	49.5		ug/L		99	73 - 122	4	20
1,2,4-Trimethylbenzene	50.0	50.4		ug/L		101	76 - 124	4	20
1,3,5-Trimethylbenzene	50.0	51.0		ug/L		102	75 - 124	5	20
Vinyl acetate	100	93.6		ug/L		94	54 - 146	13	20
Vinyl chloride	50.0	45.5		ug/L		91	58 - 137	14	20
o-Xylene	50.0	51.6		ug/L		103	78 - 122	6	20
m-Xylene & p-Xylene	50.0	52.3		ug/L		105	80 - 121	6	20
Xylenes, Total	100	104		ug/L		104	79 - 121	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*97*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*83*		*81 - 118*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*
Dibromofluoromethane (Surr)	*92*		*80 - 119*

Client: Seres Engineering & Services LLC
Job ID: 680-242433-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-805945/1-A
Matrix: Water
Analysis Batch: 806195

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 805945

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		11/02/23 15:13	1
Manganese	2.29	J	10	5.0	1.3	ug/L		11/02/23 15:13	1

Lab Sample ID: LCS 680-805945/2-A
Matrix: Water
Analysis Batch: 806195

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 805945

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	4990	5060		ug/L		101	87 - 115
Manganese	400	411		ug/L		103	90 - 114

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-805946/1-A
Matrix: Water
Analysis Batch: 806228

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 805946

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		11/03/23 02:20	1

Lab Sample ID: LCS 680-805946/2-A
Matrix: Water
Analysis Batch: 806228

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 805946

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	104		ug/L		104	84 - 116

QC Association Summary

Client: Seres Engineering & Services LLC
Job ID: 680-242433-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

GC/MS VOA

Analysis Batch: 806425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242433-1	AOC50-DUP01-FAL23	Total/NA	Water	8260D	
680-242433-2	G6M-02-13X-FAL23	Total/NA	Water	8260D	
680-242433-3	G6M-04-04X-FAL23	Total/NA	Water	8260D	
MB 680-806425/8	Method Blank	Total/NA	Water	8260D	
LCS 680-806425/4	Lab Control Sample	Total/NA	Water	8260D	
LCSD 680-806425/5	Lab Control Sample Dup	Total/NA	Water	8260D	

Metals

Prep Batch: 805945

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242433-1	AOC50-DUP01-FAL23	Dissolved	Water	3005A	
680-242433-2	G6M-02-13X-FAL23	Dissolved	Water	3005A	
680-242433-3	G6M-04-04X-FAL23	Dissolved	Water	3005A	
MB 680-805945/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-805945/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 805946

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242433-1	AOC50-DUP01-FAL23	Dissolved	Water	3005A	
680-242433-2	G6M-02-13X-FAL23	Dissolved	Water	3005A	
680-242433-3	G6M-04-04X-FAL23	Dissolved	Water	3005A	
MB 680-805946/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-805946/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 806195

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242433-1	AOC50-DUP01-FAL23	Dissolved	Water	6010C	805945
680-242433-2	G6M-02-13X-FAL23	Dissolved	Water	6010C	805945
680-242433-3	G6M-04-04X-FAL23	Dissolved	Water	6010C	805945
MB 680-805945/1-A	Method Blank	Total Recoverable	Water	6010C	805945
LCS 680-805945/2-A	Lab Control Sample	Total Recoverable	Water	6010C	805945

Analysis Batch: 806228

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242433-1	AOC50-DUP01-FAL23	Dissolved	Water	6020A	805946
680-242433-2	G6M-02-13X-FAL23	Dissolved	Water	6020A	805946
680-242433-3	G6M-04-04X-FAL23	Dissolved	Water	6020A	805946
MB 680-805946/1-A	Method Blank	Total Recoverable	Water	6020A	805946
LCS 680-805946/2-A	Lab Control Sample	Total Recoverable	Water	6020A	805946

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-242433-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: AOC50-DUP01-FAL23
Lab Sample ID: 680-242433-1
Date Collected: 10/23/23 14:50
Matrix: Water
Date Received: 11/01/23 10:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	806425	11/04/23 21:56	P1C	EET SAV
	Instrument ID: CMSAJ									
Dissolved	Prep	3005A			25 mL	25 mL	805945	11/02/23 06:53	RR	EET SAV
Dissolved	Analysis	6010C		1			806195	11/02/23 15:56	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	805946	11/02/23 06:53	RR	EET SAV
Dissolved	Analysis	6020A		1			806228	11/03/23 03:33	BWR	EET SAV
	Instrument ID: ICPMSC									

Client Sample ID: G6M-02-13X-FAL23
Lab Sample ID: 680-242433-2
Date Collected: 10/23/23 13:00
Matrix: Water
Date Received: 11/01/23 10:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	806425	11/04/23 22:17	P1C	EET SAV
	Instrument ID: CMSAJ									
Dissolved	Prep	3005A			25 mL	25 mL	805945	11/02/23 06:53	RR	EET SAV
Dissolved	Analysis	6010C		1			806195	11/02/23 15:54	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	805946	11/02/23 06:53	RR	EET SAV
Dissolved	Analysis	6020A		1			806228	11/03/23 03:29	BWR	EET SAV
	Instrument ID: ICPMSC									

Client Sample ID: G6M-04-04X-FAL23
Lab Sample ID: 680-242433-3
Date Collected: 10/23/23 14:50
Matrix: Water
Date Received: 11/01/23 10:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	806425	11/04/23 22:39	P1C	EET SAV
	Instrument ID: CMSAJ									
Dissolved	Prep	3005A			25 mL	25 mL	805945	11/02/23 06:53	RR	EET SAV
Dissolved	Analysis	6010C		1			806195	11/02/23 15:52	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	805946	11/02/23 06:53	RR	EET SAV
Dissolved	Analysis	6020A		1			806228	11/03/23 03:25	BWR	EET SAV
	Instrument ID: ICPMSC									

Laboratory References:

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

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-242433-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Laboratory: Eurofins Savannah

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

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-22-24

Method Summary

Client: Seres Engineering & Services LLC
Job ID: 680-242433-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds (GC/MS)	SW846	EET SAV
6010C	Metals (ICP)	SW846	EET SAV
6020A	Metals (ICP/MS)	SW846	EET SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET SAV
5030C	Purge and Trap	SW846	EET SAV

Protocol References:

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

Laboratory References:

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

CHAIN-OF-CUSTODY RECORD

ARVC
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # AOC50_LTM_FAL23

US Army Corps of Engineers

Project Name: Former Fort Devens, Long Term Monitoring	**Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA**	**Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023**
Project Number: DEVNS-LTM PO 2312 - 00000001	**POC: Jerry Lanier, 912-250-0281, jerry.lanier@eurofinsus.com**	
WBS Code:	**Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404**	

Comments:
A2320B (A) = Alkalinity
E353.2 (A) = Nitrite Nitrate as N
RSK175 (A) = Dissolved Gases
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9034 (A) = Sulfide

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
6	1x 125mL plastic, Cool < 6degC
7	2x 250mL plastic, ZnAc/NaOH Cool < 6degC
8	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
10	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
29	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC
47	1x 500mL, amber glass, H2SO4; Cool < 6degC

						Analytical Test Method	A2320B (A)	E353.2 (A)	RSK175 (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW8260B - VOCs	SW9034 (A)	SW9056A - SO4	SW9060A - TOC					
	Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023						46	47	8	9	9	29	7	5	10					
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
1	AOC50-DUP01-FAL23	WG								X	X	X				G6M-04-04X	FD1	94.00	104.00	1	
2	AOC50-DUP02-FAL23	WG					X	X	X	X	X	X	X	X	X	G6M-13-02X	FD1	115.00	125.00	1	
3	AOC50-DUP03-FAL23	WG					X	X	X	X	X	X	X	X	X	G6M-07-02X	FD1	22.50	27.50	1	
4	AOC50-DUP04-FAL23	WG								X	X	X				G6M-95-20X	FD1	18.00	23.00	1	
5	G6M-02-01X-FAL23	WG					X	X	X	X	X	X	X	X	X	G6M-02-01X	N1	80.00	95.00	1	
6	G6M-02-04X-FAL23	WG								X	X	X				G6M-02-04X	N1	90.00	105.00	1	
7	G6M-02-06X-FAL23	WG								X	X	X				G6M-02-06X	N1	55.00	65.00	1	
8	G6M-02-07X-FAL23	WG								X	X	X				G6M-02-07X	N1	30.00	40.00	1	
9	G6M-02-08X-FAL23	WG					X	X	X	X	X	X	X	X	X	G6M-02-08X	N1	60.00	70.00	1	
10	G6M-02-11X-FAL23	WG								X	X	X				G6M-02-11X	N1	125.00	135.00	1	
11	G6M-02-13X-FAL23	WG	10-23-23	1300	AF					X	X	X				G6M-02-13X	N1	110.00	120.00	1	
12	G6M-03-07X-FAL23	WG					X	X	X	X	X	X	X	X	X	G6M-03-07X	N1	80.00	90.00	1	
13	G6M-03-10X-FAL23	WG								X	X	X				G6M-03-10X	N1	120.00	135.00	1	
14	G6M-04-01X-FAL23	WG								X	X	X				G6M-04-01X	N1	82.00	92.00	1	
15	G6M-04-02X-FAL23	WG					X	X	X	X	X	X	X	X	X	G6M-04-02X	N1	80.00	90.00	1	
16	G6M-04-03X-FAL23	WG					X	X	X	X	X	X	X	X	X	G6M-04-03X	N1	85.00	95.00	1	
17	G6M-04-04X-FAL23	WG	10-23-23	1450	AF					X	X	X				G6M-04-04X	N1	94.00	104.00	1	
18	G6M-04-06X-FAL23	WG								X	X	X				G6M-04-06X	N1	95.00	136.00	1	
19	G6M-04-07X-FAL23	WG					X	X	X	X	X	X	X	X	X	G6M-04-07X	N1	120.00	130.00	1	
20	G6M-04-09X-FAL23	WG					X	X	X	X	X	X	X	X	X	G6M-04-09X	N1	55.00	65.00	1	

680-242433 Chain of Custody

Relinquished by: (Signature) Diane Clippinger
Date 10-25-23
Time 0800
Received by: (Signature)

Received by Laboratory: (Signature) TM
Date 11-1-23
Time 1012
2.9/3.2

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-242433-1

Login Number: 242433

List Source: Eurofins Savannah

List Number: 1

Creator: Sims, Robert D

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Received extra samples not listed on COC.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Heather Levesque
Seres Engineering & Services LLC
669 Marina Drive
Suite B7
Charleston, South Carolina 29492

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JOB DESCRIPTION

Seres-Arcadis JV, LTM, AOC 50, Fall 2023

JOB NUMBER

680-242668-1

Eurofins Savannah
5102 LaRoche Avenue
Savannah GA 31404

See page two for job notes and contact information.

my EOL

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.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization



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Authorized for release by
Jerry Lanier, Project Manager I
Jerry.Lanier@et.eurofinsus.com
(912)250-0281

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
M	Manual integrated compound.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

GC VOA

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

HPLC/IC

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

General Chemistry

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

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)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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

Sample Summary

Client: Seres Engineering & Services LLC
Job ID: 680-242668-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-242668-1	G6M-02-06X-FAL23	Water	11/02/23 12:00	11/07/23 09:53
680-242668-2	G6M-04-06X-FAL23	Water	11/02/23 09:40	11/07/23 09:53
680-242668-3	G6M-04-07X-FAL23	Water	11/02/23 10:45	11/07/23 09:53
680-242668-4	G6M-13-04X-FAL23	Water	11/02/23 14:05	11/07/23 09:53

Job ID: 680-242668-1

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-242668-1

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

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

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

Receipt
The samples were received on 11/7/2023 9:53 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.0°C

GC/MS VOA
Method 8260D_DOD5: The continuing calibration verification (CCV) associated with batch 680-808623 recovered above the upper control limit for Dichlorobromomethane, Bromomethane, Carbon tetrachloride, Chlorodibromomethane, Ethylene Dibromide, 1,2-Dichloroethane, 2,2-Dichloropropane, trans-1,3-Dichloropropene, 1,1,1-Trichloroethane and Trichlorofluoromethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8260D_DOD5: The laboratory control sample (LCS) was biased high for 1,2-Dichloroethane-d4 surrogate by 1%. All other QC and sample recoveries were acceptable and within control limits, and sample target analyte recoveries were acceptable. The data has been qualified and reported.

Method 8260D_DOD5: The laboratory control sample duplicated (LCSD) was biased high for Toluene-d8 surrogate and 1,2-Dichloroethane-d4 surrogate by 2% and 1% respectively. All other QC and sample recoveries were acceptable and within control limits, and sample target analyte recoveries were acceptable. The data has been qualified and reported.

Method 8260D_DOD5: The laboratory control sample (LCS) for analytical batch 680-808623 recovered outside control limits for the following analytes: Bromomethane and Chlorodibromomethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260D_DOD5: The laboratory control sample duplicate (LCSD) for analytical batch 680-808623 recovered outside control limits for the following analytes: Bromomethane and trans-1,3-Dichloropropene. These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

Method 8260D_DOD5: The closing continuing calibration verification (CCVC) associated with batch 680-808623 recovered above the upper control limit for Bromomethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

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

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

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

Metals

Job ID: 680-242668-1 (Continued)

Laboratory: Eurofins Savannah (Continued)

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

General Chemistry

Method 9034: The method requirement for no headspace was not met. The following samples were analyzed with headspace in the sample container(s): G6M-04-07X-FAL23 (680-242668-3) and (680-242590-H-1).

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

Client: Seres Engineering & Services LLC
Job ID: 680-242668-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-02-06X-FAL23
Lab Sample ID: 680-242668-1
Date Collected: 11/02/23 12:00
Matrix: Water
Date Received: 11/07/23 09:53

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		11/16/23 18:54	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		11/16/23 18:54	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		11/16/23 18:54	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		11/16/23 18:54	1
Dichlorobromomethane	1.0	U Q	2.0	1.0	0.25	ug/L		11/16/23 18:54	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		11/16/23 18:54	1
Bromomethane	10	U Q	20	10	3.7	ug/L		11/16/23 18:54	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		11/16/23 18:54	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		11/16/23 18:54	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		11/16/23 18:54	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		11/16/23 18:54	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		11/16/23 18:54	1
Carbon tetrachloride	1.0	U Q	2.0	1.0	0.30	ug/L		11/16/23 18:54	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		11/16/23 18:54	1
Chloroethane	10	U	20	10	4.6	ug/L		11/16/23 18:54	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		11/16/23 18:54	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		11/16/23 18:54	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		11/16/23 18:54	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		11/16/23 18:54	1
Chlorodibromomethane	1.0	U Q	2.0	1.0	0.39	ug/L		11/16/23 18:54	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		11/16/23 18:54	1
Ethylene Dibromide	1.0	U Q	2.0	1.0	0.33	ug/L		11/16/23 18:54	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		11/16/23 18:54	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/16/23 18:54	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/16/23 18:54	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/16/23 18:54	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		11/16/23 18:54	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		11/16/23 18:54	1
1,2-Dichloroethane	1.0	U Q	2.0	1.0	0.25	ug/L		11/16/23 18:54	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		11/16/23 18:54	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		11/16/23 18:54	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		11/16/23 18:54	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		11/16/23 18:54	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		11/16/23 18:54	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		11/16/23 18:54	1
2,2-Dichloropropane	1.0	U Q	2.0	1.0	0.35	ug/L		11/16/23 18:54	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		11/16/23 18:54	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		11/16/23 18:54	1
trans-1,3-Dichloropropene	1.0	U Q	2.0	1.0	0.23	ug/L		11/16/23 18:54	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		11/16/23 18:54	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		11/16/23 18:54	1
2-Hexanone	10	U	20	10	3.2	ug/L		11/16/23 18:54	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		11/16/23 18:54	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		11/16/23 18:54	1
Methylene Chloride	10	U	20	10	3.2	ug/L		11/16/23 18:54	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		11/16/23 18:54	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		11/16/23 18:54	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		11/16/23 18:54	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		11/16/23 18:54	1

Client Sample ID: G6M-02-06X-FAL23
Lab Sample ID: 680-242668-1
Date Collected: 11/02/23 12:00
Matrix: Water
Date Received: 11/07/23 09:53

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		11/16/23 18:54	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		11/16/23 18:54	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		11/16/23 18:54	1
Tetrachloroethene	1.0	U M	2.0	1.0	0.35	ug/L		11/16/23 18:54	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		11/16/23 18:54	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		11/16/23 18:54	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		11/16/23 18:54	1
1,1,1-Trichloroethane	0.50	U Q	1.0	0.50	0.21	ug/L		11/16/23 18:54	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		11/16/23 18:54	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		11/16/23 18:54	1
Trichlorofluoromethane	1.0	U Q	2.0	1.0	0.33	ug/L		11/16/23 18:54	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		11/16/23 18:54	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		11/16/23 18:54	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		11/16/23 18:54	1
Vinyl acetate	2.0	U M	2.5	2.0	0.69	ug/L		11/16/23 18:54	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		11/16/23 18:54	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		11/16/23 18:54	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		11/16/23 18:54	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		11/16/23 18:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*89 - 112*		*11/16/23 18:54*	*1*
1,2-Dichloroethane-d4 (Surr)	*115*		*81 - 118*		*11/16/23 18:54*	*1*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*		*11/16/23 18:54*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 119*		*11/16/23 18:54*	*1*

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		11/09/23 11:29	1
Manganese	5.0	U	10	5.0	1.3	ug/L		11/09/23 11:29	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**1.5**	**J**	5.0	3.0	0.86	ug/L		11/09/23 21:56	1

Client: Seres Engineering & Services LLC
Job ID: 680-242668-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-04-06X-FAL23
Lab Sample ID: 680-242668-2
Date Collected: 11/02/23 09:40
Matrix: Water
Date Received: 11/07/23 09:53

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		11/16/23 19:16	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		11/16/23 19:16	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		11/16/23 19:16	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		11/16/23 19:16	1
Dichlorobromomethane	1.0	U Q	2.0	1.0	0.25	ug/L		11/16/23 19:16	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		11/16/23 19:16	1
Bromomethane	10	U Q	20	10	3.7	ug/L		11/16/23 19:16	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		11/16/23 19:16	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		11/16/23 19:16	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		11/16/23 19:16	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		11/16/23 19:16	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		11/16/23 19:16	1
Carbon tetrachloride	1.0	U Q	2.0	1.0	0.30	ug/L		11/16/23 19:16	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		11/16/23 19:16	1
Chloroethane	10	U	20	10	4.6	ug/L		11/16/23 19:16	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		11/16/23 19:16	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		11/16/23 19:16	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		11/16/23 19:16	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		11/16/23 19:16	1
Chlorodibromomethane	1.0	U Q	2.0	1.0	0.39	ug/L		11/16/23 19:16	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		11/16/23 19:16	1
Ethylene Dibromide	1.0	U Q	2.0	1.0	0.33	ug/L		11/16/23 19:16	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		11/16/23 19:16	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/16/23 19:16	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/16/23 19:16	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/16/23 19:16	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		11/16/23 19:16	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		11/16/23 19:16	1
1,2-Dichloroethane	1.0	U Q	2.0	1.0	0.25	ug/L		11/16/23 19:16	1
cis-1,2-Dichloroethene	1.0	U M	2.0	1.0	0.25	ug/L		11/16/23 19:16	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		11/16/23 19:16	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		11/16/23 19:16	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		11/16/23 19:16	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		11/16/23 19:16	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		11/16/23 19:16	1
2,2-Dichloropropane	1.0	U Q	2.0	1.0	0.35	ug/L		11/16/23 19:16	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		11/16/23 19:16	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		11/16/23 19:16	1
trans-1,3-Dichloropropene	1.0	U Q	2.0	1.0	0.23	ug/L		11/16/23 19:16	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		11/16/23 19:16	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		11/16/23 19:16	1
2-Hexanone	10	U	20	10	3.2	ug/L		11/16/23 19:16	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		11/16/23 19:16	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		11/16/23 19:16	1
Methylene Chloride	10	U	20	10	3.2	ug/L		11/16/23 19:16	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		11/16/23 19:16	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		11/16/23 19:16	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		11/16/23 19:16	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		11/16/23 19:16	1

Client Sample ID: G6M-04-06X-FAL23
Lab Sample ID: 680-242668-2
Date Collected: 11/02/23 09:40
Matrix: Water
Date Received: 11/07/23 09:53

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		11/16/23 19:16	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		11/16/23 19:16	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		11/16/23 19:16	1
Tetrachloroethene	1.0	U M	2.0	1.0	0.35	ug/L		11/16/23 19:16	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		11/16/23 19:16	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		11/16/23 19:16	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		11/16/23 19:16	1
1,1,1-Trichloroethane	0.50	U Q	1.0	0.50	0.21	ug/L		11/16/23 19:16	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		11/16/23 19:16	1
Trichloroethene	0.50	U M	1.0	0.50	0.20	ug/L		11/16/23 19:16	1
Trichlorofluoromethane	1.0	U Q	2.0	1.0	0.33	ug/L		11/16/23 19:16	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		11/16/23 19:16	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		11/16/23 19:16	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		11/16/23 19:16	1
Vinyl acetate	2.0	U M	2.5	2.0	0.69	ug/L		11/16/23 19:16	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		11/16/23 19:16	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		11/16/23 19:16	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		11/16/23 19:16	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		11/16/23 19:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*107*		*89 - 112*		*11/16/23 19:16*	*1*
1,2-Dichloroethane-d4 (Surr)	*118*		*81 - 118*		*11/16/23 19:16*	*1*
4-Bromofluorobenzene (Surr)	*103*		*85 - 114*		*11/16/23 19:16*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 119*		*11/16/23 19:16*	*1*

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		11/09/23 11:31	1
Manganese	**88**		10	5.0	1.3	ug/L		11/09/23 11:31	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		11/09/23 22:00	1

Client Sample ID: G6M-04-07X-FAL23
Lab Sample ID: 680-242668-3
Date Collected: 11/02/23 10:45
Matrix: Water
Date Received: 11/07/23 09:53

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		11/16/23 19:38	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		11/16/23 19:38	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		11/16/23 19:38	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		11/16/23 19:38	1
Dichlorobromomethane	1.0	U Q	2.0	1.0	0.25	ug/L		11/16/23 19:38	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		11/16/23 19:38	1
Bromomethane	10	U Q	20	10	3.7	ug/L		11/16/23 19:38	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		11/16/23 19:38	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		11/16/23 19:38	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		11/16/23 19:38	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		11/16/23 19:38	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		11/16/23 19:38	1
Carbon tetrachloride	1.0	U Q	2.0	1.0	0.30	ug/L		11/16/23 19:38	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		11/16/23 19:38	1
Chloroethane	10	U	20	10	4.6	ug/L		11/16/23 19:38	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		11/16/23 19:38	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		11/16/23 19:38	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		11/16/23 19:38	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		11/16/23 19:38	1
Chlorodibromomethane	1.0	U Q	2.0	1.0	0.39	ug/L		11/16/23 19:38	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		11/16/23 19:38	1
Ethylene Dibromide	1.0	U Q	2.0	1.0	0.33	ug/L		11/16/23 19:38	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		11/16/23 19:38	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/16/23 19:38	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/16/23 19:38	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/16/23 19:38	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		11/16/23 19:38	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		11/16/23 19:38	1
1,2-Dichloroethane	1.0	U Q	2.0	1.0	0.25	ug/L		11/16/23 19:38	1
cis-1,2-Dichloroethene	**74**		2.0	1.0	0.25	ug/L		11/16/23 19:38	1
trans-1,2-Dichloroethene	1.0	U M	2.0	1.0	0.34	ug/L		11/16/23 19:38	1
1,2-Dichloroethene, Total	**74**		2.0	1.0	0.37	ug/L		11/16/23 19:38	1
1,1-Dichloroethene	1.0	U M	2.0	1.0	0.33	ug/L		11/16/23 19:38	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		11/16/23 19:38	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		11/16/23 19:38	1
2,2-Dichloropropane	1.0	U Q	2.0	1.0	0.35	ug/L		11/16/23 19:38	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		11/16/23 19:38	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		11/16/23 19:38	1
trans-1,3-Dichloropropene	1.0	U Q	2.0	1.0	0.23	ug/L		11/16/23 19:38	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		11/16/23 19:38	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		11/16/23 19:38	1
2-Hexanone	10	U	20	10	3.2	ug/L		11/16/23 19:38	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		11/16/23 19:38	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		11/16/23 19:38	1
Methylene Chloride	10	U	20	10	3.2	ug/L		11/16/23 19:38	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		11/16/23 19:38	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		11/16/23 19:38	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		11/16/23 19:38	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		11/16/23 19:38	1

Client Sample ID: G6M-04-07X-FAL23
Lab Sample ID: 680-242668-3
Date Collected: 11/02/23 10:45
Matrix: Water
Date Received: 11/07/23 09:53

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		11/16/23 19:38	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		11/16/23 19:38	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		11/16/23 19:38	1
Tetrachloroethene	**4.7**		2.0	1.0	0.35	ug/L		11/16/23 19:38	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		11/16/23 19:38	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		11/16/23 19:38	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		11/16/23 19:38	1
1,1,1-Trichloroethane	0.50	U Q	1.0	0.50	0.21	ug/L		11/16/23 19:38	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		11/16/23 19:38	1
Trichloroethene	**24**		1.0	0.50	0.20	ug/L		11/16/23 19:38	1
Trichlorofluoromethane	1.0	U Q	2.0	1.0	0.33	ug/L		11/16/23 19:38	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		11/16/23 19:38	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		11/16/23 19:38	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		11/16/23 19:38	1
Vinyl acetate	2.0	U M	2.5	2.0	0.69	ug/L		11/16/23 19:38	1
Vinyl chloride	**10**		2.0	1.0	0.40	ug/L		11/16/23 19:38	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		11/16/23 19:38	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		11/16/23 19:38	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		11/16/23 19:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*109*		*89 - 112*		*11/16/23 19:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*118*		*81 - 118*		*11/16/23 19:38*	*1*
4-Bromofluorobenzene (Surr)	*105*		*85 - 114*		*11/16/23 19:38*	*1*
Dibromofluoromethane (Surr)	*112*		*80 - 119*		*11/16/23 19:38*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**0.56**	**J**	1.1	0.76	0.30	ug/L		11/09/23 21:01	1
Ethylene	**0.46**	**J**	1.0	0.71	0.31	ug/L		11/09/23 21:01	1
Methane	**160**		1.2	1.2	0.57	ug/L		11/09/23 21:01	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**5.0**		1.5	1.0	0.40	mg/L		11/20/23 19:29	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**1200**		100	50	20	ug/L		11/09/23 11:34	1
Manganese	**3800**		10	5.0	1.3	ug/L		11/09/23 11:34	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**7.4**		5.0	3.0	0.86	ug/L		11/09/23 22:04	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B-2011)	**250**		5.5	5.0	2.2	mg/L		11/08/23 20:40	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	0.025	U	0.10	0.025	0.010	mg/L		11/15/23 11:28	1

Client: Seres Engineering & Services LLC
Job ID: 680-242668-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-04-07X-FAL23
Lab Sample ID: 680-242668-3
Date Collected: 11/02/23 10:45
Matrix: Water
Date Received: 11/07/23 09:53

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfide (SW846 9034)	1.8	U	2.7	1.8	0.89	mg/L		11/09/23 13:25	1
Total Organic Carbon (SW846 9060)	**1.3**	**J**	1.5	1.0	0.50	mg/L		11/11/23 06:31	1

Client: Seres Engineering & Services LLC
Job ID: 680-242668-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-13-04X-FAL23
Lab Sample ID: 680-242668-4
Date Collected: 11/02/23 14:05
Matrix: Water
Date Received: 11/07/23 09:53

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		11/16/23 19:59	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		11/16/23 19:59	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		11/16/23 19:59	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		11/16/23 19:59	1
Dichlorobromomethane	1.0	U Q	2.0	1.0	0.25	ug/L		11/16/23 19:59	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		11/16/23 19:59	1
Bromomethane	10	U Q	20	10	3.7	ug/L		11/16/23 19:59	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		11/16/23 19:59	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		11/16/23 19:59	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		11/16/23 19:59	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		11/16/23 19:59	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		11/16/23 19:59	1
Carbon tetrachloride	1.0	U Q	2.0	1.0	0.30	ug/L		11/16/23 19:59	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		11/16/23 19:59	1
Chloroethane	10	U	20	10	4.6	ug/L		11/16/23 19:59	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		11/16/23 19:59	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		11/16/23 19:59	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		11/16/23 19:59	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		11/16/23 19:59	1
Chlorodibromomethane	1.0	U Q	2.0	1.0	0.39	ug/L		11/16/23 19:59	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		11/16/23 19:59	1
Ethylene Dibromide	1.0	U Q	2.0	1.0	0.33	ug/L		11/16/23 19:59	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		11/16/23 19:59	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/16/23 19:59	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/16/23 19:59	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/16/23 19:59	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		11/16/23 19:59	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		11/16/23 19:59	1
1,2-Dichloroethane	1.0	U Q	2.0	1.0	0.25	ug/L		11/16/23 19:59	1
cis-1,2-Dichloroethene	1.0	U M	2.0	1.0	0.25	ug/L		11/16/23 19:59	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		11/16/23 19:59	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		11/16/23 19:59	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		11/16/23 19:59	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		11/16/23 19:59	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		11/16/23 19:59	1
2,2-Dichloropropane	1.0	U Q	2.0	1.0	0.35	ug/L		11/16/23 19:59	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		11/16/23 19:59	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		11/16/23 19:59	1
trans-1,3-Dichloropropene	1.0	U Q	2.0	1.0	0.23	ug/L		11/16/23 19:59	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		11/16/23 19:59	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		11/16/23 19:59	1
2-Hexanone	10	U	20	10	3.2	ug/L		11/16/23 19:59	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		11/16/23 19:59	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		11/16/23 19:59	1
Methylene Chloride	10	U	20	10	3.2	ug/L		11/16/23 19:59	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		11/16/23 19:59	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		11/16/23 19:59	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		11/16/23 19:59	1
N-Propylbenzene	1.0	U M	2.0	1.0	0.41	ug/L		11/16/23 19:59	1

Client Sample ID: G6M-13-04X-FAL23
Lab Sample ID: 680-242668-4
Date Collected: 11/02/23 14:05
Matrix: Water
Date Received: 11/07/23 09:53

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		11/16/23 19:59	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		11/16/23 19:59	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		11/16/23 19:59	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		11/16/23 19:59	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		11/16/23 19:59	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		11/16/23 19:59	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		11/16/23 19:59	1
1,1,1-Trichloroethane	0.50	U Q	1.0	0.50	0.21	ug/L		11/16/23 19:59	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		11/16/23 19:59	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		11/16/23 19:59	1
Trichlorofluoromethane	1.0	U Q	2.0	1.0	0.33	ug/L		11/16/23 19:59	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		11/16/23 19:59	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		11/16/23 19:59	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		11/16/23 19:59	1
Vinyl acetate	2.0	U M	2.5	2.0	0.69	ug/L		11/16/23 19:59	1
Vinyl chloride	**0.77**	**J**	2.0	1.0	0.40	ug/L		11/16/23 19:59	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		11/16/23 19:59	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		11/16/23 19:59	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		11/16/23 19:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*105*		*89 - 112*		*11/16/23 19:59*	*1*
1,2-Dichloroethane-d4 (Surr)	*117*		*81 - 118*		*11/16/23 19:59*	*1*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*		*11/16/23 19:59*	*1*
Dibromofluoromethane (Surr)	*108*		*80 - 119*		*11/16/23 19:59*	*1*

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**58000**		100	50	20	ug/L		11/15/23 18:03	1
Manganese	**6600**		10	5.0	1.3	ug/L		11/15/23 18:03	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**480**		5.0	3.0	0.86	ug/L		11/09/23 22:16	1

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

Lab Sample ID: MB 680-808623/8
Matrix: Water
Analysis Batch: 808623

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		11/16/23 14:17	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		11/16/23 14:17	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		11/16/23 14:17	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		11/16/23 14:17	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		11/16/23 14:17	1
Bromoform	2.0	U M	2.5	2.0	0.59	ug/L		11/16/23 14:17	1
Bromomethane	10	U	20	10	3.7	ug/L		11/16/23 14:17	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		11/16/23 14:17	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		11/16/23 14:17	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		11/16/23 14:17	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		11/16/23 14:17	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		11/16/23 14:17	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		11/16/23 14:17	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		11/16/23 14:17	1
Chloroethane	10	U	20	10	4.6	ug/L		11/16/23 14:17	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		11/16/23 14:17	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		11/16/23 14:17	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		11/16/23 14:17	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		11/16/23 14:17	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		11/16/23 14:17	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		11/16/23 14:17	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		11/16/23 14:17	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		11/16/23 14:17	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/16/23 14:17	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/16/23 14:17	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/16/23 14:17	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		11/16/23 14:17	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		11/16/23 14:17	1
1,2-Dichloroethane	1.0	U	2.0	1.0	0.25	ug/L		11/16/23 14:17	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		11/16/23 14:17	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		11/16/23 14:17	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		11/16/23 14:17	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		11/16/23 14:17	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		11/16/23 14:17	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		11/16/23 14:17	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		11/16/23 14:17	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		11/16/23 14:17	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		11/16/23 14:17	1
trans-1,3-Dichloropropene	1.0	U M	2.0	1.0	0.23	ug/L		11/16/23 14:17	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		11/16/23 14:17	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		11/16/23 14:17	1
2-Hexanone	10	U	20	10	3.2	ug/L		11/16/23 14:17	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		11/16/23 14:17	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		11/16/23 14:17	1
Methylene Chloride	10	U	20	10	3.2	ug/L		11/16/23 14:17	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		11/16/23 14:17	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		11/16/23 14:17	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		11/16/23 14:17	1

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

Lab Sample ID: MB 680-808623/8
Matrix: Water
Analysis Batch: 808623

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
N-Propylbenzene	1.0	U M	2.0	1.0	0.41	ug/L		11/16/23 14:17	1
Styrene	1.0	U M	2.0	1.0	0.27	ug/L		11/16/23 14:17	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		11/16/23 14:17	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		11/16/23 14:17	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		11/16/23 14:17	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		11/16/23 14:17	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		11/16/23 14:17	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		11/16/23 14:17	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		11/16/23 14:17	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		11/16/23 14:17	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		11/16/23 14:17	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		11/16/23 14:17	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		11/16/23 14:17	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		11/16/23 14:17	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		11/16/23 14:17	1
Vinyl acetate	2.0	U M	2.5	2.0	0.69	ug/L		11/16/23 14:17	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		11/16/23 14:17	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		11/16/23 14:17	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		11/16/23 14:17	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		11/16/23 14:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*106*		*89 - 112*		*11/16/23 14:17*	*1*
1,2-Dichloroethane-d4 (Surr)	*110*		*81 - 118*		*11/16/23 14:17*	*1*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*		*11/16/23 14:17*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 119*		*11/16/23 14:17*	*1*

Lab Sample ID: LCS 680-808623/4
Matrix: Water
Analysis Batch: 808623

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	250	240		ug/L		96	39 - 160
Benzene	50.0	52.8		ug/L		106	79 - 120
Bromobenzene	50.0	47.5		ug/L		95	80 - 120
Chlorobromomethane	50.0	49.8		ug/L		100	78 - 123
Dichlorobromomethane	50.0	60.5		ug/L		121	79 - 125
Bromoform	50.0	55.7		ug/L		111	66 - 130
Bromomethane	50.0	86.6	Q	ug/L		173	53 - 141
2-Butanone (MEK)	250	239		ug/L		96	56 - 143
n-Butylbenzene	50.0	51.2		ug/L		102	75 - 128
sec-Butylbenzene	50.0	48.8		ug/L		98	77 - 126
tert-Butylbenzene	50.0	50.2		ug/L		100	78 - 124
Carbon disulfide	50.0	49.0		ug/L		98	64 - 133
Carbon tetrachloride	50.0	65.0		ug/L		130	72 - 136
Chlorobenzene	50.0	46.6		ug/L		93	82 - 118
Chloroethane	50.0	46.1		ug/L		92	60 - 138
Chloroform	50.0	58.8		ug/L		118	79 - 124

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

Lab Sample ID: LCS 680-808623/4
Matrix: Water
Analysis Batch: 808623

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloromethane	50.0	47.6		ug/L		95	50 - 139
2-Chlorotoluene	50.0	46.9		ug/L		94	79 - 122
4-Chlorotoluene	50.0	48.8		ug/L		98	78 - 122
Chlorodibromomethane	50.0	63.7	Q	ug/L		127	74 - 126
1,2-Dibromo-3-Chloropropane	50.0	52.0		ug/L		104	62 - 128
Ethylene Dibromide	50.0	59.1		ug/L		118	75 - 127
Dibromomethane	50.0	56.6		ug/L		113	79 - 123
1,2-Dichlorobenzene	50.0	49.0		ug/L		98	80 - 119
1,3-Dichlorobenzene	50.0	48.1		ug/L		96	80 - 119
1,4-Dichlorobenzene	50.0	48.6		ug/L		97	79 - 118
Dichlorodifluoromethane	50.0	58.4		ug/L		117	32 - 152
1,1-Dichloroethane	50.0	52.4		ug/L		105	77 - 125
1,2-Dichloroethane	50.0	62.1		ug/L		124	73 - 128
cis-1,2-Dichloroethene	50.0	54.3		ug/L		109	78 - 123
trans-1,2-Dichloroethene	50.0	51.6		ug/L		103	75 - 124
1,2-Dichloroethene, Total	100	106		ug/L		106	79 - 121
1,1-Dichloroethene	50.0	53.2		ug/L		106	71 - 131
1,2-Dichloropropane	50.0	48.9		ug/L		98	78 - 122
1,3-Dichloropropane	50.0	55.1		ug/L		110	80 - 119
2,2-Dichloropropane	50.0	63.4	M	ug/L		127	60 - 139
1,1-Dichloropropene	50.0	55.7		ug/L		111	79 - 125
cis-1,3-Dichloropropene	50.0	60.3		ug/L		121	75 - 124
trans-1,3-Dichloropropene	50.0	61.7		ug/L		123	73 - 127
Ethylbenzene	50.0	49.6		ug/L		99	79 - 121
Hexachlorobutadiene	50.0	55.7		ug/L		111	66 - 134
2-Hexanone	250	266		ug/L		107	57 - 139
Isopropylbenzene	50.0	49.8		ug/L		100	72 - 131
4-Isopropyltoluene	50.0	52.7		ug/L		105	77 - 127
Methylene Chloride	50.0	50.9		ug/L		102	74 - 124
4-Methyl-2-pentanone (MIBK)	250	266		ug/L		106	67 - 130
Methyl tert-butyl ether	50.0	57.3		ug/L		115	71 - 124
Naphthalene	50.0	50.0		ug/L		100	61 - 128
N-Propylbenzene	50.0	48.4		ug/L		97	76 - 126
Styrene	50.0	50.0		ug/L		100	78 - 123
1,1,1,2-Tetrachloroethane	50.0	52.4		ug/L		105	78 - 124
1,1,2,2-Tetrachloroethane	50.0	46.6		ug/L		93	71 - 121
Tetrachloroethene	50.0	57.5		ug/L		115	74 - 129
Toluene	50.0	55.0		ug/L		110	80 - 121
1,2,3-Trichlorobenzene	50.0	48.7		ug/L		97	69 - 129
1,2,4-Trichlorobenzene	50.0	48.9		ug/L		98	69 - 130
1,1,1-Trichloroethane	50.0	64.1		ug/L		128	74 - 131
1,1,2-Trichloroethane	50.0	56.9		ug/L		114	80 - 119
Trichloroethene	50.0	54.8		ug/L		110	79 - 123
Trichlorofluoromethane	50.0	63.7		ug/L		127	65 - 141
1,2,3-Trichloropropane	50.0	51.1		ug/L		102	73 - 122
1,2,4-Trimethylbenzene	50.0	51.4		ug/L		103	76 - 124
1,3,5-Trimethylbenzene	50.0	50.4		ug/L		101	75 - 124
Vinyl acetate	100	107		ug/L		107	54 - 146
Vinyl chloride	50.0	52.8		ug/L		106	58 - 137

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

Lab Sample ID: LCS 680-808623/4
Matrix: Water
Analysis Batch: 808623

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			50.0	47.5		ug/L		95	78 - 122		
m-Xylene & p-Xylene			50.0	48.6		ug/L		97	80 - 121		
Xylenes, Total			100	96.1		ug/L		96	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*110*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*119*	*Q*	*81 - 118*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*
Dibromofluoromethane (Surr)	*113*		*80 - 119*

Lab Sample ID: LCSD 680-808623/5
Matrix: Water
Analysis Batch: 808623

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
Acetone			250	244		ug/L		97	39 - 160	2	20
Benzene			50.0	54.7		ug/L		109	79 - 120	4	20
Bromobenzene			50.0	48.5		ug/L		97	80 - 120	2	20
Chlorobromomethane			50.0	51.3		ug/L		103	78 - 123	3	20
Dichlorobromomethane			50.0	61.7		ug/L		123	79 - 125	2	20
Bromoform			50.0	56.9		ug/L		114	66 - 130	2	20
Bromomethane			50.0	87.2	Q	ug/L		174	53 - 141	1	20
2-Butanone (MEK)			250	252		ug/L		101	56 - 143	5	20
n-Butylbenzene			50.0	50.0		ug/L		100	75 - 128	2	20
sec-Butylbenzene			50.0	49.5		ug/L		99	77 - 126	1	20
tert-Butylbenzene			50.0	52.0		ug/L		104	78 - 124	4	20
Carbon disulfide			50.0	49.9		ug/L		100	64 - 133	2	20
Carbon tetrachloride			50.0	63.5		ug/L		127	72 - 136	2	20
Chlorobenzene			50.0	48.5		ug/L		97	82 - 118	4	20
Chloroethane			50.0	51.9		ug/L		104	60 - 138	12	20
Chloroform			50.0	57.7		ug/L		115	79 - 124	2	20
Chloromethane			50.0	48.0		ug/L		96	50 - 139	1	20
2-Chlorotoluene			50.0	47.9		ug/L		96	79 - 122	2	20
4-Chlorotoluene			50.0	49.9		ug/L		100	78 - 122	2	20
Chlorodibromomethane			50.0	63.1		ug/L		126	74 - 126	1	20
1,2-Dibromo-3-Chloropropane			50.0	51.4		ug/L		103	62 - 128	1	20
Ethylene Dibromide			50.0	60.4		ug/L		121	75 - 127	2	20
Dibromomethane			50.0	58.8		ug/L		118	79 - 123	4	20
1,2-Dichlorobenzene			50.0	48.0		ug/L		96	80 - 119	2	20
1,3-Dichlorobenzene			50.0	48.8		ug/L		98	80 - 119	1	20
1,4-Dichlorobenzene			50.0	49.0		ug/L		98	79 - 118	1	20
Dichlorodifluoromethane			50.0	58.4		ug/L		117	32 - 152	0	20
1,1-Dichloroethane			50.0	53.2		ug/L		106	77 - 125	1	20
1,2-Dichloroethane			50.0	61.8		ug/L		124	73 - 128	0	20
cis-1,2-Dichloroethene			50.0	55.1		ug/L		110	78 - 123	1	20
trans-1,2-Dichloroethene			50.0	53.6		ug/L		107	75 - 124	4	20
1,2-Dichloroethene, Total			100	109		ug/L		109	79 - 121	3	20
1,1-Dichloroethene			50.0	51.1		ug/L		102	71 - 131	4	20

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

Lab Sample ID: LCSD 680-808623/5
Matrix: Water
Analysis Batch: 808623

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Dichloropropane	50.0	50.5		ug/L		101	78 - 122	3	20
1,3-Dichloropropane	50.0	56.1		ug/L		112	80 - 119	2	20
2,2-Dichloropropane	50.0	63.6	M	ug/L		127	60 - 139	0	20
1,1-Dichloropropene	50.0	56.3		ug/L		113	79 - 125	1	20
cis-1,3-Dichloropropene	50.0	59.8		ug/L		120	75 - 124	1	20
trans-1,3-Dichloropropene	50.0	65.0	Q	ug/L		130	73 - 127	5	20
Ethylbenzene	50.0	51.1		ug/L		102	79 - 121	3	20
Hexachlorobutadiene	50.0	50.8		ug/L		102	66 - 134	9	20
2-Hexanone	250	276		ug/L		110	57 - 139	3	20
Isopropylbenzene	50.0	51.3		ug/L		103	72 - 131	3	20
4-Isopropyltoluene	50.0	51.9		ug/L		104	77 - 127	1	20
Methylene Chloride	50.0	52.7		ug/L		105	74 - 124	3	20
4-Methyl-2-pentanone (MIBK)	250	273		ug/L		109	67 - 130	2	20
Methyl tert-butyl ether	50.0	58.4		ug/L		117	71 - 124	2	20
Naphthalene	50.0	49.8		ug/L		100	61 - 128	0	20
N-Propylbenzene	50.0	50.1		ug/L		100	76 - 126	3	20
Styrene	50.0	51.0		ug/L		102	78 - 123	2	20
1,1,1,2-Tetrachloroethane	50.0	53.0		ug/L		106	78 - 124	1	20
1,1,2,2-Tetrachloroethane	50.0	49.1		ug/L		98	71 - 121	5	20
Tetrachloroethene	50.0	57.1		ug/L		114	74 - 129	1	20
Toluene	50.0	56.8		ug/L		114	80 - 121	3	20
1,2,3-Trichlorobenzene	50.0	47.1		ug/L		94	69 - 129	3	20
1,2,4-Trichlorobenzene	50.0	48.0		ug/L		96	69 - 130	2	20
1,1,1-Trichloroethane	50.0	64.6		ug/L		129	74 - 131	1	20
1,1,2-Trichloroethane	50.0	56.4		ug/L		113	80 - 119	1	20
Trichloroethene	50.0	57.4		ug/L		115	79 - 123	5	20
Trichlorofluoromethane	50.0	62.4		ug/L		125	65 - 141	2	20
1,2,3-Trichloropropane	50.0	51.9		ug/L		104	73 - 122	2	20
1,2,4-Trimethylbenzene	50.0	53.1		ug/L		106	76 - 124	3	20
1,3,5-Trimethylbenzene	50.0	51.8		ug/L		104	75 - 124	3	20
Vinyl acetate	100	110		ug/L		110	54 - 146	3	20
Vinyl chloride	50.0	53.0		ug/L		106	58 - 137	1	20
o-Xylene	50.0	49.8		ug/L		100	78 - 122	5	20
m-Xylene & p-Xylene	50.0	49.0		ug/L		98	80 - 121	1	20
Xylenes, Total	100	98.8		ug/L		99	79 - 121	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*114*	*Q*	*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*119*	*Q*	*81 - 118*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*
Dibromofluoromethane (Surr)	*115*		*80 - 119*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-807367/9
Matrix: Water
Analysis Batch: 807367

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	0.76	U	1.1	0.76	0.30	ug/L		11/09/23 15:23	1
Ethylene	0.71	U	1.0	0.71	0.31	ug/L		11/09/23 15:23	1
Methane	1.2	U	1.2	1.2	0.57	ug/L		11/09/23 15:23	1

Lab Sample ID: LCS 680-807367/3
Matrix: Water
Analysis Batch: 807367

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methane (TCD)	1920	1950		ug/L		102	73 - 125

Lab Sample ID: LCS 680-807367/6
Matrix: Water
Analysis Batch: 807367

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethane	361	298		ug/L		83	74 - 131
Ethylene	337	269		ug/L		80	72 - 133
Methane	192	158		ug/L		82	73 - 125

Lab Sample ID: LCSD 680-807367/4
Matrix: Water
Analysis Batch: 807367

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
Methane (TCD)	1920	1940		ug/L		101	73 - 125	1	30

Lab Sample ID: LCSD 680-807367/7
Matrix: Water
Analysis Batch: 807367

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
Ethane	361	318		ug/L		88	74 - 131	6	30
Ethylene	337	285		ug/L		85	72 - 133	6	30
Methane	192	168		ug/L		87	73 - 125	6	30

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-809261/33
Matrix: Water
Analysis Batch: 809261

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	1.0	U	1.5	1.0	0.40	mg/L		11/20/23 18:09	1

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

Lab Sample ID: LCS 680-809261/34
Matrix: Water
Analysis Batch: 809261

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	10.0	9.53		mg/L		95	87 - 112

Lab Sample ID: LCSD 680-809261/35
Matrix: Water
Analysis Batch: 809261

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
Sulfate	10.0	9.60		mg/L		96	87 - 112	1	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-807016/1-A
Matrix: Water
Analysis Batch: 807415

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 807016

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		11/09/23 10:44	1
Manganese	5.0	U	10	5.0	1.3	ug/L		11/09/23 10:44	1

Lab Sample ID: LCS 680-807016/2-A
Matrix: Water
Analysis Batch: 807415

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 807016

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	4990	4990		ug/L		100	87 - 115
Manganese	400	402		ug/L		100	90 - 114

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-807015/1-A
Matrix: Water
Analysis Batch: 807545

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 807015

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		11/09/23 20:39	1

Lab Sample ID: LCS 680-807015/2-A
Matrix: Water
Analysis Batch: 807545

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 807015

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	110		ug/L		110	84 - 116

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 680-807347/4
Matrix: Water
Analysis Batch: 807347

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	5.0	U	5.5	5.0	2.2	mg/L		11/08/23 17:19	1

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: LCS 680-807347/6
Matrix: Water
Analysis Batch: 807347

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity as CaCO3 to pH 4.5	250	249		mg/L		100	90 - 112

Lab Sample ID: LCSD 680-807347/31
Matrix: Water
Analysis Batch: 807347

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
Total Alkalinity as CaCO3 to pH 4.5	250	254		mg/L		101	90 - 112	2	30

Method: 353.2-1993 R2.0 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 680-808427/17
Matrix: Water
Analysis Batch: 808427

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.025	U	0.10	0.025	0.010	mg/L		11/15/23 10:36	1

Lab Sample ID: LCS 680-808427/18
Matrix: Water
Analysis Batch: 808427

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	1.00	0.978		mg/L		98	90 - 110

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 680-807403/1
Matrix: Water
Analysis Batch: 807403

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfide	2.0	U	3.0	2.0	1.0	mg/L		11/09/23 13:25	1

Lab Sample ID: LCS 680-807403/2
Matrix: Water
Analysis Batch: 807403

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	10.0	9.10		mg/L		91	75 - 125

Lab Sample ID: LCSD 680-807403/3
Matrix: Water
Analysis Batch: 807403

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
Sulfide	10.0	9.13		mg/L		91	75 - 125	0	30

Client: Seres Engineering & Services LLC
Job ID: 680-242668-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Method: 9060 - Organic Carbon, Total (TOC)

Lab Sample ID: MB 680-807772/2
Matrix: Water
Analysis Batch: 807772

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon	1.0	U	1.5	1.0	0.50	mg/L		11/10/23 22:53	1

Lab Sample ID: LCS 680-807772/3
Matrix: Water
Analysis Batch: 807772

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	20.0	18.2		mg/L		91	80 - 120

Lab Sample ID: LCSD 680-807772/4
Matrix: Water
Analysis Batch: 807772

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
Total Organic Carbon	20.0	18.2		mg/L		91	80 - 120	0	25

GC/MS VOA

Analysis Batch: 808623

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242668-1	G6M-02-06X-FAL23	Total/NA	Water	8260D	
680-242668-2	G6M-04-06X-FAL23	Total/NA	Water	8260D	
680-242668-3	G6M-04-07X-FAL23	Total/NA	Water	8260D	
680-242668-4	G6M-13-04X-FAL23	Total/NA	Water	8260D	
MB 680-808623/8	Method Blank	Total/NA	Water	8260D	
LCS 680-808623/4	Lab Control Sample	Total/NA	Water	8260D	
LCSD 680-808623/5	Lab Control Sample Dup	Total/NA	Water	8260D	

GC VOA

Analysis Batch: 807367

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242668-3	G6M-04-07X-FAL23	Total/NA	Water	RSK-175	
MB 680-807367/9	Method Blank	Total/NA	Water	RSK-175	
LCS 680-807367/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-807367/6	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-807367/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-807367/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	

HPLC/IC

Analysis Batch: 809261

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242668-3	G6M-04-07X-FAL23	Total/NA	Water	9056A	
MB 680-809261/33	Method Blank	Total/NA	Water	9056A	
LCS 680-809261/34	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-809261/35	Lab Control Sample Dup	Total/NA	Water	9056A	

Metals

Prep Batch: 807015

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242668-1	G6M-02-06X-FAL23	Dissolved	Water	3005A	
680-242668-2	G6M-04-06X-FAL23	Dissolved	Water	3005A	
680-242668-3	G6M-04-07X-FAL23	Dissolved	Water	3005A	
680-242668-4	G6M-13-04X-FAL23	Dissolved	Water	3005A	
MB 680-807015/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-807015/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 807016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242668-1	G6M-02-06X-FAL23	Dissolved	Water	3005A	
680-242668-2	G6M-04-06X-FAL23	Dissolved	Water	3005A	
680-242668-3	G6M-04-07X-FAL23	Dissolved	Water	3005A	
680-242668-4	G6M-13-04X-FAL23	Dissolved	Water	3005A	
MB 680-807016/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-807016/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 807415

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242668-1	G6M-02-06X-FAL23	Dissolved	Water	6010C	807016
680-242668-2	G6M-04-06X-FAL23	Dissolved	Water	6010C	807016

Metals (Continued)

Analysis Batch: 807415 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242668-3	G6M-04-07X-FAL23	Dissolved	Water	6010C	807016
MB 680-807016/1-A	Method Blank	Total Recoverable	Water	6010C	807016
LCS 680-807016/2-A	Lab Control Sample	Total Recoverable	Water	6010C	807016

Analysis Batch: 807545

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242668-1	G6M-02-06X-FAL23	Dissolved	Water	6020A	807015
680-242668-2	G6M-04-06X-FAL23	Dissolved	Water	6020A	807015
680-242668-3	G6M-04-07X-FAL23	Dissolved	Water	6020A	807015
680-242668-4	G6M-13-04X-FAL23	Dissolved	Water	6020A	807015
MB 680-807015/1-A	Method Blank	Total Recoverable	Water	6020A	807015
LCS 680-807015/2-A	Lab Control Sample	Total Recoverable	Water	6020A	807015

Analysis Batch: 808561

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242668-4	G6M-13-04X-FAL23	Dissolved	Water	6010C	807016

General Chemistry

Analysis Batch: 807347

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242668-3	G6M-04-07X-FAL23	Total/NA	Water	2320B-2011	
MB 680-807347/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-807347/6	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-807347/31	Lab Control Sample Dup	Total/NA	Water	2320B-2011	

Analysis Batch: 807403

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242668-3	G6M-04-07X-FAL23	Total/NA	Water	9034	
MB 680-807403/1	Method Blank	Total/NA	Water	9034	
LCS 680-807403/2	Lab Control Sample	Total/NA	Water	9034	
LCSD 680-807403/3	Lab Control Sample Dup	Total/NA	Water	9034	

Analysis Batch: 807772

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242668-3	G6M-04-07X-FAL23	Total/NA	Water	9060	
MB 680-807772/2	Method Blank	Total/NA	Water	9060	
LCS 680-807772/3	Lab Control Sample	Total/NA	Water	9060	
LCSD 680-807772/4	Lab Control Sample Dup	Total/NA	Water	9060	

Analysis Batch: 808427

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242668-3	G6M-04-07X-FAL23	Total/NA	Water	353.2-1993 R2.0	
MB 680-808427/17	Method Blank	Total/NA	Water	353.2-1993 R2.0	
LCS 680-808427/18	Lab Control Sample	Total/NA	Water	353.2-1993 R2.0	

Client Sample ID: G6M-02-06X-FAL23

Lab Sample ID: 680-242668-1

Date Collected: 11/02/23 12:00

Matrix: Water

Date Received: 11/07/23 09:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	808623	11/16/23 18:54	NTA	EET SAV
	Instrument ID: CMSAJ									
Dissolved	Prep	3005A			25 mL	25 mL	807016	11/08/23 06:02	RR	EET SAV
Dissolved	Analysis	6010C		1			807415	11/09/23 11:29	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	807015	11/08/23 06:02	RR	EET SAV
Dissolved	Analysis	6020A		1			807545	11/09/23 21:56	BWR	EET SAV
	Instrument ID: ICPMSC									

Client Sample ID: G6M-04-06X-FAL23

Lab Sample ID: 680-242668-2

Date Collected: 11/02/23 09:40

Matrix: Water

Date Received: 11/07/23 09:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	808623	11/16/23 19:16	NTA	EET SAV
	Instrument ID: CMSAJ									
Dissolved	Prep	3005A			25 mL	25 mL	807016	11/08/23 06:02	RR	EET SAV
Dissolved	Analysis	6010C		1			807415	11/09/23 11:31	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	807015	11/08/23 06:02	RR	EET SAV
Dissolved	Analysis	6020A		1			807545	11/09/23 22:00	BWR	EET SAV
	Instrument ID: ICPMSC									

Client Sample ID: G6M-04-07X-FAL23

Lab Sample ID: 680-242668-3

Date Collected: 11/02/23 10:45

Matrix: Water

Date Received: 11/07/23 09:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	808623	11/16/23 19:38	NTA	EET SAV
	Instrument ID: CMSAJ									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	807367	11/09/23 21:01	OK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	809261	11/20/23 19:29	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			25 mL	25 mL	807016	11/08/23 06:02	RR	EET SAV
Dissolved	Analysis	6010C		1			807415	11/09/23 11:34	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	807015	11/08/23 06:02	RR	EET SAV
Dissolved	Analysis	6020A		1			807545	11/09/23 22:04	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	2320B-2011		1			807347	11/08/23 20:40	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	808427	11/15/23 11:28	AF	EET SAV
	Instrument ID: SEAL 1									

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-242668-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Client Sample ID: G6M-04-07X-FAL23
Lab Sample ID: 680-242668-3
Date Collected: 11/02/23 10:45
Matrix: Water
Date Received: 11/07/23 09:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9034		1	280 mL	280 mL	807403	11/09/23 13:25	JAS	EET SAV
Total/NA	Analysis	9060		1	40 mL	40 mL	807772	11/11/23 06:31	KMB	EET SAV
	Instrument ID: TOC7									

Client Sample ID: G6M-13-04X-FAL23
Lab Sample ID: 680-242668-4
Date Collected: 11/02/23 14:05
Matrix: Water
Date Received: 11/07/23 09:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	808623	11/16/23 19:59	NTA	EET SAV
	Instrument ID: CMSAJ									
Dissolved	Prep	3005A			25 mL	25 mL	807016	11/08/23 06:02	RR	EET SAV
Dissolved	Analysis	6010C		1			808561	11/15/23 18:03	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	807015	11/08/23 06:02	RR	EET SAV
Dissolved	Analysis	6020A		1			807545	11/09/23 22:16	BWR	EET SAV
	Instrument ID: ICPMSC									

Laboratory References:

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

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-242668-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Laboratory: Eurofins Savannah

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

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-22-24

Method Summary

Client: Seres Engineering & Services LLC
Job ID: 680-242668-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2023

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds (GC/MS)	SW846	EET SAV
RSK-175	Dissolved Gases (GC)	RSK	EET SAV
9056A	Anions, Ion Chromatography	SW846	EET SAV
6010C	Metals (ICP)	SW846	EET SAV
6020A	Metals (ICP/MS)	SW846	EET SAV
2320B-2011	Alkalinity, Total	SM	EET SAV
353.2-1993 R2.0	Nitrogen, Nitrate-Nitrite	MCAWW	EET SAV
9034	Sulfide, Acid Soluble and Insoluble (Titrimetric)	SW846	EET SAV
9060	Organic Carbon, Total (TOC)	SW846	EET SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET SAV
5030C	Purge and Trap	SW846	EET SAV

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique , RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

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

CHAIN-OF-CUSTODY RECORD

ARVC
Heather Levesque
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(843) 619-370-0374, jennifer.singer@arcadis.com

COC # AOC50_LTM_FAL23

US Army Corps of Engineers

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023
Project Number: DEVNS-LTM PO 2312 - 00000001	POC: Jerry Lanier, 912-250-0281, jerry.lanier@eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
E353.2 (A) = Nitrite Nitrate as N
RSK175 (A) = Dissolved Gases
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9034 (A) = Sulfide

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
6	1x 125mL plastic, Cool < 6degC
7	2x 250mL plastic, ZnAc/NaOH Cool < 6degC
8	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
10	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
29	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC
47	1x 500mL, amber glass, H2SO4; Cool < 6degC

680-242668 Chain of Custody

						Analytical Test Method	A2320B (A)	E353.2 (A)	RSK175 (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW8260B - VOCs	SW9034 (A)	SW9056A - SO4	SW9060A - TOC						
	Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023						46	47	8	9	9	29	7	5	10						
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
1	AOC50-DUP01-FAL23	WG								X	X	X				G6M-04-04X	FD1	94.00	104.00	1	
2	AOC50-DUP02-FAL23	WG					X	X	X	X	X	X	X	X	X	G6M-13-02X	FD1	115.00	125.00	1	
3	AOC50-DUP03-FAL23	WG					X	X	X	X	X	X	X	X	X	G6M-07-02X	FD1	22.50	27.50	1	
4	AOC50-DUP04-FAL23	WG								X	X	X				G6M-95-20X	FD1	18.00	23.00	1	
5	G6M-02-01X-FAL23	WG					X	X	X	X	X	X	X	X	X	G6M-02-01X	N1	80.00	95.00	1	
6	G6M-02-04X-FAL23	WG								X	X	X				G6M-02-04X	N1	90.00	105.00	1	
7	G6M-02-06X-FAL23	WG	11-2-23	1200	FM					X	X	X				G6M-02-06X	N1	55.00	65.00	1	
8	G6M-02-07X-FAL23	WG								X	X	X				G6M-02-07X	N1	30.00	40.00	1	
9	G6M-02-08X-FAL23	WG					X	X	X	X	X	X	X	X	X	G6M-02-08X	N1	60.00	70.00	1	
10	G6M-02-11X-FAL23	WG								X	X	X				G6M-02-11X	N1	125.00	135.00	1	
11	G6M-02-13X-FAL23	WG								X	X	X				G6M-02-13X	N1	110.00	120.00	1	
12	G6M-03-07X-FAL23	WG					X	X	X	X	X	X	X	X	X	G6M-03-07X	N1	80.00	90.00	1	
13	G6M-03-10X-FAL23	WG								X	X	X				G6M-03-10X	N1	120.00	135.00	1	
14	G6M-04-01X-FAL23	WG								X	X	X				G6M-04-01X	N1	82.00	92.00	1	
15	G6M-04-02X-FAL23	WG					X	X	X	X	X	X	X	X	X	G6M-04-02X	N1	80.00	90.00	1	
16	G6M-04-03X-FAL23	WG					X	X	X	X	X	X	X	X	X	G6M-04-03X	N1	85.00	95.00	1	
17	G6M-04-04X-FAL23	WG								X	X	X				G6M-04-04X	N1	94.00	104.00	1	
18	G6M-04-06X-FAL23	WG	11-1-23	940	FM					X	X	X				G6M-04-06X	N1	95.00	136.00	1	
19	G6M-04-07X-FAL23	WG	11-2-23	1045	FM		X	X	X	X	X	X	X	X	X	G6M-04-07X	N1	120.00	130.00	1	
20	G6M-04-09X-FAL23	WG					X	X	X	X	X	X	X	X	X	G6M-04-09X	N1	55.00	65.00	1	

Relinquished by: (Signature) Dana Clare
Date 11-3-23
Time 1400
Received by: (Signature)

Received by Laboratory: (Signature) C. Mina
Date 11/7/23
Time 0953
2-7/3.0

CHAIN-OF-CUSTODY RECORD

ARVC
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # AOC50_LTM_FAL23

US Army Corps of Engineers

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023
Project Number: DEVNS-LTM PO 2312 - 00000001	POC: Jerry Lanier, 912-250-0281, jerry.lanier@eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
E353.2 (A) = Nitrite Nitrate as N
RSK175 (A) = Dissolved Gases
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9034 (A) = Sulfide

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
6	1x 125mL plastic, Cool < 6degC
7	2x 250mL plastic, ZnAc/NaOH Cool < 6degC
8	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
10	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
29	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC
47	1x 500mL, amber glass, H2SO4; Cool < 6degC

Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023

	Sample ID	Matrix	Date	Time	Samp Init.	A2320B (A)	E353.2 (A)	RSK175 (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW8260B - VOCs	SW9034 (A)	SW9056A - SO4	SW9060A - TOC	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
	Analytical Test Method					46	47	8	9	9	29	7	5	10						
21	G6M-04-10A-FAL23	WG				X	X	X	X	X	X	X	X	X	G6M-04-10A	MS1	30.00	40.00	1	
22	G6M-04-10A-FAL23	WG				X	X	X	X	X	X	X	X	X	G6M-04-10A	N1	30.00	40.00	1	
23	G6M-04-10A-FAL23	WG				X	X	X	X	X	X	X	X	X	G6M-04-10A	SD1	30.00	40.00	1	
24	G6M-04-10X-FAL23	WG									X				G6M-04-10X	N1	52.00	62.00	1	
25	G6M-04-13X-FAL23	WG									X				G6M-04-13X	N1	30.00	40.00	1	
26	G6M-04-14X-FAL23	WG							X	X	X				G6M-04-14X	N1	80.00	90.00	1	
27	G6M-04-15X-FAL23	WG							X	X	X				G6M-04-15X	N1	70.00	80.00	1	
28	G6M-07-01X-FAL23	WG				X	X	X	X	X	X	X	X	X	G6M-07-01X	N1	78.00	98.00	1	
29	G6M-07-02X-FAL23	WG				X	X	X	X	X	X	X	X	X	G6M-07-02X	N1	22.50	27.50	1	
30	G6M-13-01X-FAL23	WG				X	X	X	X	X	X	X	X	X	G6M-13-01X	N1	125.00	135.00	1	
31	G6M-13-02X-FAL23	WG				X	X	X	X	X	X	X	X	X	G6M-13-02X	N1	115.00	125.00	1	
32	G6M-13-04X-FAL23	WG	11-2-23	1405	FM				X	X	X				G6M-13-04X	N1	125.00	135.00	1	
33	G6M-13-05X-FAL23	WG				X	X	X	X	X	X	X	X	X	G6M-13-05X	N1	45.00	55.00	1	
34	G6M-13-06X-FAL23	WG				X	X	X	X	X	X	X	X	X	G6M-13-06X	N1	50.00	60.00	1	
35	G6M-95-19X-FAL23	WG									X				G6M-95-19X	N1	48.00	58.00	1	
36	G6M-95-20X-FAL23	WG							X	X	X				G6M-95-20X	N1	18.00	23.00	1	
37	G6M-97-05B-FAL23	WG				X	X	X	X	X	X	X	X	X	G6M-97-05B	N1	130.00	135.00	1	
38	G6M-97-28X-FAL23	WG							X	X					G6M-97-28X	N1	100.00	105.00	1	
39	MW-3-FAL23	WG							X	X	X				MW-3	MS1	126.00	136.00	1	
40	MW-3-FAL23	WG							X	X	X				MW-3	N1	126.00	136.00	1	

Relinquished by: (Signature) Date Time Received by: (Signature)

11-3-23 1400

Received by Laboratory: (Signature) Date Time

11/7/23 0953

11/21/2023

US Army Corps of Engineers

...ve, Suite B7, Charleston, SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023
Project Number: DEVNS-LTM PO 2312 - 00000001	POC: Jerry Lanier, 912-250-0281, jerry.lanier@eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
E353.2 (A) = Nitrite Nitrate as N
RSK175 (A) = Dissolved Gases
SW6010C/FLDFLT (B) = Fe Mn
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Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
5	1x 125mL plastic, Cool < 6degC
7	2x 250mL plastic, ZnAc/NaOH Cool < 6degC
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10	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
29	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC
47	1x 500mL, amber glass, H2SO4; Cool < 6degC

						Analytical Test Method	A2320B (A)	E353.2 (A)	RSK175 (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW8260B - VOCs	SW9034 (A)	SW9056A - SO4	SW9060A - TOC						
	Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023						46	47	8	9	9	29	7	5	10						
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
41	MW-3-FAL23	WG								X	X	X				MW-3	SD1	126.00	136.00	1	
42	MW-7-FAL23	WG								X	X	X				MW-7	N1	6.58	135.00	1	
43	XSA-12-95X-FAL23	WG								X	X	X				XSA-12-95X	N1	120.00	130.00	1	
44	XSA-12-96X-FAL23	WG								X	X	X				XSA-12-96X	N1	120.00	130.00	1	
45	XSA-12-97X-FAL23	WG								X	X	X				XSA-12-97X	N1	120.00	130.00	1	
46	XSA-12-98X-FAL23	WG								X	X	X				XSA-12-98X	N1	60.00	70.00	1	
47																					
48																					
49																					
50																					
51																					

Turnaround Time: Standard

Relinquished by: (Signature)
Date
Time
Received by: (Signature)

Received by Laboratory: (Signature)
Date
Time

C. Mun 11/7/23 0953
2.7/3.0

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-242668-1

Login Number: 242668

List Source: Eurofins Savannah

List Number: 1

Creator: Munro, Caroline

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Heather Levesque
Seres Engineering & Services LLC
669 Marina Drive
Suite B7
Charleston, South Carolina 29492

Generated 11/29/2023 11:00:54 PM

JOB DESCRIPTION

Fort Devens, Long Term Monitoring

JOB NUMBER

680-242974-2

Eurofins Savannah
5102 LaRoche Avenue
Savannah GA 31404

See page two for job notes and contact information.

my EOL

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.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization



Generated
11/29/2023 11:00:54 PM

Authorized for release by
Jerry Lanier, Project Manager I
Jerry.Lanier@et.eurofinsus.com
(912)250-0281

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
M	Manual integrated compound.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

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

Sample Summary

Client: Seres Engineering & Services LLC
Job ID: 680-242974-2
Project/Site: Fort Devens, Long Term Monitoring

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-242974-10	XSA-12-96X-FAL23	Water	11/13/23 00:00	11/14/23 10:05

Job ID: 680-242974-2

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-242974-2

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

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

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

Receipt
The samples were received on 11/14/2023 10:05 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 3.0°C, 3.4°C and 3.9°C

GC/MS VOA
Method 8260D_DOD5: The continuing calibration verification (CCV) associated with batch 680-809821 recovered above the upper control limit for Trichlorofluoromethane and Vinyl chloride. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8260D_DOD5: The continuing calibration verification (CCV) associated with batch 680-809821 recovered outside acceptance criteria, low biased, for Bromomethane and 1,2-Dibromo-3-Chloropropane. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

Method 8260D_DOD5: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 680-809821 recovered outside control limits for the following analytes: Trichlorofluoromethane. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method 8260D_DOD5: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 680-809821.

Method 8260D_DOD5: The laboratory control sample and the laboratory control sample duplicate (LCS/LCSD) were biased low for Toluene-d8 surrogate by 1%. All other QC and sample recoveries were acceptable and within control limits, and sample target analyte recoveries were acceptable. The data has been qualified and reported.

(LCS 680-809821/4) and (LCSD 680-809821/5)

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

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

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens, Long Term Monitoring

Job ID: 680-242974-2

Client Sample ID: XSA-12-96X-FAL23
Date Collected: 11/13/23 00:00
Date Received: 11/14/23 10:05

Lab Sample ID: 680-242974-10
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		11/23/23 12:57	1
Benzene	1.0	U M	2.0	1.0	0.27	ug/L		11/23/23 12:57	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		11/23/23 12:57	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		11/23/23 12:57	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		11/23/23 12:57	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		11/23/23 12:57	1
Bromomethane	10	U Q	20	10	3.7	ug/L		11/23/23 12:57	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		11/23/23 12:57	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		11/23/23 12:57	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		11/23/23 12:57	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		11/23/23 12:57	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		11/23/23 12:57	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		11/23/23 12:57	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		11/23/23 12:57	1
Chloroethane	10	U M	20	10	4.6	ug/L		11/23/23 12:57	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		11/23/23 12:57	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		11/23/23 12:57	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		11/23/23 12:57	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		11/23/23 12:57	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		11/23/23 12:57	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		11/23/23 12:57	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		11/23/23 12:57	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		11/23/23 12:57	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/23/23 12:57	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/23/23 12:57	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/23/23 12:57	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		11/23/23 12:57	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		11/23/23 12:57	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		11/23/23 12:57	1
cis-1,2-Dichloroethene	**7.5**		2.0	1.0	0.25	ug/L		11/23/23 12:57	1
trans-1,2-Dichloroethene	**3.7**		2.0	1.0	0.34	ug/L		11/23/23 12:57	1
1,2-Dichloroethene, Total	**11**		2.0	1.0	0.37	ug/L		11/23/23 12:57	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		11/23/23 12:57	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		11/23/23 12:57	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		11/23/23 12:57	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		11/23/23 12:57	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		11/23/23 12:57	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		11/23/23 12:57	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		11/23/23 12:57	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		11/23/23 12:57	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		11/23/23 12:57	1
2-Hexanone	10	U	20	10	3.2	ug/L		11/23/23 12:57	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		11/23/23 12:57	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		11/23/23 12:57	1
Methylene Chloride	10	U	20	10	3.2	ug/L		11/23/23 12:57	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		11/23/23 12:57	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		11/23/23 12:57	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		11/23/23 12:57	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		11/23/23 12:57	1

Client Sample ID: XSA-12-96X-FAL23
Lab Sample ID: 680-242974-10
Date Collected: 11/13/23 00:00
Matrix: Water
Date Received: 11/14/23 10:05

Method: SW846 8260D - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	1.0	U	2.0	1.0	0.27	ug/L		11/23/23 12:57	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		11/23/23 12:57	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		11/23/23 12:57	1
Tetrachloroethene	**4.8**		2.0	1.0	0.35	ug/L		11/23/23 12:57	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		11/23/23 12:57	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		11/23/23 12:57	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		11/23/23 12:57	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		11/23/23 12:57	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		11/23/23 12:57	1
Trichloroethene	**7.7**		1.0	0.50	0.20	ug/L		11/23/23 12:57	1
Trichlorofluoromethane	1.0	U Q	2.0	1.0	0.33	ug/L		11/23/23 12:57	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		11/23/23 12:57	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		11/23/23 12:57	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		11/23/23 12:57	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		11/23/23 12:57	1
Vinyl chloride	**7.9**	**Q**	2.0	1.0	0.40	ug/L		11/23/23 12:57	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		11/23/23 12:57	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		11/23/23 12:57	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		11/23/23 12:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*92*		*89 - 112*		*11/23/23 12:57*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*81 - 118*		*11/23/23 12:57*	*1*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*11/23/23 12:57*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 119*		*11/23/23 12:57*	*1*

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**2000**		100	50	20	ug/L		11/16/23 16:41	1
Manganese	**5100**		10	5.0	1.3	ug/L		11/16/23 16:41	1

Method: SW846 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**1.8**	**J**	5.0	3.0	0.86	ug/L		11/17/23 01:50	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens, Long Term Monitoring

Job ID: 680-242974-2

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

Lab Sample ID: MB 680-809821/8
Matrix: Water
Analysis Batch: 809821

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		11/23/23 12:21	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		11/23/23 12:21	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		11/23/23 12:21	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		11/23/23 12:21	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		11/23/23 12:21	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		11/23/23 12:21	1
Bromomethane	10	U	20	10	3.7	ug/L		11/23/23 12:21	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		11/23/23 12:21	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		11/23/23 12:21	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		11/23/23 12:21	1
tert-Butylbenzene	1.0	U M	2.0	1.0	0.43	ug/L		11/23/23 12:21	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		11/23/23 12:21	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		11/23/23 12:21	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		11/23/23 12:21	1
Chloroethane	10	U	20	10	4.6	ug/L		11/23/23 12:21	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		11/23/23 12:21	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		11/23/23 12:21	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		11/23/23 12:21	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		11/23/23 12:21	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		11/23/23 12:21	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		11/23/23 12:21	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		11/23/23 12:21	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		11/23/23 12:21	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/23/23 12:21	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/23/23 12:21	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		11/23/23 12:21	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		11/23/23 12:21	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		11/23/23 12:21	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		11/23/23 12:21	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		11/23/23 12:21	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		11/23/23 12:21	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		11/23/23 12:21	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		11/23/23 12:21	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		11/23/23 12:21	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		11/23/23 12:21	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		11/23/23 12:21	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		11/23/23 12:21	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		11/23/23 12:21	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		11/23/23 12:21	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		11/23/23 12:21	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		11/23/23 12:21	1
2-Hexanone	10	U	20	10	3.2	ug/L		11/23/23 12:21	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		11/23/23 12:21	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		11/23/23 12:21	1
Methylene Chloride	10	U	20	10	3.2	ug/L		11/23/23 12:21	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		11/23/23 12:21	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		11/23/23 12:21	1
Naphthalene	5.0	U M	10	5.0	2.4	ug/L		11/23/23 12:21	1

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

Lab Sample ID: MB 680-809821/8
Matrix: Water
Analysis Batch: 809821

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		11/23/23 12:21	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		11/23/23 12:21	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		11/23/23 12:21	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		11/23/23 12:21	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		11/23/23 12:21	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		11/23/23 12:21	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		11/23/23 12:21	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		11/23/23 12:21	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		11/23/23 12:21	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		11/23/23 12:21	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		11/23/23 12:21	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		11/23/23 12:21	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		11/23/23 12:21	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		11/23/23 12:21	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		11/23/23 12:21	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		11/23/23 12:21	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		11/23/23 12:21	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		11/23/23 12:21	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		11/23/23 12:21	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		11/23/23 12:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*89 - 112*		*11/23/23 12:21*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*81 - 118*		*11/23/23 12:21*	*1*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*		*11/23/23 12:21*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 119*		*11/23/23 12:21*	*1*

Lab Sample ID: LCS 680-809821/4
Matrix: Water
Analysis Batch: 809821

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	250	263		ug/L		105	39 - 160
Benzene	50.0	46.8		ug/L		94	79 - 120
Bromobenzene	50.0	52.1		ug/L		104	80 - 120
Chlorobromomethane	50.0	45.5		ug/L		91	78 - 123
Dichlorobromomethane	50.0	47.5		ug/L		95	79 - 125
Bromoform	50.0	53.5		ug/L		107	66 - 130
Bromomethane	50.0	28.0		ug/L		56	53 - 141
2-Butanone (MEK)	250	242		ug/L		97	56 - 143
n-Butylbenzene	50.0	48.3		ug/L		97	75 - 128
sec-Butylbenzene	50.0	55.3		ug/L		111	77 - 126
tert-Butylbenzene	50.0	54.6		ug/L		109	78 - 124
Carbon disulfide	50.0	45.9		ug/L		92	64 - 133
Carbon tetrachloride	50.0	47.8		ug/L		96	72 - 136
Chlorobenzene	50.0	45.8		ug/L		92	82 - 118
Chloroethane	50.0	66.3		ug/L		133	60 - 138
Chloroform	50.0	44.6		ug/L		89	79 - 124

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

Lab Sample ID: LCS 680-809821/4
Matrix: Water
Analysis Batch: 809821

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloromethane	50.0	49.6		ug/L		99	50 - 139
2-Chlorotoluene	50.0	58.5		ug/L		117	79 - 122
4-Chlorotoluene	50.0	56.9		ug/L		114	78 - 122
Chlorodibromomethane	50.0	50.4		ug/L		101	74 - 126
1,2-Dibromo-3-Chloropropane	50.0	36.3		ug/L		73	62 - 128
Ethylene Dibromide	50.0	48.4		ug/L		97	75 - 127
Dibromomethane	50.0	45.1		ug/L		90	79 - 123
1,2-Dichlorobenzene	50.0	41.6		ug/L		83	80 - 119
1,3-Dichlorobenzene	50.0	49.8		ug/L		100	80 - 119
1,4-Dichlorobenzene	50.0	48.7		ug/L		97	79 - 118
Dichlorodifluoromethane	50.0	58.6		ug/L		117	32 - 152
1,1-Dichloroethane	50.0	45.8		ug/L		92	77 - 125
1,2-Dichloroethane	50.0	43.0		ug/L		86	73 - 128
cis-1,2-Dichloroethene	50.0	45.0		ug/L		90	78 - 123
trans-1,2-Dichloroethene	50.0	46.2		ug/L		92	75 - 124
1,2-Dichloroethene, Total	100	91.2		ug/L		91	79 - 121
1,1-Dichloroethene	50.0	48.8		ug/L		98	71 - 131
1,2-Dichloropropane	50.0	47.0		ug/L		94	78 - 122
1,3-Dichloropropane	50.0	47.8		ug/L		96	80 - 119
2,2-Dichloropropane	50.0	47.8		ug/L		96	60 - 139
1,1-Dichloropropene	50.0	47.2		ug/L		94	79 - 125
cis-1,3-Dichloropropene	50.0	48.8		ug/L		98	75 - 124
trans-1,3-Dichloropropene	50.0	49.0		ug/L		98	73 - 127
Ethylbenzene	50.0	45.9		ug/L		92	79 - 121
Hexachlorobutadiene	50.0	41.1		ug/L		82	66 - 134
2-Hexanone	250	274		ug/L		110	57 - 139
Isopropylbenzene	50.0	50.2		ug/L		100	72 - 131
4-Isopropyltoluene	50.0	52.0		ug/L		104	77 - 127
Methylene Chloride	50.0	47.0		ug/L		94	74 - 124
4-Methyl-2-pentanone (MIBK)	250	264		ug/L		105	67 - 130
Methyl tert-butyl ether	50.0	45.9		ug/L		92	71 - 124
Naphthalene	50.0	45.2		ug/L		90	61 - 128
N-Propylbenzene	50.0	52.3		ug/L		105	76 - 126
Styrene	50.0	54.8		ug/L		110	78 - 123
1,1,1,2-Tetrachloroethane	50.0	45.9		ug/L		92	78 - 124
1,1,2,2-Tetrachloroethane	50.0	45.2		ug/L		90	71 - 121
Tetrachloroethene	50.0	46.7		ug/L		93	74 - 129
Toluene	50.0	47.3		ug/L		95	80 - 121
1,2,3-Trichlorobenzene	50.0	42.7		ug/L		85	69 - 129
1,2,4-Trichlorobenzene	50.0	40.9		ug/L		82	69 - 130
1,1,1-Trichloroethane	50.0	45.8		ug/L		92	74 - 131
1,1,2-Trichloroethane	50.0	48.3		ug/L		97	80 - 119
Trichloroethene	50.0	46.2		ug/L		92	79 - 123
Trichlorofluoromethane	50.0	72.6	Q	ug/L		145	65 - 141
1,2,3-Trichloropropane	50.0	48.8		ug/L		98	73 - 122
1,2,4-Trimethylbenzene	50.0	56.0		ug/L		112	76 - 124
1,3,5-Trimethylbenzene	50.0	55.8		ug/L		112	75 - 124
Vinyl acetate	100	95.2		ug/L		95	54 - 146
Vinyl chloride	50.0	62.9		ug/L		126	58 - 137

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

Lab Sample ID: LCS 680-809821/4
Matrix: Water
Analysis Batch: 809821

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			50.0	50.0		ug/L		100	78 - 122		
m-Xylene & p-Xylene			50.0	47.6		ug/L		95	80 - 121		
Xylenes, Total			100	97.6		ug/L		98	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*88*	*Q*	*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*85*		*81 - 118*
4-Bromofluorobenzene (Surr)	*112*		*85 - 114*
Dibromofluoromethane (Surr)	*89*		*80 - 119*

Lab Sample ID: LCSD 680-809821/5
Matrix: Water
Analysis Batch: 809821

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
Acetone			250	276		ug/L		111	39 - 160	5	20
Benzene			50.0	47.0		ug/L		94	79 - 120	1	20
Bromobenzene			50.0	52.5		ug/L		105	80 - 120	1	20
Chlorobromomethane			50.0	46.2		ug/L		92	78 - 123	2	20
Dichlorobromomethane			50.0	48.1		ug/L		96	79 - 125	1	20
Bromoform			50.0	54.9		ug/L		110	66 - 130	3	20
Bromomethane			50.0	28.8		ug/L		58	53 - 141	3	20
2-Butanone (MEK)			250	252		ug/L		101	56 - 143	4	20
n-Butylbenzene			50.0	47.9		ug/L		96	75 - 128	1	20
sec-Butylbenzene			50.0	54.6		ug/L		109	77 - 126	1	20
tert-Butylbenzene			50.0	53.8		ug/L		108	78 - 124	2	20
Carbon disulfide			50.0	45.6		ug/L		91	64 - 133	1	20
Carbon tetrachloride			50.0	48.1		ug/L		96	72 - 136	1	20
Chlorobenzene			50.0	45.6		ug/L		91	82 - 118	0	20
Chloroethane			50.0	57.3		ug/L		115	60 - 138	15	20
Chloroform			50.0	44.5		ug/L		89	79 - 124	0	20
Chloromethane			50.0	49.2		ug/L		98	50 - 139	1	20
2-Chlorotoluene			50.0	57.8		ug/L		116	79 - 122	1	20
4-Chlorotoluene			50.0	56.3		ug/L		113	78 - 122	1	20
Chlorodibromomethane			50.0	52.2		ug/L		104	74 - 126	3	20
1,2-Dibromo-3-Chloropropane			50.0	37.3		ug/L		75	62 - 128	3	20
Ethylene Dibromide			50.0	50.1		ug/L		100	75 - 127	3	20
Dibromomethane			50.0	47.1		ug/L		94	79 - 123	5	20
1,2-Dichlorobenzene			50.0	42.2		ug/L		84	80 - 119	1	20
1,3-Dichlorobenzene			50.0	50.1		ug/L		100	80 - 119	1	20
1,4-Dichlorobenzene			50.0	48.6		ug/L		97	79 - 118	0	20
Dichlorodifluoromethane			50.0	57.8		ug/L		116	32 - 152	1	20
1,1-Dichloroethane			50.0	45.6		ug/L		91	77 - 125	0	20
1,2-Dichloroethane			50.0	44.3		ug/L		89	73 - 128	3	20
cis-1,2-Dichloroethene			50.0	45.5		ug/L		91	78 - 123	1	20
trans-1,2-Dichloroethene			50.0	45.9		ug/L		92	75 - 124	1	20
1,2-Dichloroethene, Total			100	91.4		ug/L		91	79 - 121	0	20
1,1-Dichloroethene			50.0	48.1		ug/L		96	71 - 131	1	20

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

Lab Sample ID: LCSD 680-809821/5
Matrix: Water
Analysis Batch: 809821

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Dichloropropane			50.0	47.5		ug/L		95	78 - 122	1	20
1,3-Dichloropropane			50.0	49.0		ug/L		98	80 - 119	3	20
2,2-Dichloropropane			50.0	47.4		ug/L		95	60 - 139	1	20
1,1-Dichloropropene			50.0	47.5		ug/L		95	79 - 125	1	20
cis-1,3-Dichloropropene			50.0	49.9		ug/L		100	75 - 124	2	20
trans-1,3-Dichloropropene			50.0	50.1		ug/L		100	73 - 127	2	20
Ethylbenzene			50.0	45.3		ug/L		91	79 - 121	1	20
Hexachlorobutadiene			50.0	40.7		ug/L		81	66 - 134	1	20
2-Hexanone			250	287		ug/L		115	57 - 139	5	20
Isopropylbenzene			50.0	49.7		ug/L		99	72 - 131	1	20
4-Isopropyltoluene			50.0	52.0		ug/L		104	77 - 127	0	20
Methylene Chloride			50.0	49.0		ug/L		98	74 - 124	4	20
4-Methyl-2-pentanone (MIBK)			250	278		ug/L		111	67 - 130	5	20
Methyl tert-butyl ether			50.0	47.8		ug/L		96	71 - 124	4	20
Naphthalene			50.0	45.6		ug/L		91	61 - 128	1	20
N-Propylbenzene			50.0	51.7		ug/L		103	76 - 126	1	20
Styrene			50.0	54.4		ug/L		109	78 - 123	1	20
1,1,1,2-Tetrachloroethane			50.0	46.0		ug/L		92	78 - 124	0	20
1,1,2,2-Tetrachloroethane			50.0	46.3		ug/L		93	71 - 121	2	20
Tetrachloroethene			50.0	46.8		ug/L		94	74 - 129	0	20
Toluene			50.0	47.9		ug/L		96	80 - 121	1	20
1,2,3-Trichlorobenzene			50.0	42.8		ug/L		86	69 - 129	0	20
1,2,4-Trichlorobenzene			50.0	40.9		ug/L		82	69 - 130	0	20
1,1,1-Trichloroethane			50.0	46.2		ug/L		92	74 - 131	1	20
1,1,2-Trichloroethane			50.0	49.9		ug/L		100	80 - 119	3	20
Trichloroethene			50.0	47.2		ug/L		94	79 - 123	2	20
Trichlorofluoromethane			50.0	72.3	Q	ug/L		145	65 - 141	0	20
1,2,3-Trichloropropane			50.0	50.3		ug/L		101	73 - 122	3	20
1,2,4-Trimethylbenzene			50.0	55.7		ug/L		111	76 - 124	1	20
1,3,5-Trimethylbenzene			50.0	55.1		ug/L		110	75 - 124	1	20
Vinyl acetate			100	98.1		ug/L		98	54 - 146	3	20
Vinyl chloride			50.0	62.6		ug/L		125	58 - 137	0	20
o-Xylene			50.0	49.7		ug/L		99	78 - 122	1	20
m-Xylene & p-Xylene			50.0	47.1		ug/L		94	80 - 121	1	20
Xylenes, Total			100	96.8		ug/L		97	79 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*88*	*Q*	*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*88*		*81 - 118*
4-Bromofluorobenzene (Surr)	*112*		*85 - 114*
Dibromofluoromethane (Surr)	*91*		*80 - 119*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-808523/1-A
Matrix: Water
Analysis Batch: 808771

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 808523

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		11/16/23 16:02	1
Manganese	1.62	J	10	5.0	1.3	ug/L		11/16/23 16:02	1

Lab Sample ID: LCS 680-808523/2-A
Matrix: Water
Analysis Batch: 808771

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 808523

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	4990	4610		ug/L		92	87 - 115
Manganese	400	380		ug/L		95	90 - 114

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-808524/1-A
Matrix: Water
Analysis Batch: 808833

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 808524

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	5.0	3.0	0.86	ug/L		11/17/23 00:45	1

Lab Sample ID: LCS 680-808524/2-A
Matrix: Water
Analysis Batch: 808833

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 808524

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	105		ug/L		105	84 - 116

QC Association Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens, Long Term Monitoring

Job ID: 680-242974-2

GC/MS VOA

Analysis Batch: 809821

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242974-10	XSA-12-96X-FAL23	Total/NA	Water	8260D	
MB 680-809821/8	Method Blank	Total/NA	Water	8260D	
LCS 680-809821/4	Lab Control Sample	Total/NA	Water	8260D	
LCSD 680-809821/5	Lab Control Sample Dup	Total/NA	Water	8260D	

Metals

Prep Batch: 808523

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242974-10	XSA-12-96X-FAL23	Dissolved	Water	3005A	
MB 680-808523/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-808523/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 808524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242974-10	XSA-12-96X-FAL23	Dissolved	Water	3005A	
MB 680-808524/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-808524/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 808771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242974-10	XSA-12-96X-FAL23	Dissolved	Water	6010C	808523
MB 680-808523/1-A	Method Blank	Total Recoverable	Water	6010C	808523
LCS 680-808523/2-A	Lab Control Sample	Total Recoverable	Water	6010C	808523

Analysis Batch: 808833

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-242974-10	XSA-12-96X-FAL23	Dissolved	Water	6020A	808524
MB 680-808524/1-A	Method Blank	Total Recoverable	Water	6020A	808524
LCS 680-808524/2-A	Lab Control Sample	Total Recoverable	Water	6020A	808524

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-242974-2
Project/Site: Fort Devens, Long Term Monitoring

Client Sample ID: XSA-12-96X-FAL23
Lab Sample ID: 680-242974-10

Date Collected: 11/13/23 00:00
Matrix: Water
Date Received: 11/14/23 10:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	5 mL	5 mL	809821	11/23/23 12:57	Y1S	EET SAV
	Instrument ID: CMSAB									
Dissolved	Prep	3005A			25 mL	25 mL	808523	11/16/23 07:48	RR	EET SAV
Dissolved	Analysis	6010C		1			808771	11/16/23 16:41	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			25 mL	125 mL	808524	11/16/23 07:48	RR	EET SAV
Dissolved	Analysis	6020A		1			808833	11/17/23 01:50	BWR	EET SAV
	Instrument ID: ICPMSC									

Laboratory References:

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

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-242974-2
Project/Site: Fort Devens, Long Term Monitoring

Laboratory: Eurofins Savannah

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

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-22-24

Method Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens, Long Term Monitoring

Job ID: 680-242974-2

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds (GC/MS)	SW846	EET SAV
6010C	Metals (ICP)	SW846	EET SAV
6020A	Metals (ICP/MS)	SW846	EET SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET SAV
5030C	Purge and Trap	SW846	EET SAV

Protocol References:

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

Laboratory References:

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

...CUSTODY RECORD

ARVC
Heather Levesque
669 Marina Drive, Suite B7 Charleston, SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

...97_SRI_FAL23

US Army Corps of Engineers

Project Name: Former Fort Devens, Long Term Monitoring
Project Number: DEVNS-LTM PO 2106 - 00000001
MBS Code:

Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA
POC: Jerry Lanier 912-250-0281 jerry.lanier@eurofinsus.com
Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404

Event: Series-Arcadis JV, Supplemental Remedial Investigation, AOC 57, Fall 2023

Comments:
...ter (A) = EPH with PAHs
...ter (A) = VPH with targets
...ter (F) = Dissolved Glass
...s (A) & (F) 8hr MH
...ter (A) & (F) MH
...ter (A) & As

680-242974 Chain of Custody

Code	Matrix
WG	Ground Water
WS	Surface Water

Code	Container/Preservative
2	2x 1 Liter, amber, glass, 1:1 HCl to pH <2; Cool < 6degC
4	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
8	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
10	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC

11/14/23 1005

2.7/3.0 3.6/3.9 3.1/3.4

Event: Series-Arcadis JV, Supplemental Remedial Investigation, AOC 57, Fall 2023

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: MADEPEP (A)	MADEPVP (A)	RSK175 (A)	SW6010C (L)	SW6010C/FLDFLT (L)	SW6020B - As	SW6020B/FLDFLT (B)	SW9056A - SO4, NO2, NO3	SW9060A - TOC	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
						2	4	8	9	9	9	9	5	10						
20	57M-03-03X-FAL23	WG				X	X	X	X	X	X	X	X	X	57M-03-03X	SD1	2.00	12.00	1	
21	57M-03-04X-FAL23	WG				X	X	X	X	X	X	X	X	X	57M-03-04X	N1	2.00	12.00	1	
22	57M-03-05X-FAL23	WG				X	X	X	X	X	X	X	X	X	57M-03-05X	N1	2.00	12.00	1	
23	57M-03-06X-FAL23	WG				X	X	X	X	X	X	X	X	X	57M-03-06X	N1	2.00	12.00	1	
24	57M-95-03X-FAL23	WG	11-13-23	0935	MS	X	X	X	X	X	X	X	X	X	57M-95-03X	N1	7.00	17.00	1	
25	57M-95-06X-FAL23	WG				X	X	X	X	X	X	X	X	X	57M-95-06X	N1	11.87	21.87	1	
26	57M-96-11X-FAL23	WG	11-13-23	1540	FM	X	X	X	X	X	X	X	X	X	57M-96-11X	N1	2.00	12.00	1	
27	57M-96-12X-FAL23	WG	11-13-23	1300	AF	X	X	X	X	X	X	X	X	X	57M-96-12X	N1	2.00	12.00	1	
28	57P-98-03X-FAL23	WG	11-13-23	1455	AF	X	X	X	X	X	X	X	X	X	57P-98-03X	N1	2.50	5.50	1	
29	57P-98-04X-FAL23	WG				X	X	X	X	X	X	X	X	X	57P-98-04X	N1	2.00	5.00	1	
30	57WP-06-03-FAL23	WG				X	X	X	X	X	X	X	X	X	57WP-06-03	N1	13.65	18.65	1	
31	AOC57-DUP01-FAL23	WG				X	X	X	X	X	X	X	X	X	5703MW-20-01B	FD1	50.00	60.00	1	
32	AOC57-DUP02-FAL23	WG	11-13-23	0935	MS	X	X	X	X	X	X	X	X	X	57M-95-03X	FD1	7.00	17.00	1	
33	AOC57-DUP03-FAL23	WG				X	X	X	X	X	X	X	X	X	57M-96-11X	FD1	2.00	12.00	1	
34																				
35																				
36																				
37																				

Turnaround Time: Standard

Relinquished by: (Signature) Date Time: 11-13-23 1100

COC # AOC57_SRI_FAL23

CHAIN-OF-CUSTODY RECORD

US Army Corps of Engineers

ARVC
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

Project Name: Former Fort Devens, Long Term Monitoring
Project Number: DEVNS-LTM PO 2106 - 00000001
PO Code:

Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA
POC: Jerry Lanier, 912-250-0281, jerry.lanier@eurofinsus.com
Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404

Event: Seres-Arcadis JV, Supplemental Remedial Investigation, AOC 57, Fall 2023

Comments:
[illegible]

Equipment:

Code	Matrix
WG	Ground Water
WS	Surface Water

Code	Container/Preservative
2	2x 1 Liter, amber, glass, 1:1 HCl to pH =2; Cool < 6degC
4	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
8	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
10	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC

11/14/23
1005

2.7/3.0 3.6/3.9 3.1/3.4

Event: Seres-Arcadis JV, Supplemental Remedial Investigation, AOC 57, Fall

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: MADEPEP (A)	MADEPVP (A)	RSK175 (A)	SW6010C (L)	SW6010C/FLDFLT (L)	SW6020B - As	SW6020B/FLDFLT (B)	SW9056A - SO4, NO2, NO3	SW9060A - TOC	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
						2	4	8	9	9	9	9	5	10						
1	57-SW1-FAL23	WS				X	X	X	X	X	X	X	X	X	57-SW1	N1	0.00	0.00	1	
2	57-SW2-FAL23	WS				X	X	X	X	X	X	X	X	X	57-SW2	N1	0.00	0.00	1	
3	57-SW3-FAL23	WS				X	X	X	X	X	X	X	X	X	57-SW3	N1	0.00	0.00	1	
4	57-SW4-FAL23	WS	11-13-23	1520	MS	X	X	X	X	X	X	X	X	X	57-SW4	N1	0.00	0.00	1	
5	5702MW-20-01A-FAL23	WG				X	X	X	X	X	X	X	X	X	5702MW-20-01A	N1	30.00	40.00	1	
6	5702MW-20-01B-FAL23	WG				X	X	X	X	X	X	X	X	X	5702MW-20-01B	N1	70.00	80.00	1	
7	5702MW-20-02A-FAL23	WG				X	X	X	X	X	X	X	X	X	5702MW-20-02A	MS1	30.00	40.00	1	
8	5702MW-20-02A-FAL23	WG				X	X	X	X	X	X	X	X	X	5702MW-20-02A	N1	30.00	40.00	1	
9	5702MW-20-02A-FAL23	WG				X	X	X	X	X	X	X	X	X	5702MW-20-02A	SD1	30.00	40.00	1	
10	5702MW-20-03A-FAL23	WG				X	X	X	X	X	X	X	X	X	5702MW-20-03A	N1	26.00	36.00	1	
11	5702MW-20-04A-FAL23	WG				X	X	X	X	X	X	X	X	X	5702MW-20-04A	N1	70.00	80.00	1	
12	5703MW-20-01A-FAL23	WG	11-13-23	1409	MS	X	X	X	X	X	X	X	X	X	5703MW-20-01A	N1	2.00	12.00	1	
13	5703MW-20-01B-FAL23	WG				X	X	X	X	X	X	X	X	X	5703MW-20-01B	N1	50.00	60.00	1	
14	5703MW-20-02A-FAL23	WG				X	X	X	X	X	X	X	X	X	5703MW-20-02A	N1	10.00	20.00	1	
15	5703MW-20-03A-FAL23	WG	11-13-23	1100	AF	X	X	X	X	X	X	X	X	X	5703MW-20-03A	N1	50.00	60.00	1	
16	5703MW-20-04A-FAL23	WG	11-13-23	1135	MS	X	X	X	X	X	X	X	X	X	5703MW-20-04A	N1	60.00	70.00	1	
17	57M-03-02X-FAL23	WG				X	X	X	X	X	X	X	X	X	57M-03-02X	N1	2.00	12.00	1	
18	57M-03-03X-FAL23	WG				X	X	X	X	X	X	X	X	X	57M-03-03X	MS1	2.00	12.00	1	
19	57M-03-03X-FAL23	WG				X	X	X	X	X	X	X	X	X	57M-03-03X	N1	2.00	12.00	1	

RECORD

ARVC
Heather Levesque
669 Marina Drive, Suite B7 Charleston SC 2949
(843) 619-370-0374, jennifer.singer@arcadis.com

Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA
POC: Jerry Lanier 912-250-0281 jerry.lanier@eurofinsus.com
Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404

Event: Seres-Arcadis JV, Long T
Monitoring, AOC 50, Fall 2023

...ort Devens, Long Term Monitoring
...VNS-LTM PO 2312 00000001

Code	Matrix
WG	Ground Water

Code	Container/Preservative
6	1x 125mL plastic, Cool < 6degC
7	2x 250mL plastic, ZnAc/NaOH Cool < 6degC
8	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
10	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
29	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC
47	1x 500mL, amber glass, H2SO4; Cool < 6degC

Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023

	Sample ID	Matrix	Date	Time	Samp Init.	A2320B (A)	E353.2 (A)	RSK175 (A)	SW6010C/FLDFLT (B)	SW8020A/FLDFLT (B)	SW8260B - VOCs	SW9034 (A)	SW9056A - SO4	SW9060A - TOC
						46	47	8	9	9	29	7	5	10
41	MW-3-FAL23	WG							X	X	X			
42	MW-7-FAL23	WG							X	X	X			
43	XSA-12-95X-FAL23	WG	11-13-23		FM				X	X	X			
44	XSA-12-96X-FAL23	WG							X	X	X			
45	XSA-12-97X-FAL23	WG							X	X	X			
46	XSA-12-98X-FAL23	WG												
47														
48														
49														
50														
51														
52														
53														
54														
55														
56														

Turnaround Time: Standard

Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler
MW-3	SD1	126.00	136.00	1
MW-7	N1	6.58	135.00	1
XSA-12-95X	N1	120.00	130.00	1
XSA-12-96X	N1	120.00	130.00	1
XSA-12-97X	N1	120.00	130.00	1
XSA-12-98X	N1	60.00	70.00	1

11/14/23 1005

2.7/3.0 3.6/3.9 3.1/3.4

Relinquished by: (Signature) 11-13-23 1700
Date
Time
Received by: (Signature)

Received by Laboratory: (Signature)

11/29/2023

CHAIN-OF-CUSTODY RECORD

ARVC
Heather Levesque
669 Marina Drive, Suite B7, Charleston, SC 29492
(843) 619-370-0374, jennifer.singer@arcadis.com

COC # 43G-SRI-FAL23

US Army Corps of Engineers

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Supplemental Remedial Investigation, AOC 43G, Fall 2023
Project Number: DEVNS-LTM PO 2106 - 00000001	POC: Jerry Lanier, 912-250-0281, jerry.lanier@eurofinsus.com	
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
MADEPEP (A) = EPH with PAHs
MADEPVP (A) = VPH with targets
SW6010C (L) = Al Fe Mn
SW6010C/FLDFLT (L) = Al Fe Mn
SW6020B/FLDFLT (B) = As

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
2	2x 1 Liter, amber, glass, 1:1 HCl to pH =2; Cool < 6degC
4	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
10	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC

Event: Seres-Arcadis JV, Supplemental Remedial Investigation, AOC 43G, Fall 2023

	Sample ID	Matrix	Date	Time	Samp Init.	MADEPEP (A)	MADEPVP (A)	SW6010C - Al	SW6010C - Al Fe	SW6010C (L)	SW6010C/FLDFLT (L)	SW6020B - As	SW6020B/FLDFLT (B)	SW9056A - SO4	SW9060A - TOC	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
						2	4	9	9	9	9	9	9	5	10						
22	XGM-94-04X-FAL23-SRI	WG				X		X			X	X	X			XGM-94-04X	SD1	18.20	30.50	1	
23	XGM-94-06X-FAL23	WG								X	X	X	X	X	X	XGM-94-06X	N1	17.00	27.00	1	
24	XGM-94-07X-FAL23	WG				X	X			X	X	X	X	X	X	XGM-94-07X	N1	17.00	29.60	1	
25	XGM-94-08X-FAL23	WG				X	X			X	X	X	X	X	X	XGM-94-08X	N1	23.50	36.10	1	
26	XGM-94-10X-FAL23	WG								X	X	X	X	X	X	XGM-94-10X	N1	21.50	33.80	1	
27	XGM-97-12X-FAL23-SRI	WG	11-13-23	0950	DC	X		X			X	X	X	X	X	XGM-97-12X	N1	24.00	34.00	1	
28																					
29																					
30																					
31																					
32																					
33																					
34																					
35																					
36																					
37																					

Turnaround Time: Standard

11/14/23 1005

2.7/3.0 3.6/3.9 3.1/3.4

Relinquished by: (Signature) 11/13/23 1700
Date
Time
Received by: (Signature)

Received by Laboratory: (Signature)
Date
Time

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-242974-2

Login Number: 242974

List Source: Eurofins Savannah

List Number: 1

Creator: Johnson, Corey M

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Appendix C

Summary of Quality Control Exceedances and Data Validation Reports

Spring 2023

- The volatile organic compound (VOC) analysis of samples G6M-04-10A-SPR23, G6M-07-02X-SPR23, and field duplicate sample G6M-DUP01-SPR23 were reanalyzed outside of the method-specified 14-day holding time (analysis: 16 days). The results for the VOCs reported in the reanalysis of these samples (vinyl acetate in sample G6M-04-10A-SPR23; acetone in samples G6M-07-02X-SPR23 and G6M-DUP01-SPR23) were qualified as estimated (UJ) with a potential for low bias in the reported results.
- The sulfide analysis of samples G6M-04-02X-SPR23, G6M-13-02X-SPR23, and G6M-13-05X-SPR23 was performed outside of the method-specified 7-day holding time (analysis: 9 days). The results for sulfide in these samples were qualified as estimated (UJ) with a potential for low bias in the reported results.
- The differences between the ethane and ethene results in the field duplicate analysis were greater than the acceptance criteria in association with parent sample G6M-07-02X-SPR23 and field duplicate sample G6M-DUP-01-SPR23. The ethane and ethene results in these samples were qualified as estimated (J).
- The matrix spike/matrix spike duplicate (MS/MSD) performed using sample G6M-04-10A-SPR23 exhibited MS and MSD recoveries for nitrate-nitrite (as nitrogen) and dissolved arsenic below the acceptance criteria. The non-detect result of nitrate-nitrite (as nitrogen) in the sample was qualified as estimated (UJ) with a potential for low bias in the reported result. The dissolved arsenic result in the sample was qualified as estimated (J) with a potential for low bias in the reported result.
- The MS/MSD performed using sample G6M-04-02X-SPR23 exhibited MS and MSD recoveries for nitrate-nitrite (as nitrogen) below the acceptance criteria. The nitrate-nitrite (as nitrogen) result in the sample was qualified as estimated (UJ) with a potential for low bias in the reported results.
- The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) associated with dissolved gases analysis exhibited relative percent difference (RPD) between the LCS/LCSD recoveries above the acceptance criteria for methane. The methane results in samples G6M-04-02X-SPR23, G6M-13-02X-SPR23, and G6M-13-05X-SPR23 were qualified as estimated (J).
- The LCS/LCSD associated with VOC analysis exhibited an LCSD recovery and RPD between the LCS/LCSD recoveries above the acceptance criteria for naphthalene. The detected result of naphthalene in sample G6M-13-05X-SPR23 was qualified as estimated (J) with a potential for high bias in the reported result.
- The LCS/LCSD associated with VOC analysis exhibited recoveries below the acceptance criteria for trichlorofluoromethane. The trichlorofluoromethane results in samples AOC50-RB02-SPR23, AOC50-TB-03-SPR23, and XSA-12-97X-SPR23 were qualified as estimated (UJ) with a potential for low bias in the reported results.
- The recovery of the VOC surrogate compound toluene-d8 exhibited a recovery above the acceptance criteria for sample G6M-04-10A-SPR23. The detected VOCs in the sample were qualified as estimated (J) with a potential for high bias in the reported results.
- The recovery of the VOC surrogate compound 4-bromofluorobenzene exhibited a recovery below the acceptance criteria for sample G6M-04-02X-SPR23. The results for all VOCs reported in the sample were qualified as estimated (UJ/J) with a potential for low bias in the reported results.

- The continuing calibration verification (CCV) associated with VOC analysis exhibited results for bromoform and bromomethane below the acceptance criteria. The non-detect results of bromoform and bromomethane in samples G6M-04-07X-SPR23, G6M-07-02X-SPR23, G6M-13-01X-SPR23, G6M-97-05B-SPR23, and XSA-12-96X-SPR23, trip blank sample AOC50-TB-01-SPR23, and field duplicate sample G6M-DUP01-SPR23 were qualified as estimated (UJ).
- The CCV and ending CCV associated with VOC analysis exhibited results for vinyl acetate below the acceptance criteria. The non-detect result of vinyl acetate in sample G6M-04-10A-SPR23 was qualified as estimated (UJ).
- The CCV associated with VOC analysis exhibited result for acetone below the acceptance criteria. In addition, the ending CCV was below the acceptance criteria for vinyl acetate. The acetone and vinyl acetate results in samples AOC50-RB-01-SPR23 and AOC50-TB-02-SPR23 were qualified as estimated (UJ).
- The CCV associated with VOC analysis exhibited result for 1,1,2,2-tetrachloroethane below the acceptance criteria and o-xylene above the acceptance criteria. In addition, the ending CCV was below the acceptance criteria for vinyl acetate. The 1,1,2,2-tetrachloroethane and vinyl acetate results in samples G6M-04-02X-SPR23, G6M-13-02X-SPR23, and G6M-13-05X-SPR23 were qualified as estimated (UJ). The detected result of o-xylene in sample G6M-13-05X-SPR23 was qualified as estimated (J) with a potential for high bias in the reported result.
- The CCV associated with VOC analysis exhibited results for carbon tetrachloride, dichlorodifluoromethane, and trichlorofluoromethane below the acceptance criteria. The carbon tetrachloride, dichlorodifluoromethane, and trichlorofluoromethane results in samples AOC50-RB02-SPR23 and XSA-12-97X-SPR23 were qualified as estimated (UJ).
- The CCV associated with VOC analysis exhibited result for dichlorodifluoromethane below the acceptance criteria. The dichlorodifluoromethane result in sample AOC50-TB-03-SPR23 was qualified as estimated (UJ).
- Nitrate-nitrite (as nitrogen) was detected in the calibration blanks and/or lab blanks. The nitrate-nitrite as N results in samples G6M-04-07X-SPR23, G6M-04-10A-SPR23, G6M-07-02X-SPR23, G6M-13-01X-SPR23, G6M-97-05B-SPR23, G6M-04-02X-SPR23, and G6M-13-02X-SPR23, and field duplicate sample G6M-DUP01-SPR23 were qualified as not detected (U).
- The total organic carbon result in sample G6M-04-10A-SPR23 was qualified as estimated (J) since the result was noted to exceed the linear calibration range.

Fall 2023

- The differences between the methane, 1,2-dichloroethene, and cis-1,2-dichloroethene results in the field duplicate analysis was greater than the acceptance criteria in association with parent sample G6M-13-02X-FAL23 and field duplicate sample AOC50-DUP02-FAL23. The methane, 1,2-dichloroethene, and cis-1,2-dichloroethene results in these samples were qualified as estimated (J).
- The MS/MSD performed using sample MW-3-FAL23 exhibited recoveries for 1,2-dibromo-3-chloropropane and 1,3-dichloropropane below the acceptance criteria. The 1,2-dibromo-3-chloropropane and 1,3-dichloropropane results in the sample were qualified as estimated (UJ) with a potential for low bias in the reported results.
- The MS/MSD performed using sample G6M-04-10A-FAL23 exhibited MS and MSD recoveries for nitrate-nitrite (as nitrogen) and sulfate below the acceptance criteria. The nitrate-nitrite (as nitrogen) and sulfate results in the sample were qualified as estimated (UJ) with a potential for low bias in the reported results.
- The LCS/LCSD associated with VOC analysis exhibited RPD between the LCS/LCSD recoveries above the acceptance criteria for 2-hexanone and acetone. The detected results of 2-hexanone and acetone in sample G6M-04-02X-FAL23 were qualified as estimated (J).
- The VOC surrogate compound toluene-d8 exhibited recoveries above the acceptance criteria for samples G6M-03-07X-FAL23 and G6M-04-10X-FAL23. The detected VOCs in these samples were qualified as estimated (J) with a potential for high bias in the reported results.
- The initial calibration verification (ICV) associated with VOC analysis exhibited result for carbon disulfide below the acceptance criteria. The CCV associated with VOC analysis exhibited results for 2,2-dichloropropane and bromoform below the acceptance criteria. The non-detect results in samples G6M-02-11X-FAL23, G6M-03-10X-FAL23, G6M-13-05X-FAL23, G6M-13-06X-FAL23, G6M-95-20X-FAL23, and G6M-97-05B-FAL23, trip blank sample AOC50-TB01-FAL23, and field duplicate sample AOC50-DUP04-FAL23 were qualified as estimated (UJ) for bromoform and carbon disulfide, and rejected (R) for 2,2-dichloropropane.
- The ICV associated with VOC analysis exhibited result for chloroethane below the acceptance criteria. The CCV associated with VOC analysis exhibited result for 1,2-dibromo-3-chloropropane below the acceptance criteria. The non-detect results of 1,2-dibromo-3-chloropropane in samples G6M-02-01X-FAL23, G6M-02-04X-FAL23, G6M-02-07X-FAL23, G6M-02-08X-FAL23, G6M-03-07X-FAL23, G6M-04-01X-FAL23, G6M-04-02X-FAL23, G6M-04-03X-FAL23, and G6M-04-09X-FAL23, and field duplicate samples AOC50-DUP02-FAL23 and AOC50-DUP03-FAL23 were qualified as estimated (UJ).
- The CCV associated with VOC analysis exhibited result for 2-butanone below the acceptance criteria. The non-detect results of 2-butanone in samples G6M-04-10A-FAL23, G6M-04-13X-FAL23, G6M-04-14X-FAL23, G6M-07-01X-FAL23, G6M-02X-FAL23, G6M-13-01X-FAL23, G6M-13-02X-FAL23, G6M-95-19X-FAL23, XSA-12-95X-FAL23, and XSA-12-98X-FAL23 were qualified as estimated (UJ).
- The ICV associated with VOC analysis exhibited result for carbon disulfide below the acceptance criteria. The opening and closing CCV associated with VOC analysis exhibited result for 2-butanone below the acceptance criteria. The non-detect results of carbon disulfide and 2-butanone in samples G6M-02-13X-FAL23 and G6M-04-04X-FAL23, and field duplicate sample AOC50-DUP01-FAL23 were qualified as estimated (UJ).

- The ICV associated with VOC analysis exhibited result for chloroethane below the acceptance criteria. The CCV associated with VOC analysis exhibited result for 1,2-dibromo-3-chloropropane and bromomethane below the acceptance criteria. The non-detect results of 1,2-dibromo-3-chloropropane and bromomethane in samples G6M-04-10X-FAL23, G6M-04-15X-FAL23, MW-3-FAL23, and MW-7-FAL23 were qualified as estimated (UJ).
- The CCV associated with VOC analysis exhibited result for 1,2-dibromo-3-chloropropane and bromomethane below the acceptance criteria and vinyl chloride above the acceptance criteria. The non-detect results of 1,2-dibromo-3-chloropropane and bromomethane in sample XSA-12-96X-FAL23 were qualified as estimated (UJ). The detected result of vinyl chloride in sample XSA-12-96X-FAL23 were qualified as estimated (J); the result may be biased high.

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

August 28, 2023

SUBJECT: Fort Devens - Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. This SDG was received on July 26, 2023. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #57156_A:

SDG #	**Fraction**
680-236018-1	Volatiles, Dissolved Metals, Mixed Chemistry, Methane, Ethane, and Ethene

The data validation was performed under Stage 2B guidelines. The analysis was validated using the following documents, as applicable to each method:

- Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

547 pages-ADV

Attachment 1

Stage 2B EQUIS EDD

LDC# 57156 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	VOA (8260D)		Pest. (8081B)		Metals (6010C/20A /7470A)		As,Mn (6010C /6020A)		3 D.Met. (6010C /6020A)		VPH (MADEP -VPH		EPH (MADEP -EPH		Methane Ethane Ethene																	
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	680-236018-1	07/26/23	08/09/23	8	0	-	-	-	-	-	-	7	0	-	-	-	-	6	0																
B	680-236086-1	07/26/23	08/09/23	5	0	-	-	-	-	-	-	4	0	-	-	-	-	3	0																
C	680-236086-2	07/26/23	08/09/23	2	0	-	-	-	-	2	0	-	-	2	0	-	-	-	-																
D	680-236120-1	07/26/23	08/09/23	-	-	5	0	5	0	-	-	-	-	5	0	10	0	-	-																
E	680-236128-1	07/26/23	08/09/23	-	-	-	-	-	-	-	-	5	0	-	-	-	-	-	-																
F	680-236128-2	07/26/23	08/09/23	-	-	-	-	-	-	-	-	4	0	-	-	-	-	-	-																
G	680-236128-3	07/26/23	08/09/23	6	0	-	-	-	-	4	0	-	-	4	0	-	-	-	-																
H	680-236378-1	07/26/23	08/09/23	-	-	-	-	-	-	-	-	14	0	-	-	-	-	-	-																
I	680-236434-1	07/26/23	08/09/23	-	-	-	-	-	-	-	-	18	0	-	-	-	-	-	-																
J	680-236498-1	07/26/23	08/09/23	3	0	-	-	-	-	-	-	2	0	-	-	-	-	-	-																
K	680-236498-2	07/26/23	08/09/23	-	-	-	-	-	-	-	-	26	0	-	-	-	-	-	-																
L	680-236818-1	07/26/23	08/09/23	-	-	-	-	-	-	-	-	5	0	-	-	-	-	-	-																
M	680-237047-1	07/26/23	08/09/23	-	-	-	-	-	-	-	-	1	0	-	-	-	-	-	-																
Total	TR/PG			24	0	5	0	5	0	6	0	86	0	11	0	10	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	156

Stage 2B EQUIS EDD

LDC# 57156 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	Alk (2320B)		COD (410.4)		CN- (9012B)		Cl (9056A)		DOC (9060A)		NO_3 /NO_2-N (353.2)		SO_4 (9056A)		S= (9034)		TDS (2540C)		TOC (9060A)													
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	680-236018-1	07/26/23	08/09/23	6	0	-	-	-	-	-	-	-	-	6	0	6	0	6	0	-	-	6	0												
B	680-236086-1	07/26/23	08/09/23	3	0	-	-	-	-	-	-	-	-	3	0	3	0	3	0	-	-	3	0												
D	680-236120-1	07/26/23	08/09/23	5	0	5	0	5	0	5	0	-	-	5	0	5	0	-	-	5	0	-	-												
E	680-236128-1	07/26/23	08/09/23	5	0	-	-	-	-	5	0	5	0	-	-	5	0	-	-	-	-	-	-												
H	680-236378-1	07/26/23	08/09/23	14	0	-	-	-	-	14	0	14	0	-	-	14	0	-	-	-	-	-	-												
I	680-236434-1	07/26/23	08/09/23	18	0	-	-	-	-	18	0	18	0	-	-	18	0	-	-	-	-	-	-												
K	680-236498-2	07/26/23	08/09/23	25	0	-	-	-	-	25	0	25	0	-	-	25	0	-	-	-	-	-	-												
L	680-236818-1	07/26/23	08/09/23	5	0	-	-	-	-	5	0	5	0	-	-	5	0	-	-	-	-	-	-												
M	680-237047-1	07/26/23	08/09/23	1	0	-	-	-	-	1	0	1	0	-	-	1	0	-	-	-	-	-	-												
Total	TR/PG			82	0	5	0	5	0	73	0	68	0	14	0	82	0	9	0	5	0	9	0	0	0	0	0	0	0	0	0	0	0	0	352

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

Data Validation Report for 680-236018-1

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, AOC 50, Spring 2023
SDG:	680-236018-1
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
Prime Contractor:	Seres - Arcadis SB Joint Venture, LLC, Charleston, SC
Project Manager:	Jennifer Singer
Contract Laboratory(ies):	Eurofins Environment Testing TestAmerica, Savannah, GA | Eurofins Lancaster Laboratories Environmental, LLC, Lancaster, PA
Data Review Contractor:	Laboratory Data Consultants, Inc.
Data Review Level:	2B
Primary Data Reviewer:	Allie Jefferson, Chemist/ERPIMS Specialist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	August 24, 2023

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	E353.2	RSK175	SW6010C - Dissolved	SW6020A - Dissolved	SW8260D	SW9034	SW9056A	SW9060
AOC50-TB-01-SPR23	680-236018-10	Water	Trip Blank/TB						X			
G6M-04-07X-SPR23	680-236018-1	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-04-10A-SPR23	680-236018-2	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-07-02X-SPR23	680-236018-5	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-13-01X-SPR23	680-236018-7	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-97-05B-SPR23	680-236018-8	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-DUP01-SPR23	680-236018-6	Water	Field Duplicate/FD	X	X	X	X	X	X	X	X	X
XSA-12-96X-SPR23	680-236018-9	Water	Field Sample/N				X	X	X			

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page at 2B data validation level. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020 and the additional guidance documents incorporated by reference to the extent possible. Where definitive guidance is not provided, results have been evaluated in a conservative manner using professional judgment.

Sample collection was managed and directed by Seres - Arcadis SB Joint Venture, LLC, Charleston, SC; analyses were performed by Eurofins Environment Testing TestAmerica, Savannah, GA | Eurofins Lancaster Laboratories Environmental, LLC, Lancaster, PA and were reported under sample delivery group (SDG) 680-236018-1. Data have been evaluated electronically based on electronic data deliverables (EDDs) provided by the laboratory, and hard copy data summary forms have also been reviewed during this effort and compared to the automated review output by the reviewers whose signatures appear on the following page. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative and throughout this report.

All quality control (QC) elements associated with this SDG have been reviewed by a project chemist in accordance with the requirements defined for the project. This review is documented in the attached Data Review Checklists. The QC elements listed below were supported by the electronic deliverable and were evaluated using ADR processes.

- Blank - Negative
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Field Duplicate RPD
- Interference Check Sample A
- Interference Check Sample A - Negative
- Interference Check Sample AB
- Lab Blank
- LCS Recovery
- LCS RPD
- MS Recovery
- MS RPD
- Prep Hold Time
- Surrogate
- Test Hold Time
- Trip Blank

Results of the ADR process were subsequently reviewed and updated as applicable by the data review chemists identified on the signature page. Quality control elements that were not included in the electronic deliverable were reviewed manually and findings are documented within this report. Summaries of findings and associated qualified results are documented throughout this report.

A total of 33 results (5.38%) out of the 613 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected or deemed a serious deficiency (X qualifier). Trace values, defined as results that are qualified as estimated because they fall between the detection limit and the reporting limit/limit of quantitation, are not counted as qualified results in the above count. The qualified results are detailed throughout this report and discussed in the narrative below, where appropriate.

Narrative Comments

Analytical Method	Data Reviewer Comment
A2320B	No additional comments; see Checklist for detail.
E353.2	No additional comments; see Checklist for detail.
RSK175	No additional comments; see Checklist for detail.
SW6010C	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
SW8260D	No additional comments; see Checklist for detail.
SW9034	No additional comments; see Checklist for detail.
SW9056A	No additional comments; see Checklist for detail.



August 24, 2023

Reviewed by Allie Jefferson, Chemist/ERPIMS Specialist, Laboratory Data Consultants, Inc.

As the First Reviewer, I certify that I have performed a data review process in accordance with the requirements of the project guidance document, and have compared the electronic data to the laboratory's hard copy report and have verified the consistency of the reported sample results and method quality control data between the two deliverables.



Reviewed by Pei Geng, Senior Scientist, Laboratory Data Consultants, Inc.

August 28, 2023

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

Quality Control Outliers for test method E353.2, Calibration Blank

The purpose of calibration blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in calibration blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
CCB68078496416 (CB)	Nitrate-Nitrite (as N)	0.0240	< 0.01	< 0.1	mg/l	U/None*	B2	
CCB68078496432 (CB)	Nitrate-Nitrite (as N)	0.0210	< 0.01	< 0.1	mg/l	U/None*	B2	
CCB68078496438 (CB)	Nitrate-Nitrite (as N)	0.0210	< 0.01	< 0.1	mg/l	U/None*	B2	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

*Blank flags displayed in the above table identify qualification of the sample result when it is less than or equal to the LOQ/RL. Sample results above the LOD or LOQ will be qualified based on the validation guidance assigned in the project setup.

Qualified Results associated with the Calibration Blank for E353.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-07X-SPR23 680-236018-1	N	Nitrate-Nitrite (as N)	0.100	0.0200 J	0.100 U		mg/l	B2
G6M-04-10A-SPR23 680-236018-2	N	Nitrate-Nitrite (as N)	0.100	0.0570 J J1	0.100 UJ		mg/l	B2/M
G6M-07-02X-SPR23 680-236018-5	N	Nitrate-Nitrite (as N)	0.100	0.0640 J	0.100 U		mg/l	B2
G6M-13-01X-SPR23 680-236018-7	N	Nitrate-Nitrite (as N)	0.100	0.0360 J	0.100 U		mg/l	B2
G6M-97-05B-SPR23 680-236018-8	N	Nitrate-Nitrite (as N)	0.100	0.0550 J	0.100 U		mg/l	B2
G6M-DUP01-SPR23 680-236018-6	FD	Nitrate-Nitrite (as N)	0.100	0.0630 J	0.100 U		mg/l	B2

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method E353.2, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
G6M-04-10A-SPR23 (MS)	Nitrate-Nitrite (as N)	65.0	90 - 110	30 - 110	percent	J/UJ	M	
G6M-04-10A-SPR23 (SD)	Nitrate-Nitrite (as N)	65.0	90 - 110	30 - 110	percent	J/UJ	M	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the MS Recovery for E353.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-10A-SPR23 680-236018-2	N	Nitrate-Nitrite (as N)	0.100	0.0570 J J1	0.100 UJ		mg/l	B2/M

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method RSK175, Field Duplicate RPD

Field duplicate analyses are performed in order to assess sample collection/laboratory precision for each sample matrix. Summary forms were evaluated and compared to electronic data deliverables. Field duplicate results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
G6M-DUP01-SPR23 (N)	Ethane	5.10	< 1.1	< 1.1	ug/l	J/UJ	D3	
G6M-DUP01-SPR23 (N)	Ethene	5.70	< 1	< 1	ug/l	J/UJ	D3	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Field Duplicate RPD for RSK175

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-07-02X-SPR23 680-236018-5	N	Ethane	1.10	6.70	6.70 J		ug/l	D3
G6M-07-02X-SPR23 680-236018-5	N	Ethene	1.00	7.60	7.60 J		ug/l	D3
G6M-DUP01-SPR23 680-236018-6	FD	Ethane	1.10	1.60	1.60 J		ug/l	D3
G6M-DUP01-SPR23 680-236018-6	FD	Ethene	1.00	1.90	1.90 J		ug/l	D3

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method RSK175, LCS RPD

The objective of laboratory control sample/laboratory control sample duplicate (LCS/LCSD) RPD analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. LCS/LCSD analyses are also performed to generate data that determines the long-term precision of the analytical method on various matrices. Non-homogenous samples can impact the apparent method precision. Summary forms were evaluated and compared to electronic data deliverables. Laboratory control sample/laboratory control sample duplicate RPD results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
LCSD6807830984 (BD)	Methane	164	< 30	< 30	rpd	J/None	Z	
LCSD6807830987 (BD)	Methane	164	< 30	< 30	rpd	J/None	Z	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method RSK175, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
G6M-04-10A-SPR23 (MS)	Methane	1750	73 - 125	10 - 125	percent	J/None	M	Spike amount Insignificant
G6M-04-10A-SPR23 (SD)	Methane	1200	73 - 125	10 - 125	percent	J/None	M	Spike amount Insignificant

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW6010C, Dissolved, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
G6M-04-10A-SPR23 (MS)	Iron	76.0	87 - 115	10 - 125	percent	J/UJ	M	Spike amount Insignificant
G6M-04-10A-SPR23 (SD)	Iron	64.0	87 - 115	10 - 125	percent	J/UJ	M	Spike amount Insignificant

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW6020A, Dissolved, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
G6M-04-10A-SPR23 (MS)	Arsenic	74.0	84 - 116	10 - 125	percent	J/UJ	M	
G6M-04-10A-SPR23 (SD)	Arsenic	71.0	84 - 116	10 - 125	percent	J/UJ	M	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the MS Recovery for SW6020A, Dissolved

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-10A-SPR23 680-236018-2	N	Arsenic	5.00	380 J1	380 J	-	ug/l	M

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260D, Continuing Calibration Verification

Compliance requirements for satisfactory continuing calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data. Continuing calibration is performed to verify and evaluate instrument performance during sample analysis. Summary forms were evaluated against project acceptance criteria, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
CCVIS6807844204 (CV)	Dichlorodifluoromethane	180	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807844634 (CV)	2-Butanone (MEK)	139	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807844634 (CV)	2-Hexanone	132	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807844634 (CV)	4-Methyl-2-pentanone (MIBK)	124	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807844634 (CV)	Acetone	132	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807844634 (CV)	Bromoform	79.0	80 - 120	80 - 120	percent	J/X	V2	
CCVIS6807844634 (CV)	Bromomethane	77.0	80 - 120	80 - 120	percent	J/X	V2	
CCVIS6807844634 (CV)	Chloroethane	126	80 - 120	80 - 120	percent	J/None	V2	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Continuing Calibration Verification for SW8260D

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-TB-01-SPR23 680-236018-10	TB	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V2
AOC50-TB-01-SPR23 680-236018-10	TB	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-04-07X-SPR23 680-236018-1	N	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V2
G6M-04-07X-SPR23 680-236018-1	N	Bromomethane	20.0	10.0 U M Q	10.0 UJ		ug/l	V2
G6M-07-02X-SPR23 680-236018-5	N	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V2
G6M-07-02X-SPR23 680-236018-5	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-13-01X-SPR23 680-236018-7	N	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V2
G6M-13-01X-SPR23 680-236018-7	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-97-05B-SPR23 680-236018-8	N	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V2
G6M-97-05B-SPR23 680-236018-8	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-DUP01-SPR23 680-236018-6	FD	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V2
G6M-DUP01-SPR23 680-236018-6	FD	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
XSA-12-96X-SPR23 680-236018-9	N	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V2

Qualified Results associated with the Continuing Calibration Verification for SW8260D

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
XSA-12-96X-SPR23 680-236018-9	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260D, Ending Continuing Calibration Verification

Compliance requirements for satisfactory closing continuing calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data. Continuing calibration is performed to verify and evaluate instrument performance during sample analysis. Summary forms were evaluated against project acceptance criteria, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
CCVC68078442036 (EV)	Dichlorodifluoromethane	204	50 - 150	50 - 150	percent	J/None	V5	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW8260D, LCS Recovery

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
LCS6807844205 (BS)	Dichlorodifluoromethane	186	32 - 152	10 - 152	percent	J/None	C	
LCS6807844205 (BS)	Vinyl acetate	49.0	54 - 146	10 - 146	percent	J/UJ	C	
LCSD6807844206 (BD)	Dichlorodifluoromethane	180	32 - 152	10 - 152	percent	J/None	C	
LCSD6807844206 (BD)	Vinyl acetate	49.0	54 - 146	10 - 146	percent	J/UJ	C	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW8260D, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
G6M-04-10A-SPR23 (SD)	4-Methyl-2-pentanone (MIBK)	133	67 - 130	10 - 130	percent	J/None	M	
G6M-04-10A-SPR23 (MS)	Dichlorodifluoromethane	164	32 - 152	10 - 152	percent	J/None	M	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW8260D, MS RPD

The objective of matrix spikes/matrix spike duplicates (MS/MSD) RPD analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. MS/MSD analyses are also performed to generate data that determines the long-term precision of the analytical method on various matrices. Non-homogenous samples can impact the apparent method precision. Summary forms were evaluated and compared to electronic data deliverables. Matrix spikes/matrix spike duplicates results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
G6M-04-10A-SPR23 (SD)	trans-1,2-Dichloroethene	21.2	< 20	< 20	rpd	J/None	D	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW8260D, Surrogate

Method performance for individual samples is demonstrated through spiking activities. All samples are spiked with surrogate compounds prior to sample preparation. The sample itself may produce effects due to such factors as interferences and high concentrations of analytes. Summary forms were evaluated and compared to electronic data deliverables. Surrogate results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
G6M-04-10A-SPR23 (N)	Toluene-d8	115	89 - 112	10 - 112	percent	J/None	I	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Surrogate for SW8260D

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-10A-SPR23 680-236018-2	N	1,2,4-Trimethylbenzene	2.00	0.980 J	0.980 J	+	ug/l	I/TR
G6M-04-10A-SPR23 680-236018-2	N	1,2-Dichloroethene	2.00	0.710 J	0.710 J	+	ug/l	I/TR
G6M-04-10A-SPR23 680-236018-2	N	1,3,5-Trimethylbenzene	2.00	0.470 J	0.470 J	+	ug/l	I/TR
G6M-04-10A-SPR23 680-236018-2	N	cis-1,2-Dichloroethene	2.00	0.710 J	0.710 J	+	ug/l	I/TR

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260D, Test Hold Time

Hold times are ascertained based on project requirements. Holding times were determined by comparing the chain of custody records with the dates of analysis found in the electronic data deliverable and laboratory summary forms. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
G6M-04-10A-SPR23 (N)		16.2	< 14	< 28	days	J/UJ	H1	Test Exceeds UWL
G6M-07-02X-SPR23 (N)		16.1	< 14	< 28	days	J/UJ	H1	Test Exceeds UWL
G6M-DUP01-SPR23 (FD)		16.1	< 14	< 28	days	J/UJ	H1	Test Exceeds UWL

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Test Hold Time for SW8260D

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-10A-SPR23 680-236018-2	N	Vinyl acetate	2.50	2.00 U H	2.00 UJ		ug/l	H1/V2/V5
G6M-07-02X-SPR23 680-236018-5	N	Acetone	25.0	10.0 U H	10.0 UJ		ug/l	H1
G6M-DUP01-SPR23 680-236018-6	FD	Acetone	25.0	10.0 U H	10.0 UJ		ug/l	H1

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260D, Trip Blank

The purpose of trip blanks is to determine the existence and magnitude of cross-contamination problems resulting from the shipping of samples. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in trip blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
AOC50-TB-01-SPR23 (TB)	Toluene	0.480	< 0.25	< 2	ug/l	U/None*	T	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

*Blank flags displayed in the above table identify qualification of the sample result when it is less than or equal to the LOQ/RL. Sample results above the LOD or LOQ will be qualified based on the validation guidance assigned in the project setup.

No results associated with this QC element required qualification.

Table of All Qualified Results

Test Method: E353.2		Extraction Method: NONE						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-07X-SPR23 680-236018-1	N	Nitrate-Nitrite (as N)	0.100	0.0200 J	0.100 U		mg/l	B2
G6M-04-10A-SPR23 680-236018-2	N	Nitrate-Nitrite (as N)	0.100	0.0570 J J1	0.100 UJ		mg/l	B2/M
G6M-07-02X-SPR23 680-236018-5	N	Nitrate-Nitrite (as N)	0.100	0.0640 J	0.100 U		mg/l	B2
G6M-13-01X-SPR23 680-236018-7	N	Nitrate-Nitrite (as N)	0.100	0.0360 J	0.100 U		mg/l	B2
G6M-97-05B-SPR23 680-236018-8	N	Nitrate-Nitrite (as N)	0.100	0.0550 J	0.100 U		mg/l	B2
G6M-DUP01-SPR23 680-236018-6	FD	Nitrate-Nitrite (as N)	0.100	0.0630 J	0.100 U		mg/l	B2

Test Method: RSK175		Extraction Method: METHOD						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-07-02X-SPR23 680-236018-5	N	Ethane	1.10	6.70	6.70 J		ug/l	D3
G6M-07-02X-SPR23 680-236018-5	N	Ethene	1.00	7.60	7.60 J		ug/l	D3
G6M-DUP01-SPR23 680-236018-6	FD	Ethane	1.10	1.60	1.60 J		ug/l	D3
G6M-DUP01-SPR23 680-236018-6	FD	Ethene	1.00	1.90	1.90 J		ug/l	D3

Test Method: SW6020A		Extraction Method: FLDFLT						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-10A-SPR23 680-236018-2	N	Arsenic	5.00	380 J1	380 J	-	ug/l	M

Test Method: SW8260D		Extraction Method: SW5030C						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-TB-01-SPR23 680-236018-10	TB	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V2
AOC50-TB-01-SPR23 680-236018-10	TB	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-04-07X-SPR23 680-236018-1	N	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V2
G6M-04-07X-SPR23 680-236018-1	N	Bromomethane	20.0	10.0 U M Q	10.0 UJ		ug/l	V2
G6M-04-10A-SPR23 680-236018-2	N	1,2,4-Trimethylbenzene	2.00	0.980 J	0.980 J	+	ug/l	I/TR
G6M-04-10A-SPR23 680-236018-2	N	1,2-Dichloroethene	2.00	0.710 J	0.710 J	+	ug/l	I/TR
G6M-04-10A-SPR23 680-236018-2	N	1,3,5-Trimethylbenzene	2.00	0.470 J	0.470 J	+	ug/l	I/TR
G6M-04-10A-SPR23 680-236018-2	N	cis-1,2-Dichloroethene	2.00	0.710 J	0.710 J	+	ug/l	I/TR
G6M-04-10A-SPR23 680-236018-2	N	Vinyl acetate	2.50	2.00 U H	2.00 UJ		ug/l	H1/V2/V5

Table of All Qualified Results

Test Method: SW8260D		Extraction Method: SW5030C						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-07-02X-SPR23 680-236018-5	N	Acetone	25.0	10.0 U H	10.0 UJ		ug/l	H1
G6M-07-02X-SPR23 680-236018-5	N	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V2
G6M-07-02X-SPR23 680-236018-5	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-13-01X-SPR23 680-236018-7	N	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V2
G6M-13-01X-SPR23 680-236018-7	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-97-05B-SPR23 680-236018-8	N	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V2
G6M-97-05B-SPR23 680-236018-8	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-DUP01-SPR23 680-236018-6	FD	Acetone	25.0	10.0 U H	10.0 UJ		ug/l	H1
G6M-DUP01-SPR23 680-236018-6	FD	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V2
G6M-DUP01-SPR23 680-236018-6	FD	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
XSA-12-96X-SPR23 680-236018-9	N	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V2
XSA-12-96X-SPR23 680-236018-9	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2

Test Method: SW9060		Extraction Method: NONE						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-10A-SPR23 680-236018-2	N	Total Organic Carbon	1.50	18.0	18.0 J		mg/l	R

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Table of Results with Modified Qualifiers

Modified Qualifiers for test method RSK175

FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-04-07X-SPR23 680-236018-1	N	Methane	1.20	230	230 J	230	
G6M-04-10A-SPR23 680-236018-2	N	Methane	390	18000 J1	18000 J	18000	
G6M-07-02X-SPR23 680-236018-5	N	Methane	390	16000	16000 J	16000	
G6M-13-01X-SPR23 680-236018-7	N	Methane	390	750	750 J	750	
G6M-97-05B-SPR23 680-236018-8	N	Methane	390	34000	34000 J	34000	
G6M-DUP01-SPR23 680-236018-6	FD	Methane	390	15000	15000 J	15000	

Modified Qualifiers for test method SW8260D

FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
AOC50-TB-01-SPR23 680-236018-10	TB	Bromoform	2.50	2.00 U Q	2.00 X	2.00 UJ	V2
AOC50-TB-01-SPR23 680-236018-10	TB	Bromomethane	20.0	10.0 U Q	10.0 X	10.0 UJ	V2
G6M-04-07X-SPR23 680-236018-1	N	Bromoform	2.50	2.00 U Q	2.00 X	2.00 UJ	V2
G6M-04-07X-SPR23 680-236018-1	N	Bromomethane	20.0	10.0 U M Q	10.0 X	10.0 UJ	V2
G6M-04-10A-SPR23 680-236018-2	N	Vinyl acetate	2.50	2.00 U H	2.00 UJ	2.00 UJ	H1/V2/V5
G6M-07-02X-SPR23 680-236018-5	N	Bromoform	2.50	2.00 U Q	2.00 X	2.00 UJ	V2
G6M-07-02X-SPR23 680-236018-5	N	Bromomethane	20.0	10.0 U Q	10.0 X	10.0 UJ	V2
G6M-13-01X-SPR23 680-236018-7	N	Bromoform	2.50	2.00 U Q	2.00 X	2.00 UJ	V2
G6M-13-01X-SPR23 680-236018-7	N	Bromomethane	20.0	10.0 U Q	10.0 X	10.0 UJ	V2
G6M-97-05B-SPR23 680-236018-8	N	Bromoform	2.50	2.00 U Q	2.00 X	2.00 UJ	V2
G6M-97-05B-SPR23 680-236018-8	N	Bromomethane	20.0	10.0 U Q	10.0 X	10.0 UJ	V2
G6M-DUP01-SPR23 680-236018-6	FD	Bromoform	2.50	2.00 U Q	2.00 X	2.00 UJ	V2
G6M-DUP01-SPR23 680-236018-6	FD	Bromomethane	20.0	10.0 U Q	10.0 X	10.0 UJ	V2
XSA-12-96X-SPR23 680-236018-9	N	Bromoform	2.50	2.00 U Q	2.00 X	2.00 UJ	V2
XSA-12-96X-SPR23 680-236018-9	N	Bromomethane	20.0	10.0 U Q	10.0 X	10.0 UJ	V2

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW9060							
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-04-10A-SPR23 680-236018-2	N	Total Organic Carbon	1.50	18.0	18.0	18.0 J	R

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Reason Code Definitions

Code	Definition
B2	CCB
C	LCS Recovery
D	MS RPD
D3	Field Duplicate RPD
H1	Test Hold Time
I	Surrogate recovery outside project limits.
M	MS Recovery
R	Exceeds LinearCalibration Range
T	Trip Blank
TR	Trace Level Detect
V2	CCV
V5	Ending Continuing Calibration Verification
Z	LCS RPD

Flag Code and Definitions

Flag	Definition
J	Estimated Value
N	The analysis indicates the presence of an analyte for which there was presumptive evidence to make a tentative identification.
NJ	The analyte has been tentatively identified or presumptively as present and the associated numerical value was the estimated concentration in the sample.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
U	Undetected: The analyte was analyzed for, but not detected.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.
X	Result may require rejection; PDT attention required

Bias

-	The result may be biased low
+	The result may be biased high

Note - The bias field is a separate field; however, it is an integral part of the final flag (qualifier) on the sample result

Review Questions

Method: A2320B (Alkalinity by Titrimetric Method)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified

Review Questions

Method: E353.2 (Nitrogen, Nitrate-Nitrite (Colorimetric Automated, Cadmium Reduction))				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?		•		CB detect, results qualified U at the LOQ.
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?		•		Parent result qualified UJ due to recovery outside project limits.
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Review Questions

Method: RSK175 (Dissolved Gas Analysis in Water Samples Using a GC Headspace Equilibrium Technique)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Were the required minimum levels of calibration standards used in the initial calibration?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Were surrogate recoveries within project acceptance limits?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?		•		RPD outside of project limits. All results non-detect, no data qualified.
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?		•		Results were qualified J for RPD exceeding project limits.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were DoD QSM corrective actions followed if deviations were noted?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Review Questions

Method: SW6010C (Trace Metals by Inductively Coupled Plasma/Atomic Emission Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?		•		Fe outside of limits, >4X spike amount, no data was qualified.
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Review Questions

Method: SW6020A (Trace Metals by Inductively Coupled Plasma/Mass Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?		•		Recovery low. Results qualified J/UJ.
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Review Questions

Method: SW8260D (Volatile Organic Compounds by GC/MS)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?		•		Test Exceeds UWL for three samples. Data was qualified J/UJ.
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?		•		Several compounds were outside of the limits for CCV and closing CCV. All affected results were non-detect and qualified UJ.
Were the required minimum levels of calibration standards used in the initial calibration?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Were surrogate recoveries within project acceptance limits?		•		One surrogate was outside of project limits for one sample. Detect results were qualified J.
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?	•			
Were target analytes reported in the field blank(s) less than MDL?		•		The trip blank was detect for one compound. No data was qualified.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?		•		The LCS/D was outside of limits for two compounds. All results were ND, no data was qualified.
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?		•		Outside of limits. All results ND, no data qualified.
Was the MS/MSD RPD within project acceptance limits?		•		Outside of limits. All results ND, no data qualified.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were DoD QSM corrective actions followed if deviations were noted?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Review Questions

Method: SW9034 (Titrimetric Procedure for Acid-Soluble and Acid-Insoluble Sulfides)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Review Questions

Method: SW9056A (Anion Chromatography)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Spring 2023
Field Duplicates for SDG: 680-236018-1

Location	Analysis
G6M-07-02X	A2320B

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Alkalinity, Total (as CaCO3)	95.0	93.0	5.00	2.13	30	OK	NA

Location	Analysis
G6M-07-02X	E353.2

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Nitrate-Nitrite (as N)	ND	ND	0.100	NA	30	NA	OK

Location	Analysis
G6M-07-02X	RSK175

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Ethane	6.70	1.60	1.10	123	30	NA	5.1
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Ethene	7.60	1.90	1.00	120	30	NA	5.7
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Methane	16000	15000	390	6.45	30	OK	NA

Location	Analysis
G6M-07-02X	SW6010C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Iron (FLDFLT)	100000	110000	100	9.52	30	OK	NA
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Manganese (FLDFLT)	3300	3400	10.0	2.99	30	OK	NA

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG

Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Spring 2023
Field Duplicates for SDG: 680-236018-1

Location	Analysis
G6M-07-02X	SW6020A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Arsenic (FLDFLT)	7.30	7.30	5.00	0.00	30	NA	OK

Location	Analysis
G6M-07-02X	SW8260D

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,1,1,2-Tetrachloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,1,1-Trichloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,1,2,2-Tetrachloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,1,2-Trichloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,1-Dichloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,1-Dichloroethene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,1-Dichloropropene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,2,3-Trichlorobenzene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,2,3-Trichloropropane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,2,4-Trichlorobenzene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,2,4-Trimethylbenzene	1.10	1.10	2.00	0.00	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,2-Dibromo-3-chloropropane	ND	ND	10.0	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,2-Dibromoethane (EDB)	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,2-Dichlorobenzene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,2-Dichloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,2-Dichloroethene	0.940	0.980	2.00	4.17	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,2-Dichloropropane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,3,5-Trimethylbenzene	0.350	0.360	2.00	2.82	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,3-Dichlorobenzene	ND	ND	2.00	NA	30	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Spring 2023
Field Duplicates for SDG: 680-236018-1

Location	Analysis
G6M-07-02X	SW8260D

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,3-Dichloropropane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,4-Dichlorobenzene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	2,2-Dichloropropane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	2-Butanone (MEK)	ND	ND	25.0	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	2-Chlorotoluene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	2-Hexanone	ND	ND	20.0	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	4-Chlorotoluene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	4-Methyl-2-pentanone (MIBK)	ND	ND	20.0	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Acetone	ND	ND	25.0	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Benzene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Bromobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Bromochloromethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Bromodichloromethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Bromoform	ND	ND	2.50	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Bromomethane	ND	ND	20.0	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Carbon disulfide	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Carbon Tetrachloride	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Chlorobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Chloroethane	ND	ND	20.0	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Chloroform	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Chloromethane	ND	ND	2.50	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	cis-1,2-Dichloroethene	0.940	0.980	2.00	4.17	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	cis-1,3-Dichloropropene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Cumene	ND	ND	2.00	NA	30	NA	OK

FD = Field Duplicate
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RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Spring 2023
Field Duplicates for SDG: 680-236018-1

Location	Analysis
G6M-07-02X	SW8260D

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Dibromochloromethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Dibromomethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Dichlorodifluoromethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Ethylbenzene	0.210	0.210	1.00	0.00	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Hexachlorobutadiene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	m,p-Xylene	0.540	0.540	2.00	0.00	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Methyl tert-butyl ether (MTBE)	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Methylene chloride	ND	ND	20.0	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	n-Butylbenzene	0.530	0.530	2.50	0.00	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	n-Propylbenzene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Naphthalene	4.30	4.50	10.0	4.55	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	o-Xylene	0.270	0.290	2.00	7.14	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	p-Cymene (p-Isopropyltoluene)	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	sec-Butylbenzene	ND	ND	2.50	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Styrene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	tert-Butylbenzene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Tetrachloroethene (PCE)	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Toluene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	trans-1,2-Dichloroethene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	trans-1,3-Dichloropropene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Trichloroethene (TCE)	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Trichlorofluoromethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Vinyl acetate	ND	ND	2.50	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Vinyl chloride	ND	ND	2.00	NA	30	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Spring 2023
Field Duplicates for SDG: 680-236018-1

Location	Analysis
G6M-07-02X	SW8260D

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Xylenes, Total	0.810	0.830	2.00	2.44	30	NA	OK

Location	Analysis
G6M-07-02X	SW9034

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Sulfide	ND	ND	2.00	NA	30	NA	OK

Location	Analysis
G6M-07-02X	SW9056A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Sulfate	ND	ND	1.00	NA	30	NA	OK

Location	Analysis
G6M-07-02X	SW9060

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Total Organic Carbon	100	99.0	1.50	1.01	30	OK	NA

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Spring 2023
Field Duplicates for SDG: 680-236018-1

Location	Analysis
G6M-07-02X	A2320B

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Alkalinity, Total (as CaCO3)	95.0	93.0	5.00	2.13	30	OK	NA

Location	Analysis
G6M-07-02X	E353.2

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Nitrate-Nitrite (as N)	ND	ND	0.100	NA	30	NA	OK

Location	Analysis
G6M-07-02X	RSK175

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Ethane	6.70	1.60	1.10	123	30	NA	5.1
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Ethene	7.60	1.90	1.00	120	30	NA	5.7
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Methane	16000	15000	390	6.45	30	OK	NA

Location	Analysis
G6M-07-02X	SW6010C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Iron (FLDFLT)	100000	110000	100	9.52	30	OK	NA
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Manganese (FLDFLT)	3300	3400	10.0	2.99	30	OK	NA

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG

Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Spring 2023
Field Duplicates for SDG: 680-236018-1

Location	Analysis
G6M-07-02X	SW6020A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Arsenic (FLDFLT)	7.30	7.30	5.00	0.00	30	NA	OK

Location	Analysis
G6M-07-02X	SW8260D

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,1,1,2-Tetrachloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,1,1-Trichloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,1,2,2-Tetrachloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,1,2-Trichloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,1-Dichloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,1-Dichloroethene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,1-Dichloropropene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,2,3-Trichlorobenzene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,2,3-Trichloropropane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,2,4-Trichlorobenzene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,2,4-Trimethylbenzene	1.10	1.10	2.00	0.00	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,2-Dibromo-3-chloropropane	ND	ND	10.0	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,2-Dibromoethane (EDB)	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,2-Dichlorobenzene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,2-Dichloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,2-Dichloroethene	0.940	0.980	2.00	4.17	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,2-Dichloropropane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,3,5-Trimethylbenzene	0.350	0.360	2.00	2.82	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,3-Dichlorobenzene	ND	ND	2.00	NA	30	NA	OK

FD = Field Duplicate
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RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Spring 2023
Field Duplicates for SDG: 680-236018-1

Location	Analysis
G6M-07-02X	SW8260D

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,3-Dichloropropane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	1,4-Dichlorobenzene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	2,2-Dichloropropane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	2-Butanone (MEK)	ND	ND	25.0	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	2-Chlorotoluene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	2-Hexanone	ND	ND	20.0	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	4-Chlorotoluene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	4-Methyl-2-pentanone (MIBK)	ND	ND	20.0	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Acetone	ND	ND	25.0	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Benzene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Bromobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Bromochloromethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Bromodichloromethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Bromoform	ND	ND	2.50	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Bromomethane	ND	ND	20.0	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Carbon disulfide	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Carbon Tetrachloride	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Chlorobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Chloroethane	ND	ND	20.0	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Chloroform	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Chloromethane	ND	ND	2.50	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	cis-1,2-Dichloroethene	0.940	0.980	2.00	4.17	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	cis-1,3-Dichloropropene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Cumene	ND	ND	2.00	NA	30	NA	OK

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Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Spring 2023
Field Duplicates for SDG: 680-236018-1

Location	Analysis
G6M-07-02X	SW8260D

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Dibromochloromethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Dibromomethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Dichlorodifluoromethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Ethylbenzene	0.210	0.210	1.00	0.00	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Hexachlorobutadiene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	m,p-Xylene	0.540	0.540	2.00	0.00	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Methyl tert-butyl ether (MTBE)	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Methylene chloride	ND	ND	20.0	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	n-Butylbenzene	0.530	0.530	2.50	0.00	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	n-Propylbenzene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Naphthalene	4.30	4.50	10.0	4.55	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	o-Xylene	0.270	0.290	2.00	7.14	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	p-Cymene (p-Isopropyltoluene)	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	sec-Butylbenzene	ND	ND	2.50	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Styrene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	tert-Butylbenzene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Tetrachloroethene (PCE)	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Toluene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	trans-1,2-Dichloroethene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	trans-1,3-Dichloropropene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Trichloroethene (TCE)	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Trichlorofluoromethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Vinyl acetate	ND	ND	2.50	NA	30	NA	OK
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Vinyl chloride	ND	ND	2.00	NA	30	NA	OK

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Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Spring 2023
Field Duplicates for SDG: 680-236018-1

Location	Analysis
G6M-07-02X	SW8260D

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Xylenes, Total	0.810	0.830	2.00	2.44	30	NA	OK

Location	Analysis
G6M-07-02X	SW9034

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Sulfide	ND	ND	2.00	NA	30	NA	OK

Location	Analysis
G6M-07-02X	SW9056A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Sulfate	ND	ND	1.00	NA	30	NA	OK

Location	Analysis
G6M-07-02X	SW9060

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-SPR23 / G6M-DUP01-SPR23	680-236018-5 / 680-236018-6	Total Organic Carbon	100	99.0	1.50	1.01	30	OK	NA

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

August 28, 2023

SUBJECT: Fort Devens - Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. This SDG was received on July 26, 2023. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #57156_B:

SDG #	Fraction
680-236086-1	Volatiles, Dissolved Metals, Wet Chemistry, Methane, Ethane, and Ethene

The data validation was performed under Stage 2B guidelines. The analysis was validated using the following documents, as applicable to each method:

- Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

547 pages-ADV

Attachment 1

Stage 2B EQUIS EDD

LDC# 57156 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	VOA (8260D)		Pest. (8081B)		Metals (6010C/20A /7470A)		As,Mn (6010C /6020A)		3 D.Met. (6010C /6020A)		VPH (MADEP -VPH		EPH (MADEP -EPH		Methane Ethane Ethene																	
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	680-236018-1	07/26/23	08/09/23	8	0	-	-	-	-	-	-	7	0	-	-	-	-	6	0																
B	680-236086-1	07/26/23	08/09/23	5	0	-	-	-	-	-	-	4	0	-	-	-	-	3	0																
C	680-236086-2	07/26/23	08/09/23	2	0	-	-	-	-	2	0	-	-	2	0	-	-	-	-																
D	680-236120-1	07/26/23	08/09/23	-	-	5	0	5	0	-	-	-	-	5	0	10	0	-	-																
E	680-236128-1	07/26/23	08/09/23	-	-	-	-	-	-	-	-	5	0	-	-	-	-	-	-																
F	680-236128-2	07/26/23	08/09/23	-	-	-	-	-	-	-	-	4	0	-	-	-	-	-	-																
G	680-236128-3	07/26/23	08/09/23	6	0	-	-	-	-	4	0	-	-	4	0	-	-	-	-																
H	680-236378-1	07/26/23	08/09/23	-	-	-	-	-	-	-	-	14	0	-	-	-	-	-	-																
I	680-236434-1	07/26/23	08/09/23	-	-	-	-	-	-	-	-	18	0	-	-	-	-	-	-																
J	680-236498-1	07/26/23	08/09/23	3	0	-	-	-	-	-	-	2	0	-	-	-	-	-	-																
K	680-236498-2	07/26/23	08/09/23	-	-	-	-	-	-	-	-	26	0	-	-	-	-	-	-																
L	680-236818-1	07/26/23	08/09/23	-	-	-	-	-	-	-	-	5	0	-	-	-	-	-	-																
M	680-237047-1	07/26/23	08/09/23	-	-	-	-	-	-	-	-	1	0	-	-	-	-	-	-																
Total	TR/PG			24	0	5	0	5	0	6	0	86	0	11	0	10	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	156

Stage 2B EQUIS EDD

LDC# 57156 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	Alk (2320B)		COD (410.4)		CN- (9012B)		Cl (9056A)		DOC (9060A)		NO_3 /NO_2-N (353.2)		SO_4 (9056A)		S= (9034)		TDS (2540C)		TOC (9060A)													
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	680-236018-1	07/26/23	08/09/23	6	0	-	-	-	-	-	-	-	-	6	0	6	0	6	0	-	-	6	0												
B	680-236086-1	07/26/23	08/09/23	3	0	-	-	-	-	-	-	-	-	3	0	3	0	3	0	-	-	3	0												
D	680-236120-1	07/26/23	08/09/23	5	0	5	0	5	0	5	0	-	-	5	0	5	0	-	-	5	0	-	-												
E	680-236128-1	07/26/23	08/09/23	5	0	-	-	-	-	5	0	5	0	-	-	5	0	-	-	-	-	-	-												
H	680-236378-1	07/26/23	08/09/23	14	0	-	-	-	-	14	0	14	0	-	-	14	0	-	-	-	-	-	-												
I	680-236434-1	07/26/23	08/09/23	18	0	-	-	-	-	18	0	18	0	-	-	18	0	-	-	-	-	-	-												
K	680-236498-2	07/26/23	08/09/23	25	0	-	-	-	-	25	0	25	0	-	-	25	0	-	-	-	-	-	-												
L	680-236818-1	07/26/23	08/09/23	5	0	-	-	-	-	5	0	5	0	-	-	5	0	-	-	-	-	-	-												
M	680-237047-1	07/26/23	08/09/23	1	0	-	-	-	-	1	0	1	0	-	-	1	0	-	-	-	-	-	-												
Total	TR/PG			82	0	5	0	5	0	73	0	68	0	14	0	82	0	9	0	5	0	9	0	0	0	0	0	0	0	0	0	0	0	0	352

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

Data Validation Report for 680-236086-1

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, AOC 50, Spring 2023
SDG:	680-236086-1
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
Prime Contractor:	Seres - Arcadis SB Joint Venture, LLC, Charleston, SC
Project Manager:	Jennifer Singer
Contract Laboratory(ies):	Eurofins Environment Testing TestAmerica, Savannah, GA | Eurofins Lancaster Laboratories Environmental, LLC, Lancaster, PA
Data Review Contractor:	Laboratory Data Consultants, Inc.
Data Review Level:	2B
Primary Data Reviewer:	Allie Jefferson, Chemist/ERPIMS Specialist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	August 24, 2023

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	E353.2	RSK175	SW6010C - Dissolved	SW6020A - Dissolved	SW8260D	SW9034	SW9056A	SW9060
AOC50-RB-01-SPR23	680-236086-4	Water	Equipment Blank/EB				X	X	X			
AOC50-TB-02-SPR23	680-236086-7	Water	Trip Blank/TB						X			
G6M-04-02X-SPR23	680-236086-1	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-13-02X-SPR23	680-236086-2	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-13-05X-SPR23	680-236086-3	Water	Field Sample/N	X	X	X	X	X	X	X	X	X

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page at 2B data validation level. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020 and the additional guidance documents incorporated by reference to the extent possible. Where definitive guidance is not provided, results have been evaluated in a conservative manner using professional judgment.

Sample collection was managed and directed by Seres - Arcadis SB Joint Venture, LLC, Charleston, SC; analyses were performed by Eurofins Environment Testing TestAmerica, Savannah, GA | Eurofins Lancaster Laboratories Environmental, LLC, Lancaster, PA and were reported under sample delivery group (SDG) 680-236086-1. Data have been evaluated electronically based on electronic data deliverables (EDDs) provided by the laboratory, and hard copy data summary forms have also been reviewed during this effort and compared to the automated review output by the reviewers whose signatures appear on the following page. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative and throughout this report.

All quality control (QC) elements associated with this SDG have been reviewed by a project chemist in accordance with the requirements defined for the project. This review is documented in the attached Data Review Checklists. The QC elements listed below were supported by the electronic deliverable and were evaluated using ADR processes.

- Blank - Negative
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Equipment Blank
- Interference Check Sample A
- Interference Check Sample A - Negative
- Interference Check Sample AB
- Lab Blank
- LCS Recovery
- LCS RPD
- Prep Hold Time
- Surrogate
- Test Hold Time
- Trip Blank

Results of the ADR process were subsequently reviewed and updated as applicable by the data review chemists identified on the signature page. Quality control elements that were not included in the electronic deliverable were reviewed manually and findings are documented within this report. Summaries of findings and associated qualified results are documented throughout this report.

A total of 86 results (22.87%) out of the 376 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected or deemed a serious deficiency (X qualifier). Trace values, defined as results that are qualified as estimated because they fall between the detection limit and the reporting limit/limit of quantitation, are not counted as qualified results in the above count. The qualified results are detailed throughout this report and discussed in the narrative below, where appropriate.

Narrative Comments

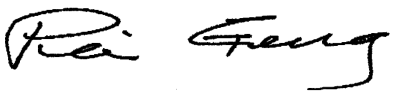
Analytical Method	Data Reviewer Comment
A2320B	No additional comments; see Checklist for detail.
E353.2	No additional comments; see Checklist for detail.
RSK175	No additional comments; see Checklist for detail.
SW6010C	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
SW8260D	Re-analyisis samples were determined "Not Reportable." Initial results were reported.
SW9034	No additional comments; see Checklist for detail.
SW9056A	No additional comments; see Checklist for detail.



August 24, 2023

Reviewed by Allie Jefferson, Chemist/ERPIMS Specialist, Laboratory Data Consultants, Inc.

As the First Reviewer, I certify that I have performed a data review process in accordance with the requirements of the project guidance document, and have compared the electronic data to the laboratory's hard copy report and have verified the consistency of the reported sample results and method quality control data between the two deliverables.



Reviewed by Pei Geng, Senior Scientist, Laboratory Data Consultants, Inc.

August 28, 2023

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

Quality Control Outliers for test method E353.2, Calibration Blank

The purpose of calibration blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in calibration blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
CCB68078506519 (CB)	Nitrate-Nitrite (as N)	0.0210	< 0.01	< 0.1	mg/l	U/None*	B2	
CCB6807850653 (CB)	Nitrate-Nitrite (as N)	0.0230	< 0.01	< 0.1	mg/l	U/None*	B2	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

*Blank flags displayed in the above table identify qualification of the sample result when it is less than or equal to the LOQ/RL. Sample results above the LOD or LOQ will be qualified based on the validation guidance assigned in the project setup.

Qualified Results associated with the Calibration Blank for E353.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-02X-SPR23 680-236086-1	N	Nitrate-Nitrite (as N)	0.100	0.0830 J J1	0.100 UJ		mg/l	B2/L/M
G6M-13-02X-SPR23 680-236086-2	N	Nitrate-Nitrite (as N)	0.100	0.0160 J	0.100 U		mg/l	B2/L

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method E353.2, Lab Blank

The purpose of laboratory blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in laboratory blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
MB6807850654 (LB)	Nitrate-Nitrite (as N)	0.0110	< 0.01	< 0.1	mg/l	U/None*	L	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

*Blank flags displayed in the above table identify qualification of the sample result when it is less than or equal to the LOQ/RL. Sample results above the LOD or LOQ will be qualified based on the validation guidance assigned in the project setup.

Qualified Results associated with the Lab Blank for E353.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-02X-SPR23 680-236086-1	N	Nitrate-Nitrite (as N)	0.100	0.0830 J J1	0.100 UJ		mg/l	B2/L/M
G6M-13-02X-SPR23 680-236086-2	N	Nitrate-Nitrite (as N)	0.100	0.0160 J	0.100 U		mg/l	B2/L

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method RSK175, LCS RPD

The objective of laboratory control sample/laboratory control sample duplicate (LCS/LCSD) RPD analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. LCS/LCSD analyses are also performed to generate data that determines the long-term precision of the analytical method on various matrices. Non-homogenous samples can impact the apparent method precision. Summary forms were evaluated and compared to electronic data deliverables. Laboratory control sample/laboratory control sample duplicate RPD results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
LCSD6807833264 (BD)	Methane	159	< 30	< 30	rpd	J/None	Z	
LCSD6807833267 (BD)	Methane	162	< 30	< 30	rpd	J/None	Z	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the LCS RPD for RSK175

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-02X-SPR23 680-236086-1	N	Methane	390	20000	20000 J		ug/l	Z
G6M-13-02X-SPR23 680-236086-2	N	Methane	390	19000	19000 J		ug/l	Z
G6M-13-05X-SPR23 680-236086-3	N	Methane	390	3100	3100 J		ug/l	Z

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW6010C, Dissolved, Equipment Blank

The purpose of equipment blanks is to determine the existence and magnitude of cross-contamination problems resulting from the process during sampling. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in equipment blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
AOC50-RB-01-SPR23 (EB)	Iron	67.0	< 20	< 100	ug/l	U/None*	V	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

*Blank flags displayed in the above table identify qualification of the sample result when it is less than or equal to the LOQ/RL. Sample results above the LOD or LOQ will be qualified based on the validation guidance assigned in the project setup.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW8260D, Continuing Calibration Verification

Compliance requirements for satisfactory continuing calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data. Continuing calibration is performed to verify and evaluate instrument performance during sample analysis. Summary forms were evaluated against project acceptance criteria, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
CCVIS6807846704 (CV)	Acetone	79.0	80 - 120	80 - 120	percent	J/X	V2	
CCVIS6807846704 (CV)	Bromomethane	143	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807846704 (CV)	Chloroethane	160	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807846704 (CV)	sec-Butylbenzene	122	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807846704 (CV)	Styrene	121	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807847702 (CV)	1,1,2,2-Tetrachloroethane	79.0	80 - 120	80 - 120	percent	J/X	V2	
CCVIS6807847702 (CV)	2-Chlorotoluene	134	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807847702 (CV)	4-Chlorotoluene	136	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807847702 (CV)	Cumene	134	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807847702 (CV)	m,p-Xylene	125	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807847702 (CV)	n-Propylbenzene	137	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807847702 (CV)	o-Xylene	127	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807847702 (CV)	sec-Butylbenzene	122	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807847702 (CV)	Styrene	132	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807847702 (CV)	tert-Butylbenzene	128	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807847702 (CV)	Trichlorofluoromethane	150	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807847702 (CV)	Xylenes, Total	126	80 - 120	80 - 120	percent	J/None	V2	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Continuing Calibration Verification for SW8260D

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-RB-01-SPR23 680-236086-4	EB	Acetone	25.0	10.0 U Q	10.0 UJ		ug/l	V2
AOC50-TB-02-SPR23 680-236086-7	TB	Acetone	25.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-04-02X-SPR23 680-236086-1	N	1,1,2,2-Tetrachloroethane	2.00	1.00 U Q	1.00 UJ		ug/l	I/V2
G6M-13-02X-SPR23 680-236086-2	N	1,1,2,2-Tetrachloroethane	2.00	1.00 U Q	1.00 UJ		ug/l	V2
G6M-13-05X-SPR23 680-236086-3	N	1,1,2,2-Tetrachloroethane	2.00	1.00 U Q	1.00 UJ		ug/l	V2
G6M-13-05X-SPR23 680-236086-3	N	o-Xylene	2.00	0.290 J Q	0.290 J	+	ug/l	TR/V2

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260D, Ending Continuing Calibration Verification

Compliance requirements for satisfactory closing continuing calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data. Continuing calibration is performed to verify and evaluate instrument performance during sample analysis. Summary forms were evaluated against project acceptance criteria, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
CCVC68078467035 (EV)	Bromomethane	202	50 - 150	50 - 150	percent	J/None	V5	
CCVC68078467035 (EV)	Chloroethane	157	50 - 150	50 - 150	percent	J/None	V5	
CCVC68078467035 (EV)	Vinyl acetate	31.0	50 - 150	50 - 150	percent	J/X	V5	
CCVC68078477034 (EV)	Chloroethane	200	50 - 150	50 - 150	percent	J/None	V5	
CCVC68078477034 (EV)	Trichlorofluoromethane	153	50 - 150	50 - 150	percent	J/None	V5	
CCVC68078477034 (EV)	Vinyl acetate	13.0	50 - 150	50 - 150	percent	J/X	V5	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Ending Continuing Calibration Verification for SW8260D

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-RB-01-SPR23 680-236086-4	EB	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5
AOC50-TB-02-SPR23 680-236086-7	TB	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5
G6M-04-02X-SPR23 680-236086-1	N	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	I/V5
G6M-13-02X-SPR23 680-236086-2	N	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5
G6M-13-05X-SPR23 680-236086-3	N	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260D, LCS Recovery

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
LCS6807846705 (BS)	Bromomethane	159	53 - 141	10 - 141	percent	J/None	C	
LCS6807846705 (BS)	Chloroethane	153	60 - 138	10 - 138	percent	J/None	C	
LCS6807847703 (BS)	Trichlorofluoromethane	154	65 - 141	10 - 141	percent	J/None	C	
LCSD6807846706 (BD)	Bromomethane	163	53 - 141	10 - 141	percent	J/None	C	
LCSD6807846706 (BD)	Chloroethane	147	60 - 138	10 - 138	percent	J/None	C	
LCSD6807847704 (BD)	1,2,3-Trichlorobenzene	154	69 - 129	10 - 129	percent	J/None	C	
LCSD6807847704 (BD)	1,2,4-Trichlorobenzene	154	69 - 130	10 - 130	percent	J/None	C	
LCSD6807847704 (BD)	Naphthalene	147	61 - 128	10 - 128	percent	J/None	C	
LCSD6807847704 (BD)	Trichlorofluoromethane	156	65 - 141	10 - 141	percent	J/None	C	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the LCS Recovery for SW8260D

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-13-05X-SPR23 680-236086-3	N	Naphthalene	10.0	3.20 J Q	3.20 J	+	ug/l	C/TR/Z

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260D, LCS RPD

The objective of laboratory control sample/laboratory control sample duplicate (LCS/LCSD) RPD analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. LCS/LCSD analyses are also performed to generate data that determines the long-term precision of the analytical method on various matrices. Non-homogenous samples can impact the apparent method precision. Summary forms were evaluated and compared to electronic data deliverables. Laboratory control sample/laboratory control sample duplicate RPD results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
LCSD6807847704 (BD)	1,2,3-Trichlorobenzene	21.7	< 20	< 20	rpd	J/None	Z	
LCSD6807847704 (BD)	1,2,4-Trichlorobenzene	25.4	< 20	< 20	rpd	J/None	Z	
LCSD6807847704 (BD)	2-Chlorotoluene	24.1	< 20	< 20	rpd	J/None	Z	
LCSD6807847704 (BD)	4-Chlorotoluene	22.1	< 20	< 20	rpd	J/None	Z	
LCSD6807847704 (BD)	Cumene	30.8	< 20	< 20	rpd	J/None	Z	
LCSD6807847704 (BD)	Naphthalene	25.5	< 20	< 20	rpd	J/None	Z	
LCSD6807847704 (BD)	n-Propylbenzene	26.1	< 20	< 20	rpd	J/None	Z	
LCSD6807847704 (BD)	sec-Butylbenzene	22.1	< 20	< 20	rpd	J/None	Z	
LCSD6807847704 (BD)	Styrene	22.3	< 20	< 20	rpd	J/None	Z	
LCSD6807847704 (BD)	tert-Butylbenzene	25.1	< 20	< 20	rpd	J/None	Z	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the LCS RPD for SW8260D

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-13-05X-SPR23 680-236086-3	N	Naphthalene	10.0	3.20 J Q	3.20 J	+	ug/l	C/TR/Z

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260D, Surrogate

Method performance for individual samples is demonstrated through spiking activities. All samples are spiked with surrogate compounds prior to sample preparation. The sample itself may produce effects due to such factors as interferences and high concentrations of analytes. Summary forms were evaluated and compared to electronic data deliverables. Surrogate results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
AOC50-RB-01-SPR23 (EB)	1,2-Dichloroethane-d4	127	81 - 118	10 - 118	percent	J/None	I	
AOC50-RB-01-SPR23 (EB)	Dibromofluoromethane	126	89 - 119	10 - 119	percent	J/None	I	
AOC50-TB-02-SPR23 (TB)	1,2-Dichloroethane-d4	134	81 - 118	10 - 118	percent	J/None	I	
AOC50-TB-02-SPR23 (TB)	Dibromofluoromethane	129	89 - 119	10 - 119	percent	J/None	I	
G6M-04-02X-SPR23 (N)	1-Bromo-4-fluorobenzene (4-Bromofluorobenzene)	84.0	85 - 114	10 - 114	percent	J/UJ	I	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Surrogate for SW8260D

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-02X-SPR23 680-236086-1	N	1,1,1,2-Tetrachloroethane	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,1,1-Trichloroethane	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,1,2,2-Tetrachloroethane	2.00	1.00 U Q	1.00 UJ		ug/l	I/V2
G6M-04-02X-SPR23 680-236086-1	N	1,1,2-Trichloroethane	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,1-Dichloroethane	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,1-Dichloroethene	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,1-Dichloropropene	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,2,3-Trichlorobenzene	5.00	2.00 U Q	2.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,2,3-Trichloropropane	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,2,4-Trichlorobenzene	5.00	2.00 U Q	2.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,2,4-Trimethylbenzene	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U	5.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,2-Dibromoethane (EDB)	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,2-Dichlorobenzene	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,2-Dichloroethane	2.00	1.00 U M	1.00 UJ		ug/l	I

Qualified Results associated with the Surrogate for SW8260D

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-02X-SPR23 680-236086-1	N	1,2-Dichloroethene	2.00	61.0	61.0 J	-	ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,2-Dichloropropane	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,3,5-Trimethylbenzene	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,3-Dichlorobenzene	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,3-Dichloropropane	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,4-Dichlorobenzene	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	2,2-Dichloropropane	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	2-Butanone (MEK)	25.0	20.0 U	20.0 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	2-Chlorotoluene	1.00	0.500 U Q	0.500 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	2-Hexanone	20.0	10.0 U	10.0 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	4-Chlorotoluene	2.00	1.00 U Q	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U	10.0 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Acetone	25.0	10.0 U M	10.0 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Benzene	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Bromobenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Bromochloromethane	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Bromodichloromethane	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Bromoform	2.50	2.00 U	2.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Bromomethane	20.0	10.0 U	10.0 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Carbon disulfide	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Carbon Tetrachloride	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Chlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Chloroethane	20.0	10.0 U Q	10.0 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Chloroform	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Chloromethane	2.50	2.00 U	2.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	cis-1,2-Dichloroethene	2.00	60.0	60.0 J	-	ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	cis-1,3-Dichloropropene	2.00	1.00 U	1.00 UJ		ug/l	I

Qualified Results associated with the Surrogate for SW8260D

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-02X-SPR23 680-236086-1	N	Cumene	2.00	1.00 U Q	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Dibromochloromethane	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Dibromomethane	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Dichlorodifluoromethane	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Ethylbenzene	1.00	0.500 U Q	0.500 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Hexachlorobutadiene	5.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	m,p-Xylene	2.00	1.00 U Q	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Methyl tert-butyl ether (MTBE)	5.00	2.00 U	2.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Methylene chloride	20.0	10.0 U	10.0 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Naphthalene	10.0	5.00 U Q	5.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	n-Butylbenzene	2.50	2.00 U	2.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	n-Propylbenzene	2.00	1.00 U Q	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	o-Xylene	2.00	1.00 U Q	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	p-Cymene (p-Isopropyltoluene)	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	sec-Butylbenzene	2.50	2.00 U Q	2.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Styrene	2.00	1.00 U Q	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	tert-Butylbenzene	2.00	1.00 U Q	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Tetrachloroethene (PCE)	2.00	26.0	26.0 J	-	ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Toluene	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	trans-1,2-Dichloroethene	2.00	0.510 J	0.510 J	-	ug/l	I/TR
G6M-04-02X-SPR23 680-236086-1	N	trans-1,3-Dichloropropene	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Trichloroethene (TCE)	1.00	50.0	50.0 J	-	ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Trichlorofluoromethane	2.00	1.00 U Q	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	I/V5
G6M-04-02X-SPR23 680-236086-1	N	Vinyl chloride	2.00	9.30	9.30 J	-	ug/l	I

Qualified Results associated with the Surrogate for SW8260D

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-02X-SPR23 680-236086-1	N	Xylenes, Total	2.00	1.00 U Q	1.00 UJ		ug/l	I

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW9034, Test Hold Time

Hold times are ascertained based on project requirements. Holding times were determined by comparing the chain of custody records with the dates of analysis found in the electronic data deliverable and laboratory summary forms. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
G6M-04-02X-SPR23 (N)		8.99	< 7	< 14	days	J/UJ	H1	Test Exceeds UWL
G6M-13-02X-SPR23 (N)		9.00	< 7	< 14	days	J/UJ	H1	Test Exceeds UWL
G6M-13-05X-SPR23 (N)		9.07	< 7	< 14	days	J/UJ	H1	Test Exceeds UWL

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Test Hold Time for SW9034

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-02X-SPR23 680-236086-1	N	Sulfide	2.00	1.50 U H	1.50 UJ		mg/l	H1
G6M-13-02X-SPR23 680-236086-2	N	Sulfide	2.00	1.50 U H	1.50 UJ		mg/l	H1
G6M-13-05X-SPR23 680-236086-3	N	Sulfide	2.00	1.50 U H	1.50 UJ		mg/l	H1

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Table of All Qualified Results

Test Method: E353.2		Extraction Method: NONE						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-02X-SPR23 680-236086-1	N	Nitrate-Nitrite (as N)	0.100	0.0830 J J1	0.100 UJ		mg/l	B2/L/M
G6M-13-02X-SPR23 680-236086-2	N	Nitrate-Nitrite (as N)	0.100	0.0160 J	0.100 U		mg/l	B2/L

Test Method: RSK175		Extraction Method: METHOD						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-02X-SPR23 680-236086-1	N	Methane	390	20000	20000 J		ug/l	Z
G6M-13-02X-SPR23 680-236086-2	N	Methane	390	19000	19000 J		ug/l	Z
G6M-13-05X-SPR23 680-236086-3	N	Methane	390	3100	3100 J		ug/l	Z

Test Method: SW8260D		Extraction Method: SW5030C						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-RB-01-SPR23 680-236086-4	EB	Acetone	25.0	10.0 U Q	10.0 UJ		ug/l	V2
AOC50-RB-01-SPR23 680-236086-4	EB	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5
AOC50-TB-02-SPR23 680-236086-7	TB	Acetone	25.0	10.0 U Q	10.0 UJ		ug/l	V2
AOC50-TB-02-SPR23 680-236086-7	TB	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5
G6M-04-02X-SPR23 680-236086-1	N	1,1,1,2-Tetrachloroethane	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,1,1-Trichloroethane	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,1,2,2-Tetrachloroethane	2.00	1.00 U Q	1.00 UJ		ug/l	I/V2
G6M-04-02X-SPR23 680-236086-1	N	1,1,2-Trichloroethane	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,1-Dichloroethane	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,1-Dichloroethene	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,1-Dichloropropene	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,2,3-Trichlorobenzene	5.00	2.00 U Q	2.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,2,3-Trichloropropane	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,2,4-Trichlorobenzene	5.00	2.00 U Q	2.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,2,4-Trimethylbenzene	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U	5.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,2-Dibromoethane (EDB)	2.00	1.00 U	1.00 UJ		ug/l	I

Table of All Qualified Results

Test Method: SW8260D		Extraction Method: SW5030C						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-02X-SPR23 680-236086-1	N	1,2-Dichlorobenzene	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,2-Dichloroethane	2.00	1.00 U M	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,2-Dichloroethene	2.00	61.0	61.0 J	-	ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,2-Dichloropropane	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,3,5-Trimethylbenzene	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,3-Dichlorobenzene	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,3-Dichloropropane	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	1,4-Dichlorobenzene	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	2,2-Dichloropropane	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	2-Butanone (MEK)	25.0	20.0 U	20.0 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	2-Chlorotoluene	1.00	0.500 U Q	0.500 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	2-Hexanone	20.0	10.0 U	10.0 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	4-Chlorotoluene	2.00	1.00 U Q	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U	10.0 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Acetone	25.0	10.0 U M	10.0 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Benzene	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Bromobenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Bromochloromethane	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Bromodichloromethane	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Bromoform	2.50	2.00 U	2.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Bromomethane	20.0	10.0 U	10.0 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Carbon disulfide	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Carbon Tetrachloride	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Chlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Chloroethane	20.0	10.0 U Q	10.0 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Chloroform	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Chloromethane	2.50	2.00 U	2.00 UJ		ug/l	I

Table of All Qualified Results

Test Method: SW8260D		Extraction Method: SW5030C						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-02X-SPR23 680-236086-1	N	cis-1,2-Dichloroethene	2.00	60.0	60.0 J	-	ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	cis-1,3-Dichloropropene	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Cumene	2.00	1.00 U Q	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Dibromochloromethane	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Dibromomethane	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Dichlorodifluoromethane	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Ethylbenzene	1.00	0.500 U Q	0.500 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Hexachlorobutadiene	5.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	m,p-Xylene	2.00	1.00 U Q	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Methyl tert-butyl ether (MTBE)	5.00	2.00 U	2.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Methylene chloride	20.0	10.0 U	10.0 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Naphthalene	10.0	5.00 U Q	5.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	n-Butylbenzene	2.50	2.00 U	2.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	n-Propylbenzene	2.00	1.00 U Q	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	o-Xylene	2.00	1.00 U Q	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	p-Cymene (p-Isopropyltoluene)	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	sec-Butylbenzene	2.50	2.00 U Q	2.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Styrene	2.00	1.00 U Q	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	tert-Butylbenzene	2.00	1.00 U Q	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Tetrachloroethene (PCE)	2.00	26.0	26.0 J	-	ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Toluene	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	trans-1,2-Dichloroethene	2.00	0.510 J	0.510 J	-	ug/l	I/TR
G6M-04-02X-SPR23 680-236086-1	N	trans-1,3-Dichloropropene	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Trichloroethene (TCE)	1.00	50.0	50.0 J	-	ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Trichlorofluoromethane	2.00	1.00 U Q	1.00 UJ		ug/l	I
G6M-04-02X-SPR23 680-236086-1	N	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	I/V5
G6M-04-02X-SPR23 680-236086-1	N	Vinyl chloride	2.00	9.30	9.30 J	-	ug/l	I

Table of All Qualified Results

Test Method: SW8260D		Extraction Method: SW5030C						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-02X-SPR23 680-236086-1	N	Xylenes, Total	2.00	1.00 U Q	1.00 UJ		ug/l	I
G6M-13-02X-SPR23 680-236086-2	N	1,1,2,2-Tetrachloroethane	2.00	1.00 U Q	1.00 UJ		ug/l	V2
G6M-13-02X-SPR23 680-236086-2	N	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5
G6M-13-05X-SPR23 680-236086-3	N	1,1,2,2-Tetrachloroethane	2.00	1.00 U Q	1.00 UJ		ug/l	V2
G6M-13-05X-SPR23 680-236086-3	N	Naphthalene	10.0	3.20 J Q	3.20 J	+	ug/l	C/TR/Z
G6M-13-05X-SPR23 680-236086-3	N	o-Xylene	2.00	0.290 J Q	0.290 J	+	ug/l	TR/V2
G6M-13-05X-SPR23 680-236086-3	N	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5

Test Method: SW9034		Extraction Method: NONE						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-02X-SPR23 680-236086-1	N	Sulfide	2.00	1.50 U H	1.50 UJ		mg/l	H1
G6M-13-02X-SPR23 680-236086-2	N	Sulfide	2.00	1.50 U H	1.50 UJ		mg/l	H1
G6M-13-05X-SPR23 680-236086-3	N	Sulfide	2.00	1.50 U H	1.50 UJ		mg/l	H1

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Table of Results with Modified Qualifiers

Modified Qualifiers for test method E353.2

FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-04-02X-SPR23 680-236086-1	N	Nitrate-Nitrite (as N)	0.100	0.0830 J J1	0.100 U	0.100 UJ	B2/L/M

Modified Qualifiers for test method SW8260D

FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
AOC50-RB-01-SPR23 680-236086-4	EB	Acetone	25.0	10.0 U Q	10.0 X	10.0 UJ	V2
AOC50-RB-01-SPR23 680-236086-4	EB	Vinyl acetate	2.50	2.00 U Q	2.00 X	2.00 UJ	V5
AOC50-TB-02-SPR23 680-236086-7	TB	Acetone	25.0	10.0 U Q	10.0 X	10.0 UJ	V2
AOC50-TB-02-SPR23 680-236086-7	TB	Vinyl acetate	2.50	2.00 U Q	2.00 X	2.00 UJ	V5
G6M-04-02X-SPR23 680-236086-1	N	1,1,2,2-Tetrachloroethane	2.00	1.00 U Q	1.00 X	1.00 UJ	I/V2
G6M-04-02X-SPR23 680-236086-1	N	Vinyl acetate	2.50	2.00 U Q	2.00 X	2.00 UJ	I/V5
G6M-13-02X-SPR23 680-236086-2	N	1,1,2,2-Tetrachloroethane	2.00	1.00 U Q	1.00 X	1.00 UJ	V2
G6M-13-02X-SPR23 680-236086-2	N	Vinyl acetate	2.50	2.00 U Q	2.00 X	2.00 UJ	V5
G6M-13-05X-SPR23 680-236086-3	N	1,1,2,2-Tetrachloroethane	2.00	1.00 U Q	1.00 X	1.00 UJ	V2
G6M-13-05X-SPR23 680-236086-3	N	Vinyl acetate	2.50	2.00 U Q	2.00 X	2.00 UJ	V5

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Reason Code Definitions

Code	Definition
B2	CCB
C	LCS Recovery
H1	Test Hold Time
I	Surrogate recovery outside project limits.
L	Lab Blank
M	MS Recovery
TR	Trace Level Detect
V	Equipment Blank
V2	CCV
V5	Ending Continuing Calibration Verification
Z	LCS RPD

Flag Code and Definitions

Flag	Definition
J	Estimated Value
N	The analysis indicates the presence of an analyte for which there was presumptive evidence to make a tentative identification.
NJ	The analyte has been tentatively identified or presumptively as present and the associated numerical value was the estimated concentration in the sample.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
U	Undetected: The analyte was analyzed for, but not detected.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.
X	Result may require rejection; PDT attention required

Bias	
-	The result may be biased low
+	The result may be biased high
Note - The bias field is a separate field; however, it is an integral part of the final flag (qualifier) on the sample result	

Review Questions

Method: A2320B (Alkalinity by Titrimetric Method)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Review Questions

Method: E353.2 (Nitrogen, Nitrate-Nitrite (Colorimetric Automated, Cadmium Reduction))				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?		•		Results qualified U at the LOQ due to method blank contamination.
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?		•		Results qualified U at the LOQ due to method blank contamination.
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?		•		Recovery low. Parent sample qualified J.
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Review Questions

Method: RSK175 (Dissolved Gas Analysis in Water Samples Using a GC Headspace Equilibrium Technique)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Were the required minimum levels of calibration standards used in the initial calibration?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Were surrogate recoveries within project acceptance limits?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?		•		RPD exceeded project limits. Detect results were qualified J.
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were DoD QSM corrective actions followed if deviations were noted?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Review Questions

Method: SW6010C (Trace Metals by Inductively Coupled Plasma/Atomic Emission Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?	•			
Were target analytes reported in the field blank(s) less than MDL?		•		Iron was detect in the equipment blank. No results were qualified.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Review Questions

Method: SW6020A (Trace Metals by Inductively Coupled Plasma/Mass Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?	•			
Were target analytes reported in the field blank(s) less than MDL?	•			
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Review Questions

Method: SW8260D (Volatile Organic Compounds by GC/MS)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?		•		CCV and closing CCV outside of limits for several compounds. Results qualified J/UJ.
Were the required minimum levels of calibration standards used in the initial calibration?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?		•		Several compounds are outside of limits. All results were non-detect, no data was qualified.
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Were surrogate recoveries within project acceptance limits?		•		Several surrogates outside of project limits. Results qualified J/UJ.
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?	•			
Were target analytes reported in the field blank(s) less than MDL?	•			
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?		•		Recovery above limits. Detect results qualified J.
Was the LCS/LCSD RPD within project acceptance limits?		•		RPD exceeded limits. Detect results qualified J.
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were DoD QSM corrective actions followed if deviations were noted?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Review Questions

Method: SW9034 (Titrimetric Procedure for Acid-Soluble and Acid-Insoluble Sulfides)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?		•		Test holding time exceeds UWL. Results qualified J/UJ.
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Review Questions

Method: SW9056A (Anion Chromatography)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

August 28, 2023

SUBJECT: Fort Devens - Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. This SDG was received on July 26, 2023. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #57156_J:

SDG #	Fraction
680-236498-1	Volatiles, Dissolved Metals

The data validation was performed under Stage 2B guidelines. The analysis was validated using the following documents, as applicable to each method:

- Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

547 pages-ADV

Attachment 1

Stage 2B EQUIS EDD

LDC# 57156 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	VOA (8260D)		Pest. (8081B)		Metals (6010C/20A /7470A)		As,Mn (6010C /6020A)		3 D.Met. (6010C /6020A)		VPH (MADEP -VPH		EPH (MADEP -EPH		Methane Ethane Ethene																	
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	680-236018-1	07/26/23	08/09/23	8	0	-	-	-	-	-	-	7	0	-	-	-	-	6	0																
B	680-236086-1	07/26/23	08/09/23	5	0	-	-	-	-	-	-	4	0	-	-	-	-	3	0																
C	680-236086-2	07/26/23	08/09/23	2	0	-	-	-	-	2	0	-	-	2	0	-	-	-	-																
D	680-236120-1	07/26/23	08/09/23	-	-	5	0	5	0	-	-	-	-	5	0	10	0	-	-																
E	680-236128-1	07/26/23	08/09/23	-	-	-	-	-	-	-	-	5	0	-	-	-	-	-	-																
F	680-236128-2	07/26/23	08/09/23	-	-	-	-	-	-	-	-	4	0	-	-	-	-	-	-																
G	680-236128-3	07/26/23	08/09/23	6	0	-	-	-	-	4	0	-	-	4	0	-	-	-	-																
H	680-236378-1	07/26/23	08/09/23	-	-	-	-	-	-	-	-	14	0	-	-	-	-	-	-																
I	680-236434-1	07/26/23	08/09/23	-	-	-	-	-	-	-	-	18	0	-	-	-	-	-	-																
J	680-236498-1	07/26/23	08/09/23	3	0	-	-	-	-	-	-	2	0	-	-	-	-	-	-																
K	680-236498-2	07/26/23	08/09/23	-	-	-	-	-	-	-	-	26	0	-	-	-	-	-	-																
L	680-236818-1	07/26/23	08/09/23	-	-	-	-	-	-	-	-	5	0	-	-	-	-	-	-																
M	680-237047-1	07/26/23	08/09/23	-	-	-	-	-	-	-	-	1	0	-	-	-	-	-	-																
Total	TR/PG			24	0	5	0	5	0	6	0	86	0	11	0	10	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	156

Stage 2B EQUIS EDD

LDC# 57156 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	Alk (2320B)		COD (410.4)		CN- (9012B)		Cl (9056A)		DOC (9060A)		NO_3 /NO_2-N (353.2)		SO_4 (9056A)		S= (9034)		TDS (2540C)		TOC (9060A)													
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	680-236018-1	07/26/23	08/09/23	6	0	-	-	-	-	-	-	-	-	6	0	6	0	6	0	-	-	6	0												
B	680-236086-1	07/26/23	08/09/23	3	0	-	-	-	-	-	-	-	-	3	0	3	0	3	0	-	-	3	0												
D	680-236120-1	07/26/23	08/09/23	5	0	5	0	5	0	5	0	-	-	5	0	5	0	-	-	5	0	-	-												
E	680-236128-1	07/26/23	08/09/23	5	0	-	-	-	-	5	0	5	0	-	-	5	0	-	-	-	-	-	-												
H	680-236378-1	07/26/23	08/09/23	14	0	-	-	-	-	14	0	14	0	-	-	14	0	-	-	-	-	-	-												
I	680-236434-1	07/26/23	08/09/23	18	0	-	-	-	-	18	0	18	0	-	-	18	0	-	-	-	-	-	-												
K	680-236498-2	07/26/23	08/09/23	25	0	-	-	-	-	25	0	25	0	-	-	25	0	-	-	-	-	-	-												
L	680-236818-1	07/26/23	08/09/23	5	0	-	-	-	-	5	0	5	0	-	-	5	0	-	-	-	-	-	-												
M	680-237047-1	07/26/23	08/09/23	1	0	-	-	-	-	1	0	1	0	-	-	1	0	-	-	-	-	-	-												
Total	TR/PG			82	0	5	0	5	0	73	0	68	0	14	0	82	0	9	0	5	0	9	0	0	0	0	0	0	0	0	0	0	0	0	352

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

Data Validation Report for 680-236498-1

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, AOC 50, Spring 2023
SDG:	680-236498-1
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
Prime Contractor:	Seres - Arcadis SB Joint Venture, LLC, Charleston, SC
Project Manager:	Jennifer Singer
Contract Laboratory(ies):	Eurofins Environment Testing TestAmerica, Savannah, GA
Data Review Contractor:	Laboratory Data Consultants, Inc.
Data Review Level:	2B
Primary Data Reviewer:	Allie Jefferson, Chemist/ERPIMS Specialist
Second Reviewer:	Long Ngo, Senior Scientist
Date Submitted:	August 24, 2023

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	SW6010C - Dissolved	SW6020A - Dissolved	SW8260D
AOC50-RB02-SPR23	680-236498-2	Water	Equipment Blank/EB	X	X	X
AOC50-TB-03-SPR23	680-236498-3	Water	Trip Blank/TB			X
XSA-12-97X-SPR23	680-236498-1	Water	Field Sample/N	X	X	X

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page at 2B data validation level. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020 and the additional guidance documents incorporated by reference to the extent possible. Where definitive guidance is not provided, results have been evaluated in a conservative manner using professional judgment.

Sample collection was managed and directed by Seres - Arcadis SB Joint Venture, LLC, Charleston, SC; analyses were performed by Eurofins Environment Testing TestAmerica, Savannah, GA and were reported under sample delivery group (SDG) 680-236498-1. Data have been evaluated electronically based on electronic data deliverables (EDDs) provided by the laboratory, and hard copy data summary forms have also been reviewed during this effort and compared to the automated review output by the reviewers whose signatures appear on the following page. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative and throughout this report.

All quality control (QC) elements associated with this SDG have been reviewed by a project chemist in accordance with the requirements defined for the project. This review is documented in the attached Data Review Checklists. The QC elements listed below were supported by the electronic deliverable and were evaluated using ADR processes.

- Blank - Negative
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Equipment Blank
- Interference Check Sample A
- Interference Check Sample A - Negative
- Interference Check Sample AB
- Lab Blank
- LCS Recovery
- LCS RPD
- Prep Hold Time
- Surrogate
- Test Hold Time
- Trip Blank

Results of the ADR process were subsequently reviewed and updated as applicable by the data review chemists identified on the signature page. Quality control elements that were not included in the electronic deliverable were reviewed manually and findings are documented within this report. Summaries of findings and associated qualified results are documented throughout this report.

A total of 8 results (3.81%) out of the 210 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected or deemed a serious deficiency (X qualifier). Trace values, defined as results that are qualified as estimated because they fall between the detection limit and the reporting limit/limit of quantitation, are not counted as qualified results in the above count. The qualified results are detailed throughout this report and discussed in the narrative below, where appropriate.

Narrative Comments

Analytical Method	Data Reviewer Comment
SW6010C	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
SW8260D	No additional comments; see Checklist for detail.



August 24, 2023

Reviewed by Allie Jefferson, Chemist/ERPIMS Specialist, Laboratory Data Consultants, Inc.

As the First Reviewer, I certify that I have performed a data review process in accordance with the requirements of the project guidance document, and have compared the electronic data to the laboratory's hard copy report and have verified the consistency of the reported sample results and method quality control data between the two deliverables.



Reviewed by Long Ngo, Senior Scientist, Laboratory Data Consultants, Inc.

August 28, 2023

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

Quality Control Outliers for test method SW8260D, Continuing Calibration Verification

Compliance requirements for satisfactory continuing calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data. Continuing calibration is performed to verify and evaluate instrument performance during sample analysis. Summary forms were evaluated against project acceptance criteria, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
CCVIS6807858713 (CV)	2-Butanone (MEK)	124	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807858713 (CV)	Carbon Tetrachloride	76.0	80 - 120	80 - 120	percent	J/X	V2	
CCVIS6807858713 (CV)	Dichlorodifluoromethane	74.0	80 - 120	80 - 120	percent	J/X	V2	
CCVIS6807858713 (CV)	Trichlorofluoromethane	78.0	80 - 120	80 - 120	percent	J/X	V2	
CCVIS6807860965 (CV)	Chloroethane	148	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807860965 (CV)	Dichlorodifluoromethane	75.0	80 - 120	80 - 120	percent	J/X	V2	
CCVIS6807860965 (CV)	Trichlorofluoromethane	184	80 - 120	80 - 120	percent	J/None	V2	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Continuing Calibration Verification for SW8260D

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-RB02-SPR23 680-236498-2	EB	Carbon Tetrachloride	2.00	1.00 U Q	1.00 UJ		ug/l	V2
AOC50-RB02-SPR23 680-236498-2	EB	Dichlorodifluoromethane	2.00	1.00 U Q	1.00 UJ		ug/l	V2
AOC50-RB02-SPR23 680-236498-2	EB	Trichlorofluoromethane	2.00	1.00 U Q	1.00 UJ		ug/l	C/V2/V1
AOC50-TB-03-SPR23 680-236498-3	TB	Dichlorodifluoromethane	2.00	1.00 U Q	1.00 UJ		ug/l	V2
XSA-12-97X-SPR23 680-236498-1	N	Carbon Tetrachloride	2.00	1.00 U Q	1.00 UJ		ug/l	V2
XSA-12-97X-SPR23 680-236498-1	N	Dichlorodifluoromethane	2.00	1.00 U Q	1.00 UJ		ug/l	V2
XSA-12-97X-SPR23 680-236498-1	N	Trichlorofluoromethane	2.00	1.00 U Q	1.00 UJ		ug/l	C/V2/V1

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260D, Ending Continuing Calibration Verification

Compliance requirements for satisfactory closing continuing calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data. Continuing calibration is performed to verify and evaluate instrument performance during sample analysis. Summary forms were evaluated against project acceptance criteria, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
CCVC68078587132 (EV)	Trichlorofluoromethane	189	50 - 150	50 - 150	percent	J/None	V5	
CCVC68078609631 (EV)	Chloroethane	151	50 - 150	50 - 150	percent	J/None	V5	
CCVC68078609631 (EV)	Trichlorofluoromethane	190	50 - 150	50 - 150	percent	J/None	V5	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW8260D, LCS Recovery

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
LCS6807860966 (BS)	Chloroethane	146	60 - 138	10 - 138	percent	J/None	C	
LCS6807860966 (BS)	Trichlorofluoromethane	165	65 - 141	10 - 141	percent	J/None	C	
LCSD6807858715 (BD)	Trichlorofluoromethane	61.0	65 - 141	10 - 141	percent	J/UJ	C	
LCSD6807860967 (BD)	Trichlorofluoromethane	64.0	65 - 141	10 - 141	percent	J/UJ	C	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the LCS Recovery for SW8260D

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-RB02-SPR23 680-236498-2	EB	Trichlorofluoromethane	2.00	1.00 U Q	1.00 UJ		ug/l	C/V2/V1
AOC50-TB-03-SPR23 680-236498-3	TB	Trichlorofluoromethane	2.00	1.00 U Q	1.00 UJ		ug/l	C/V1
XSA-12-97X-SPR23 680-236498-1	N	Trichlorofluoromethane	2.00	1.00 U Q	1.00 UJ		ug/l	C/V2/V1

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260D, LCS RPD

The objective of laboratory control sample/laboratory control sample duplicate (LCS/LCSD) RPD analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. LCS/LCSD analyses are also performed to generate data that determines the long-term precision of the analytical method on various matrices. Non-homogenous samples can impact the apparent method precision. Summary forms were evaluated and compared to electronic data deliverables. Laboratory control sample/laboratory control sample duplicate RPD results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
LCSD6807860967 (BD)	Bromomethane	20.9	< 20	< 20	rpd	J/None	Z	
LCSD6807860967 (BD)	Chloroethane	68.9	< 20	< 20	rpd	J/None	Z	
LCSD6807860967 (BD)	Chloromethane	21.8	< 20	< 20	rpd	J/None	Z	
LCSD6807860967 (BD)	Trichlorofluoromethane	88.7	< 20	< 20	rpd	J/None	Z	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW8260D, Trip Blank

The purpose of trip blanks is to determine the existence and magnitude of cross-contamination problems resulting from the shipping of samples. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in trip blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
AOC50-TB-03-SPR23 (TB)	Toluene	0.430	< 0.25	< 2	ug/l	U/None*	T	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

*Blank flags displayed in the above table identify qualification of the sample result when it is less than or equal to the LOQ/RL. Sample results above the LOD or LOQ will be qualified based on the validation guidance assigned in the project setup.

No results associated with this QC element required qualification.

Table of All Qualified Results

Test Method: SW8260D		Extraction Method: SW5030C						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-RB02-SPR23 680-236498-2	EB	Carbon Tetrachloride	2.00	1.00 U Q	1.00 UJ		ug/l	V2
AOC50-RB02-SPR23 680-236498-2	EB	Dichlorodifluoromethane	2.00	1.00 U Q	1.00 UJ		ug/l	V2
AOC50-RB02-SPR23 680-236498-2	EB	Trichlorofluoromethane	2.00	1.00 U Q	1.00 UJ		ug/l	C/V2/V1
AOC50-TB-03-SPR23 680-236498-3	TB	Dichlorodifluoromethane	2.00	1.00 U Q	1.00 UJ		ug/l	V2
AOC50-TB-03-SPR23 680-236498-3	TB	Trichlorofluoromethane	2.00	1.00 U Q	1.00 UJ		ug/l	C/V1
XSA-12-97X-SPR23 680-236498-1	N	Carbon Tetrachloride	2.00	1.00 U Q	1.00 UJ		ug/l	V2
XSA-12-97X-SPR23 680-236498-1	N	Dichlorodifluoromethane	2.00	1.00 U Q	1.00 UJ		ug/l	V2
XSA-12-97X-SPR23 680-236498-1	N	Trichlorofluoromethane	2.00	1.00 U Q	1.00 UJ		ug/l	C/V2/V1

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260D

FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
AOC50-RB02-SPR23 680-236498-2	EB	Carbon Tetrachloride	2.00	1.00 U Q	1.00 X	1.00 UJ	V2
AOC50-RB02-SPR23 680-236498-2	EB	Dichlorodifluoromethane	2.00	1.00 U Q	1.00 X	1.00 UJ	V2
AOC50-RB02-SPR23 680-236498-2	EB	Trichlorofluoromethane	2.00	1.00 U Q	1.00 X	1.00 UJ	C/V2/V1
AOC50-TB-03-SPR23 680-236498-3	TB	Dichlorodifluoromethane	2.00	1.00 U Q	1.00 X	1.00 UJ	V2
AOC50-TB-03-SPR23 680-236498-3	TB	Trichlorofluoromethane	2.00	1.00 U Q	1.00 UJ	1.00 UJ	C/V1
XSA-12-97X-SPR23 680-236498-1	N	Carbon Tetrachloride	2.00	1.00 U Q	1.00 X	1.00 UJ	V2
XSA-12-97X-SPR23 680-236498-1	N	Dichlorodifluoromethane	2.00	1.00 U Q	1.00 X	1.00 UJ	V2
XSA-12-97X-SPR23 680-236498-1	N	Trichlorofluoromethane	2.00	1.00 U Q	1.00 X	1.00 UJ	C/V2/V1

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Reason Code Definitions

Code	Definition
C	LCS Recovery
T	Trip Blank
TR	Trace Level Detect
V1	ICV
V2	CCV
V5	Ending Continuing Calibration Verification
Z	LCS RPD

Flag Code and Definitions

Flag	Definition
J	Estimated Value
N	The analysis indicates the presence of an analyte for which there was presumptive evidence to make a tentative identification.
NJ	The analyte has been tentatively identified or presumptively as present and the associated numerical value was the estimated concentration in the sample.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
U	Undetected: The analyte was analyzed for, but not detected.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.
X	Result may require rejection; PDT attention required

Bias

-	The result may be biased low
+	The result may be biased high

Note - The bias field is a separate field; however, it is an integral part of the final flag (qualifier) on the sample result

Review Questions

Method: SW6010C (Trace Metals by Inductively Coupled Plasma/Atomic Emission Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?	•			
Were target analytes reported in the field blank(s) less than MDL?	•			
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Review Questions

Method: SW6020A (Trace Metals by Inductively Coupled Plasma/Mass Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?	•			
Were target analytes reported in the field blank(s) less than MDL?	•			
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?		•		Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Review Questions

Method: SW8260D (Volatile Organic Compounds by GC/MS)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?		•		CCV and closing CCV outside of limits for several compounds. Results qualified UJ.
Were the required minimum levels of calibration standards used in the initial calibration?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?		•		ICV outside of limits for several compounds. Results qualified UJ.
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Were surrogate recoveries within project acceptance limits?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?	•			
Were target analytes reported in the field blank(s) less than MDL?		•		One compound detect in Trip Blank. No data was qualified.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?		•		Outside limits. Results qualified UJ.
Was the LCS/LCSD RPD within project acceptance limits?		•		Outside limits. All results non-detect, no data qualified.
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?		•		Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were DoD QSM corrective actions followed if deviations were noted?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

February 28, 2024

SUBJECT: Fort Devens - Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. This SDG was received on January 4, 2024. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #58331_A:

SDG #	Fraction
680-241926-1	Volatiles, Dissolved Metals, Wet Chemistry, Methane, Ethane, & Ethene

The data validation was performed under Stage 2B guidelines. The analysis was validated using the following documents, as applicable to each method:

- Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

341 pages-ADV

Attachment 1

Stage 2B EQUIS EDD

LDC# 58331 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	VOA (8260D)		VOA (624)		SVOA (625)		Pest. (8081B)		PCBs (8082A)		Metals (6010C /6020A)		Hg (7470A)		3 D.Met. (6010C /6020A)		DRO (8015C)		Methane Ethane Ethene													
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	680-241926-1	01/04/24	01/18/24	8	0	-	-	-	-	-	-	-	-	-	-	-	-	8	0	-	-	3	0												
B	680-242109-1	01/04/24	01/18/24	25	0	-	-	-	-	-	-	-	-	-	-	-	-	23	0	-	-	13	0												
C	680-242433-1	01/04/24	01/18/24	3	0	-	-	-	-	-	-	-	-	-	-	-	-	3	0	-	-	-	-												
D	680-242668-1	01/04/24	01/18/24	4	0	-	-	-	-	-	-	-	-	-	-	-	-	4	0	-	-	1	0												
E	680-242837-1	01/04/24	01/18/24	-	-	1	0	-	-	1	0	-	-	1	0	1	0	-	-	-	-	-	-												
F	680-242837-2	01/04/24	01/18/24	-	-	-	-	-	-	-	-	1	0	-	-	-	-	-	-	-	-	-	-												
G	680-242974-2	01/04/24	01/18/24	1	0	-	-	-	-	-	-	-	-	-	-	-	-	1	0	-	-	-	-												
H	680-243143-1	01/04/24	01/18/24	-	-	-	-	1	0	-	-	-	-	-	-	-	-	-	-	1	0	-	-												
Total	TR/PG			41	0	1	0	1	0	1	0	1	0	1	0	1	0	39	0	1	0	17	0	0	0	0	0	0	0	0	0	0	0	0	104

Stage 2B EQUIS EDD

LDC# 58331 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	Alk (2320B)		CN- (9012B)		NO_3 /NO_2-N (353.2)		pH (9040C)		Total Phenols (9066)		SO_4 (9056A)		S= (9034)		TSS (2540D)		TOC (9060A)													
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	680-241926-1	01/04/24	01/18/24	3	0	-	-	3	0	-	-	-	-	3	0	-	-	-	-	3	0												
B	680-242109-1	01/04/24	01/18/24	13	0	-	-	13	0	-	-	-	-	13	0	13	0	-	-	13	0												
D	680-242668-1	01/04/24	01/18/24	1	0	-	-	1	0	-	-	-	-	1	0	1	0	-	-	1	0												
E	680-242837-1	01/04/24	01/18/24	-	-	1	0	-	-	1	0	-	-	-	-	-	-	-	-	-	-												
G	680-242974-2	01/04/24	01/18/24																														
H	680-243143-1	01/04/24	01/18/24	-	-	-	-	-	-	-	-	1	0	-	-	-	-	1	0	-	-												
Total	TR/PG			17	0	1	0	17	0	1	0	1	0	17	0	14	0	1	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	86

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

Data Validation Report for 680-241926-1

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023
SDG:	680-241926-1
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
Prime Contractor:	Seres - Arcadis SB Joint Venture, LLC, Charleston, SC
Project Manager:	Jennifer Singer
Contract Laboratory(ies):	Eurofins Environment Testing TestAmerica, Savannah, GA
Data Review Contractor:	Laboratory Data Consultants, Inc.
Data Review Level:	2B
Primary Data Reviewer:	Long Ngo, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	February 21, 2024

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	E353.2	RSK175	SW6010C - Dissolved	SW6020A - Dissolved	SW8260D	SW9056A	SW9060
AOC50-DUP04-FAL23	680-241926-1	Water	Field Duplicate/FD				X	X	X		
AOC5-TB01-FAL23	680-241926-8	Water	Trip Blank/TB						X		
G6M-02-11X-FAL23	680-241926-2	Water	Field Sample/N				X	X	X		
G6M-03-10X-FAL23	680-241926-3	Water	Field Sample/N				X	X	X		
G6M-13-05X-FAL23	680-241926-4	Water	Field Sample/N	X	X	X	X	X	X	X	X
G6M-13-06X-FAL23	680-241926-5	Water	Field Sample/N	X	X	X	X	X	X	X	X
G6M-95-20X-FAL23	680-241926-6	Water	Field Sample/N				X	X	X		
G6M-97-05B-FAL23	680-241926-7	Water	Field Sample/N	X	X	X	X	X	X	X	X

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page at 2B data validation level. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020 and the additional guidance documents incorporated by reference to the extent possible. Where definitive guidance is not provided, results have been evaluated in a conservative manner using professional judgment.

Sample collection was managed and directed by Seres - Arcadis SB Joint Venture, LLC, Charleston, SC; analyses were performed by Eurofins Environment Testing TestAmerica, Savannah, GA and were reported under sample delivery group (SDG) 680-241926-1. Data have been evaluated electronically based on electronic data deliverables (EDDs) provided by the laboratory, and hard copy data summary forms have also been reviewed during this effort and compared to the automated review output by the reviewers whose signatures appear on the following page. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative and throughout this report.

All quality control (QC) elements associated with this SDG have been reviewed by a project chemist in accordance with the requirements defined for the project. This review is documented in the attached Data Review Checklists. The QC elements listed below were supported by the electronic deliverable and were evaluated using ADR processes.

- Blank - Negative
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Field Duplicate RPD
- Interference Check Sample A
- Interference Check Sample A - Negative
- Interference Check Sample AB
- Lab Blank
- LCS Recovery
- LCS RPD
- Prep Hold Time
- Surrogate
- Test Hold Time
- Trip Blank

Results of the ADR process were subsequently reviewed and updated as applicable by the data review chemists identified on the signature page. Quality control elements that were not included in the electronic deliverable were reviewed manually and findings are documented within this report. Summaries of findings and associated qualified results are documented throughout this report.

A total of 24 results (4.10%) out of the 586 results (sample and field QC samples) reported are qualified based on review and 8 results (1.37%) have been rejected or deemed a serious deficiency (X qualifier). Trace values, defined as results that are qualified as estimated because they fall between the detection limit and the reporting limit/limit of quantitation, are not counted as qualified results in the above count. The qualified results are detailed throughout this report and discussed in the narrative below, where appropriate.

Narrative Comments

Analytical Method	Data Reviewer Comment
A2320B	No additional comments; see Checklist for detail.
E353.2	No additional comments; see Checklist for detail.
RSK175	No additional comments; see Checklist for detail.
SW6010C	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
SW8260D	No additional comments; see Checklist for detail.
SW9056A	No additional comments; see Checklist for detail.
SW9060	No additional comments; see Checklist for detail.



February 21, 2024

Reviewed by Long Ngo, Environmental Scientist, Laboratory Data Consultants, Inc.

As the First Reviewer, I certify that I have performed a data review process in accordance with the requirements of the project guidance document, and have compared the electronic data to the laboratory's hard copy report and have verified the consistency of the reported sample results and method quality control data between the two deliverables.



Reviewed by Pei Geng, Senior Scientist, Laboratory Data Consultants, Inc.

February 28, 2024

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

Quality Control Outliers for test method E353.2, Calibration Blank

The purpose of calibration blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in calibration blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
CCB68080509414 (CB)	Nitrate-Nitrite (as N)	0.0390	< 0.01	< 0.1	mg/l	U/None*	B2	
CCB68080509430 (CB)	Nitrate-Nitrite (as N)	0.0360	< 0.01	< 0.1	mg/l	U/None*	B2	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

*Blank flags displayed in the above table identify qualification of the sample result when it is less than or equal to the LOQ/RL. Sample results above the LOD or LOQ will be qualified based on the validation guidance assigned in the project setup.

No results associated with this QC element required qualification.

Quality Control Outliers for test method E353.2, Lab Blank

The purpose of laboratory blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in laboratory blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
MB68080509415 (LB)	Nitrate-Nitrite (as N)	0.0360	< 0.01	< 0.1	mg/l	U/None*	L	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

*Blank flags displayed in the above table identify qualification of the sample result when it is less than or equal to the LOQ/RL. Sample results above the LOD or LOQ will be qualified based on the validation guidance assigned in the project setup.

No results associated with this QC element required qualification.

Quality Control Outliers for test method RSK175, LCS RPD

The objective of laboratory control sample/laboratory control sample duplicate (LCS/LCSD) RPD analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. LCS/LCSD analyses are also performed to generate data that determines the long-term precision of the analytical method on various matrices. Non-homogenous samples can impact the apparent method precision. Summary forms were evaluated and compared to electronic data deliverables. Laboratory control sample/laboratory control sample duplicate RPD results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
LCSD6808045764 (BD)	Methane	166	< 30	< 30	rpd	J/None	Z	
LCSD6808045767 (BD)	Methane	164	< 30	< 30	rpd	J/None	Z	
LCSD6808050514 (BD)	Methane	167	< 30	< 30	rpd	J/None	Z	
LCSD6808050517 (BD)	Methane	163	< 30	< 30	rpd	J/None	Z	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW6010C, Dissolved, Calibration Blank

The purpose of calibration blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in calibration blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
CCB68080424069 (CB)	Manganese	1.18	< 1	< 10	ug/l	U/None*	B2	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

*Blank flags displayed in the above table identify qualification of the sample result when it is less than or equal to the LOQ/RL. Sample results above the LOD or LOQ will be qualified based on the validation guidance assigned in the project setup.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW8260D, Continuing Calibration Verification

Compliance requirements for satisfactory continuing calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data. Continuing calibration is performed to verify and evaluate instrument performance during sample analysis. Summary forms were evaluated against project acceptance criteria, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
CCVIS6808051733 (CV)	2,2-Dichloropropane	0.00	80 - 120	80 - 120	percent	J/X	V2	
CCVIS6808051733 (CV)	Bromoform	79.0	80 - 120	80 - 120	percent	J/X	V2	
CCVIS6808051733 (CV)	Chloroethane	181	80 - 120	80 - 120	percent	J/None	V2	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Continuing Calibration Verification for SW8260D

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP04-FAL23 680-241926-1	FD	2,2-Dichloropropane	2.00	1.00 U Q	1.00 X		ug/l	V2
AOC50-DUP04-FAL23 680-241926-1	FD	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V2
AOC5-TB01-FAL23 680-241926-8	TB	2,2-Dichloropropane	2.00	1.00 U Q	1.00 X		ug/l	V2
AOC5-TB01-FAL23 680-241926-8	TB	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V2
G6M-02-11X-FAL23 680-241926-2	N	2,2-Dichloropropane	2.00	1.00 U Q	1.00 X		ug/l	V2
G6M-02-11X-FAL23 680-241926-2	N	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V2
G6M-03-10X-FAL23 680-241926-3	N	2,2-Dichloropropane	2.00	1.00 U Q	1.00 X		ug/l	V2
G6M-03-10X-FAL23 680-241926-3	N	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V2
G6M-13-05X-FAL23 680-241926-4	N	2,2-Dichloropropane	2.00	1.00 U Q	1.00 X		ug/l	V2
G6M-13-05X-FAL23 680-241926-4	N	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V2
G6M-13-06X-FAL23 680-241926-5	N	2,2-Dichloropropane	2.00	1.00 U Q	1.00 X		ug/l	V2
G6M-13-06X-FAL23 680-241926-5	N	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V2
G6M-95-20X-FAL23 680-241926-6	N	2,2-Dichloropropane	2.00	1.00 U Q	1.00 X		ug/l	V2
G6M-95-20X-FAL23 680-241926-6	N	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V2
G6M-97-05B-FAL23 680-241926-7	N	2,2-Dichloropropane	2.00	1.00 U Q	1.00 X		ug/l	V2
G6M-97-05B-FAL23 680-241926-7	N	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V2

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260D, Ending Continuing Calibration Verification

Compliance requirements for satisfactory closing continuing calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data. Continuing calibration is performed to verify and evaluate instrument performance during sample analysis. Summary forms were evaluated against project acceptance criteria, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
CCVC68080517330 (EV)	Chloroethane	172	50 - 150	50 - 150	percent	J/None	V5	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW8260D, LCS Recovery

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
LCS6808051734 (BS)	Chloroethane	162	60 - 138	10 - 138	percent	J/None	C	
LCSD6808051735 (BD)	Chloroethane	168	60 - 138	10 - 138	percent	J/None	C	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Table of All Qualified Results

Test Method: SW8260D		**Extraction Method: SW5030C**						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP04-FAL23 680-241926-1	FD	2,2-Dichloropropane	2.00	1.00 U Q	1.00 X		ug/l	V2
AOC50-DUP04-FAL23 680-241926-1	FD	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V2
AOC50-DUP04-FAL23 680-241926-1	FD	Carbon disulfide	2.00	1.00 U Q	1.00 UJ		ug/l	V1
AOC5-TB01-FAL23 680-241926-8	TB	2,2-Dichloropropane	2.00	1.00 U Q	1.00 X		ug/l	V2
AOC5-TB01-FAL23 680-241926-8	TB	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V2
AOC5-TB01-FAL23 680-241926-8	TB	Carbon disulfide	2.00	1.00 U Q	1.00 UJ		ug/l	V1
G6M-02-11X-FAL23 680-241926-2	N	2,2-Dichloropropane	2.00	1.00 U Q	1.00 X		ug/l	V2
G6M-02-11X-FAL23 680-241926-2	N	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V2
G6M-02-11X-FAL23 680-241926-2	N	Carbon disulfide	2.00	1.00 U Q	1.00 UJ		ug/l	V1
G6M-03-10X-FAL23 680-241926-3	N	2,2-Dichloropropane	2.00	1.00 U Q	1.00 X		ug/l	V2
G6M-03-10X-FAL23 680-241926-3	N	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V2
G6M-03-10X-FAL23 680-241926-3	N	Carbon disulfide	2.00	1.00 U Q	1.00 UJ		ug/l	V1
G6M-13-05X-FAL23 680-241926-4	N	2,2-Dichloropropane	2.00	1.00 U Q	1.00 X		ug/l	V2
G6M-13-05X-FAL23 680-241926-4	N	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V2
G6M-13-05X-FAL23 680-241926-4	N	Carbon disulfide	2.00	1.00 U Q	1.00 UJ		ug/l	V1
G6M-13-06X-FAL23 680-241926-5	N	2,2-Dichloropropane	2.00	1.00 U Q	1.00 X		ug/l	V2
G6M-13-06X-FAL23 680-241926-5	N	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V2
G6M-13-06X-FAL23 680-241926-5	N	Carbon disulfide	2.00	1.00 U Q	1.00 UJ		ug/l	V1
G6M-95-20X-FAL23 680-241926-6	N	2,2-Dichloropropane	2.00	1.00 U Q	1.00 X		ug/l	V2
G6M-95-20X-FAL23 680-241926-6	N	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V2
G6M-95-20X-FAL23 680-241926-6	N	Carbon disulfide	2.00	1.00 U Q	1.00 UJ		ug/l	V1
G6M-97-05B-FAL23 680-241926-7	N	2,2-Dichloropropane	2.00	1.00 U Q	1.00 X		ug/l	V2
G6M-97-05B-FAL23 680-241926-7	N	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V2
G6M-97-05B-FAL23 680-241926-7	N	Carbon disulfide	2.00	1.00 U Q	1.00 UJ		ug/l	V1

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Table of Results with Modified Qualifiers

Modified Qualifiers for test method E353.2

FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	ADR Reason	Modified Result	Reason
G6M-13-05X-FAL23 680-241926-4	N	Nitrate-Nitrite (as N)	0.100	0.0860 J	0.100 U	B2/L	0.0860 J	TR
G6M-13-06X-FAL23 680-241926-5	N	Nitrate-Nitrite (as N)	0.100	0.0720 J	0.100 U	B2/L	0.0720 J	TR
G6M-97-05B-FAL23 680-241926-7	N	Nitrate-Nitrite (as N)	0.100	0.0740 J	0.100 U	B2/L	0.0740 J	TR

Modified Qualifiers for test method RSK175

FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	ADR Reason	Modified Result	Reason
G6M-13-05X-FAL23 680-241926-4	N	Methane	390	23000	23000 J	Z	23000	
G6M-13-06X-FAL23 680-241926-5	N	Methane	390	24000	24000 J	Z	24000	
G6M-97-05B-FAL23 680-241926-7	N	Methane	390	31000	31000 J	Z	31000	

Modified Qualifiers for test method SW8260D

FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	ADR Reason	Modified Result	Reason
AOC50-DUP04-FAL23 680-241926-1	FD	Bromoform	2.50	2.00 U Q	2.00 X	V2	2.00 UJ	V2
AOC50-DUP04-FAL23 680-241926-1	FD	Carbon disulfide	2.00	1.00 U Q	1.00 U		1.00 UJ	V1
AOC5-TB01-FAL23 680-241926-8	TB	Bromoform	2.50	2.00 U Q	2.00 X	V2	2.00 UJ	V2
AOC5-TB01-FAL23 680-241926-8	TB	Carbon disulfide	2.00	1.00 U Q	1.00 U		1.00 UJ	V1
G6M-02-11X-FAL23 680-241926-2	N	Bromoform	2.50	2.00 U Q	2.00 X	V2	2.00 UJ	V2
G6M-02-11X-FAL23 680-241926-2	N	Carbon disulfide	2.00	1.00 U Q	1.00 U		1.00 UJ	V1
G6M-03-10X-FAL23 680-241926-3	N	Bromoform	2.50	2.00 U Q	2.00 X	V2	2.00 UJ	V2
G6M-03-10X-FAL23 680-241926-3	N	Carbon disulfide	2.00	1.00 U Q	1.00 U		1.00 UJ	V1
G6M-13-05X-FAL23 680-241926-4	N	Bromoform	2.50	2.00 U Q	2.00 X	V2	2.00 UJ	V2
G6M-13-05X-FAL23 680-241926-4	N	Carbon disulfide	2.00	1.00 U Q	1.00 U		1.00 UJ	V1
G6M-13-06X-FAL23 680-241926-5	N	Bromoform	2.50	2.00 U Q	2.00 X	V2	2.00 UJ	V2
G6M-13-06X-FAL23 680-241926-5	N	Carbon disulfide	2.00	1.00 U Q	1.00 U		1.00 UJ	V1
G6M-95-20X-FAL23 680-241926-6	N	Bromoform	2.50	2.00 U Q	2.00 X	V2	2.00 UJ	V2
G6M-95-20X-FAL23 680-241926-6	N	Carbon disulfide	2.00	1.00 U Q	1.00 U		1.00 UJ	V1
G6M-97-05B-FAL23 680-241926-7	N	Bromoform	2.50	2.00 U Q	2.00 X	V2	2.00 UJ	V2

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260D								
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	ADR Reason	Modified Result	Reason
G6M-97-05B-FAL23 680-241926-7	N	Carbon disulfide	2.00	1.00 U Q	1.00 U		1.00 UJ	V1

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Reason Code Definitions

Code	Definition
B2	CCB
C	LCS Recovery
L	Lab Blank
TR	Trace Level Detect
V1	ICV
V2	CCV
V5	Ending Continuing Calibration Verification
Z	LCS RPD

Flag Code and Definitions

Flag	Definition
J	Estimated Value
N	The analysis indicates the presence of an analyte for which there was presumptive evidence to make a tentative identification.
NJ	The analyte has been tentatively identified or presumptively as present and the associated numerical value was the estimated concentration in the sample.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
U	Undetected: The analyte was analyzed for, but not detected.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.
X	Result may require rejection; PDT attention required

Bias

-	The result may be biased low
+	The result may be biased high

Note - The bias field is a separate field; however, it is an integral part of the final flag (qualifier) on the sample result

Review Questions

Method: A2320B (Alkalinity by Titrimetric Method)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: E353.2 (Nitrogen, Nitrate-Nitrite (Colorimetric Automated, Cadmium Reduction))				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?		•		Analyte detected in the ICB and CCB but no results were qualified due to detect being lower than 1/2 the LOQ.
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?		•		Analyte detected in the MB but no results were qualified due to detect being lower than 1/2 the LOQ.
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: RSK175 (Dissolved Gas Analysis in Water Samples Using a GC Headspace Equilibrium Technique)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Were the required minimum levels of calibration standards used in the initial calibration?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Were surrogate recoveries within project acceptance limits?			•	Not applicable to this method.
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			FUDSChem reported LCSD RPD as out of limits. LCSD RPD was manually reviewed and found to be in limits.
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were DoD QSM corrective actions followed if deviations were noted?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW6010C (Trace Metals by Inductively Coupled Plasma/Atomic Emission Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?		•		Analyte detected in the CCB but no results were qualified.
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW6020A (Trace Metals by Inductively Coupled Plasma/Mass Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW8260D (Volatile Organic Compounds by GC/MS)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?		•		Several results qualified UJ due to CCV %D greater than 20%. Several results qualified X due to CCV %D greater than twice the control criteria of 40%.
Were the required minimum levels of calibration standards used in the initial calibration?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?		•		Several results qualified UJ due to ICV %D > 20%.
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Were surrogate recoveries within project acceptance limits?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?	•			
Were target analytes reported in the field blank(s) less than MDL?	•			
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were DoD QSM corrective actions followed if deviations were noted?	•			
Were any data recommended for rejection (exclusion) in the data validation process?	•			Several results recommended for rejection due to exceeding the calibration rejection criteria.

Review Questions

Method: SW9056A (Anion Chromatography)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW9060 (Total Organic Carbon)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023
Field Duplicates for SDG: 680-241926-1

Location	Analysis
G6M-95-20X	SW6010C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Iron (FLDFLT)	1800	1800	100	0.00	30	OK	NA
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Manganese (FLDFLT)	120	130	10.0	8.00	30	OK	NA

Location	Analysis
G6M-95-20X	SW6020A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Arsenic (FLDFLT)	8.50	9.00	5.00	5.71	30	NA	OK

Location	Analysis
G6M-95-20X	SW8260D

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	1,1,1,2-Tetrachloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	1,1,1-Trichloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	1,1,2,2-Tetrachloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	1,1,2-Trichloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	1,1-Dichloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	1,1-Dichloroethene	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	1,1-Dichloropropene	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	1,2,3-Trichlorobenzene	ND	ND	5.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	1,2,3-Trichloropropane	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	1,2,4-Trichlorobenzene	ND	ND	5.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	1,2,4-Trimethylbenzene	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	1,2-Dibromo-3-chloropropane	ND	ND	10.0	NA	30	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023
Field Duplicates for SDG: 680-241926-1

Location	Analysis
G6M-95-20X	SW8260D

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	1,2-Dibromoethane (EDB)	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	1,2-Dichlorobenzene	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	1,2-Dichloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	1,2-Dichloroethene	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	1,2-Dichloropropane	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	1,3,5-Trimethylbenzene	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	1,3-Dichlorobenzene	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	1,3-Dichloropropane	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	1,4-Dichlorobenzene	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	2,2-Dichloropropane	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	2-Butanone (MEK)	ND	ND	25.0	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	2-Chlorotoluene	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	2-Hexanone	ND	ND	20.0	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	4-Chlorotoluene	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	4-Methyl-2-pentanone (MIBK)	ND	ND	20.0	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Acetone	ND	ND	25.0	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Benzene	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Bromobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Bromochloromethane	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Bromodichloromethane	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Bromoform	ND	ND	2.50	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Bromomethane	ND	ND	20.0	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Carbon disulfide	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Carbon Tetrachloride	ND	ND	2.00	NA	30	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023
Field Duplicates for SDG: 680-241926-1

Location	Analysis
G6M-95-20X	SW8260D

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Chlorobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Chloroethane	ND	ND	20.0	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Chloroform	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Chloromethane	ND	ND	2.50	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	cis-1,2-Dichloroethene	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	cis-1,3-Dichloropropene	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Cumene	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Dibromochloromethane	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Dibromomethane	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Dichlorodifluoromethane	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Ethylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Hexachlorobutadiene	ND	ND	5.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	m,p-Xylene	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Methyl tert-butyl ether (MTBE)	ND	ND	5.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Methylene chloride	ND	ND	20.0	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	n-Butylbenzene	ND	ND	2.50	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	n-Propylbenzene	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Naphthalene	ND	ND	10.0	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	o-Xylene	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	p-Cymene (p-Isopropyltoluene)	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	sec-Butylbenzene	ND	ND	2.50	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Styrene	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	tert-Butylbenzene	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Tetrachloroethene (PCE)	0.480	0.490	2.00	2.06	30	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023
Field Duplicates for SDG: 680-241926-1

Location	Analysis
G6M-95-20X	SW8260D

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Toluene	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	trans-1,2-Dichloroethene	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	trans-1,3-Dichloropropene	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Trichloroethene (TCE)	0.290	0.290	1.00	0.00	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Trichlorofluoromethane	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Vinyl acetate	ND	ND	2.50	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Vinyl chloride	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL23 / AOC50-DUP04-FAL23	680-241926-6 / 680-241926-1	Xylenes, Total	ND	ND	2.00	NA	30	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

February 28, 2024

SUBJECT: Fort Devens - Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. This SDG was received on January 4, 2024. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #58331_B:

SDG #	Fraction
680-242109-1	Volatiles, Dissolved Metals, Wet Chemistry, Methane, Ethane, & Ethene

The data validation was performed under Stage 2B guidelines. The analysis was validated using the following documents, as applicable to each method:

- Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

341 pages-ADV

Attachment 1

Stage 2B EQUIS EDD

LDC# 58331 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	VOA (8260D)		VOA (624)		SVOA (625)		Pest. (8081B)		PCBs (8082A)		Metals (6010C /6020A)		Hg (7470A)		3 D.Met. (6010C /6020A)		DRO (8015C)		Methane Ethane Ethene													
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	680-241926-1	01/04/24	01/18/24	8	0	-	-	-	-	-	-	-	-	-	-	-	-	8	0	-	-	3	0												
B	680-242109-1	01/04/24	01/18/24	25	0	-	-	-	-	-	-	-	-	-	-	-	-	23	0	-	-	13	0												
C	680-242433-1	01/04/24	01/18/24	3	0	-	-	-	-	-	-	-	-	-	-	-	-	3	0	-	-	-	-												
D	680-242668-1	01/04/24	01/18/24	4	0	-	-	-	-	-	-	-	-	-	-	-	-	4	0	-	-	1	0												
E	680-242837-1	01/04/24	01/18/24	-	-	1	0	-	-	1	0	-	-	1	0	1	0	-	-	-	-	-	-												
F	680-242837-2	01/04/24	01/18/24	-	-	-	-	-	-	-	-	1	0	-	-	-	-	-	-	-	-	-	-												
G	680-242974-2	01/04/24	01/18/24	1	0	-	-	-	-	-	-	-	-	-	-	-	-	1	0	-	-	-	-												
H	680-243143-1	01/04/24	01/18/24	-	-	-	-	1	0	-	-	-	-	-	-	-	-	-	-	1	0	-	-												
Total	TR/PG			41	0	1	0	1	0	1	0	1	0	1	0	1	0	39	0	1	0	17	0	0	0	0	0	0	0	0	0	0	0	0	104

Stage 2B EQUIS EDD

LDC# 58331 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	Alk (2320B)		CN- (9012B)		NO_3 /NO_2-N (353.2)		pH (9040C)		Total Phenols (9066)		SO_4 (9056A)		S= (9034)		TSS (2540D)		TOC (9060A)													
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	680-241926-1	01/04/24	01/18/24	3	0	-	-	3	0	-	-	-	-	3	0	-	-	-	-	3	0												
B	680-242109-1	01/04/24	01/18/24	13	0	-	-	13	0	-	-	-	-	13	0	13	0	-	-	13	0												
D	680-242668-1	01/04/24	01/18/24	1	0	-	-	1	0	-	-	-	-	1	0	1	0	-	-	1	0												
E	680-242837-1	01/04/24	01/18/24	-	-	1	0	-	-	1	0	-	-	-	-	-	-	-	-	-	-												
G	680-242974-2	01/04/24	01/18/24																														
H	680-243143-1	01/04/24	01/18/24	-	-	-	-	-	-	-	-	1	0	-	-	-	-	1	0	-	-												
Total	TR/PG			17	0	1	0	17	0	1	0	1	0	17	0	14	0	1	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	86

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

Data Validation Report for 680-242109-1

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023
SDG:	680-242109-1
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
Prime Contractor:	Seres - Arcadis SB Joint Venture, LLC, Charleston, SC
Project Manager:	Jennifer Singer
Contract Laboratory(ies):	Eurofins Environment Testing TestAmerica, Savannah, GA
Data Review Contractor:	Laboratory Data Consultants, Inc.
Data Review Level:	2B
Primary Data Reviewer:	Long Ngo, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	February 21, 2024

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	E353.2	RSK175	SW6010C - Dissolved	SW6020A - Dissolved	SW8260D	SW9034	SW9056A	SW9060
AOC50-DUP02-FAL23	680-242109-1	Water	Field Duplicate/FD	X	X	X	X	X	X	X	X	X
AOC50-DUP03-FAL23	680-242109-2	Water	Field Duplicate/FD	X	X	X	X	X	X	X	X	X
G6M-02-01X-FAL23	680-242109-3	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-02-04X-FAL23	680-242109-4	Water	Field Sample/N				X	X	X			
G6M-02-07X-FAL23	680-242109-5	Water	Field Sample/N				X	X	X			
G6M-02-08X-FAL23	680-242109-6	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-03-07X-FAL23	680-242109-7	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-04-01X-FAL23	680-242109-8	Water	Field Sample/N				X	X	X			
G6M-04-02X-FAL23	680-242109-9	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-04-03X-FAL23	680-242109-10	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-04-09X-FAL23	680-242109-11	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-04-10A-FAL23	680-242109-12	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-04-10X-FAL23	680-242109-13	Water	Field Sample/N						X			
G6M-04-13X-FAL23	680-242109-14	Water	Field Sample/N						X			
G6M-04-14X-FAL23	680-242109-15	Water	Field Sample/N				X	X	X			
G6M-04-15X-FAL23	680-242109-16	Water	Field Sample/N				X	X	X			
G6M-07-01X-FAL23	680-242109-17	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-07-02X-FAL23	680-242109-18	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-13-01X-FAL23	680-242109-19	Water	Field Sample/N	X	X	X	X	X	X	X	X	X

Data Validation Report for 680-242109-1

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	E353.2	RSK175	SW6010C - Dissolved	SW6020A - Dissolved	SW8260D	SW9034	SW9056A	SW9060
G6M-13-02X-FAL23	680-242109-20	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-95-19X-FAL23	680-242109-21	Water	Field Sample/N						X			
G6M-97-28X-FAL23	680-242109-22	Water	Field Sample/N				X	X				
MW-3-FAL23	680-242109-23	Water	Field Sample/N				X	X	X			
MW-7-FAL23	680-242109-24	Water	Field Sample/N				X	X	X			
XSA-12-95X-FAL23	680-242109-25	Water	Field Sample/N				X	X	X			
XSA-12-98X-FAL23	680-242109-26	Water	Field Sample/N				X	X	X			

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page at 2B data validation level. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020 and the additional guidance documents incorporated by reference to the extent possible. Where definitive guidance is not provided, results have been evaluated in a conservative manner using professional judgment.

Sample collection was managed and directed by Seres - Arcadis SB Joint Venture, LLC, Charleston, SC; analyses were performed by Eurofins Environment Testing TestAmerica, Savannah, GA and were reported under sample delivery group (SDG) 680-242109-1. Data have been evaluated electronically based on electronic data deliverables (EDDs) provided by the laboratory, and hard copy data summary forms have also been reviewed during this effort and compared to the automated review output by the reviewers whose signatures appear on the following page. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative and throughout this report.

All quality control (QC) elements associated with this SDG have been reviewed by a project chemist in accordance with the requirements defined for the project. This review is documented in the attached Data Review Checklists. The QC elements listed below were supported by the electronic deliverable and were evaluated using ADR processes.

- Blank - Negative
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Field Duplicate RPD
- Interference Check Sample A
- Interference Check Sample A - Negative
- Interference Check Sample AB
- Lab Blank
- LCS Recovery
- LCS RPD
- MS Recovery
- MS RPD
- Prep Hold Time
- Surrogate
- Test Hold Time

Results of the ADR process were subsequently reviewed and updated as applicable by the data review chemists identified on the signature page. Quality control elements that were not included in the electronic deliverable were reviewed manually and findings are documented within this report. Summaries of findings and associated qualified results are documented throughout this report.

A total of 59 results (3.15%) out of the 1873 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected or deemed a serious deficiency (X qualifier). Trace values, defined as results that are qualified as estimated because they fall between the detection limit and the reporting limit/limit of quantitation, are not counted as qualified results in the above count. The qualified results are detailed throughout this report and discussed in the narrative below, where appropriate.

Narrative Comments

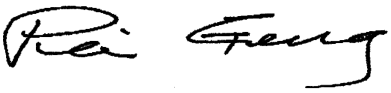
Analytical Method	Data Reviewer Comment
A2320B	No additional comments; see Checklist for detail.
E353.2	No additional comments; see Checklist for detail.
RSK175	No additional comments; see Checklist for detail.
SW6010C	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
SW8260D	No additional comments; see Checklist for detail.
SW9034	No additional comments; see Checklist for detail.
SW9056A	No additional comments; see Checklist for detail.
SW9060	No additional comments; see Checklist for detail.



February 21, 2024

Reviewed by Long Ngo, Environmental Scientist, Laboratory Data Consultants, Inc.

As the First Reviewer, I certify that I have performed a data review process in accordance with the requirements of the project guidance document, and have compared the electronic data to the laboratory's hard copy report and have verified the consistency of the reported sample results and method quality control data between the two deliverables.



Reviewed by Pei Geng, Senior Scientist, Laboratory Data Consultants, Inc.

February 28, 2024

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

Quality Control Outliers for test method E353.2, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
G6M-04-10A-FAL23 (MS)	Nitrate-Nitrite (as N)	75.0	90 - 110	30 - 110	percent	J/UJ	M	
G6M-04-10A-FAL23 (SD)	Nitrate-Nitrite (as N)	76.0	90 - 110	30 - 110	percent	J/UJ	M	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the MS Recovery for E353.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-10A-FAL23 680-242109-12	N	Nitrate-Nitrite (as N)	0.100	0.0250 U J1	0.0250 UJ		mg/l	M

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method RSK175, Field Duplicate RPD

Field duplicate analyses are performed in order to assess sample collection/laboratory precision for each sample matrix. Summary forms were evaluated and compared to electronic data deliverables. Field duplicate results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
AOC50-DUP02-FAL23 (N)	Methane	34.7	< 30	< 30	rpd	J/UJ	D3	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Field Duplicate RPD for RSK175

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP02-FAL23 680-242109-1	FD	Methane	390	6200	6200 J		ug/l	D3
G6M-13-02X-FAL23 680-242109-20	N	Methane	390	8800	8800		ug/l	D3

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method RSK175, LCS RPD

The objective of laboratory control sample/laboratory control sample duplicate (LCS/LCSD) RPD analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. LCS/LCSD analyses are also performed to generate data that determines the long-term precision of the analytical method on various matrices. Non-homogenous samples can impact the apparent method precision. Summary forms were evaluated and compared to electronic data deliverables. Laboratory control sample/laboratory control sample duplicate RPD results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
LCSD6808052004 (BD)	Methane	163	< 30	< 30	rpd	J/None	Z	
LCSD6808052007 (BD)	Methane	166	< 30	< 30	rpd	J/None	Z	
LCSD68080526034 (BD)	Methane	167	< 30	< 30	rpd	J/None	Z	
LCSD68080526036 (BD)	Methane	167	< 30	< 30	rpd	J/None	Z	
LCSD68080544435 (BD)	Methane	166	< 30	< 30	rpd	J/None	Z	
LCSD68080544437 (BD)	Methane	168	< 30	< 30	rpd	J/None	Z	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method RSK175, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
G6M-04-10A-FAL23 (MS)	Methane	-750	73 - 125	10 - 125	percent	J/X	M	Spike amount Insignificant
G6M-04-10A-FAL23 (SD)	Methane	1650	73 - 125	10 - 125	percent	J/None	M	Spike amount Insignificant

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW6010C, Dissolved, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
G6M-04-10A-FAL23 (MS)	Iron	28.0	87 - 115	10 - 125	percent	J/UJ	M	Spike amount Insignificant
G6M-04-10A-FAL23 (SD)	Iron	76.0	87 - 115	10 - 125	percent	J/UJ	M	Spike amount Insignificant
MW-3-FAL23 (MS)	Iron	10.0	87 - 115	10 - 125	percent	J/UJ	M	Spike amount Insignificant
MW-3-FAL23 (SD)	Iron	10.0	87 - 115	10 - 125	percent	J/UJ	M	Spike amount Insignificant
MW-3-FAL23 (MS)	Manganese	-50.0	90 - 114	10 - 125	percent	J/X	M	Spike amount Insignificant
MW-3-FAL23 (SD)	Manganese	-50.0	90 - 114	10 - 125	percent	J/X	M	Spike amount Insignificant

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW6020A, Dissolved, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
MW-3-FAL23 (MS)	Arsenic	40.0	84 - 116	10 - 125	percent	J/UJ	M	Spike amount Insignificant
MW-3-FAL23 (SD)	Arsenic	42.0	84 - 116	10 - 125	percent	J/UJ	M	Spike amount Insignificant

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW8260D, Continuing Calibration Verification

Compliance requirements for satisfactory continuing calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data. Continuing calibration is performed to verify and evaluate instrument performance during sample analysis. Summary forms were evaluated against project acceptance criteria, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
CCVIS6808052982 (CV)	1,2-Dibromo-3-chloropropane	76.0	80 - 120	80 - 120	percent	J/X	V2	
CCVIS6808052982 (CV)	Carbon disulfide	122	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6808052982 (CV)	Chloromethane	138	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6808052982 (CV)	Dichlorodifluoromethane	129	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6808053163 (CV)	1,2,3-Trichlorobenzene	161	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6808053163 (CV)	1,2,4-Trichlorobenzene	138	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6808053163 (CV)	2,2-Dichloropropane	121	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6808053163 (CV)	2-Butanone (MEK)	74.0	80 - 120	80 - 120	percent	J/X	V2	
CCVIS6808053163 (CV)	Bromomethane	144	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6808053163 (CV)	Chloroethane	224	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6808053163 (CV)	Dichlorodifluoromethane	125	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6808053163 (CV)	Hexachlorobutadiene	139	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6808053163 (CV)	Naphthalene	151	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6808053163 (CV)	Vinyl acetate	133	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6808053163 (CV)	Vinyl chloride	121	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6808056602 (CV)	1,2-Dibromo-3-chloropropane	73.0	80 - 120	80 - 120	percent	J/X	V2	
CCVIS6808056602 (CV)	Bromomethane	75.0	80 - 120	80 - 120	percent	J/X	V2	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Continuing Calibration Verification for SW8260D

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP02-FAL23 680-242109-1	FD	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
AOC50-DUP03-FAL23 680-242109-2	FD	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-02-01X-FAL23 680-242109-3	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-02-04X-FAL23 680-242109-4	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-02-07X-FAL23 680-242109-5	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-02-08X-FAL23 680-242109-6	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-03-07X-FAL23 680-242109-7	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2

Qualified Results associated with the Continuing Calibration Verification for SW8260D

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-01X-FAL23 680-242109-8	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-04-02X-FAL23 680-242109-9	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-04-03X-FAL23 680-242109-10	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-04-09X-FAL23 680-242109-11	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-04-10A-FAL23 680-242109-12	N	2-Butanone (MEK)	50.0	40.0 U Q J1	40.0 UJ		ug/l	V2
G6M-04-10X-FAL23 680-242109-13	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-04-10X-FAL23 680-242109-13	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-04-13X-FAL23 680-242109-14	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 UJ		ug/l	V2
G6M-04-14X-FAL23 680-242109-15	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 UJ		ug/l	V2
G6M-04-15X-FAL23 680-242109-16	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-04-15X-FAL23 680-242109-16	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-07-01X-FAL23 680-242109-17	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 UJ		ug/l	V2
G6M-07-02X-FAL23 680-242109-18	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 UJ		ug/l	V2
G6M-13-01X-FAL23 680-242109-19	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 UJ		ug/l	V2
G6M-13-02X-FAL23 680-242109-20	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 UJ		ug/l	V2
G6M-95-19X-FAL23 680-242109-21	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 UJ		ug/l	V2
MW-3-FAL23 680-242109-23	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	M/V2
MW-3-FAL23 680-242109-23	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
MW-7-FAL23 680-242109-24	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
MW-7-FAL23 680-242109-24	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
XSA-12-95X-FAL23 680-242109-25	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 UJ		ug/l	V2
XSA-12-98X-FAL23 680-242109-26	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 UJ		ug/l	V2

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260D, Ending Continuing Calibration Verification

Compliance requirements for satisfactory closing continuing calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data. Continuing calibration is performed to verify and evaluate instrument performance during sample analysis. Summary forms were evaluated against project acceptance criteria, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
CCVC68080531628 (EV)	1,2,3-Trichlorobenzene	171	50 - 150	50 - 150	percent	J/None	V5	
CCVC68080531628 (EV)	Bromomethane	151	50 - 150	50 - 150	percent	J/None	V5	
CCVC68080531628 (EV)	Chloroethane	204	50 - 150	50 - 150	percent	J/None	V5	
CCVC68080531628 (EV)	Naphthalene	162	50 - 150	50 - 150	percent	J/None	V5	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW8260D, Field Duplicate RPD

Field duplicate analyses are performed in order to assess sample collection/laboratory precision for each sample matrix. Summary forms were evaluated and compared to electronic data deliverables. Field duplicate results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
AOC50-DUP02-FAL23 (N)	1,2-Dichloroethene	4.50	< 2	< 2	ug/l	J/UJ	D3	
AOC50-DUP02-FAL23 (N)	cis-1,2-Dichloroethene	3.50	< 2	< 2	ug/l	J/UJ	D3	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Field Duplicate RPD for SW8260D

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP02-FAL23 680-242109-1	FD	1,2-Dichloroethene	2.00	8.50	8.50 J		ug/l	D3
AOC50-DUP02-FAL23 680-242109-1	FD	cis-1,2-Dichloroethene	2.00	7.50	7.50 J		ug/l	D3
G6M-13-02X-FAL23 680-242109-20	N	1,2-Dichloroethene	2.00	13.0	13.0 J		ug/l	D3
G6M-13-02X-FAL23 680-242109-20	N	cis-1,2-Dichloroethene	2.00	11.0	11.0 J		ug/l	D3

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260D, Lab Blank

The purpose of laboratory blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in laboratory blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
MB6808052987 (LB)	1,2,3-Trichlorobenzene	1.58	< 0.81	< 5	ug/l	U/None*	L	
MB6808052987 (LB)	1,2,4-Trichlorobenzene	1.93	< 0.53	< 5	ug/l	U/None*	L	
MB6808053167 (LB)	1,2,4-Trichlorobenzene	1.08	< 0.53	< 5	ug/l	U/None*	L	
MB6808053167 (LB)	Hexachlorobutadiene	0.668	< 0.22	< 5	ug/l	U/None*	L	
MB68080566026 (LB)	1,2,3-Trichlorobenzene	1.47	< 0.81	< 5	ug/l	U/None*	L	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

*Blank flags displayed in the above table identify qualification of the sample result when it is less than or equal to the LOQ/RL. Sample results above the LOD or LOQ will be qualified based on the validation guidance assigned in the project setup.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW8260D, LCS Recovery

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
LCS6808053164 (BS)	1,2,3-Trichlorobenzene	167	69 - 129	10 - 129	percent	J/None	C	
LCS6808053164 (BS)	1,2,4-Trichlorobenzene	138	69 - 130	10 - 130	percent	J/None	C	
LCS6808053164 (BS)	Bromomethane	142	53 - 141	10 - 141	percent	J/None	C	
LCS6808053164 (BS)	Chloroethane	214	60 - 138	10 - 138	percent	J/None	C	
LCS6808053164 (BS)	Hexachlorobutadiene	141	66 - 134	10 - 134	percent	J/None	C	
LCS6808053164 (BS)	Naphthalene	152	61 - 128	10 - 128	percent	J/None	C	
LCS6808053164 (BS)	Toluene	122	80 - 121	10 - 121	percent	J/None	C	
LCSD6808052984 (BD)	Bromoform	133	66 - 130	10 - 130	percent	J/None	C	
LCSD6808053165 (BD)	1,2,3-Trichlorobenzene	168	69 - 129	10 - 129	percent	J/None	C	
LCSD6808053165 (BD)	1,2,4-Trichlorobenzene	141	69 - 130	10 - 130	percent	J/None	C	
LCSD6808053165 (BD)	Bromomethane	145	53 - 141	10 - 141	percent	J/None	C	
LCSD6808053165 (BD)	Chloroethane	196	60 - 138	10 - 138	percent	J/None	C	
LCSD6808053165 (BD)	Hexachlorobutadiene	142	66 - 134	10 - 134	percent	J/None	C	
LCSD6808053165 (BD)	Naphthalene	157	61 - 128	10 - 128	percent	J/None	C	
LCSD6808053165 (BD)	Vinyl acetate	153	54 - 146	10 - 146	percent	J/None	C	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW8260D, LCS RPD

The objective of laboratory control sample/laboratory control sample duplicate (LCS/LCSD) RPD analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. LCS/LCSD analyses are also performed to generate data that determines the long-term precision of the analytical method on various matrices. Non-homogenous samples can impact the apparent method precision. Summary forms were evaluated and compared to electronic data deliverables. Laboratory control sample/laboratory control sample duplicate RPD results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
LCSD6808052984 (BD)	2-Butanone (MEK)	21.8	< 20	< 20	rpd	J/None	Z	
LCSD6808052984 (BD)	2-Hexanone	22.9	< 20	< 20	rpd	J/None	Z	
LCSD6808052984 (BD)	Acetone	22.2	< 20	< 20	rpd	J/None	Z	
LCSD6808056605 (BD)	1,1,2-Trichloroethane	20.5	< 20	< 20	rpd	J/None	Z	
LCSD6808056605 (BD)	1,2-Dibromoethane (EDB)	22.7	< 20	< 20	rpd	J/None	Z	
LCSD6808056605 (BD)	1,3-Dichloropropane	20.8	< 20	< 20	rpd	J/None	Z	
LCSD6808056605 (BD)	2-Butanone (MEK)	22.3	< 20	< 20	rpd	J/None	Z	
LCSD6808056605 (BD)	2-Hexanone	30.7	< 20	< 20	rpd	J/None	Z	
LCSD6808056605 (BD)	Acetone	26.8	< 20	< 20	rpd	J/None	Z	
LCSD6808056605 (BD)	Dibromochloromethane	25.1	< 20	< 20	rpd	J/None	Z	
LCSD6808056605 (BD)	Hexachlorobutadiene	20.0	< 20	< 20	rpd	J/None	Z	
LCSD6808056605 (BD)	trans-1,3-Dichloropropene	20.8	< 20	< 20	rpd	J/None	Z	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the LCS RPD for SW8260D

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-02X-FAL23 680-242109-9	N	2-Hexanone	20.0	3.80 J Q	3.80 J		ug/l	TR/Z
G6M-04-02X-FAL23 680-242109-9	N	Acetone	25.0	9.80 J Q	9.80 J		ug/l	TR/Z

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260D, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
G6M-04-10A-FAL23 (MS)	1,1,2-Trichloroethane	124	80 - 119	10 - 119	percent	J/None	M	
G6M-04-10A-FAL23 (SD)	1,1,2-Trichloroethane	131	80 - 119	10 - 119	percent	J/None	M	
G6M-04-10A-FAL23 (MS)	1,2,3-Trichlorobenzene	183	69 - 129	10 - 129	percent	J/None	M	
G6M-04-10A-FAL23 (SD)	1,2,3-Trichlorobenzene	203	69 - 129	10 - 129	percent	J/None	M	
G6M-04-10A-FAL23 (MS)	1,2,4-Trichlorobenzene	137	69 - 130	10 - 130	percent	J/None	M	
G6M-04-10A-FAL23 (SD)	1,2,4-Trichlorobenzene	144	69 - 130	10 - 130	percent	J/None	M	
G6M-04-10A-FAL23 (MS)	1,2-Dibromo-3-chloropropane	133	62 - 128	10 - 128	percent	J/None	M	
G6M-04-10A-FAL23 (SD)	1,2-Dibromo-3-chloropropane	147	62 - 128	10 - 128	percent	J/None	M	
G6M-04-10A-FAL23 (SD)	1,2-Dibromoethane (EDB)	123	77 - 121	10 - 121	percent	J/None	M	
G6M-04-10A-FAL23 (MS)	1,3-Dichloropropane	124	80 - 119	10 - 119	percent	J/None	M	
G6M-04-10A-FAL23 (SD)	1,3-Dichloropropane	129	80 - 119	10 - 119	percent	J/None	M	
G6M-04-10A-FAL23 (MS)	4-Methyl-2-pentanone (MIBK)	142	67 - 130	10 - 130	percent	J/None	M	
G6M-04-10A-FAL23 (SD)	4-Methyl-2-pentanone (MIBK)	167	67 - 130	10 - 130	percent	J/None	M	
G6M-04-10A-FAL23 (SD)	Bromochloromethane	124	78 - 123	10 - 123	percent	J/None	M	
G6M-04-10A-FAL23 (SD)	Bromodichloromethane	127	79 - 125	10 - 125	percent	J/None	M	
G6M-04-10A-FAL23 (MS)	Bromomethane	168	53 - 141	10 - 141	percent	J/None	M	
G6M-04-10A-FAL23 (SD)	Bromomethane	666	53 - 141	10 - 141	percent	J/None	M	
G6M-04-10A-FAL23 (MS)	Chloroethane	281	60 - 138	10 - 138	percent	J/None	M	
G6M-04-10A-FAL23 (SD)	Chloroethane	802	60 - 138	10 - 138	percent	J/None	M	
G6M-04-10A-FAL23 (SD)	Dibromomethane	127	79 - 123	10 - 123	percent	J/None	M	
G6M-04-10A-FAL23 (MS)	Naphthalene	189	61 - 128	10 - 128	percent	J/None	M	
G6M-04-10A-FAL23 (SD)	Naphthalene	221	61 - 128	10 - 128	percent	J/None	M	
G6M-04-10A-FAL23 (MS)	Vinyl acetate	171	54 - 146	10 - 146	percent	J/None	M	
G6M-04-10A-FAL23 (SD)	Vinyl acetate	197	54 - 146	10 - 146	percent	J/None	M	
MW-3-FAL23 (SD)	1,1,1,2-Tetrachloroethane	136	78 - 124	10 - 124	percent	J/None	M	
MW-3-FAL23 (SD)	1,1,1-Trichloroethane	134	74 - 131	10 - 131	percent	J/None	M	

Quality Control Outliers for test method SW8260D, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
MW-3-FAL23 (SD)	1,1,2,2-Tetrachloroethane	161	71 - 121	10 - 121	percent	J/None	M	
MW-3-FAL23 (SD)	1,1,2-Trichloroethane	132	80 - 119	10 - 119	percent	J/None	M	
MW-3-FAL23 (SD)	1,1-Dichloroethane	131	77 - 125	10 - 125	percent	J/None	M	
MW-3-FAL23 (SD)	1,2,3-Trichloropropane	153	73 - 122	10 - 122	percent	J/None	M	
MW-3-FAL23 (MS)	1,2-Dibromo-3-chloropropane	59.0	62 - 128	10 - 128	percent	J/UJ	M	
MW-3-FAL23 (SD)	1,2-Dibromoethane (EDB)	135	77 - 121	10 - 121	percent	J/None	M	
MW-3-FAL23 (SD)	1,2-Dichloroethane	129	73 - 128	10 - 128	percent	J/None	M	
MW-3-FAL23 (SD)	1,2-Dichloroethene	133	79 - 121	10 - 121	percent	J/None	M	
MW-3-FAL23 (SD)	1,2-Dichloropropane	123	78 - 122	10 - 122	percent	J/None	M	
MW-3-FAL23 (MS)	1,3-Dichloropropane	78.0	80 - 119	10 - 119	percent	J/UJ	M	
MW-3-FAL23 (SD)	1,3-Dichloropropane	129	80 - 119	10 - 119	percent	J/None	M	
MW-3-FAL23 (SD)	2-Butanone (MEK)	170	56 - 143	10 - 143	percent	J/None	M	
MW-3-FAL23 (SD)	2-Chlorotoluene	124	79 - 122	10 - 122	percent	J/None	M	
MW-3-FAL23 (SD)	2-Hexanone	168	57 - 139	10 - 139	percent	J/None	M	
MW-3-FAL23 (SD)	4-Methyl-2-pentanone (MIBK)	160	67 - 130	10 - 130	percent	J/None	M	
MW-3-FAL23 (SD)	Bromobenzene	133	80 - 120	10 - 120	percent	J/None	M	
MW-3-FAL23 (SD)	Bromochloromethane	136	78 - 123	10 - 123	percent	J/None	M	
MW-3-FAL23 (SD)	Bromodichloromethane	131	79 - 125	10 - 125	percent	J/None	M	
MW-3-FAL23 (SD)	Bromoform	184	66 - 130	10 - 130	percent	J/None	M	
MW-3-FAL23 (SD)	Chloroethane	162	60 - 138	10 - 138	percent	J/None	M	
MW-3-FAL23 (SD)	Chloroform	132	79 - 124	10 - 124	percent	J/None	M	
MW-3-FAL23 (SD)	cis-1,2-Dichloroethene	138	78 - 123	10 - 123	percent	J/None	M	
MW-3-FAL23 (SD)	cis-1,3-Dichloropropene	127	75 - 124	10 - 124	percent	J/None	M	
MW-3-FAL23 (SD)	Cumene	136	72 - 131	10 - 131	percent	J/None	M	
MW-3-FAL23 (SD)	Dibromochloromethane	143	74 - 126	10 - 126	percent	J/None	M	
MW-3-FAL23 (SD)	Dibromomethane	128	79 - 123	10 - 123	percent	J/None	M	
MW-3-FAL23 (SD)	Methyl tert-butyl ether (MTBE)	144	71 - 124	10 - 124	percent	J/None	M	
MW-3-FAL23 (SD)	o-Xylene	138	78 - 122	10 - 122	percent	J/None	M	

Quality Control Outliers for test method SW8260D, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
MW-3-FAL23 (SD)	Styrene	141	78 - 123	10 - 123	percent	J/None	M	
MW-3-FAL23 (SD)	trans-1,2-Dichloroethene	129	75 - 124	10 - 124	percent	J/None	M	
MW-3-FAL23 (SD)	trans-1,3-Dichloropropene	129	73 - 127	10 - 127	percent	J/None	M	
MW-3-FAL23 (SD)	Xylenes, Total	130	79 - 121	10 - 121	percent	J/None	M	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the MS Recovery for SW8260D

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
MW-3-FAL23 680-242109-23	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	M/V2
MW-3-FAL23 680-242109-23	N	1,3-Dichloropropane	2.00	1.00 U Q	1.00 UJ		ug/l	M

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260D, MS RPD

The objective of matrix spikes/matrix spike duplicates (MS/MSD) RPD analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. MS/MSD analyses are also performed to generate data that determines the long-term precision of the analytical method on various matrices. Non-homogenous samples can impact the apparent method precision. Summary forms were evaluated and compared to electronic data deliverables. Matrix spikes/matrix spike duplicates results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
G6M-04-10A-FAL23 (SD)	2-Butanone (MEK)	21.5	< 20	< 20	rpd	J/None	D	
G6M-04-10A-FAL23 (SD)	Bromomethane	119	< 20	< 20	rpd	J/None	D	
G6M-04-10A-FAL23 (SD)	Chloroethane	96.2	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	1,1,1,2-Tetrachloroethane	38.5	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	1,1,1-Trichloroethane	36.2	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	1,1,2,2-Tetrachloroethane	46.2	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	1,1,2-Trichloroethane	49.0	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	1,1-Dichloroethane	39.1	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	1,1-Dichloroethene	28.7	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	1,1-Dichloropropene	22.4	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	1,2,3-Trichlorobenzene	37.9	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	1,2,3-Trichloropropane	37.3	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	1,2,4-Trichlorobenzene	30.9	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	1,2-Dibromo-3-chloropropane	67.4	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	1,2-Dibromoethane (EDB)	50.2	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	1,2-Dichlorobenzene	36.3	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	1,2-Dichloroethane	41.7	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	1,2-Dichloroethene	38.5	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	1,2-Dichloropropane	37.6	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	1,3-Dichlorobenzene	27.8	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	1,3-Dichloropropane	48.5	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	1,4-Dichlorobenzene	25.8	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	2,2-Dichloropropane	45.0	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	2-Butanone (MEK)	70.9	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	2-Hexanone	66.5	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	4-Methyl-2-pentanone (MIBK)	67.6	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	Acetone	59.9	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	Benzene	25.6	< 20	< 20	rpd	J/None	D	

Quality Control Outliers for test method SW8260D, MS RPD

The objective of matrix spikes/matrix spike duplicates (MS/MSD) RPD analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. MS/MSD analyses are also performed to generate data that determines the long-term precision of the analytical method on various matrices. Non-homogenous samples can impact the apparent method precision. Summary forms were evaluated and compared to electronic data deliverables. Matrix spikes/matrix spike duplicates results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
MW-3-FAL23 (SD)	Bromobenzene	23.0	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	Bromochloromethane	40.9	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	Bromodichloromethane	39.1	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	Bromoform	47.2	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	Bromomethane	20.8	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	Carbon disulfide	20.1	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	Carbon Tetrachloride	31.7	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	Chlorobenzene	26.3	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	Chloroethane	31.1	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	Chloroform	41.1	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	Chloromethane	22.0	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	cis-1,2-Dichloroethene	44.7	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	cis-1,3-Dichloropropene	44.4	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	Cumene	20.8	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	Dibromochloromethane	49.1	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	Dibromofluoromethane	41.0	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	Dibromomethane	38.0	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	Ethylbenzene	29.5	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	Hexachlorobutadiene	21.6	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	m,p-Xylene	30.0	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	Methyl tert-butyl ether (MTBE)	53.6	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	Methylene chloride	34.2	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	Naphthalene	48.6	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	n-Butylbenzene	20.9	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	o-Xylene	40.9	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	p-Cymene (p-Isopropyltoluene)	21.3	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	Styrene	39.3	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	Tetrachloroethene (PCE)	27.5	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	Toluene	36.0	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	trans-1,2-Dichloroethene	32.8	< 20	< 20	rpd	J/None	D	

Quality Control Outliers for test method SW8260D, MS RPD

The objective of matrix spikes/matrix spike duplicates (MS/MSD) RPD analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. MS/MSD analyses are also performed to generate data that determines the long-term precision of the analytical method on various matrices. Non-homogenous samples can impact the apparent method precision. Summary forms were evaluated and compared to electronic data deliverables. Matrix spikes/matrix spike duplicates results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
MW-3-FAL23 (SD)	trans-1,3-Dichloropropene	46.5	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	Trichloroethene (TCE)	27.4	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	Trichlorofluoromethane	23.5	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	Vinyl acetate	55.5	< 20	< 20	rpd	J/None	D	
MW-3-FAL23 (SD)	Xylenes, Total	35.8	< 20	< 20	rpd	J/None	D	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW8260D, Surrogate

Method performance for individual samples is demonstrated through spiking activities. All samples are spiked with surrogate compounds prior to sample preparation. The sample itself may produce effects due to such factors as interferences and high concentrations of analytes. Summary forms were evaluated and compared to electronic data deliverables. Surrogate results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
G6M-03-07X-FAL23 (N)	Toluene-d8	115	89 - 112	10 - 112	percent	J/None	I	
G6M-04-10A-FAL23 (MS)	Toluene-d8	115	89 - 112	10 - 112	percent	J/None	I	No Qualifiers Applied
G6M-04-10A-FAL23 (SD)	Toluene-d8	116	89 - 112	10 - 112	percent	J/None	I	No Qualifiers Applied
G6M-04-10X-FAL23 (N)	Toluene-d8	113	89 - 112	10 - 112	percent	J/None	I	
MW-3-FAL23 (SD)	1,2-Dichloroethane-d4	126	81 - 118	10 - 118	percent	J/None	I	No Qualifiers Applied
MW-3-FAL23 (SD)	1-Bromo-4-fluorobenzene (4-Bromofluorobenzene)	140	85 - 114	10 - 114	percent	J/None	I	No Qualifiers Applied
MW-3-FAL23 (MS)	Dibromofluoromethane	87.0	89 - 119	10 - 119	percent	J/UJ	I	No Qualifiers Applied
MW-3-FAL23 (SD)	Dibromofluoromethane	132	89 - 119	10 - 119	percent	J/None	I	No Qualifiers Applied
MW-3-FAL23 (MS)	Toluene-d8	87.0	89 - 112	10 - 112	percent	J/UJ	I	No Qualifiers Applied

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Surrogate for SW8260D

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-03-07X-FAL23 680-242109-7	N	1,2-Dichloroethene	2.00	0.510 J	0.510 J	+	ug/l	I/TR
G6M-03-07X-FAL23 680-242109-7	N	cis-1,2-Dichloroethene	2.00	0.340 J	0.340 J	+	ug/l	I/TR
G6M-03-07X-FAL23 680-242109-7	N	Toluene	2.00	0.450 J	0.450 J	+	ug/l	I/TR
G6M-04-10X-FAL23 680-242109-13	N	Trichloroethene (TCE)	1.00	0.290 J	0.290 J	+	ug/l	I/TR

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW9056A, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
G6M-04-10A-FAL23 (MS)	Sulfate	85.0	87 - 112	10 - 112	percent	J/UJ	M	
G6M-04-10A-FAL23 (SD)	Sulfate	83.0	87 - 112	10 - 112	percent	J/UJ	M	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the MS Recovery for SW9056A

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-10A-FAL23 680-242109-12	N	Sulfate	1.50	1.00 U J1	1.00 UJ		mg/l	M

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW9060, LCS Recovery

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
LCSD6808074184 (BD)	Total Organic Carbon	0.00	80 - 120	10 - 120	percent	J/X	C	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Table of All Qualified Results

Test Method: E353.2		Extraction Method: NONE						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-10A-FAL23 680-242109-12	N	Nitrate-Nitrite (as N)	0.100	0.0250 U J1	0.0250 UJ		mg/l	M

Test Method: RSK175		Extraction Method: METHOD						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP02-FAL23 680-242109-1	FD	Methane	390	6200	6200 J		ug/l	D3
G6M-13-02X-FAL23 680-242109-20	N	Methane	390	8800	8800		ug/l	D3

Test Method: SW8260D		Extraction Method: SW5030C						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP02-FAL23 680-242109-1	FD	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
AOC50-DUP02-FAL23 680-242109-1	FD	1,2-Dichloroethene	2.00	8.50	8.50 J		ug/l	D3
AOC50-DUP02-FAL23 680-242109-1	FD	Chloroethane	20.0	10.0 U Q	10.0 UJ		ug/l	V1
AOC50-DUP02-FAL23 680-242109-1	FD	cis-1,2-Dichloroethene	2.00	7.50	7.50 J		ug/l	D3
AOC50-DUP03-FAL23 680-242109-2	FD	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
AOC50-DUP03-FAL23 680-242109-2	FD	Chloroethane	20.0	10.0 U Q	10.0 UJ		ug/l	V1
G6M-02-01X-FAL23 680-242109-3	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-02-01X-FAL23 680-242109-3	N	Chloroethane	20.0	10.0 U Q	10.0 UJ		ug/l	V1
G6M-02-04X-FAL23 680-242109-4	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-02-04X-FAL23 680-242109-4	N	Chloroethane	20.0	10.0 U Q	10.0 UJ		ug/l	V1
G6M-02-07X-FAL23 680-242109-5	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-02-07X-FAL23 680-242109-5	N	Chloroethane	20.0	10.0 U Q	10.0 UJ		ug/l	V1
G6M-02-08X-FAL23 680-242109-6	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-02-08X-FAL23 680-242109-6	N	Chloroethane	20.0	10.0 U Q	10.0 UJ		ug/l	V1
G6M-03-07X-FAL23 680-242109-7	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-03-07X-FAL23 680-242109-7	N	1,2-Dichloroethene	2.00	0.510 J	0.510 J	+	ug/l	I/TR
G6M-03-07X-FAL23 680-242109-7	N	Chloroethane	20.0	10.0 U Q	10.0 UJ		ug/l	V1
G6M-03-07X-FAL23 680-242109-7	N	cis-1,2-Dichloroethene	2.00	0.340 J	0.340 J	+	ug/l	I/TR
G6M-03-07X-FAL23 680-242109-7	N	Toluene	2.00	0.450 J	0.450 J	+	ug/l	I/TR

Table of All Qualified Results

Test Method: SW8260D		Extraction Method: SW5030C						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-01X-FAL23 680-242109-8	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-04-01X-FAL23 680-242109-8	N	Chloroethane	20.0	10.0 U Q	10.0 UJ		ug/l	V1
G6M-04-02X-FAL23 680-242109-9	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-04-02X-FAL23 680-242109-9	N	2-Hexanone	20.0	3.80 J Q	3.80 J		ug/l	TR/Z
G6M-04-02X-FAL23 680-242109-9	N	Acetone	25.0	9.80 J Q	9.80 J		ug/l	TR/Z
G6M-04-02X-FAL23 680-242109-9	N	Chloroethane	20.0	10.0 U Q	10.0 UJ		ug/l	V1
G6M-04-03X-FAL23 680-242109-10	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-04-03X-FAL23 680-242109-10	N	Chloroethane	20.0	10.0 U Q	10.0 UJ		ug/l	V1
G6M-04-09X-FAL23 680-242109-11	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-04-09X-FAL23 680-242109-11	N	Chloroethane	20.0	10.0 U Q	10.0 UJ		ug/l	V1
G6M-04-10A-FAL23 680-242109-12	N	2-Butanone (MEK)	50.0	40.0 U Q J1	40.0 UJ		ug/l	V2
G6M-04-10X-FAL23 680-242109-13	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-04-10X-FAL23 680-242109-13	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-04-10X-FAL23 680-242109-13	N	Chloroethane	20.0	10.0 U Q	10.0 UJ		ug/l	V1
G6M-04-10X-FAL23 680-242109-13	N	Trichloroethene (TCE)	1.00	0.290 J	0.290 J	+	ug/l	I/TR
G6M-04-13X-FAL23 680-242109-14	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 UJ		ug/l	V2
G6M-04-14X-FAL23 680-242109-15	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 UJ		ug/l	V2
G6M-04-15X-FAL23 680-242109-16	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-04-15X-FAL23 680-242109-16	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-04-15X-FAL23 680-242109-16	N	Chloroethane	20.0	10.0 U Q	10.0 UJ		ug/l	V1
G6M-07-01X-FAL23 680-242109-17	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 UJ		ug/l	V2
G6M-07-02X-FAL23 680-242109-18	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 UJ		ug/l	V2
G6M-13-01X-FAL23 680-242109-19	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 UJ		ug/l	V2
G6M-13-02X-FAL23 680-242109-20	N	1,2-Dichloroethene	2.00	13.0	13.0 J		ug/l	D3
G6M-13-02X-FAL23 680-242109-20	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 UJ		ug/l	V2
G6M-13-02X-FAL23 680-242109-20	N	cis-1,2-Dichloroethene	2.00	11.0	11.0 J		ug/l	D3
G6M-95-19X-FAL23 680-242109-21	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 UJ		ug/l	V2

Table of All Qualified Results

Test Method: SW8260D		Extraction Method: SW5030C						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
MW-3-FAL23 680-242109-23	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	M/V2
MW-3-FAL23 680-242109-23	N	1,3-Dichloropropane	2.00	1.00 U Q	1.00 UJ		ug/l	M
MW-3-FAL23 680-242109-23	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
MW-3-FAL23 680-242109-23	N	Chloroethane	20.0	10.0 U Q	10.0 UJ		ug/l	V1
MW-7-FAL23 680-242109-24	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
MW-7-FAL23 680-242109-24	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
MW-7-FAL23 680-242109-24	N	Chloroethane	20.0	10.0 U Q	10.0 UJ		ug/l	V1
XSA-12-95X-FAL23 680-242109-25	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 UJ		ug/l	V2
XSA-12-98X-FAL23 680-242109-26	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 UJ		ug/l	V2

Test Method: SW9056A		Extraction Method: NONE						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-10A-FAL23 680-242109-12	N	Sulfate	1.50	1.00 U J1	1.00 UJ		mg/l	M

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Table of Results with Modified Qualifiers

Modified Qualifiers for test method RSK175

FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	ADR Reason	Modified Result	Reason
AOC50-DUP02-FAL23 680-242109-1	FD	Methane	390	6200	6200 J	D3/Z	6200 J	D3
AOC50-DUP03-FAL23 680-242109-2	FD	Methane	390	14000	14000 J	Z	14000	
G6M-02-01X-FAL23 680-242109-3	N	Methane	390	19000	19000 J	Z	19000	
G6M-02-08X-FAL23 680-242109-6	N	Methane	390	29000	29000 J	Z	29000	
G6M-03-07X-FAL23 680-242109-7	N	Methane	390	25000	25000 J	Z	25000	
G6M-04-02X-FAL23 680-242109-9	N	Methane	390	26000	26000 J	Z	26000	
G6M-04-03X-FAL23 680-242109-10	N	Methane	390	33000	33000 J	Z	33000	
G6M-04-09X-FAL23 680-242109-11	N	Methane	390	26000	26000 J	Z	26000	
G6M-04-10A-FAL23 680-242109-12	N	Methane	390	18000	18000 J	Z	18000	
G6M-07-01X-FAL23 680-242109-17	N	Methane	1.20	41.0	41.0 J	Z	41.0	
G6M-07-02X-FAL23 680-242109-18	N	Methane	390	14000	14000 J	Z	14000	
G6M-13-01X-FAL23 680-242109-19	N	Methane	390	680	680 J	Z	680	
G6M-13-02X-FAL23 680-242109-20	N	Methane	390	8800	8800 J	D3/Z	8800	D3

Modified Qualifiers for test method SW8260D

FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	ADR Reason	Modified Result	Reason
AOC50-DUP02-FAL23 680-242109-1	FD	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 X	V2	5.00 UJ	V2
AOC50-DUP02-FAL23 680-242109-1	FD	Chloroethane	20.0	10.0 U Q	10.0 U		10.0 UJ	V1
AOC50-DUP03-FAL23 680-242109-2	FD	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 X	V2	5.00 UJ	V2
AOC50-DUP03-FAL23 680-242109-2	FD	Chloroethane	20.0	10.0 U Q	10.0 U		10.0 UJ	V1
G6M-02-01X-FAL23 680-242109-3	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 X	V2	5.00 UJ	V2
G6M-02-01X-FAL23 680-242109-3	N	Chloroethane	20.0	10.0 U Q	10.0 U		10.0 UJ	V1
G6M-02-04X-FAL23 680-242109-4	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 X	V2	5.00 UJ	V2
G6M-02-04X-FAL23 680-242109-4	N	Chloroethane	20.0	10.0 U Q	10.0 U		10.0 UJ	V1
G6M-02-07X-FAL23 680-242109-5	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 X	V2	5.00 UJ	V2
G6M-02-07X-FAL23 680-242109-5	N	Chloroethane	20.0	10.0 U Q	10.0 U		10.0 UJ	V1
G6M-02-08X-FAL23 680-242109-6	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 X	V2	5.00 UJ	V2

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260D								
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	ADR Reason	Modified Result	Reason
G6M-02-08X-FAL23 680-242109-6	N	Chloroethane	20.0	10.0 U Q	10.0 U		10.0 UJ	V1
G6M-03-07X-FAL23 680-242109-7	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 X	V2	5.00 UJ	V2
G6M-03-07X-FAL23 680-242109-7	N	Chloroethane	20.0	10.0 U Q	10.0 U		10.0 UJ	V1
G6M-04-01X-FAL23 680-242109-8	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 X	V2	5.00 UJ	V2
G6M-04-01X-FAL23 680-242109-8	N	Chloroethane	20.0	10.0 U Q	10.0 U		10.0 UJ	V1
G6M-04-02X-FAL23 680-242109-9	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 X	V2	5.00 UJ	V2
G6M-04-02X-FAL23 680-242109-9	N	Chloroethane	20.0	10.0 U Q	10.0 U		10.0 UJ	V1
G6M-04-03X-FAL23 680-242109-10	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 X	V2	5.00 UJ	V2
G6M-04-03X-FAL23 680-242109-10	N	Chloroethane	20.0	10.0 U Q	10.0 U		10.0 UJ	V1
G6M-04-09X-FAL23 680-242109-11	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 X	V2	5.00 UJ	V2
G6M-04-09X-FAL23 680-242109-11	N	Chloroethane	20.0	10.0 U Q	10.0 U		10.0 UJ	V1
G6M-04-10A-FAL23 680-242109-12	N	2-Butanone (MEK)	50.0	40.0 U Q J1	40.0 X	V2	40.0 UJ	V2
G6M-04-10X-FAL23 680-242109-13	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 X	V2	5.00 UJ	V2
G6M-04-10X-FAL23 680-242109-13	N	Bromomethane	20.0	10.0 U Q	10.0 X	V2	10.0 UJ	V2
G6M-04-10X-FAL23 680-242109-13	N	Chloroethane	20.0	10.0 U Q	10.0 U		10.0 UJ	V1
G6M-04-13X-FAL23 680-242109-14	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 X	V2	20.0 UJ	V2
G6M-04-14X-FAL23 680-242109-15	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 X	V2	20.0 UJ	V2
G6M-04-15X-FAL23 680-242109-16	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 X	V2	5.00 UJ	V2
G6M-04-15X-FAL23 680-242109-16	N	Bromomethane	20.0	10.0 U Q	10.0 X	V2	10.0 UJ	V2
G6M-04-15X-FAL23 680-242109-16	N	Chloroethane	20.0	10.0 U Q	10.0 U		10.0 UJ	V1
G6M-07-01X-FAL23 680-242109-17	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 X	V2	20.0 UJ	V2
G6M-07-02X-FAL23 680-242109-18	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 X	V2	20.0 UJ	V2
G6M-13-01X-FAL23 680-242109-19	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 X	V2	20.0 UJ	V2
G6M-13-02X-FAL23 680-242109-20	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 X	V2	20.0 UJ	V2
G6M-95-19X-FAL23 680-242109-21	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 X	V2	20.0 UJ	V2
MW-3-FAL23 680-242109-23	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 X	M/V2	5.00 UJ	M/V2
MW-3-FAL23 680-242109-23	N	Bromomethane	20.0	10.0 U Q	10.0 X	V2	10.0 UJ	V2

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260D

FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	ADR Reason	Modified Result	Reason
MW-3-FAL23 680-242109-23	N	Chloroethane	20.0	10.0 U Q	10.0 U		10.0 UJ	V1
MW-7-FAL23 680-242109-24	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 X	V2	5.00 UJ	V2
MW-7-FAL23 680-242109-24	N	Bromomethane	20.0	10.0 U Q	10.0 X	V2	10.0 UJ	V2
MW-7-FAL23 680-242109-24	N	Chloroethane	20.0	10.0 U Q	10.0 U		10.0 UJ	V1
XSA-12-95X-FAL23 680-242109-25	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 X	V2	20.0 UJ	V2
XSA-12-98X-FAL23 680-242109-26	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 X	V2	20.0 UJ	V2

Modified Qualifiers for test method SW9060

FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	ADR Reason	Modified Result	Reason
AOC50-DUP02-FAL23 680-242109-1	FD	Total Organic Carbon	1.50	1.10 J Q	1.10 J	C/TR	1.10 J	TR
G6M-02-01X-FAL23 680-242109-3	N	Total Organic Carbon	1.50	2.90 Q	2.90 J	C	2.90	
G6M-02-08X-FAL23 680-242109-6	N	Total Organic Carbon	1.50	8.70 Q	8.70 J	C	8.70	
G6M-03-07X-FAL23 680-242109-7	N	Total Organic Carbon	1.50	19.0 Q	19.0 J	C	19.0	
G6M-04-02X-FAL23 680-242109-9	N	Total Organic Carbon	1.50	5.70 Q	5.70 J	C	5.70	
G6M-04-03X-FAL23 680-242109-10	N	Total Organic Carbon	1.50	5.50 Q	5.50 J	C	5.50	
G6M-04-09X-FAL23 680-242109-11	N	Total Organic Carbon	1.50	8.30 Q	8.30 J	C	8.30	
G6M-04-10A-FAL23 680-242109-12	N	Total Organic Carbon	1.50	18.0 Q	18.0 J	C	18.0	
G6M-07-01X-FAL23 680-242109-17	N	Total Organic Carbon	1.50	0.770 J Q	0.770 J	C/TR	0.770 J	TR
G6M-13-01X-FAL23 680-242109-19	N	Total Organic Carbon	1.50	1.50 Q	1.50 J	C	1.50	
G6M-13-02X-FAL23 680-242109-20	N	Total Organic Carbon	1.50	1.00 J Q	1.00 J	C/TR	1.00 J	TR

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Reason Code Definitions

Code	Definition
C	LCS Recovery
D	MS RPD
D3	Field Duplicate RPD
I	Surrogate recovery outside project limits.
L	Lab Blank

Reason Code Definitions

Code	Definition
M	MS Recovery
TR	Trace Level Detect
V1	ICV
V2	CCV
V5	Ending Continuing Calibration Verification
Z	LCS RPD

Flag Code and Definitions

Flag	Definition
J	Estimated Value
N	The analysis indicates the presence of an analyte for which there was presumptive evidence to make a tentative identification.
NJ	The analyte has been tentatively identified or presumptively as present and the associated numerical value was the estimated concentration in the sample.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
U	Undetected: The analyte was analyzed for, but not detected.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.
X	Result may require rejection; PDT attention required

Bias

-	The result may be biased low
+	The result may be biased high

Note - The bias field is a separate field; however, it is an integral part of the final flag (qualifier) on the sample result

Review Questions

Method: A2320B (Alkalinity by Titrimetric Method)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: E353.2 (Nitrogen, Nitrate-Nitrite (Colorimetric Automated, Cadmium Reduction))				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?		•		Results qualified UJ due to MS/MSD %R lower and %R limits.
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: RSK175 (Dissolved Gas Analysis in Water Samples Using a GC Headspace Equilibrium Technique)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Were the required minimum levels of calibration standards used in the initial calibration?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Were surrogate recoveries within project acceptance limits?			•	Not applicable to this method.
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			FUDSChem reported LCSD RPD as out of limits, LCSD RPD was manually reviewed and found to be in limits.
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?		•		Results were not qualified by MS/MSD %R greater than limits due to sample amount >4x spike amount.
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?		•		Results qualified J due to FD RPD > 30.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were DoD QSM corrective actions followed if deviations were noted?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW6010C (Trace Metals by Inductively Coupled Plasma/Atomic Emission Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?		•		MS/MSD %R greater than limits but no results were qualified due to sample amount >4x spike amount.
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW6020A (Trace Metals by Inductively Coupled Plasma/Mass Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?		•		MS/MSD%R greater than limits but no results were qualified due to sample amount >4x spike amount.
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW8260D (Volatile Organic Compounds by GC/MS)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?		•		Several results qualified UJ due to CCV %D > 20%.
Were the required minimum levels of calibration standards used in the initial calibration?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?		•		Several results qualified UJ due to ICV %D > 20%.
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Were surrogate recoveries within project acceptance limits?		•		Several results qualified J+ due to surrogate %R greater than %R limits.
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?		•		Analytes detected in the method blank but no results were qualified.
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?		•		LCS $R greater than limits but no results were qualified due to being non-detects.
Was the LCS/LCSD RPD within project acceptance limits?		•		Several results qualified J due to LCS/LCSD RPD greater than RPD limits.
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?		•		Several results qualified UJ due to MS/MSD %R below %R limits.
Was the MS/MSD RPD within project acceptance limits?		•		Several results qualified J due to MS/MSD RPD greater than RPD limits.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were DoD QSM corrective actions followed if deviations were noted?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW9034 (Titrimetric Procedure for Acid-Soluble and Acid-Insoluble Sulfides)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW9056A (Anion Chromatography)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?		•		Results qualified UJ due to MS/MSD %R lower than %R limits.
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW9060 (Total Organic Carbon)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?			•	The spiking solution was inadvertently omitted for the LCSD so no result was reported.
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023
Field Duplicates for SDG: 680-242109-1

Location	Analysis
G6M-07-02X	A2320B

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Alkalinity, Total (as CaCO3)	81.0	80.0	5.50	1.24	30	OK	NA

Location	Analysis
G6M-07-02X	E353.2

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Nitrate-Nitrite (as N)	ND	ND	0.100	NA	30	NA	OK

Location	Analysis
G6M-07-02X	RSK175

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Ethane	1.70	1.70	1.10	0.00	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Ethene	1.70	1.70	1.00	0.00	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Methane	14000	14000	390	0.00	30	OK	NA

Location	Analysis
G6M-07-02X	SW6010C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Iron (FLDFLT)	93000	88000	100	5.52	30	OK	NA
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Manganese (FLDFLT)	2800	2700	10.0	3.64	30	OK	NA

FD = Field Duplicate
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RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG

Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023
Field Duplicates for SDG: 680-242109-1

Location	Analysis
G6M-07-02X	SW6020A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Arsenic (FLDFLT)	25.0	29.0	5.00	14.8	30	NA	OK

Location	Analysis
G6M-07-02X	SW8260D

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	1,1,1,2-Tetrachloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	1,1,1-Trichloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	1,1,2,2-Tetrachloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	1,1,2-Trichloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	1,1-Dichloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	1,1-Dichloroethene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	1,1-Dichloropropene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	1,2,3-Trichlorobenzene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	1,2,3-Trichloropropane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	1,2,4-Trichlorobenzene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	1,2,4-Trimethylbenzene	1.10	0.880	2.00	22.2	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	1,2-Dibromo-3-chloropropane	ND	ND	10.0	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	1,2-Dibromoethane (EDB)	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	1,2-Dichlorobenzene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	1,2-Dichloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	1,2-Dichloroethene	1.10	0.940	2.00	15.7	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	1,2-Dichloropropane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	1,3,5-Trimethylbenzene	0.930	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	1,3-Dichlorobenzene	ND	ND	2.00	NA	30	NA	OK

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Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023
Field Duplicates for SDG: 680-242109-1

Location	Analysis
G6M-07-02X	SW8260D

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	1,3-Dichloropropane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	1,4-Dichlorobenzene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	2,2-Dichloropropane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	2-Butanone (MEK)	ND	ND	25.0	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	2-Chlorotoluene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	2-Hexanone	ND	ND	20.0	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	4-Chlorotoluene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	4-Methyl-2-pentanone (MIBK)	ND	ND	20.0	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Acetone	ND	ND	25.0	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Benzene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Bromobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Bromochloromethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Bromodichloromethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Bromoform	ND	ND	2.50	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Bromomethane	ND	ND	20.0	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Carbon disulfide	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Carbon Tetrachloride	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Chlorobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Chloroethane	ND	ND	20.0	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Chloroform	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Chloromethane	ND	ND	2.50	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	cis-1,2-Dichloroethene	1.10	0.940	2.00	15.7	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	cis-1,3-Dichloropropene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Cumene	ND	ND	2.00	NA	30	NA	OK

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Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023
Field Duplicates for SDG: 680-242109-1

Location	Analysis
G6M-07-02X	SW8260D

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Dibromochloromethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Dibromomethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Dichlorodifluoromethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Ethylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Hexachlorobutadiene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	m,p-Xylene	0.780	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Methyl tert-butyl ether (MTBE)	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Methylene chloride	ND	ND	20.0	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	n-Butylbenzene	1.10	ND	2.50	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	n-Propylbenzene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Naphthalene	3.20	3.50	10.0	8.96	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	o-Xylene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	p-Cymene (p-Isopropyltoluene)	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	sec-Butylbenzene	ND	ND	2.50	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Styrene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	tert-Butylbenzene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Tetrachloroethene (PCE)	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Toluene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	trans-1,2-Dichloroethene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	trans-1,3-Dichloropropene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Trichloroethene (TCE)	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Trichlorofluoromethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Vinyl acetate	ND	ND	2.50	NA	30	NA	OK
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Vinyl chloride	ND	ND	2.00	NA	30	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023
Field Duplicates for SDG: 680-242109-1

Location	Analysis
G6M-07-02X	SW8260D

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Xylenes, Total	0.780	ND	2.00	NA	30	NA	OK

Location	Analysis
G6M-07-02X	SW9034

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Sulfide	ND	ND	2.40	NA	30	NA	OK

Location	Analysis
G6M-07-02X	SW9056A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Sulfate	ND	ND	1.50	NA	30	NA	OK

Location	Analysis
G6M-07-02X	SW9060

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-FAL23 / AOC50-DUP03-FAL23	680-242109-18 / 680-242109-2	Total Organic Carbon	95.0	93.0	15.0	2.13	30	OK	NA

Location	Analysis
G6M-13-02X	A2320B

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Alkalinity, Total (as CaCO3)	83.0	96.0	5.50	14.5	30	OK	NA

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Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023
Field Duplicates for SDG: 680-242109-1

Location	Analysis
G6M-13-02X	E353.2

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Nitrate-Nitrite (as N)	ND	ND	0.100	NA	30	NA	OK

Location	Analysis
G6M-13-02X	RSK175

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Ethane	0.870	0.630	1.10	32.0	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Ethene	ND	0.730	1.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Methane	8800	6200	390	34.7	30	Out	NA

Location	Analysis
G6M-13-02X	SW6010C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Iron (FLDFLT)	1500	1300	100	14.3	30	OK	NA
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Manganese (FLDFLT)	12000	12000	10.0	0.00	30	OK	NA

Location	Analysis
G6M-13-02X	SW6020A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Arsenic (FLDFLT)	27.0	25.0	5.00	7.69	30	NA	OK

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Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023
Field Duplicates for SDG: 680-242109-1

Location	Analysis
G6M-13-02X	SW8260D

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	1,1,1,2-Tetrachloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	1,1,1-Trichloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	1,1,2,2-Tetrachloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	1,1,2-Trichloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	1,1-Dichloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	1,1-Dichloroethene	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	1,1-Dichloropropene	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	1,2,3-Trichlorobenzene	ND	ND	5.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	1,2,3-Trichloropropane	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	1,2,4-Trichlorobenzene	ND	ND	5.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	1,2,4-Trimethylbenzene	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	1,2-Dibromo-3-chloropropane	ND	ND	10.0	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	1,2-Dibromoethane (EDB)	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	1,2-Dichlorobenzene	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	1,2-Dichloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	1,2-Dichloroethene	13.0	8.50	2.00	41.9	30	NA	4.5
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	1,2-Dichloropropane	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	1,3,5-Trimethylbenzene	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	1,3-Dichlorobenzene	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	1,3-Dichloropropane	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	1,4-Dichlorobenzene	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	2,2-Dichloropropane	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	2-Butanone (MEK)	ND	ND	25.0	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	2-Chlorotoluene	ND	ND	1.00	NA	30	NA	OK

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Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023
Field Duplicates for SDG: 680-242109-1

Location	Analysis
G6M-13-02X	SW8260D

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	2-Hexanone	ND	ND	20.0	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	4-Chlorotoluene	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	4-Methyl-2-pentanone (MIBK)	ND	ND	20.0	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Acetone	ND	ND	25.0	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Benzene	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Bromobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Bromochloromethane	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Bromodichloromethane	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Bromoform	ND	ND	2.50	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Bromomethane	ND	ND	20.0	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Carbon disulfide	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Carbon Tetrachloride	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Chlorobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Chloroethane	ND	ND	20.0	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Chloroform	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Chloromethane	ND	ND	2.50	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	cis-1,2-Dichloroethene	11.0	7.50	2.00	37.8	30	NA	3.5
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	cis-1,3-Dichloropropene	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Cumene	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Dibromochloromethane	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Dibromomethane	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Dichlorodifluoromethane	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Ethylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Hexachlorobutadiene	ND	ND	5.00	NA	30	NA	OK

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Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023
Field Duplicates for SDG: 680-242109-1

Location	Analysis
G6M-13-02X	SW8260D

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	m,p-Xylene	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Methyl tert-butyl ether (MTBE)	ND	ND	5.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Methylene chloride	ND	ND	20.0	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	n-Butylbenzene	ND	ND	2.50	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	n-Propylbenzene	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Naphthalene	ND	ND	10.0	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	o-Xylene	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	p-Cymene (p-Isopropyltoluene)	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	sec-Butylbenzene	ND	ND	2.50	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Styrene	ND	0.280	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	tert-Butylbenzene	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Tetrachloroethene (PCE)	ND	0.440	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Toluene	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	trans-1,2-Dichloroethene	1.40	1.00	2.00	33.3	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	trans-1,3-Dichloropropene	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Trichloroethene (TCE)	3.30	3.00	1.00	9.52	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Trichlorofluoromethane	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Vinyl acetate	ND	ND	2.50	NA	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Vinyl chloride	0.580	0.540	2.00	7.14	30	NA	OK
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Xylenes, Total	ND	ND	2.00	NA	30	NA	OK

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Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023
Field Duplicates for SDG: 680-242109-1

Location	Analysis
G6M-13-02X	SW9034

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Sulfide	ND	ND	2.50	NA	30	NA	OK

Location	Analysis
G6M-13-02X	SW9056A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Sulfate	8.90	8.40	1.50	5.78	30	OK	NA

Location	Analysis
G6M-13-02X	SW9060

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-13-02X-FAL23 / AOC50-DUP02-FAL23	680-242109-20 / 680-242109-1	Total Organic Carbon	1.00	1.10	1.50	9.52	30	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

February 28, 2024

SUBJECT: Fort Devens - Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. This SDG was received on January 4, 2024. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #58331_C:

SDG #	**Fraction**
680-242433-1	Volatiles, Dissolved Metals

The data validation was performed under Stage 2B guidelines. The analysis was validated using the following documents, as applicable to each method:

- Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

341 pages-ADV

Attachment 1

Stage 2B EQUIS EDD

LDC# 58331 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	VOA (8260D)		VOA (624)		SVOA (625)		Pest. (8081B)		PCBs (8082A)		Metals (6010C /6020A)		Hg (7470A)		3 D.Met. (6010C /6020A)		DRO (8015C)		Methane Ethane Ethene													
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	680-241926-1	01/04/24	01/18/24	8	0	-	-	-	-	-	-	-	-	-	-	-	-	8	0	-	-	3	0												
B	680-242109-1	01/04/24	01/18/24	25	0	-	-	-	-	-	-	-	-	-	-	-	-	23	0	-	-	13	0												
C	680-242433-1	01/04/24	01/18/24	3	0	-	-	-	-	-	-	-	-	-	-	-	-	3	0	-	-	-	-												
D	680-242668-1	01/04/24	01/18/24	4	0	-	-	-	-	-	-	-	-	-	-	-	-	4	0	-	-	1	0												
E	680-242837-1	01/04/24	01/18/24	-	-	1	0	-	-	1	0	-	-	1	0	1	0	-	-	-	-	-	-												
F	680-242837-2	01/04/24	01/18/24	-	-	-	-	-	-	-	-	1	0	-	-	-	-	-	-	-	-	-	-												
G	680-242974-2	01/04/24	01/18/24	1	0	-	-	-	-	-	-	-	-	-	-	-	-	1	0	-	-	-	-												
H	680-243143-1	01/04/24	01/18/24	-	-	-	-	1	0	-	-	-	-	-	-	-	-	-	-	1	0	-	-												
Total	TR/PG			41	0	1	0	1	0	1	0	1	0	1	0	1	0	39	0	1	0	17	0	0	0	0	0	0	0	0	0	0	0	0	104

Stage 2B EQUIS EDD

LDC# 58331 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	Alk (2320B)		CN- (9012B)		NO_3 /NO_2-N (353.2)		pH (9040C)		Total Phenols (9066)		SO_4 (9056A)		S= (9034)		TSS (2540D)		TOC (9060A)													
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	680-241926-1	01/04/24	01/18/24	3	0	-	-	3	0	-	-	-	-	3	0	-	-	-	-	3	0												
B	680-242109-1	01/04/24	01/18/24	13	0	-	-	13	0	-	-	-	-	13	0	13	0	-	-	13	0												
D	680-242668-1	01/04/24	01/18/24	1	0	-	-	1	0	-	-	-	-	1	0	1	0	-	-	1	0												
E	680-242837-1	01/04/24	01/18/24	-	-	1	0	-	-	1	0	-	-	-	-	-	-	-	-	-	-												
G	680-242974-2	01/04/24	01/18/24																														
H	680-243143-1	01/04/24	01/18/24	-	-	-	-	-	-	-	-	1	0	-	-	-	-	1	0	-	-												
Total	TR/PG			17	0	1	0	17	0	1	0	1	0	17	0	14	0	1	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	86

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

Data Validation Report for 680-242433-1

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023
SDG:	680-242433-1
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
Prime Contractor:	Seres - Arcadis SB Joint Venture, LLC, Charleston, SC
Project Manager:	Jennifer Singer
Contract Laboratory(ies):	Eurofins Environment Testing TestAmerica, Savannah, GA
Data Review Contractor:	Laboratory Data Consultants, Inc.
Data Review Level:	2B
Primary Data Reviewer:	Long Ngo, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	February 21, 2024

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	SW6010C - Dissolved	SW6020A - Dissolved	SW8260D
AOC50-DUP01-FAL23	680-242433-1	Water	Field Duplicate/FD	X	X	X
G6M-02-13X-FAL23	680-242433-2	Water	Field Sample/N	X	X	X
G6M-04-04X-FAL23	680-242433-3	Water	Field Sample/N	X	X	X

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page at 2B data validation level. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020 and the additional guidance documents incorporated by reference to the extent possible. Where definitive guidance is not provided, results have been evaluated in a conservative manner using professional judgment.

Sample collection was managed and directed by Seres - Arcadis SB Joint Venture, LLC, Charleston, SC; analyses were performed by Eurofins Environment Testing TestAmerica, Savannah, GA and were reported under sample delivery group (SDG) 680-242433-1. Data have been evaluated electronically based on electronic data deliverables (EDDs) provided by the laboratory, and hard copy data summary forms have also been reviewed during this effort and compared to the automated review output by the reviewers whose signatures appear on the following page. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative and throughout this report.

All quality control (QC) elements associated with this SDG have been reviewed by a project chemist in accordance with the requirements defined for the project. This review is documented in the attached Data Review Checklists. The QC elements listed below were supported by the electronic deliverable and were evaluated using ADR processes.

- Blank - Negative
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Field Duplicate RPD
- Interference Check Sample A
- Interference Check Sample A - Negative
- Interference Check Sample AB
- Lab Blank
- LCS Recovery
- LCS RPD
- Prep Hold Time
- Surrogate
- Test Hold Time

Results of the ADR process were subsequently reviewed and updated as applicable by the data review chemists identified on the signature page. Quality control elements that were not included in the electronic deliverable were reviewed manually and findings are documented within this report. Summaries of findings and associated qualified results are documented throughout this report.

A total of 6 results (2.82%) out of the 213 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected or deemed a serious deficiency (X qualifier). Trace values, defined as results that are qualified as estimated because they fall between the detection limit and the reporting limit/limit of quantitation, are not counted as qualified results in the above count. The qualified results are detailed throughout this report and discussed in the narrative below, where appropriate.

Narrative Comments

Analytical Method	Data Reviewer Comment
SW6010C	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
SW8260D	No additional comments; see Checklist for detail.



February 21, 2024

Reviewed by Long Ngo, Environmental Scientist, Laboratory Data Consultants, Inc.

As the First Reviewer, I certify that I have performed a data review process in accordance with the requirements of the project guidance document, and have compared the electronic data to the laboratory's hard copy report and have verified the consistency of the reported sample results and method quality control data between the two deliverables.



Reviewed by Pei Geng, Senior Scientist, Laboratory Data Consultants, Inc.

February 28, 2024

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

Quality Control Outliers for test method SW6010C, Dissolved, Lab Blank

The purpose of laboratory blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in laboratory blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
MB6808059451A (LB)	Manganese	2.29	< 1.3	< 10	ug/l	U/None*	L	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

*Blank flags displayed in the above table identify qualification of the sample result when it is less than or equal to the LOQ/RL. Sample results above the LOD or LOQ will be qualified based on the validation guidance assigned in the project setup.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW8260D, Continuing Calibration Verification

Compliance requirements for satisfactory continuing calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data. Continuing calibration is performed to verify and evaluate instrument performance during sample analysis. Summary forms were evaluated against project acceptance criteria, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
CCVIS6808064253 (CV)	2-Butanone (MEK)	75.0	80 - 120	80 - 120	percent	J/X	V2	
CCVIS6808064253 (CV)	Bromomethane	124	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6808064253 (CV)	Chloroethane	145	80 - 120	80 - 120	percent	J/None	V2	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Continuing Calibration Verification for SW8260D

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP01-FAL23 680-242433-1	FD	2-Butanone (MEK)	25.0	20.0 U Q	20.0 UJ		ug/l	V2/V5
G6M-02-13X-FAL23 680-242433-2	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 UJ		ug/l	V2/V5
G6M-04-04X-FAL23 680-242433-3	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 UJ		ug/l	V2/V5

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260D, Ending Continuing Calibration Verification

Compliance requirements for satisfactory closing continuing calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data. Continuing calibration is performed to verify and evaluate instrument performance during sample analysis. Summary forms were evaluated against project acceptance criteria, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
CCVC68080642532 (EV)	2-Butanone (MEK)	48.0	50 - 150	50 - 150	percent	J/X	V5	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Ending Continuing Calibration Verification for SW8260D

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP01-FAL23 680-242433-1	FD	2-Butanone (MEK)	25.0	20.0 U Q	20.0 UJ		ug/l	V2/V5
G6M-02-13X-FAL23 680-242433-2	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 UJ		ug/l	V2/V5
G6M-04-04X-FAL23 680-242433-3	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 UJ		ug/l	V2/V5

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260D, LCS Recovery

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
LCS6808064254 (BS)	Chloroethane	151	60 - 138	10 - 138	percent	J/None	C	
LCSD6808064255 (BD)	Bromomethane	160	53 - 141	10 - 141	percent	J/None	C	
LCSD6808064255 (BD)	Chloroethane	147	60 - 138	10 - 138	percent	J/None	C	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW8260D, LCS RPD

The objective of laboratory control sample/laboratory control sample duplicate (LCS/LCSD) RPD analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. LCS/LCSD analyses are also performed to generate data that determines the long-term precision of the analytical method on various matrices. Non-homogenous samples can impact the apparent method precision. Summary forms were evaluated and compared to electronic data deliverables. Laboratory control sample/laboratory control sample duplicate RPD results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
LCSD6808064255 (BD)	Bromomethane	28.3	< 20	< 20	rpd	J/None	Z	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Table of All Qualified Results

Test Method: SW8260D		**Extraction Method: SW5030C**						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP01-FAL23 680-242433-1	FD	2-Butanone (MEK)	25.0	20.0 U Q	20.0 UJ		ug/l	V2/V5
AOC50-DUP01-FAL23 680-242433-1	FD	Carbon disulfide	2.00	1.00 U Q	1.00 UJ		ug/l	V1
G6M-02-13X-FAL23 680-242433-2	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 UJ		ug/l	V2/V5
G6M-02-13X-FAL23 680-242433-2	N	Carbon disulfide	2.00	1.00 U Q	1.00 UJ		ug/l	V1
G6M-04-04X-FAL23 680-242433-3	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 UJ		ug/l	V2/V5
G6M-04-04X-FAL23 680-242433-3	N	Carbon disulfide	2.00	1.00 U Q	1.00 UJ		ug/l	V1

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260D

FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	ADR Reason	Modified Result	Reason
AOC50-DUP01-FAL23 680-242433-1	FD	2-Butanone (MEK)	25.0	20.0 U Q	20.0 X	V2/V5	20.0 UJ	V2/V5
AOC50-DUP01-FAL23 680-242433-1	FD	Carbon disulfide	2.00	1.00 U Q	1.00 U		1.00 UJ	V1
G6M-02-13X-FAL23 680-242433-2	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 X	V2/V5	20.0 UJ	V2/V5
G6M-02-13X-FAL23 680-242433-2	N	Carbon disulfide	2.00	1.00 U Q	1.00 U		1.00 UJ	V1
G6M-04-04X-FAL23 680-242433-3	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 X	V2/V5	20.0 UJ	V2/V5
G6M-04-04X-FAL23 680-242433-3	N	Carbon disulfide	2.00	1.00 U Q	1.00 U		1.00 UJ	V1

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Reason Code Definitions

Code	Definition
C	LCS Recovery
L	Lab Blank
TR	Trace Level Detect
V1	ICV
V2	CCV
V5	Ending Continuing Calibration Verification
Z	LCS RPD

Flag Code and Definitions

Flag	Definition
J	Estimated Value
N	The analysis indicates the presence of an analyte for which there was presumptive evidence to make a tentative identification.
NJ	The analyte has been tentatively identified or presumptively as present and the associated numerical value was the estimated concentration in the sample.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
U	Undetected: The analyte was analyzed for, but not detected.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.
X	Result may require rejection; PDT attention required

Bias

-	The result may be biased low
+	The result may be biased high

Note - The bias field is a separate field; however, it is an integral part of the final flag (qualifier) on the sample result

Review Questions

Method: SW6010C (Trace Metals by Inductively Coupled Plasma/Atomic Emission Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?		•		Analyte detected in the method blank but no results were qualified.
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW6020A (Trace Metals by Inductively Coupled Plasma/Mass Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW8260D (Volatile Organic Compounds by GC/MS)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?		•		Several results qualified UJ due to CCV %D > 20%.
Were the required minimum levels of calibration standards used in the initial calibration?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?		•		Several results qualified UJ due to ICV %D > 20%.
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Were surrogate recoveries within project acceptance limits?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?		•		LCS %D greater than %D limits but no results were qualified.
Was the LCS/LCSD RPD within project acceptance limits?		•		LCS/LCSD RPD greater than RPD limits but no results were qualified.
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were DoD QSM corrective actions followed if deviations were noted?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023
Field Duplicates for SDG: 680-242433-1

Location	Analysis
G6M-04-04X	SW6010C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Iron (FLDFLT)	62000	59000	100	4.96	30	OK	NA
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Manganese (FLDFLT)	15000	15000	10.0	0.00	30	OK	NA

Location	Analysis
G6M-04-04X	SW6020A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Arsenic (FLDFLT)	380	380	5.00	0.00	30	OK	NA

Location	Analysis
G6M-04-04X	SW8260D

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	1,1,1,2-Tetrachloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	1,1,1-Trichloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	1,1,2,2-Tetrachloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	1,1,2-Trichloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	1,1-Dichloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	1,1-Dichloroethene	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	1,1-Dichloropropene	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	1,2,3-Trichlorobenzene	ND	ND	5.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	1,2,3-Trichloropropane	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	1,2,4-Trichlorobenzene	ND	ND	5.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	1,2,4-Trimethylbenzene	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	1,2-Dibromo-3-chloropropane	ND	ND	10.0	NA	30	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023
Field Duplicates for SDG: 680-242433-1

Location	Analysis
G6M-04-04X	SW8260D

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	1,2-Dibromoethane (EDB)	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	1,2-Dichlorobenzene	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	1,2-Dichloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	1,2-Dichloroethene	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	1,2-Dichloropropane	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	1,3,5-Trimethylbenzene	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	1,3-Dichlorobenzene	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	1,3-Dichloropropane	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	1,4-Dichlorobenzene	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	2,2-Dichloropropane	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	2-Butanone (MEK)	ND	ND	25.0	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	2-Chlorotoluene	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	2-Hexanone	ND	ND	20.0	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	4-Chlorotoluene	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	4-Methyl-2-pentanone (MIBK)	ND	ND	20.0	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Acetone	ND	ND	25.0	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Benzene	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Bromobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Bromochloromethane	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Bromodichloromethane	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Bromoform	ND	ND	2.50	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Bromomethane	ND	ND	20.0	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Carbon disulfide	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Carbon Tetrachloride	ND	ND	2.00	NA	30	NA	OK

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Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023
Field Duplicates for SDG: 680-242433-1

Location	Analysis
G6M-04-04X	SW8260D

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Chlorobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Chloroethane	ND	ND	20.0	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Chloroform	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Chloromethane	ND	ND	2.50	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	cis-1,2-Dichloroethene	0.300	0.350	2.00	15.4	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	cis-1,3-Dichloropropene	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Cumene	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Dibromochloromethane	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Dibromomethane	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Dichlorodifluoromethane	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Ethylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Hexachlorobutadiene	ND	ND	5.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	m,p-Xylene	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Methyl tert-butyl ether (MTBE)	ND	ND	5.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Methylene chloride	ND	ND	20.0	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	n-Butylbenzene	ND	ND	2.50	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	n-Propylbenzene	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Naphthalene	ND	ND	10.0	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	o-Xylene	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	p-Cymene (p-Isopropyltoluene)	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	sec-Butylbenzene	ND	ND	2.50	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Styrene	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	tert-Butylbenzene	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Tetrachloroethene (PCE)	ND	ND	2.00	NA	30	NA	OK

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Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023
Field Duplicates for SDG: 680-242433-1

Location	Analysis
G6M-04-04X	SW8260D

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Toluene	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	trans-1,2-Dichloroethene	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	trans-1,3-Dichloropropene	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Trichloroethene (TCE)	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Trichlorofluoromethane	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Vinyl acetate	ND	ND	2.50	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Vinyl chloride	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL23 / AOC50-DUP01-FAL23	680-242433-3 / 680-242433-1	Xylenes, Total	ND	ND	2.00	NA	30	NA	OK

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RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

February 28, 2024

SUBJECT: Fort Devens - Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. This SDG was received on January 4, 2024. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #58331_D:

SDG #	**Fraction**
680-242668-1	Volatiles, Dissolved Metals, Wet Chemistry, Methane, Ethane, & Ethene

The data validation was performed under Stage 2B guidelines. The analysis was validated using the following documents, as applicable to each method:

- Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

341 pages-ADV

Attachment 1

Stage 2B EQUIS EDD

LDC# 58331 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	VOA (8260D)		VOA (624)		SVOA (625)		Pest. (8081B)		PCBs (8082A)		Metals (6010C /6020A)		Hg (7470A)		3 D.Met. (6010C /6020A)		DRO (8015C)		Methane Ethane Ethene													
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	680-241926-1	01/04/24	01/18/24	8	0	-	-	-	-	-	-	-	-	-	-	-	-	8	0	-	-	3	0												
B	680-242109-1	01/04/24	01/18/24	25	0	-	-	-	-	-	-	-	-	-	-	-	-	23	0	-	-	13	0												
C	680-242433-1	01/04/24	01/18/24	3	0	-	-	-	-	-	-	-	-	-	-	-	-	3	0	-	-	-	-												
D	680-242668-1	01/04/24	01/18/24	4	0	-	-	-	-	-	-	-	-	-	-	-	-	4	0	-	-	1	0												
E	680-242837-1	01/04/24	01/18/24	-	-	1	0	-	-	1	0	-	-	1	0	1	0	-	-	-	-	-	-												
F	680-242837-2	01/04/24	01/18/24	-	-	-	-	-	-	-	-	1	0	-	-	-	-	-	-	-	-	-	-												
G	680-242974-2	01/04/24	01/18/24	1	0	-	-	-	-	-	-	-	-	-	-	-	-	1	0	-	-	-	-												
H	680-243143-1	01/04/24	01/18/24	-	-	-	-	1	0	-	-	-	-	-	-	-	-	-	-	1	0	-	-												
Total	TR/PG			41	0	1	0	1	0	1	0	1	0	1	0	1	0	39	0	1	0	17	0	0	0	0	0	0	0	0	0	0	0	0	104

Stage 2B EQUIS EDD

LDC# 58331 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	Alk (2320B)		CN- (9012B)		NO_3 /NO_2-N (353.2)		pH (9040C)		Total Phenols (9066)		SO_4 (9056A)		S= (9034)		TSS (2540D)		TOC (9060A)													
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	680-241926-1	01/04/24	01/18/24	3	0	-	-	3	0	-	-	-	-	3	0	-	-	-	-	3	0												
B	680-242109-1	01/04/24	01/18/24	13	0	-	-	13	0	-	-	-	-	13	0	13	0	-	-	13	0												
D	680-242668-1	01/04/24	01/18/24	1	0	-	-	1	0	-	-	-	-	1	0	1	0	-	-	1	0												
E	680-242837-1	01/04/24	01/18/24	-	-	1	0	-	-	1	0	-	-	-	-	-	-	-	-	-	-												
G	680-242974-2	01/04/24	01/18/24																														
H	680-243143-1	01/04/24	01/18/24	-	-	-	-	-	-	-	-	1	0	-	-	-	-	1	0	-	-												
Total	TR/PG			17	0	1	0	17	0	1	0	1	0	17	0	14	0	1	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	86

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

Data Validation Report for 680-242668-1

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023
SDG:	680-242668-1
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
Prime Contractor:	Seres - Arcadis SB Joint Venture, LLC, Charleston, SC
Project Manager:	Jennifer Singer
Contract Laboratory(ies):	Eurofins Environment Testing TestAmerica, Savannah, GA
Data Review Contractor:	Laboratory Data Consultants, Inc.
Data Review Level:	2B
Primary Data Reviewer:	Long Ngo, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	February 21, 2024

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	E353.2	RSK175	SW6010C - Dissolved	SW6020A - Dissolved	SW8260D	SW9034	SW9056A	SW9060
G6M-02-06X-FAL23	680-242668-1	Water	Field Sample/N				X	X	X			
G6M-04-06X-FAL23	680-242668-2	Water	Field Sample/N				X	X	X			
G6M-04-07X-FAL23	680-242668-3	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-13-04X-FAL23	680-242668-4	Water	Field Sample/N				X	X	X			

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page at 2B data validation level. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020 and the additional guidance documents incorporated by reference to the extent possible. Where definitive guidance is not provided, results have been evaluated in a conservative manner using professional judgment.

Sample collection was managed and directed by Seres - Arcadis SB Joint Venture, LLC, Charleston, SC; analyses were performed by Eurofins Environment Testing TestAmerica, Savannah, GA and were reported under sample delivery group (SDG) 680-242668-1. Data have been evaluated electronically based on electronic data deliverables (EDDs) provided by the laboratory, and hard copy data summary forms have also been reviewed during this effort and compared to the automated review output by the reviewers whose signatures appear on the following page. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative and throughout this report.

All quality control (QC) elements associated with this SDG have been reviewed by a project chemist in accordance with the requirements defined for the project. This review is documented in the attached Data Review Checklists. The QC elements listed below were supported by the electronic deliverable and were evaluated using ADR processes.

- Blank - Negative
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Interference Check Sample A
- Interference Check Sample A - Negative
- Interference Check Sample AB
- Lab Blank
- LCS Recovery
- LCS RPD
- Prep Hold Time
- Surrogate
- Test Hold Time

Results of the ADR process were subsequently reviewed and updated as applicable by the data review chemists identified on the signature page. Quality control elements that were not included in the electronic deliverable were reviewed manually and findings are documented within this report. Summaries of findings and associated qualified results are documented throughout this report.

A total of 0 results (0.00%) out of the 292 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected or deemed a serious deficiency (X qualifier). Trace values, defined as results that are qualified as estimated because they fall between the detection limit and the reporting limit/limit of quantitation, are not counted as qualified results in the above count. The qualified results are detailed throughout this report and discussed in the narrative below, where appropriate.

Narrative Comments

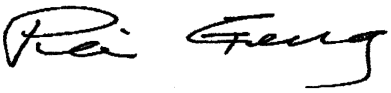
Analytical Method	Data Reviewer Comment
A2320B	No additional comments; see Checklist for detail.
E353.2	No additional comments; see Checklist for detail.
RSK175	No additional comments; see Checklist for detail.
SW6010C	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
SW8260D	No additional comments; see Checklist for detail.
SW9034	No additional comments; see Checklist for detail.
SW9056A	No additional comments; see Checklist for detail.
SW9060	No additional comments; see Checklist for detail.



February 21, 2024

Reviewed by Long Ngo, Environmental Scientist, Laboratory Data Consultants, Inc.

As the First Reviewer, I certify that I have performed a data review process in accordance with the requirements of the project guidance document, and have compared the electronic data to the laboratory's hard copy report and have verified the consistency of the reported sample results and method quality control data between the two deliverables.



Reviewed by Pei Geng, Senior Scientist, Laboratory Data Consultants, Inc.

February 28, 2024

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

Quality Control Outliers for test method RSK175, LCS RPD

The objective of laboratory control sample/laboratory control sample duplicate (LCS/LCSD) RPD analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. LCS/LCSD analyses are also performed to generate data that determines the long-term precision of the analytical method on various matrices. Non-homogenous samples can impact the apparent method precision. Summary forms were evaluated and compared to electronic data deliverables. Laboratory control sample/laboratory control sample duplicate RPD results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
LCSD6808073674 (BD)	Methane	170	< 30	< 30	rpd	J/None	Z	
LCSD6808073677 (BD)	Methane	168	< 30	< 30	rpd	J/None	Z	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW8260D, Continuing Calibration Verification

Compliance requirements for satisfactory continuing calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data. Continuing calibration is performed to verify and evaluate instrument performance during sample analysis. Summary forms were evaluated against project acceptance criteria, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
CCVIS6808086233 (CV)	1,1,1-Trichloroethane	130	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6808086233 (CV)	1,2-Dibromoethane (EDB)	122	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6808086233 (CV)	1,2-Dichloroethane	128	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6808086233 (CV)	2,2-Dichloropropane	127	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6808086233 (CV)	Bromodichloromethane	123	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6808086233 (CV)	Bromomethane	178	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6808086233 (CV)	Carbon Tetrachloride	132	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6808086233 (CV)	Dibromochloromethane	129	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6808086233 (CV)	trans-1,3-Dichloropropene	127	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6808086233 (CV)	Trichlorofluoromethane	127	80 - 120	80 - 120	percent	J/None	V2	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW8260D, Ending Continuing Calibration Verification

Compliance requirements for satisfactory closing continuing calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data. Continuing calibration is performed to verify and evaluate instrument performance during sample analysis. Summary forms were evaluated against project acceptance criteria, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
CCVC68080862327 (EV)	Bromomethane	206	50 - 150	50 - 150	percent	J/None	V5	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW8260D, LCS Recovery

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
LCS6808086234 (BS)	Bromomethane	173	53 - 141	10 - 141	percent	J/None	C	
LCS6808086234 (BS)	Dibromochloromethane	127	74 - 126	10 - 126	percent	J/None	C	
LCSD6808086235 (BD)	Bromomethane	174	53 - 141	10 - 141	percent	J/None	C	
LCSD6808086235 (BD)	trans-1,3-Dichloropropene	130	73 - 127	10 - 127	percent	J/None	C	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Qualified Results

No results associated with this sample delivery group required qualification.

Table of Results with Modified Qualifiers

Modified Qualifiers for test method RSK175

FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	ADR Reason	Modified Result	Reason
G6M-04-07X-FAL23 680-242668-3	N	Methane	1.20	160	160 J	Z	160	

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Reason Code Definitions

Code	Definition
C	LCS Recovery
TR	Trace Level Detect
V2	CCV
V5	Ending Continuing Calibration Verification
Z	LCS RPD

Flag Code and Definitions

Flag	Definition
J	Estimated Value
N	The analysis indicates the presence of an analyte for which there was presumptive evidence to make a tentative identification.
NJ	The analyte has been tentatively identified or presumptively as present and the associated numerical value was the estimated concentration in the sample.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
U	Undetected: The analyte was analyzed for, but not detected.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.
X	Result may require rejection; PDT attention required

Bias

-	The result may be biased low
+	The result may be biased high

Note - The bias field is a separate field; however, it is an integral part of the final flag (qualifier) on the sample result

Review Questions

Method: A2320B (Alkalinity by Titrimetric Method)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: E353.2 (Nitrogen, Nitrate-Nitrite (Colorimetric Automated, Cadmium Reduction))				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: RSK175 (Dissolved Gas Analysis in Water Samples Using a GC Headspace Equilibrium Technique)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Were the required minimum levels of calibration standards used in the initial calibration?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Were surrogate recoveries within project acceptance limits?			•	Not applicable to this method.
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			FUDSChem reported LCSD RPD as out of limits, LCSD RPD was manually reviewed and found to be in limits.
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were DoD QSM corrective actions followed if deviations were noted?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW6010C (Trace Metals by Inductively Coupled Plasma/Atomic Emission Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW6020A (Trace Metals by Inductively Coupled Plasma/Mass Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		

Review Questions

Method: SW8260D (Volatile Organic Compounds by GC/MS)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?		•		CCV %D greater than >20% but no results were qualified.
Were the required minimum levels of calibration standards used in the initial calibration?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Were surrogate recoveries within project acceptance limits?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?		•		LCS/LCSD %R greater than %R limits but no results were qualified.
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were DoD QSM corrective actions followed if deviations were noted?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW9034 (Titrimetric Procedure for Acid-Soluble and Acid-Insoluble Sulfides)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW9056A (Anion Chromatography)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW9060 (Total Organic Carbon)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

LABORATORY DATA CONSULTANTS, INC.
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ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

February 28, 2024

SUBJECT: Fort Devens - Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. This SDG was received on January 4, 2024. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #58331_G:

SDG #	**Fraction**
680-242974-2	Volatiles, Dissolved Metals

The data validation was performed under Stage 2B guidelines. The analysis was validated using the following documents, as applicable to each method:

- Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014; update VI, July 2018

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

341 pages-ADV

Attachment 1

Stage 2B EQUIS EDD

LDC# 58331 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	VOA (8260D)		VOA (624)		SVOA (625)		Pest. (8081B)		PCBs (8082A)		Metals (6010C /6020A)		Hg (7470A)		3 D.Met. (6010C /6020A)		DRO (8015C)		Methane Ethane Ethene													
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	680-241926-1	01/04/24	01/18/24	8	0	-	-	-	-	-	-	-	-	-	-	-	-	8	0	-	-	3	0												
B	680-242109-1	01/04/24	01/18/24	25	0	-	-	-	-	-	-	-	-	-	-	-	-	23	0	-	-	13	0												
C	680-242433-1	01/04/24	01/18/24	3	0	-	-	-	-	-	-	-	-	-	-	-	-	3	0	-	-	-	-												
D	680-242668-1	01/04/24	01/18/24	4	0	-	-	-	-	-	-	-	-	-	-	-	-	4	0	-	-	1	0												
E	680-242837-1	01/04/24	01/18/24	-	-	1	0	-	-	1	0	-	-	1	0	1	0	-	-	-	-	-	-												
F	680-242837-2	01/04/24	01/18/24	-	-	-	-	-	-	-	-	1	0	-	-	-	-	-	-	-	-	-	-												
G	680-242974-2	01/04/24	01/18/24	1	0	-	-	-	-	-	-	-	-	-	-	-	-	1	0	-	-	-	-												
H	680-243143-1	01/04/24	01/18/24	-	-	-	-	1	0	-	-	-	-	-	-	-	-	-	-	1	0	-	-												
Total	TR/PG			41	0	1	0	1	0	1	0	1	0	1	0	1	0	39	0	1	0	17	0	0	0	0	0	0	0	0	0	0	0	0	104

Stage 2B EQUIS EDD

LDC# 58331 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	Alk (2320B)		CN- (9012B)		NO_3 /NO_2-N (353.2)		pH (9040C)		Total Phenols (9066)		SO_4 (9056A)		S= (9034)		TSS (2540D)		TOC (9060A)													
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	680-241926-1	01/04/24	01/18/24	3	0	-	-	3	0	-	-	-	-	3	0	-	-	-	-	3	0												
B	680-242109-1	01/04/24	01/18/24	13	0	-	-	13	0	-	-	-	-	13	0	13	0	-	-	13	0												
D	680-242668-1	01/04/24	01/18/24	1	0	-	-	1	0	-	-	-	-	1	0	1	0	-	-	1	0												
E	680-242837-1	01/04/24	01/18/24	-	-	1	0	-	-	1	0	-	-	-	-	-	-	-	-	-	-												
G	680-242974-2	01/04/24	01/18/24																														
H	680-243143-1	01/04/24	01/18/24	-	-	-	-	-	-	-	-	1	0	-	-	-	-	1	0	-	-												
Total	TR/PG			17	0	1	0	17	0	1	0	1	0	17	0	14	0	1	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	86

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

Data Validation Report for 680-242974-2

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2023
SDG:	680-242974-2
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
Prime Contractor:	Seres - Arcadis SB Joint Venture, LLC, Charleston, SC
Project Manager:	Jennifer Singer
Contract Laboratory(ies):	Eurofins Environment Testing TestAmerica, Savannah, GA
Data Review Contractor:	Laboratory Data Consultants, Inc.
Data Review Level:	2B
Primary Data Reviewer:	Long Ngo, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	February 21, 2024

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	SW6010C - Dissolved	SW6020A - Dissolved	SW8260D
XSA-12-96X-FAL23	680-242974-10	Water	Field Sample/N	X	X	X

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page at 2B data validation level. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020 and the additional guidance documents incorporated by reference to the extent possible. Where definitive guidance is not provided, results have been evaluated in a conservative manner using professional judgment.

Sample collection was managed and directed by Seres - Arcadis SB Joint Venture, LLC, Charleston, SC; analyses were performed by Eurofins Environment Testing TestAmerica, Savannah, GA and were reported under sample delivery group (SDG) 680-242974-2. Data have been evaluated electronically based on electronic data deliverables (EDDs) provided by the laboratory, and hard copy data summary forms have also been reviewed during this effort and compared to the automated review output by the reviewers whose signatures appear on the following page. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative and throughout this report.

All quality control (QC) elements associated with this SDG have been reviewed by a project chemist in accordance with the requirements defined for the project. This review is documented in the attached Data Review Checklists. The QC elements listed below were supported by the electronic deliverable and were evaluated using ADR processes.

- Blank - Negative
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Interference Check Sample A
- Interference Check Sample A - Negative
- Interference Check Sample AB
- Lab Blank
- LCS Recovery
- LCS RPD
- Prep Hold Time
- Surrogate
- Test Hold Time

Results of the ADR process were subsequently reviewed and updated as applicable by the data review chemists identified on the signature page. Quality control elements that were not included in the electronic deliverable were reviewed manually and findings are documented within this report. Summaries of findings and associated qualified results are documented throughout this report.

A total of 3 results (4.23%) out of the 71 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected or deemed a serious deficiency (X qualifier). Trace values, defined as results that are qualified as estimated because they fall between the detection limit and the reporting limit/limit of quantitation, are not counted as qualified results in the above count. The qualified results are detailed throughout this report and discussed in the narrative below, where appropriate.

Narrative Comments

Analytical Method	Data Reviewer Comment
SW6010C	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
SW8260D	No additional comments; see Checklist for detail.



February 21, 2024

Reviewed by Long Ngo, Environmental Scientist, Laboratory Data Consultants, Inc.

As the First Reviewer, I certify that I have performed a data review process in accordance with the requirements of the project guidance document, and have compared the electronic data to the laboratory's hard copy report and have verified the consistency of the reported sample results and method quality control data between the two deliverables.



Reviewed by Pei Geng, Senior Scientist, Laboratory Data Consultants, Inc.

February 28, 2024

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

Quality Control Outliers for test method SW6010C, Dissolved, Calibration Blank

The purpose of calibration blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in calibration blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
CCB680808771138 (CB)	Manganese	1.15	< 1	< 10	ug/l	U/None*	B2	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

*Blank flags displayed in the above table identify qualification of the sample result when it is less than or equal to the LOQ/RL. Sample results above the LOD or LOQ will be qualified based on the validation guidance assigned in the project setup.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW6010C, Dissolved, Lab Blank

The purpose of laboratory blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in laboratory blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
MB6808085231A (LB)	Manganese	1.62	< 1.3	< 10	ug/l	U/None*	L	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

*Blank flags displayed in the above table identify qualification of the sample result when it is less than or equal to the LOQ/RL. Sample results above the LOD or LOQ will be qualified based on the validation guidance assigned in the project setup.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW8260D, Continuing Calibration Verification

Compliance requirements for satisfactory continuing calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data. Continuing calibration is performed to verify and evaluate instrument performance during sample analysis. Summary forms were evaluated against project acceptance criteria, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
CCVIS6808098213 (CV)	1,2-Dibromo-3-chloropropane	70.0	80 - 120	80 - 120	percent	J/X	V2	
CCVIS6808098213 (CV)	Bromomethane	55.0	80 - 120	80 - 120	percent	J/X	V2	
CCVIS6808098213 (CV)	Trichlorofluoromethane	144	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6808098213 (CV)	Vinyl chloride	126	80 - 120	80 - 120	percent	J/None	V2	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Continuing Calibration Verification for SW8260D

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
XSA-12-96X-FAL23 680-242974-10	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
XSA-12-96X-FAL23 680-242974-10	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
XSA-12-96X-FAL23 680-242974-10	N	Vinyl chloride	2.00	7.90 Q	7.90 J	+	ug/l	V2

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the sample concentration and the validation guidance. In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260D, LCS Recovery

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
LCS6808098214 (BS)	Trichlorofluoromethane	145	65 - 141	10 - 141	percent	J/None	C	
LCSD6808098215 (BD)	Trichlorofluoromethane	145	65 - 141	10 - 141	percent	J/None	C	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Table of All Qualified Results

Test Method: SW8260D		Extraction Method: SW5030C						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
XSA-12-96X-FAL23 680-242974-10	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
XSA-12-96X-FAL23 680-242974-10	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
XSA-12-96X-FAL23 680-242974-10	N	Vinyl chloride	2.00	7.90 Q	7.90 J	+	ug/l	V2

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260D

FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	ADR Reason	Modified Result	Reason
XSA-12-96X-FAL23 680-242974-10	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 X	V2	5.00 UJ	V2
XSA-12-96X-FAL23 680-242974-10	N	Bromomethane	20.0	10.0 U Q	10.0 X	V2	10.0 UJ	V2

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Reason Code Definitions

Code	Definition
B2	CCB
C	LCS Recovery
L	Lab Blank
TR	Trace Level Detect
V2	CCV

Flag Code and Definitions

Flag	Definition
J	Estimated Value
N	The analysis indicates the presence of an analyte for which there was presumptive evidence to make a tentative identification.
NJ	The analyte has been tentatively identified or presumptively as present and the associated numerical value was the estimated concentration in the sample.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
U	Undetected: The analyte was analyzed for, but not detected.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.
X	Result may require rejection; PDT attention required

Bias

-	The result may be biased low
+	The result may be biased high

Note - The bias field is a separate field; however, it is an integral part of the final flag (qualifier) on the sample result

Review Questions

Method: SW6010C (Trace Metals by Inductively Coupled Plasma/Atomic Emission Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?		•		Analyte detected in the CCB but no results were qualified.
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?		•		Analyte detected in the MB but no results were qualified.
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW6020A (Trace Metals by Inductively Coupled Plasma/Mass Spectrometry)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Review Questions

Method: SW8260D (Volatile Organic Compounds by GC/MS)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?		•		Several results qualified J+(detects) or UJ(non-detects) due to CCV%D > 20%.
Were the required minimum levels of calibration standards used in the initial calibration?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?	•			
Were ICB/CCBs run at the required frequency?	•			
Were target analytes in the ICBs/CCBs non-detect?	•			
Were surrogate recoveries within project acceptance limits?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?			•	Not applicable to this method.
Were target analytes reported in the field blank(s) less than MDL?			•	Not applicable to this method.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?		•		LCS/LCSd %R greater than %R limits but no results were qualified due to being non-detects.
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?			•	Not applicable to this method.
Were MS/MSD recoveries within project acceptance limits?			•	Not applicable to this method.
Was the MS/MSD RPD within project acceptance limits?			•	Not applicable to this method.
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Not applicable to this method.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were DoD QSM corrective actions followed if deviations were noted?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Data acceptable as reported and qualified.

Appendix D

Historical Groundwater Analytical Results

Appendix D
Historical Groundwater Analytical Results
2023 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

		Analytical Method	VOCs						Dissolved Metals			Dissolved Gases			General Chemistry					Field Parameters					
		Analyte	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Nitrate/ Nitrite	Alkalinity	Sulfate	TOC	Sulfide	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mS/cm)	(NTU)	(mg/L)	°C	(mV)
		Cleanup Level[1]	7	70	5	70	5	2	10	3,129	1,460				10,000										
Area	Well ID	Date Sampled																							
Area 1	G6M-02-08X	5/17/2002	1.0 U	250	2,300	2.0 U	35	5.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.0	-
Area 1	G6M-02-08X	1/31/2003	1.0 U	480	3,600	2.3	46	2.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.0	-
Area 1	G6M-02-08X	3/31/2005	50 U	250	1,300	50 U	38 J	50 U	5.0 U	300 J	770	0.049	0.79	1.2	1.1	62	6.2	15	2.0 U	7.08	0.563	24.6	9.10	9.6	-50.0
Area 1	G6M-02-08X	7/5/2005	12 U	1,800	1,000	12 U	130	12 U	33	110,000	29,000	0.16	0.22	3.0	0.05 U	350	3.7	450	8.3	4.23	1.616	4.72	1.66	15.0	19.1
Area 1	G6M-02-08X	9/27/2005	1.8	1,300	560	1.0 U	26	2.5	270	310,000 J	75 U	0.11	0.25	21	0.05 U	466	320 J	1,200	16	5.03	1.965	3.16	0.33	18.8	-68.6
Area 1	G6M-02-08X	12/16/2005	2.0 U	1,200	300	4.0 U	24	4.0 U	4.4	350,000 J	15 U	0.19	0.36	2.1	0.05 U	520	57	1,500	9.4	5.46	1.999	66.4	0.03	9.7	-31.4
Area 1	G6M-02-08X	3/21/2006	2.1	1,300	180	2.0 U	25	2.3	80	470,000	40,000	0.084	0.24	15	1.0 U	1,400	245	3,000	14	5.46	2.450	6.98	0.33	15.0	-62.5
Area 1	G6M-02-08X	6/21/2006	1.0 U	850	230	2.0 U	30	2.0 U	100	970,000	44,000	0.14	0.23	19	1.7	1,800	759	5,700	40	4.80	4.528	45.4	1.32	12.4	-25.2
Area 1	G6M-02-08X	9/20/2006	1.6	1,300	150	2.0 U	25	2.0 U	77	860,000	29,000	0.072	0.14	11	2.0 U	1,000	655	4,400	16	5.20	4.503	53.4	1.57	19.6	-14.4
Area 1	G6M-02-08X	12/11/2006	1.6	620	830	2.0 U	340	7.3	190	130,000	27,000	0.020 J	0.047	9,000	-	-	6.1	360	1.2	6.28	1.930	2.10	14.1	11.0	-260.0
Area 1	G6M-02-08X	3/28/2007	1.0 U	500	60	2.0 U	14	2.0 U	72	1,200,000	30,000 J	0.31	0.14	62	-	-	1,170	7,200	80	4.46	7.243	60.9	0.21	11.7	-144.5
Area 1	G6M-02-08X	6/13/2007	1.0 U	420	110	2.0 U	8.4	2.0 U	130	1,200,000	33,000	0.092	0.11	180	-	-	1,160	6,800	82	4.70	6.948	1,328	1.78	9.3	24.1
Area 1	G6M-02-08X	9/13/2007	1.0 U	1,400	140	2.0 U	74	2.0 U	410	1,100,000	37,000	0.22	0.17	120	0.2 U	3,000	890	4,400	200	5.34	6.823	28.2	2.68	11.5	-150.5
Area 1	G6M-02-08X	12/10/2007	2.0	1,100	250	2.0 U	66	3.3	360	1,200,000	42,000	0.14	0.23	240	-	-	414	7,700	120	5.17	7.569	10.8	0.15	11.1	-115.7
Area 1	G6M-02-08X	3/10/2008	1.0 U	170	32	2.0 U	5.5	2.0 U	570	970,000	20,000	0.36	0.15	280	-	-	770	11,000	16	4.28	7.828	13.8	0.50	15.4	-55.7
Area 1	G6M-02-08X	10/6/2008	5.0 U	81	49	5.0 U	4.5 J	5.0 U	103 J	598,000	7,630	6.3 U	7.9 U	3,000	0.13 U	1,800	610	4,190	0.75 U	4.52	4.495	65.0	0.00	12.3	-25.9
Area 1	G6M-02-08X	1/21/2009	14 U	39	29	11 U	18 U	11 U	76	474,000 J	6,650	1.2 U	1.5 U	3,400	0.13 U	3,000	710	2,900 J	0.39	4.76	3.739	46.4	0.15	13.1	39.2
Area 1	G6M-02-08X	5/7/2009	20 U	29	25	20 U	20 U	20 U	53	356,000	5,130	1.3 U	5.8	3,500	0.092 J	550 J	410	3,000	0.053	3.97	3.538	15.4	0.40	15.0	71.4
Area 1	G6M-02-08X	10/20/2009	0.5 U	0.31 J	0.5 U	0.5 U	0.5 U	0.5 U	71	486,000	6,840	1.3 U	1.6 U	2,300 J	1.3 U	40	440	2,300	0.3 U	4.61	3.973	20.1	1.88	12.5	79.4
Area 1	G6M-02-08X	4/21/2010	2.0 U	75 J	11 J	2.0 U	2.0 U	2.0 U	99	447,000 J	8,720	1.3 U	1.6 U	4,400	1.3 U	40	130	3,400	0.28	4.49	3.353	22.3	0.10	11.1	28.2
Area 1	G6M-02-08X	10/7/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	73	381,000	8,080	1.3 U	1.6 U	27,000	2.6 U	860	100	2,400	0.095	4.47	3.209	4.33	0.33	12.7	58.0
Area 1	G6M-02-08X	6/9/2011	0.5 U	140	13	0.5 U	0.5 U	1.6	155	473,000	14,000	1.2 U	1.5 U	83,000	6.5 U	1,100	99 J	2,800	0.38	4.64	2.968	11.0	0.11	11.1	18.9
Area 1	G6M-02-08X	10/4/2011	8.0 U	210	8.0 U	8.0U	8.0 U	8.0 U	194	491,000	15,900	1.2 U	1.5 U	28,000	0.13 U	230	86	2,400	0.091	4.81	2.376	4.99	0.02	13.7	18.1
Area 1	G6M-02-08X	5/10/2012	8.0 U	270	9.8	8.0U	8.0 U	8.0 U	184	581,000	19,000	1.2 U	1.5 U	14,000	0.13 U	730	64	1,900	1.8	5.16	3.338	3.29	0.21	11.5	-9.9
Area 1	G6M-02-08X	10/15/2012	4.0 U	270	12	4.0 U	4.0 U	6.2	121	523,000	20,300	1.2 U	1.5 U	3,600	0.08 J	900	37	1,800	0.096	4.85	2.915	3.76	0.32	10.4	-1.0
Area 1	G6M-02-08X	5/23/2013	8.0 U	510	20	8.0U	8.0 U	24	160	460,000	18,200	1.2 U	1.5 U	11,000	0.041 J	610	5.3	1,600	3.5 j	4.88	2.618	4.01	0.10	-	9.4
Area 1	G6M-02-08X	10/22/2013	13 U	500	13 U	13 U	13 U	51	200	428,000	15,400	3.6	84	40,000	0.13 U	630	8.9	1,100	3.8	5.23	1.308	10.8	0.27	8.2	1.1
Area 1	G6M-02-08X	11/3/2014	5.0 U	260	8.3	5.0 U	5.0 U	44	258	461,000	10,400	4.4	7.7	26,000	0.13 U	590	0.96 J	1,400	0.03 U	5.28	0.994	33.6	0.12	15.0	-33.6
Area 1	G6M-02-08X	6/16/2015	10 U	99	10 U	10 U	10 U	10 U	318	455,000	10,200	10 U	10 U	1,410	0.15	582	8.6 J	1,020	1.0 U	5.43	1.476	110	2.94	13.6	43.0
Area 1	G6M-02-08X	9/9/2015	20 U	84	20 U	20 U	20 U	20 U	340	428,000	8,780	10 U	10 U	10,600	0.078 J	-	16	976	4.8	5.59	1.337	12.0	0.07	13.7	-39.2
Area 1	G6M-02-08X	10/13/2015	21 U	84	20 U	21 U	21 U	21 U	320	483,000	9,410	10 U	10 U	18,400	0.11 U	526	7.1 J	1,280	2.0 U	5.02	1.689	47.8	0.33	9.8	0.4
Area 1	G6M-02-08X	2/10/2016	2.0 U	49	2.9	2.0 U	2.0 U	4.7	272	1,150,000	12,100	10 U	10 U	14,500	0.10 J	879	5.3 J	3,110	2.0 U	4.89	2.906	17.2	0.47	10.4	52.6
Area 1	G6M-02-08X	6/14/2016	10 U	35	10 U	10 U	10 U	10 U	220	1,200,000	8,000	2.8	1.0 U	19,000	0.05 U	1,200	1.3	2,600	1.0 U	5.21	3.370	10.7	0.33	16.4	29.1
Area 1	G6M-02-08X	11/10/2016	1.0 U	27	4.3	1.0 U	1.0 U	2.1	230	880,000	8,600	1.1 U	1.0 U	11,000	0.053 J	1,000	0.58 J	2,100	7.0	5.27	1.370	9.44	0.77	8.3	-0.9
Area 1	G6M-02-08X	5/18/2017	20 U	51	20 U	20 U	20 U	20 U	410	770,000	4,300	1.1 U	1.0 U	15,000	0.10 U	930	1.0 U	740	1.0 U	12.31	2.650	30.4	0.01	13.0	-111.3
Area 1	G6M-02-08X	10/18/2017	20 U	20 U	20 U	20 U	20 U	20 U	370	640,000	3,300	1.1 U	1.0 U	16,000	0.26	680	2.0 U	250	1.6	6.66	1.970	38.1	0.44	12.2	-144.8
Area 1	G6M-02-08X	10/19/2018	10 U	8.0 J	10 U	10 U	10 U	10 U	300	240,000	1,400	1.1 U	1.0 U	38,000	0.23	190	2.0 U	110	1.0 U	6.37	1.439	41.6	0.35	11.2	111.3
Area 1	G6M-02-08X	10/16/2019	5.0 U	5.9 J	5.0 U	5.0 U	5.0 U	5.0 U	370	180,000	1,100	1.1 U	4.3	31,000	0.054 J	120	1.0 U	89	1.8	6.43	1.400	44.0	1.82	12.0	-115.0
Area 1	G6M-02-08X	10/13/2020	1.0 U	3.5	1.0 U	1.0 U	1.0 U	1.0 U	390	78,000	420	1.1 U	0.76 J	12,000	0.12	95	5.0 U	37	0.81 U	6.61	0.522	8.12	0.51	11.6	-93.1
Area 1	G6M-02-08X	10/14/2021	1.0 U	3.3	2.0 U	1.0 U	1.0 U	1.6	260	22,000	110	2.5	6.7	25,000	0.047 J	87	2.0 U	25	0.81 U	6.95	0.597	28.90	0.63	13.4	-119.0
Area 1	G6M-02-08X	10/4/2022	1.0 U	0.91 J	1.0 U	1.0 U	0.5 U	1.0 U	210	19,000	240	3.4	0.71 U	28,000	0.025 U	52	1.1	15	1.7 U	6.88	0.109	7.61	1.01	12.4	-102.0
Area 1	G6M-02-08X	10/19/2023	1.0 U	0.60 J	1.0 U	1.0 U	0.5 U	1.0 U	150	23,000	540	9.5	2.8	29,000	0.025 U	41	1.0 U	8.7	1.7 U	6.65	0.190	3.76	0.27	13.9	-65.3
Area 1	G6M-03-01X	10/21/2009	25 U	670	380	25 U	65	25 U	-	-	-	-	-	-	-	-	-	-	-	6.52	0.559	7.25	0.88	12.0	-153.5
Area 1	G6M-03-01X	10/16/2012	10 U	200	200	10 U	60	550	-	-	-	-	-	-	-	-	-	-	-	6.51	1.776	2.28	0.95	20.2	-69.4
Area 1	G6M-03-01X	6/12/2014	0.51	19	0.29 J	0.59	37	68	-	-	-	-	-	-	-	-	-	-	-	6.52	0.812	13.1	1.95	16.7	11.7
Area 1	G6M-03-01X	10/31/2014	0.5 U	98	300	0.5 U	310	34	-	-	-	-	-	-	-	-	-	-	-	6.40	1.263	8.57	0.75	9.6	-106.6
Area 1	G6M-03-01X	6/18/2015	0.55 J	53	0.65 J	0.5 U	37	19	-	-	-	-	-	-	-	-	-	-	-	6.36	1.093	22.9	1.82	13.6	19.9
Area 1	G6M-03-01X	9/10/2015	1.4	65	103	2.4	67	63	46	41,800	7,080	10 U	69	8,640	0.076 J	-	10	5.3	2.0 U	6.00	1.881	4.38	0.61	12.6	-55.0
Area 1	G6M-03-01X	10/13/2015	1.5	141	126	5.2	190	58	-	-	-	-	-	-	-	-	-	-	-	6.27	2.096	3.61	0.28	13.3	-83.5
Area 1	G6M-03-01X	2/22/2016	1.0 U	87	1.0 U	1.9	81	51	24	20,000	6,330	10 U	96	16,300	0.11 U	144	3.4 J	6.4	2.0 U	6.62	1.162	4.98	2.11	8.5	33.6
Area 1	G6M-03-01X	6/15/2016	1.4	180	9.6	8.8	180	99	-	-	-	-	-	-	-	-	-	-	-	5.84	1.726	5.61	2.81	12.9	-48.3
Area 1	G6M-03-01X	11/10/2016	1.4	180	1.0 U	4.0	130	140	-	-	-	-	-	-	-	-	-	-	-	6.25	1.097	2.40	0.47	8.2	-84.7
Area 1	G6M-03-01X	5/18/2017	0.70 J	210	61	2.3	77	73	75	120,000	70,000	1.1 U	120	7,900	0.08 J	310	8.6	26	1.0 U	12.52	2.275	8.51	0.12	13.6	-93.1
Area 1	G6M-03-01X	10/12/2017	2.0 U	240 J	2.0 U	2.0 U	9.7 J	160 J	130	210,000	65,000	1.1 U	1.0 U	8,000	0.12	390	0.50 J	72	1.0 U	6.42	2.020	7.96	2.23	12.5	-69.7
Area 1	G6M-02-02X	5/12/2003	1.0 U	4.4	1,300	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.9	-
Area 1	G6M-03-02X	10/11/2004	1.0 U	5.6	690	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	17	0.051	0.030	2.6	3.7	12	20	1.0 U	1.7 J	6.29	0.321	12.1	8.25	8.8	97.4
Area 1	G6M-03-02X	12/15/2004	1.0 U	5.0	200	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	610	0.056	0.063	3.4	2.4	29	30	390	2.0 U	5.86	0.382	1.93	1.75	12.8	-132.9
Area 1	G6M-03-02X	3/29/2005	10 U	14 J	340	20 U	20 U	20 U	640	140,000	49,000	0.15	0.34	5.1	0.2 U	366	230	1,300	6.7 J	5.23	1.654	28.7	0.65	15.5	-20.1
Area 1	G6M-03-02X	6/29/2005	2.5 U	91	190	2.5 U	11	2.5 U	130	220,000 J	35,000 J	0.29	0.65	43	0.05 U	431	74	1,200	11	4.62	1.723	29.1	1.13	15.6	2.9
Area 1	G6M-03-02X	9/29/2005	2.5 U	190	57	2.5 U	7.8	2.5 U	150	260,000 J	37,000	0.20	0.29	560	0.05 U	345	62	850	16	4.94	1.752	23.8	0.53	11.3	-73.7
Area 1	G6M-03-02X	12/15/2005	4.0 U	190	39	8.0U	8.0 U	8.0 U	146	290,000 J	38,000	0.17	0.26	4,300	0.05 U	550	66	1,100	16	5.42	1.650	19.7	4.55	12.1	13.9
Area 1	G6M-03-02X	3/21/2006	1.0 U	140	17	2.0 U	2.0 U	2.0 U	140	320,000	37,000	0.016 J	0.14	6,700	2.0 U	1,200	88	1,400	8.8	5.56	1.731	17.3	0.16	13.4	-47.7
Area 1	G6M-03-02X	6/21/2006	1.0 U	160	8.2	2.0 U	2.0 U	2.0 U	240	410,000	23,000	0.044	0.12	10,000	1.0 U	1,000	120	1,300	9.6	3.21	2.428	11.6	0.89	10.1	140.1
Area 1	G6M-03-02X	9/20/2006	1.0 U	230	9.7	2.0 U	2.3	2.0 U	200	440,000	21,000	0.050	0.20	8,700	1.0 U	570	115	1,300	8.4	5.55	2.029	13.7	0.71	11.5	-27.8
Area 1	G6M-03-02X	12/11/2006	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	100 U	15 U	0.008 J	0.038	11	-	-	6.6	5.0 U	1.0 U	6.38	0.076	2.23	10.7	12.1	91.3
Area 1	G6M-03-02X	12/12/2006	1.1	910	140	2.0 U	28	2.0 U	73	1,000,000	32,000	0.18	0.17	30	-	-	14	6,400	110	4.93	6.436	109	0.67	7.4	-38.3
Area 1	G6M-03-02X	3/28/2007	1.0 U	320	13	2.0 U	2.2	2.0 U	230	470,000	14,000 J	0.033	0.11	9,800	-	-	75	920	9.2	5.38	2.523	14.9	0.17	12.8	-62.3

		Analytical Method	VOCs						Dissolved Metals			Dissolved Gases			General Chemistry					Field Parameters					
		Analyte	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Nitrate/ Nitrite	Alkalinity	Sulfate	TOC	Sulfide	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mS/cm)	(NTU)	(mg/L)	°C	(mV)
		Cleanup Level[1]	7	70	5	70	5	2	10	3,129	1,460				10,000										
Area	Well ID	Date Sampled																							
Area 1	G6M-03-02X	6/12/2007	1.4	**650**	**11**	2.0 U	2.0 U	**17**	**200**	**360,000**	**10,000**	0.025 U	0.14	21,000	-	-	39	840	8.4	5.77	2.268	39.5	0.38	12.0	-59.3
Area 1	G6M-03-02X	9/12/2007	1.0 U	**800**	**12**	2.0 U	2.1	**81**	**230**	**350,000**	**12,000**	0.006 J	0.60	17,000	0.2 U	790	580	740	20	5.44	2.156	18.1	10.3	12.3	-122.8
Area 1	G6M-03-02X	12/10/2007	1.8	**720**	3.8	2.0 U	2.0 U	**94**	**290**	**390,000**	**29,000**	0.005 J	1.4	14,000	-	-	25	1,000	7.0	5.67	2.802	5.30	6.03	12.3	-80.2
Area 1	G6M-03-02X	3/10/2008	1.8	**590**	2.0 U	2.0 U	2.0 U	**50**	**320**	**410,000**	**100,000**	0.098	3.4	11,000	-	-	50 U	2,000	4.8	5.47	3.113	24.5	0.51	11.7	-55.9
Area 1	G6M-03-02X	10/15/2008	5.0 U	**260**	5.0 U	5.0 U	5.0 U	**27**	**193**	**366,000**	**108,000**	1.2 U	10	12,000	0.13 U	860	59	454	0.03 U	5.60	2.376	15.0	0.75	11.0	-28.1
Area 1	G6M-03-02X	5/7/2009	4.0 U	**220**	4.0 U	4.0 U	4.0 U	**12**	**188**	**396,000**	**56,700**	1.2 U	18	23,000	0.13 U	1,100 J	44	900	0.03 U	5.45	1.962	4.81	0.32	11.3	-46.7
Area 1	G6M-03-02X	10/19/2009	10 U	**290**	10 U	10 U	20 U	**9.5 J**	**205**	**423,000**	**43,400**	1.3 U	14	18,000	0.13 U	920	300	290	0.03 U	5.99	1.832	11.9	2.56	-	-44.2
Area 1	G6M-03-02X	4/21/2010	2.0 U	**120 J**	2.0 U	2.0 U	2.0 U	**9.3 J**	**189**	**566,000 J**	**39,600**	1.3 U	16	16,000	0.13 U	1,000	0.28 J	1,200	0.03 U	5.85	1.902	7.28	0.29	18.1	18.9
Area 1	G6M-03-02X	10/6/2010	0.5 U	3.2	0.5 U	0.5 U	0.5 U	0.42 J	**118**	**580,000**	**36,100**	1.2 U	20	35,000	0.29	1,100	0.40 J	810	0.03 U	5.65	2.137	5.47	0.57	13.0	-21.1
Area 1	G6M-03-02X	10/4/2011	13 U	**410**	13 U	13 U	13 U	**30**	**379**	**352,000**	**12,400**	1.2 U	63	47,000	0.13 U	3,300	0.51 J	190	0.035	6.32	1.140	13.0	0.09	16.7	-86.1
Area 1	G6M-03-02X	10/11/2012	2.0 U	59	2.0 U	2.0 U	2.0 U	**34**	**270**	**295,000**	**10,200**	1.2 U	540	39,000	0.051 J	500	5.0 U	140	0.49	6.13	1.310	9.50	0.46	24.0	-68.9
Area 1	G6M-03-02X	10/22/2013	1.3 U	44	1.3 U	1.3 U	1.3 J	**36**	**296**	**212,000**	**6,750**	1.2 U	200	44,000	0.13 U	300	5.0 U	57	0.19	6.24	0.609	9.19	0.41	18.0	-68.8
Area 1	G6M-03-02X	10/30/2014	0.5 U	6.6	0.5 U	0.5 U	0.27 J	**6.3**	**254**	**251,000**	**6,090**	1.2 U	12	38,000	0.13 U	450	0.23 J	340	0.03 U	6.45	0.820	13.6	0.33	10.2	-61.7
Area 1	G6M-03-02X	10/13/2015	1.0 U	6.0	1.0 U	1.0 U	1.0 U	**5.3**	**168**	**116,000**	**3,540**	10 U	10 U	17,600	0.062 J	156	10	33	2.0 U	5.85	0.679	23.1	0.39	13.1	-86.6
Area 1	G6M-03-02X	11/10/2016	1.0 U	18	1.0 U	1.0 U	0.54 J	**6.4**	**180**	**260,000**	**3,900**	1.1 U	1.0 U	17,000	0.05 U	300	0.44 J	120	1.9	6.21	0.730	8.87	0.25	9.2	-57.0
Area 1	G6M-03-02X	10/12/2017	1.0 U	3.5	1.0 U	1.0 U	1.0 U	**4.0**	**250**	**150,000**	**2,000**	1.1 U	13	16,000	0.15	140	1.0 U	21	1.0 U	6.29	1.130	13.9	1.29	11.2	-44.1
Area 1	G6M-04-09X	9/24/2004	1.0 U	9.0	**7,400**	2.0 U	4.2	2.0 U	5.0 U	1,000 U	160	-	-	-	-	-	-	-	-	5.15	0.495	0.82	3.84	9.5	637.6
Area 1	G6M-04-09X	9/28/2005	5.0 U	5.0 U	**3,200**	5.0 U	5.0 U	5.0 U	5.0 U	1,000 U	37	-	-	-	-	-	-	-	-	5.92	0.169	2.07	3.41	10.2	678.4
Area 1	G6M-04-09X	9/21/2006	1.0 U	2.0 U	**190**	2.0 U	2.0 U	2.0 U	5.0 U	100 U	50	-	-	-	-	-	-	-	-	5.83	0.102	5.51	8.18	15.4	215.6
Area 1	G6M-04-09X	9/12/2007	1.0 U	31	**440**	2.0 U	**22**	2.0 U	5.0 U	830	390	-	-	-	-	-	-	-	-	6.22	0.179	4.30	2.18	14.0	49.7
Area 1	G6M-04-09X	10/17/2008	50 U	**410**	**4,000**	50 U	**330**	**44**	**63**	**13,300**	**5,700**	-	-	-	-	-	-	-	-	6.23	0.497	9.20	0.66	10.5	-36.2
Area 1	G6M-04-09X	10/21/2009	50 U	**210**	**1,600**	50 U	**210**	**51**	**71**	**13,400**	**3,960**	-	-	-	-	-	-	-	-	5.80	0.376	4.53	0.58	12.4	33.3
Area 1	G6M-04-09X	10/8/2010	0.89	**990**	**1,000**	0.79	**420**	**7.8**	**70**	**14,300**	**15,300**	-	-	-	-	-	-	-	-	6.17	0.388	1.58	0.99	11.9	-20.8
Area 1	G6M-04-09X	6/9/2011	1.7	**950**	**260**	0.56	**140**	**200**	**203**	**43,300**	**9,820**	-	-	-	-	-	-	-	-	6.14	0.562	0.03	0.35	11.3	-49.3
Area 1	G6M-04-09X	10/7/2011	20 U	**910**	20 U	20 U	**23**	**240**	**291**	**107,000**	**50,900**	-	-	-	-	-	-	45	-	6.45	0.626	2.00	0.14	10.1	-105.8
Area 1	G6M-04-09X	5/9/2012	40 U	**510**	**970**	40 U	**250**	**340**	**344**	**76,700**	**17,800**	-	-	-	-	-	-	9.1 J	-	6.66	0.495	12.5	0.08	10.1	-85.2
Area 1	G6M-04-09X	10/16/2012	20 U	**100**	**260**	20 U	**70**	**350**	**225**	**41,700**	**13,800**	-	-	-	-	-	-	3.0 J	-	6.24	0.289	10.3	0.31	10.8	-79.9
Area 1	G6M-04-09X	10/22/2013	0.5 U	5.9	**5.9**	0.81	3.6	**9.9**	**321**	**135,000**	**30,800**	-	-	-	-	-	-	11	-	6.29	0.812	4.21	0.15	8.7	-84.7
Area 1	G6M-04-09X	10/22/2013	0.5 U	52	0.5 U	0.53	0.5 U	**38**	**551**	**303,000**	**27,100**	-	-	-	-	-	-	34	-	6.64	0.917	18.5	3.30	10.0	-130.9
Area 1	G6M-04-09X	6/12/2014	0.5 U	12	1.4	0.60	0.75	**26**	**607**	**315,000**	**19,200**	-	-	-	-	-	-	29	-	6.37	1.392	3.64	0.26	10.4	-82.0
Area 1	G6M-04-09X	11/3/2014	0.5 U	0.43 J	0.21 J	0.21 J	0.5 U	0.83	**600**	**339,000**	**16,500**	-	-	-	-	-	-	31	-	6.59	1.030	21.8	0.05	10.5	-129.2
Area 1	G6M-04-09X	6/17/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**351**	**159,000**	**3,560**	-	-	-	-	-	-	14	-	6.33	1.384	96.0	0.64	14.0	-65.0
Area 1	G6M-04-09X	10/14/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**577**	**241,000**	**5,600**	-	-	-	-	-	-	16	-	6.61	1.604	15.3	0.13	10.8	134.9
Area 1	G6M-04-09X	2/19/2016	1.0 U	0.55 J	1.0 U	1.0 U	1.0 U	1.0 U	**514**	**202,000**	**3,600**	10 U	10 U	16,700	0.37	439	4.5 J	13	2.0 U	6.74	1.280	12.4	1.09	9.9	-95.7
Area 1	G6M-04-09X	6/15/2016	1.0 U	1.0	1.0 U	1.0 U	0.85 J	0.61 J	**550**	**200,000**	**3,100**	-	-	-	-	-	-	14	-	6.38	2.118	11.5	2.56	11.2	-87.6
Area 1	G6M-04-09X	11/9/2016	1.0 U	0.67 J	1.0 U	1.0 U	1.0 U	0.56 J	**430**	**160,000**	**2,600**	-	-	-	-	-	-	-	-	7.32	1.277	21.7	0.52	8.5	-139.7
Area 1	G6M-04-09X	5/18/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**430**	**180,000**	**3,200**	1.1 U	1.0 U	14,000	0.15	190	5.4	11	1.0 U	6.58	1.813	17.0	0.45	10.4	-116.7
Area 1	G6M-04-09X	10/23/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.74 J	**370**	**110,000**	**2,400**	-	-	-	-	-	-	7.8	-	6.72	1.860	30.7	0.13	10.4	-106.4
Area 1	G6M-04-09X	10/19/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**330**	**140,000**	**2,600**	-	-	-	-	-	-	-	-	6.42	1.315	16.8	0.81	10.3	14.3
Area 1	G6M-04-09X	10/10/2019	1.0 U	23	2.8	1.4	**11**	**11**	**310**	**64,000**	**1,600**	-	-	-	-	-	-	-	-	6.48	0.443	43.6	0.28	10.0	-116.9
Area 1	G6M-04-09X	10/20/2020	0.94 J	68	**110**	2.3	**110**	**34**	**200**	**44,000**	**2,100**	-	-	-	-	-	-	-	-	6.62	0.298	20.3	0.54	11.6	-122.0
Area 1	G6M-04-09X	5/14/2021	1.0 U	3.2	2.0 U	2.2	2.5	**2.5**	**380**	**100,000**	**4,800**	5.8	52	38,000	0.071 J	140	3.7	9.5	0.81 U	6.48	0.936	426.7	1.12	10.5	-139.2
Area 1	G6M-04-09X	10/18/2021	1.0 U	12	2.0 U	1.1	3.2	1.7	**460**	**94,000**	**3,100**	-	-	-	-	-	-	-	-	6.57	0.515	22.3	0.74	10.3	-138.0
Area 1	G6M-04-09X	10/12/2022	1.0 U	0.94 J	1.0 U	0.98 J	0.5 U	1.0 U	**280**	**43,000**	**1,900**	3.3	3.0	15,000	0.029 J	98	5.0 U	7.1	1.9 U	6.79	0.329	35.1	0.48	16.0	-145.4
Area 1	G6M-04-09X	10/19/2023	1.0 U	0.54 J	1.0 U	1.0 U	0.29 J	0.77 J	**410**	**83,000**	**5,400**	4.8	3.7	26,000	0.025 U	150	1.0 U	8.3	1.7 U	6.47	0.550	15.2	0.85	13.6	-151.0
Area 1	G6M-04-11X	9/20/2004	1.0 U	2.0 U	**8.5**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.54	0.782	16.8	3.42	14.4	374.7
Area 1	G6M-04-11X	9/26/2005	1.0 U	2.0 U	**7.8**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.96	0.390	8.70	5.14	10.6	94.6
Area 1	G6M-04-11X	9/20/2006	1.0 U	2.0 U	4.0	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.24	0.380	5.99	6.00	14.4	129.0
Area 1	G6M-04-11X	9/11/2007	1.0 U	2.0 U	2.1	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.87	0.380	14.8	6.59	11.8	46.5
Area 1	G6M-04-11X	10/17/2008	0.5 U	0.5 U	1.4	0.5 U	0.5 U	0.5 U	-	-	-	-	-	-	-	-	-	-	-	6.53	0.302	3.50	5.62	9.5	98.1
Area 1	G6M-04-11X	10/16/2009	1.0 U	1.0 U	1.1	1.0 U	**53**	1.0 U	-	-	-	-	-	-	-	-	-	-	-	6.46	0.225	4.20	7.04	9.8	176.0
Area 1	G6M-04-11X	10/8/2010	0.5 U	0.5 U	0.41 J	0.5 U	0.5 U	0.5 U	-	-	-	-	-	-	-	-	-	-	-	6.71	0.247	3.15	6.95	9.6	152.6
Area 1	G6M-04-11X	10/6/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	-	-	-	-	-	-	-	-	-	-	-	6.77	0.219	4.00	2.50	10.6	87.7
Area 1	G6M-04-11X	10/16/2012	0.5 U	0.5 U	0.62	0.5 U	0.5 U	0.5 U	-	-	-	-	-	-	-	-	-	-	-	6.36	0.224	< 0.01	9.40	10.1	161.8
Area 1	G6M-04-11X	10/31/2014	0.5 U	0.5 U	0.54	0.5 U	0.5 U	0.5 U	-	-	-	-	-	-	-	-	-	-	-	6.88	0.163	0.91	7.12	10.4	167.7
Area 1	G6M-04-11X	11/10/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	6.65	0.167	1.18	6.67	10.3	25.6
Area 1	G6M-04-11X	10/22/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	50 U	3.0 U	-	-	-	-	-	-	-	-	6.23	0.254	2.65	6.24	10.4	206.0
Area 1	G6M-04-11X	10/16/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	50 U	1.6 J	-	-	-	-	-	-	-	-	6.62	0.144	1.57	7.29	16.6	135.0
Area 1	G6M-04-11X	10/5/2022	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	3.0 U	50 U	5.0 U	-	-	-	-	-	-	-	-	6.31	0.168	1.36	7.75	13.4	577.8
Area 1	G6M-04-12X	9/20/2004	1.0 U	56	**310**	2.0 U	**7.5**	2.0 U	5.0 U	1,000	44	-	-	-	-	-	-	-	-	11.03	2.003	5.22	0.86	9.6	102.6
Area 1	G6M-04-12X	9/26/2005	1.0 U	49	**250**	2.0 U	**6.8**	2.0 U	**15**	1,000 U	360	-	-	-	-	-	-	-	-	8.41	1.961	1.65	1.05	-	234.2
Area 1	G6M-04-12X	9/18/2006	1.0 U	60	**470**	2.0 U	**9.4**	2.0 U	6.5	100 U	550	-	-	-	-	-	-	-	-	7.21	1.764	7.11	3.22	12.7	253.5
Area 1	G6M-04-12X	9/10/2007	1.0 U	50	**350**	2.0 U	**11**	2.0 U	2.0 U	100 U	580	-	-	-	-	-	-	-	-	6.84	2.613	29.8	1.73	12.2	90.2
Area 1	G6M-04-12X	10/16/2008	10 U	35	**360**	10 U	**7.7 J**	10 U	3.1 J	200 U	360	-	-	-	-	-	-	-	-	7.23	2.623	2.00	1.45	12.4	91.2
Area 1	G6M-04-12X	10/19/2009	10 U	28	**170**	10 U	22 U	10 U	2.3 J	200 U	308	-	-	-	-	-	-	-	-	6.72	2.543	5.91	1.80	11.5	66.7
Area 1	G6M-04-12X	10/8/2010	0.5 U	22	**100**	0.5 U	4.4	0.5 U	5.0 U	100 U	336	-	-	-	-	-	-	-	-	6.57	3.632	2.35	1.75	10.6	208.0
Area 1	G6M-04-12X	6/9/2011	0.5 U	19	**180**	0.5 U	3.9	0.5 U	5.0 U	100 U	209	-	-	-	-	-	-	-	-	7.26	2.816	9.00	1.38	10.2	25.6
Area 1	G6M-04-12X	10/4/2011	4.0 U	27	**280**	4.0 U	4.6	4.0 U	5.0 U	100 U	200	-	-	-	-	-	-	-	-	6.62	2.332	2.44	1.06	13.4	63.8

		Analytical Method	VOCs						Dissolved Metals			Dissolved Gases			General Chemistry					Field Parameters					
		Analyte	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Nitrate/ Nitrite	Alkalinity	Sulfate	TOC	Sulfide	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mS/cm)	(NTU)	(mg/L)	°C	(mV)
		Cleanup Level[1]	7	70	5	70	5	2	10	3,129	1,460				10,000										
Area	Well ID	Date Sampled																							
Area 1	G6M-04-12X	5/9/2012	5.0 U	12	**160**	5.0 U	5.0 U	5.0 U	4.1 J	100 U	155	-	-	-	-	-	-	-	-	6.70	2.680	1.42	1.34	12.3	85.1
Area 1	G6M-04-12X	10/16/2012	5.0 U	14	**120**	5.0 U	5.0 U	5.0 U	5.0 U	100 U	156	-	-	-	-	-	-	-	-	6.60	3.799	2.03	2.11	13.0	62.5
Area 1	G6M-04-12X	5/22/2013	5.0 U	18	**220**	5.0 U	3.4 J	5.0 U	3.8 J	100 U	93	-	-	-	-	-	-	-	-	6.55	2.927	2.58	0.87	12.5	120.8
Area 1	G6M-04-12X	10/22/2013	4.0 U	23	**190**	4.0 U	3.7 J	4.0 U	5.0 U	100 U	106	-	-	-	-	-	-	-	-	6.58	2.231	4.88	1.60	12.3	133.7
Area 1	G6M-04-12X	6/10/2014	0.5 U	13	**130**	0.5 U	2.7	0.5 U	5.0 U	100 U	75	-	-	-	-	-	-	-	-	6.59	2.675	13.0	0.84	14.4	178.9
Area 1	G6M-04-15X	9/21/2004	1.0 U	5.3	**5.2**	2.0 U	2.0 U	2.0 U	5.0 U	**4,800**	**8,100**	-	-	-	-	-	-	-	-	5.26	2.640	0.23	0.82	11.3	410.0
Area 1	G6M-04-15X	9/28/2005	1.0 U	6.4	**9.1**	2.0 U	2.0 U	2.0 U	**33**	1,800	**4,400**	-	-	-	-	-	-	-	-	5.11	0.674	0.29	0.39	11.8	248.1
Area 1	G6M-04-15X	9/20/2006	1.0 U	5.2	3.5	2.0 U	2.0 U	2.0 U	**20**	2,000	**4,300**	-	-	-	-	-	-	-	-	4.60	1.555	0.95	1.07	11.1	-100.3
Area 1	G6M-04-15X	9/11/2007	1.0 U	2.0 U	2.7	2.0 U	2.0 U	2.0 U	**18**	750	**2,100**	-	-	-	-	-	-	-	-	6.21	1.353	3.50	3.21	11.3	85.1
Area 1	G6M-04-15X	10/17/2008	0.5 U	2.3	4.8	0.5 U	1.0	0.5 U	**36**	3,010	**3,010**	-	-	-	-	-	-	-	-	6.34	0.910	4.00	1.50	11.1	-8.1
Area 1	G6M-04-15X	10/19/2009	0.5 U	3.2	1.9	0.5 U	**14**	0.5 U	**49**	**4,840**	**3,130**	-	-	-	-	-	-	-	-	6.19	0.799	4.68	0.31	11.1	24.4
Area 1	G6M-04-15X	10/8/2010	0.5 U	3.2	0.65	0.5 U	0.34 J	0.5 U	**59**	**4,760**	**2,900**	-	-	-	-	-	-	-	-	6.14	0.704	1.34	0.30	10.9	3.2
Area 1	G6M-04-15X	10/6/2011	0.5 U	3.7	0.52	0.5 U	0.5 U	0.5 U	**56**	**3,750**	**3,470**	-	-	-	-	-	-	-	-	6.12	0.446	4.89	0.05	19.3	37.3
Area 1	G6M-04-15X	10/16/2012	0.5 U	3.9	1.0	0.5 U	0.5 U	0.5 U	**111**	**11,100**	**4,300**	-	-	-	-	-	-	-	-	6.15	0.760	1.08	0.49	14.3	-48.6
Area 1	G6M-04-15X	10/18/2013	0.5 U	2.2	0.97	0.5 U	0.27 J	0.5 U	**112**	**14,500**	**3,530**	-	-	-	-	-	-	-	-	5.68	0.838	1.33	0.24	18.8	14.1
Area 1	G6M-04-15X	11/4/2014	0.5 U	2.2	1.6	0.5 U	0.29 J	0.5 U	**135**	**33,400**	**14,000**	-	-	-	-	-	-	-	-	6.08	1.937	3.61	0.14	13.0	-16.0
Area 1	G6M-04-15X	10/14/2015	1.0 U	1.0 U	0.76 J	1.0 U	1.0 U	1.0 U	**103**	**45,000**	**21,200**	-	-	-	-	-	-	-	-	5.93	4.011	1.24	0.69	13.6	-38.2
Area 1	G6M-04-15X	11/10/2016	1.0 U	1.0 U	1.0 U	1.0 U	0.95 J	1.0 U	**55**	**16,000**	**14,000**	-	-	-	-	-	-	-	-	4.64	2.929	4.60	0.50	13.9	-21.4
Area 1	G6M-04-15X	10/9/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**70**	**15,000**	**19,000**	-	-	-	-	-	-	-	-	6.13	4.280	8.90	0.59	14.5	0.6
Area 1	G6M-04-15X	10/19/2018	1.0 U	1.0 U	1.5	1.0 U	0.60 J	1.0 U	**62**	**11,000**	**5,900**	-	-	-	-	-	-	-	-	6.21	3.171	7.49	0.12	12.0	116.0
Area 1	G6M-04-15X	10/9/2019	1.0 U	0.64 J	2.2	1.0 U	1.1	1.0 U	**71**	**8,900**	**2,500**	-	-	-	-	-	-	-	-	6.45	2.500	5.50	0.19	11.0	-10.0
Area 1	G6M-04-15X	10/20/2020	1.0 U	0.62 J	1.0 U	1.0 U	0.86 J	1.0 U	**75**	**5,200**	630	-	-	-	-	-	-	-	-	7.06	1.000	3.81	0.49	11.2	-121.0
Area 1	G6M-04-15X	10/18/2021	1.0 U	1.6	0.87 J	1.0 U	0.88 J	1.0 U	**94**	**4,300**	670	-	-	-	-	-	-	-	-	6.56	0.940	2.97	0.75	11.9	-53.4
Area 1	G6M-04-15X	10/12/2022	1.0 U	1.2 J	0.43 J	1.0 U	0.70 J	1.0 U	**95**	**7,200**	1,000	-	-	-	-	-	-	-	-	6.39	1.247	2.21	0.60	11.8	-50.7
Area 1	G6M-04-15X	10/19/2023	1.0 U	0.66 J	1.8 J	1.0 U	0.60 J	1.0 U	**55**	2,000	570	-	-	-	-	-	-	-	-	6.24	0.500	9.20	1.14	11.8	-27.1
Area 1	G6M-04-22X	9/21/2004	1.0 U	**110**	**900**	2.0 U	**24**	2.0 U	5.0 U	1,000 U	990	-	-	-	-	-	-	-	-	6.30	0.897	19.0	4.78	13.2	192.2
Area 1	G6M-04-22X	9/28/2005	1.0 U	45	**210**	2.5	**6.8**	2.0 U	5.0 U	1,000 U	120	-	-	-	-	-	-	-	-	5.52	0.757	21.0	6.13	14.1	391.3
Area 1	G6M-04-22X	9/20/2006	1.0 U	54	**200**	2.0 U	**8.7**	2.0 U	5.0 U	430	**4,500**	-	-	-	-	-	-	-	-	5.68	1.048	6.98	2.80	15.4	197.8
Area 1	G6M-04-22X	9/11/2007	1.0 U	**75**	**95**	2.0 U	**12**	**9.4**	**390**	**250,000**	**44,000**	-	-	-	-	-	-	-	-	6.92	2.250	20.7	0.28	13.4	-160.8
Area 1	G6M-04-22X	10/17/2008	1.0 U	53	**18**	0.44 J	3.7	**26**	**439**	**421,000**	**15,900**	-	-	-	-	-	-	-	-	6.34	2.104	18.0	0.28	12.9	-106.1
Area 1	G6M-04-22X	10/19/2009	0.5 U	16	**7.2**	0.5 U	**9.7**	**4.9**	**320**	**355,000**	**9,360**	-	-	-	-	-	-	-	-	6.26	2.181	290	1.27	14.3	-48.7
Area 1	G6M-04-22X	10/8/2010	0.5 U	7.1	0.39 J	0.23 J	2.2	**4.7**	**522**	**210,000**	**3,020**	-	-	-	-	-	-	-	-	6.32	1.691	22.2	2.51	14.8	-59.7
Area 1	G6M-04-22X	10/6/2011	0.5 U	13	0.5 U	0.5 U	0.5 U	**7.5**	**534**	**232,000**	**15,800**	-	-	-	-	-	-	-	-	6.25	0.016	6.47	0.39	12.2	-53.4
Area 1	G6M-04-22X	10/12/2012	0.5 U	5.7	0.5 U	0.5 U	0.5 U	**6.6**	**657**	**162,000**	**9,080**	-	-	-	-	-	-	-	-	6.41	1.701	8.66	0.60	12.4	-66.8
Area 1	G6M-04-22X	10/18/2013	-	-	-	-	-	-	**767**	-	-	-	-	-	-	-	-	-	-	6.12	1.113	14.3	0.29	12.8	-68.7
Area 1	G6M-04-22X	11/4/2014	0.5 U	2.0	0.5 U	0.72	0.5 U	**4.6**	**667**	**150,000**	**1,600**	-	-	-	-	-	-	-	-	6.39	0.951	42.9	0.20	13.3	-64.0
Area 1	G6M-04-22X	10/13/2015	-	-	-	-	-	-	**223**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Area 1	G6M-04-22X	11/9/2016	1.0 U	1.2	2.5	1.0 U	1.4	1.0 U	**650**	**150,000**	960	-	-	-	-	-	-	-	-	6.92	0.740	55.5	1.22	7.0	-73.1
Area 1	G6M-04-22X	10/18/2017	--	--	--	--	--	--	**970**	-	-	-	-	-	-	-	-	-	-	6.32	1.270	120	0.48	11.7	-66.9
Area 1	G6M-04-22X	10/22/2018	1.0 U	2.8 J	1.0 U	1.0 U	1.0 U	**3.4 J**	**820**	**140,000**	760	-	-	-	-	-	-	-	-	6.18	1.371	35.9	0.24	12.0	49.6
Area 1	G6M-04-22X	10/20/2020	1.0 U	2.0	1.0 U	1.0 U	1.0 U	1.8	**780**	**120,000**	890	-	-	-	-	-	-	-	-	6.25	0.717	< 0.01	0.49	11.0	-81.1
Area 1	G6M-04-22X	10/10/2022	1.0 U	1.4 J	1.0 U	1.0 U	0.5 U	1.0 U	**720**	**110,000**	920	-	-	-	-	-	-	-	-	6.15	0.947	11.9	0.64	11.4	-60.9
Area 1	G6M-04-31X	9/21/2004	1.0 U	4.2	**1,600**	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	190	-	-	-	-	-	-	-	-	5.69	1.000	2.99	5.10	13.3	211.0
Area 1	G6M-04-31X	9/28/2005	5.0 U	5.2	**1,900**	5.0 U	5.0 U	5.0 U	5.0 U	1,000 U	35	-	-	-	-	-	-	-	-	5.63	0.388	2.20	3.66	9.3	305.4
Area 1	G6M-04-31X	9/20/2006	1.0 U	2.5	**600**	2.0 U	**6.1**	2.0 U	5.0 U	100 U	15 U	-	-	-	-	-	-	-	-	6.52	0.729	3.56	0.28	9.2	-108.5
Area 1	G6M-04-31X	9/11/2007	1.3	**330**	**340**	2.8	**260**	2.0 U	5.0 U	100	890	-	-	-	-	-	-	-	-	6.38	0.217	6.90	5.61	10.9	101.6
Area 1	G6M-04-31X	10/17/2008	20 U	**340**	**110**	20 U	**72**	**730**	**103**	**68,400**	**9,710**	-	-	-	-	-	-	-	-	6.43	0.636	9.00	2.00	9.4	-72.7
Area 1	G6M-04-31X	10/21/2009	10 U	**270**	**86**	10 U	**11**	**560**	**311**	**181,000**	**16,900**	-	-	-	-	-	-	-	-	5.82	0.626	6.23	1.96	10.3	-102.0
Area 1	G6M-04-31X	10/8/2010	0.5 U	7.4	3.1	0.30 J	1.1	**31**	**428**	**127,000**	**9,620**	-	-	-	-	-	-	-	-	6.41	0.728	1.21	0.93	9.5	-107.6
Area 1	G6M-04-31X	10/6/2011	0.5 U	38	**18**	0.5 U	**5.3**	**37**	**635**	**223,000**	**15,800**	-	-	-	-	-	-	-	-	6.62	1.333	2.89	0.07	11.2	-112.4
Area 1	G6M-04-31X	10/12/2012	2.0 U	61	**25**	2.0 U	**31**	**72**	**556**	**181,000**	**8,940**	-	-	-	-	-	-	-	-	6.62	1.193	4.58	0.43	11.4	-104.6
Area 1	G6M-04-31X	10/18/2013	-	-	-	-	-	-	**498**	-	-	-	-	-	-	-	-	-	-	6.36	1.656	1.13	1.71	10.8	-87.6
Area 1	G6M-04-31X	11/4/2014	0.5 U	6.9	0.5 U	0.23 J	0.51	**3.4**	**468**	**121,000**	**9,690**	-	-	-	-	-	-	-	-	6.51	1.775	9.01	0.12	11.6	-95.5
Area 1	G6M-04-31X	10/13/2015	-	-	-	-	-	-	**420**	-	-	-	-	-	-	-	-	-	-	5.93	3.980	9.80	0.84	9.0	-144.3
Area 1	G6M-04-31X	11/10/2016	1.0 U	1.0 U	1.0 U	1.0 U	0.95 J	1.0 U	**430**	-	-	-	-	-	-	-	-	-	-	6.15	2.490	2.95	0.89	14.1	-95.8
Area 1	G6M-04-31X	10/9/2017	--	--	--	--	--	--	**410**	-	-	-	-	-	-	-	-	-	-	6.52	2.830	8.70	0.58	14.3	-83.5
Area 1	G6M-04-31X	10/22/2018	1.0 U	1.0 U	1.0 U	1.0 U	0.58 J	1.0 U	**370**	**60,000**	**6,800**	-	-	-	-	-	-	-	-	6.59	2.999	4.49	0.20	10.6	111.5
Area 1	G6M-04-31X	10/20/2020	1.0 U	1.0 U	1.5 U	1.0 U	1.0 U	0.98 J	**360 J**	**30,000**	**2,100**	-	-	-	-	-	-	-	-	6.71	1.580	0.93	0.51	13.2	-124.0
Area 1	G6M-04-31X	10/10/2022	1.0 U	1.0 U	1.0 U	1.0 U	0.23 J	1.0 U	**330**	**77,000**	**5,200**	-	-	-	-	-	-	-	-	6.52	1.605	2.01	0.60	11.8	-119.1
Area 1	G6M-13-05X	1/30/2014	10 U	16	**250**	10 U	10U	10 U	-	-	-	-	-	-	-	-	-	-	-	8.63	1.112	3.09	0.37	11.4	-86.6
Area 1	G6M-13-05X	6/10/2014	0.54	70	**1,200**	0.40 J	**12**	0.5 U	**11**	299 J	556	-	-	-	-	-	-	-	-	7.65	0.515	8.19	0.46	11.3	-107.0
Area 1	G6M-13-05X	11/4/2014	32 U	**77**	**1,700**	32 U	**13 J**	32 U	6.6	233	565	-	-	-	-	-	-	-	-	7.43	0.417	9.73	0.47	18.3	-93.6
Area 1	G6M-13-05X	6/16/2015	0.5 U	62	**1,520**	0.5 U	**12**	0.5 U	5.2	50 U	229	-	-	-	-	-	-	-	-	7.04	0.398	33.2	1.63	12.7	57.0
Area 1	G6M-13-05X	10/13/2015	1.0 U	63	**1,120**	1.0 U	**11**	1.0 U	2.3 J	100 U	235	-	-	-	-	-	-	-	-	7.22	0.525	2.14	0.99	11.2	59.5
Area 1	G6M-13-05X	2/10/2016	10 U	24	**770**	10 U	**5.2 J**	10 U	4.0 U	100 U	199	10 U	10 U	10 U	1.4	25	10 U	1.0 U	2.0 U	6.20	0.523	20.2	4.39	9.7	244.6
Area 1	G6M-13-05X	6/15/2016	10 U	50	**1,200**	10 U	**9.6**	10 U	3.0	22 J	130	-	-	-	-	-	-	-	-	6.41	0.582	2.59	0.89	12.3	55.2
Area 1	G6M-13-05X	11/10/2016	10 U	31	**830**	10 U	**7.2 J**	10 U	3.0 U	50 U	54	-	-	-	-	-	-	-	-	6.57	0.404	2.47	2.63	9.2	20.9
Area 1	G6M-13-05X	5/18/2017	20 U	64 J	**1,300**	20 U	20 U	20 U	3.0 U	280	350	1.1 U	1.0 U	0.58 U	1.5	32 J	1.0 U	1.0 U	1.0 U	11.40	0.550	7.65	3.97	12.7	25.1

Appendix D
Historical Groundwater Analytical Results
2023 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

		Analytical Method	VOCs						Dissolved Metals			Dissolved Gases			General Chemistry					Field Parameters					
		Analyte	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Nitrate/ Nitrite	Alkalinity	Sulfate	TOC	Sulfide	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mS/cm)	(NTU)	(mg/L)	°C	(mV)
		Cleanup Level[1]	7	70	5	70	5	2	10	3,129	1,460				10,000										
Area	Well ID	Date Sampled																							
Area 1	G6M-13-05X	10/5/2017	10 U	**750**	**280**	10 U	**69**	10 U	**35**	**12,000**	**1,700**	1.1 U	1.0 U	32	0.04 J	49	1.0 U	28	1.0 U	5.95	0.630	27.4	0.51	12.8	19.7
Area 1	G6M-13-05X	4/5/2018	10 U	**410**	**59**	10 U	**81**	**5.6 J**	**85**	**32,000**	**3,900**	0.75 J	1.1	6,800	0.10	77	0.95 J	85	1.0 U	6.31	0.641	5.92	0.89	10.3	-20.9
Area 1	G6M-13-05X	10/16/2018	5.0 U	**250**	5.0 U	5.0 U	2.7 J	**57**	**95**	**66,000**	**15,000**	4.1	39	16,000	0.05 U	170	5.0 U	210	1.0 U	4.99	0.973	4.83	0.45	11.2	87.2
Area 1	G6M-13-05X	4/5/2019	1.0 U	**120**	1.0 U	1.2	0.62 J	**39**	**120**	**83,000**	**20,000**	8.7	65	25,000	0.23	-	1.0 U	150	1.0 U	6.00	1.100	1.80	0.74	8.6	-13.0
Area 1	G6M-13-05X	10/10/2019	1.0 U	33	1.5 J	0.93 J	1.8	**38**	**130**	**94,000**	**19,000**	3.3	33	12,000	0.05 U	140	1.0 U	37	0.83 U	7.80	0.950	7.00	0.14	12.0	-65.6
Area 1	G6M-13-05X	5/12/2020	1.0 U	8.4	1.0 U	0.88 J	1.3 J	**10**	**120**	**100,000**	**16,000**	27	57	19,000	0.10 U	160	5.0 U	27	0.81 U	6.30	1.010	7.30	0.60	12.7	-54.2
Area 1	G6M-13-05X	10/13/2020	1.0 U	1.3	1.0 U	0.48 J	1.0 U	1.7	**150**	**110,000**	**15,000**	21	11	4,000	0.12 U	130	1.0 U	12	0.81 U	6.82	0.689	4.82	0.61	11.1	-104.0
Area 1	G6M-13-05X	5/11/2021	1.0 U	42	**50**	1.0	**18**	**29**	**120**	**53,000**	**6,400**	45	77	17,000	0.028 J	71	0.59 J	4.4	0.81 U	6.51	0.567	154.92	0.97	14.2	-75.5
Area 1	G6M-13-05X	10/14/2021	1.0 U	23	**9.2**	0.64 J	2.8	**13**	**130**	**92,000**	**10,000**	30	35	17,000	0.043 J	91	1.0 U	11	0.81 U	6.74	1.800	21.4	0.74	12.5	-117.0
Area 1	G6M-13-05X	5/2/2022	1.0 U	16	**8.0**	0.54 J	2.4	**9.4**	**150**	**78,000**	**8,300**	55	23	21,000 J	0.049 J	65	1.0 U	6.9	1.5 U	6.64	0.728	4.89	0.73	12.0	-143.0
Area 1	G6M-13-05X	10/3/2022	1.0 U	12	**24**	0.57 J	12	**12**	**110**	**68,000**	**7,100**	47	12	16,000	0.025 U	250	1.0 U	3.9	1.7 U	6.93	0.580	27.81	1.09	13.5	-109.9
Area 1	G6M-13-05X	6/7/2023	1.0 U	14	**39**	0.42 J	**6.3**	**27**	**160**	**72,000**	**6,400**	18	8.1	4,000	0.12	61	1.0 U	3.7	1.5 U	6.63	1.020	7.68	0.7	13.0	-135.0
Area 1	G6M-13-05X	10/17/2023	1.0 U	33	**10**	0.49 J	3.2	**42**	**150**	**70,000**	**6,000**	26	20	23,000	0.086 J	64	2.0 U	5.9	-	6.78	0.784	3.69	0.45	13.1	-74.4
Area 1	G6M-13-06X	1/30/2014	8.0 U	**300**	3.9 J	8.0U	8.0 U	**95**	-	-	-	-	-	-	-	-	-	-	-	6.61	2.521	35.9	0.33	10.8	-38.3
Area 1	G6M-13-06X	6/12/2014	0.37 J	**180**	0.5 U	0.68	0.44 J	**330**	**444**	**365,000**	**16,900**	1.3 U	33 J	18,000 J	0.13 U	710 J	0.68 J	160	0.03 U	6.42	1.710	13.7	0.24	19.0	-88.9
Area 1	G6M-13-06X	10/30/2014	0.5 U	14	0.5 U	0.70	0.5 U	**15**	**558**	**274,000**	**12,500**	1.2 U	63	79,000	0.13 U	580	0.42 J	42	0.03 U	6.31	1.943	20.1	0.24	18.3	-99.0
Area 1	G6M-13-06X	6/16/2015	0.5 U	3.9	0.5 U	0.98 J	0.5 U	**6.0**	**546**	**246,000**	**16,900**	10 U	27	10,300	0.15	510	1.0 J	55	1.0 U	6.25	1.989	31.9	0.11	11.3	-40.1
Area 1	G6M-13-06X	9/9/2015	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	**4.0 J**	**511**	**269,000**	**22,500**	5.0 U	37	18,200	0.11	-	10 U	82	6.5	6.02	1.745	4.09	0.16	12.2	-53.6
Area 1	G6M-13-06X	10/14/2015	5.0 U	3.2 J	5.0 U	5.0 U	5.0 U	5.0 U	**531**	**260,000**	**21,300**	10 U	30	11,300	0.071 J	434	1.7	62	1.5	5.71	0.904	1.46	1.19	19.3	100.7
Area 1	G6M-13-06X	2/9/2016	1.0 U	2.0	1.0 U	0.80 J	1.0 U	**4.6**	**536**	**226,000**	**12,000**	10 U	32	14,500	0.17	409	10 U	46	2.0 U	6.35	1.204	3.69	1.07	7.1	-23.7
Area 1	G6M-13-06X	6/14/2016	1.0 U	1.9	1.0 U	0.59 J	1.0 U	**4.2**	**490**	**280,000**	**18,000**	1.1 U	41	13,000	0.05 U	640	0.8 U	150	1.0 U	6.40	2.223	2.27	0.57	10.7	-48.4
Area 1	G6M-13-06X	11/8/2016	1.0 U	9.8	1.0 U	0.55 J	1.0 U	**7.7**	**470**	**250,000**	**9,600**	1.1 U	23	11,000	0.05 U	560	1.0 U	55	5.8	6.42	1.230	4.72	1.47	8.2	-127.3
Area 1	G6M-13-06X	5/19/2017	1.0 U	2.2	1.0 U	0.45 J	1.0 U	**2.6**	**500**	**250,000**	**7,000**	14	16	17,000	0.14 J	470	3.0	70 J	1.0 U	5.96	1.450	7.43	1.01	10.9	-64.8
Area 1	G6M-13-06X	10/5/2017	1.0 U	2.3 J	1.0 U	1.0 U	1.0 U	1.1	**490**	**220,000**	**7,500**	6.0	6.3	6,000	0.17 J	440	1.0 U	72	1.0 U	6.20	1.460	15.2	0.31	11.0	-88.6
Area 1	G6M-13-06X	10/19/2018	1.0 U	0.67 J	1.0 U	1.0 U	1.0 U	1.2	**400**	**220,000**	**5,300**	12	18	17,000	0.18	480	2.0 U	120	1.0 U	6.25	2.131	13.2	1.50	10.5	-61.9
Area 1	G6M-13-06X	10/10/2019	1.0 U	1.0	1.0 U	1.0 U	1.0 U	0.82 J	**500**	**220,000**	**2,900**	11	14	11,000	0.29 J	420	1.0 U	110	1.2	7.00	1.500	18.0	0.11	11.0	-35.0
Area 1	G6M-13-06X	10/12/2021	1.0 U	1.5	2.0 U	1.0 U	1.0 U	0.59 J	**440**	**220,000**	**2,300**	8.4	4.7	12,000	0.064 J	310	1.0 U	150	0.81 U	6.28	2.080	23.8	0.76	11.8	-69.2
Area 1	G6M-13-06X	10/3/2022	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	**360**	**160,000**	1,100	11	3.4	16,000	0.025 U	78	1.0 U	69	1.7 U	6.38	0.781	8.94	1.04	11.5	-57.1
Area 1	G6M-13-06X	10/17/2023	1.0 U	1.1 J	1.0 U	1.0 U	0.5 U	0.54 J	**390**	**180,000**	1,300	15	5.6	24,000	0.072 J	260	2.0 U	52	-	6.17	0.973	2.95	0.36	13.0	-52.5
Area 1	G6M-93-13X	10/15/2001	1.0 U	2.0 U	0.55 J	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.30	6.000	1.20	9.90	14.9	355.0
Area 1	G6M-93-13X	9/20/2004	1.0 U	2.0 U	3.8	2.0 U	2.0 U	2.0 U	5.0 U	1,000	15 U	0.008	0.014	0.89	1.3 J	23	10	1.0 U	2.7 J	6.14	0.059	4.31	13.1	12.4	250.7
Area 1	G6M-93-13X	12/13/2004	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	15 U	0.005 U	0.005 U	3.8	1.2	20	9.6	5.0 U	2.0 U	6.16	0.080	1.42	10.4	14.8	192.5
Area 1	G6M-93-13X	3/29/2005	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	15 U	0.006	0.28	3.1	0.2 U	22	9.1	0.6 J	2.0 U	6.24	0.090	0.64	10.4	15.9	97.3
Area 1	G6M-93-13X	6/28/2005	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	1,000 U	10 U	0.023	0.020	9.4	0.081	41	8.2	4.9	1.0 U	11.30	0.275	2.46	11.4	13.3	146.1
Area 1	G6M-93-13X	9/26/2005	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	15 U	0.006 J	0.018 J	4.9	0.083	27	9.5	3.1	1.0 U	6.04	0.126	18.2	7.98	15.2	191.8
Area 1	G6M-93-13X	12/13/2005	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	15 U	0.008 J	0.011 J	9.3	3.4	41	9.4	4.4 J	1.0 U	6.48	0.086	0.50	9.55	13.7	69.6
Area 1	G6M-93-13X	3/21/2006	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	100 U	19	0.025 U	0.046	9.5	0.2 U	24	6.8	6.8	1.0 U	6.87	0.058	0.61	9.55	13.0	-9.4
Area 1	G6M-93-13X	6/19/2006	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	100 U	28	0.008 J	0.008 J	5.3	0.2 U	46	4.4	1.4 J	1.0 U	6.33	0.087	1.34	9.14	11.5	190.1
Area 1	G6M-93-13X	9/18/2006	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	100 U	15 U	0.006 J	0.014 J	5.0	0.2 U	22	7.8	4.6 J	1.0 U	6.22	0.062	4.62	9.33	10.4	173.6
Area 1	G6M-93-13X	3/28/2007	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	100 U	15 U	0.005 J	0.014 J	9.6	-	-	5.7	5.0 U	1.0 U	6.14	0.071	8.73	9.80	12.6	-3.1
Area 1	G6M-93-13X	6/11/2007	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	100 U	15 U	0.034	0.30	13	-	-	9.0	0.4 J	1.0 U	6.64	0.121	3.30	10.1	14.0	125.4
Area 1	G6M-93-13X	9/11/2007	1.0 U	2.0 U	3.0	2.0 U	2.0 U	2.0 U	6.0 U	100 U	15 U	0.005 J	0.025 U	2.8	0.2 U	99	12	0.70 J	1.0 U	6.31	0.095	7.10	9.67	12.4	96.7
Area 1	G6M-93-13X	12/10/2007	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	100 U	15 U	0.004 J	0.007 J	1.1	-	-	6.9	5.0 U	1.0 U	6.25	0.156	0.60	8.81	11.8	71.0
Area 1	G6M-93-13X	3/10/2008	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	200	**12,000**	0.008 J	0.050	10	-	-	100	34	1.0 U	6.30	0.953	< 0.01	3.84	16.0	141.0
Area 1	G6M-93-13X	10/15/2008	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	8.0 U	200 U	**3,270**	1.3 U	1.6 U	5.6	3.6	110	34	10 U	0.03 U	6.31	0.304	< 0.01	2.97	15.2	116.4
Area 1	G6M-93-13X	5/7/2009	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.5 J	200 U	50 U	1.2 U	1.5 U	2.2	0.71	67 J	16	10 U	0.03 U	6.26	0.164	1.10	6.10	-	79.6
Area 1	G6M-93-13X	10/19/2009	0.5 U	0.5 U	0.5 U	0.5 U	**15**	0.5 U	8.0 U	142 U	50 U	1.3 U	1.6 U	6.3	0.058 J	54	9.2	10 U	0.03 U	6.42	0.110	1.01	4.79	15.7	182.0
Area 1	G6M-93-13X	4/21/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	115 U	25 U	1.2 U	1.5 U	440	0.13 U	140	10	6.5 J	0.03 U	6.19	0.109	< 0.01	9.03	15.2	37.3
Area 1	G6M-93-13X	10/6/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	100 U	25 U	1.2 U	1.5 U	16	0.05 J	63	11	10 U	0.03 U	6.12	0.116	3.42	4.77	17.3	114.0
Area 1	G6M-93-13X	9/9/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	100 U	207	10 U	10 U	10 U	0.11 U	-	50	-	2.0 U	6.02	1.745	4.09	0.16	12.2	-53.6
Area 1	G6M-93-13X	2/9/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	100 U	12 J	10 U	10 U	10 U	0.11 U	86	73	2.2	2.0 U	6.21	0.350	10.7	1.64	9.0	232.3
Area 1	G6M-93-13X	6/14/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	45 J	130	-	-	-	-	-	-	-	-	6.35	0.306	14.0	1.01	13.4	63.1
Area 1	G6M-93-13X	11/8/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	150	230	-	-	-	-	-	-	-	-	6.47	0.192	11.4	0.91	9.5	-29.7
Area 1	G6M-95-19X	10/15/2001	1.0 U	42	**110**	1.5 J	**6.6**	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.46	2.870	8.50	6.24	9.8	202.0
Area 1	G6M-95-19X	9/20/2004	1.0 U	16	**41**	2.0 U	2.9	2.0 U	5.0 U	1,000	210	-	-	-	-	-	-	-	-	5.45	4.170	3.10	7.92	14.1	467.5
Area 1	G6M-95-19X	9/26/2005	1.0 U	5.4	**21**	2.0 U	2.0 U	2.0 U	8.3	1,000 U	160	-	-	-	-	-	-	-	-	4.00	4.361	0.72	4.51	14.5	595.3
Area 1	G6M-95-19X	9/19/2006	1.0 U	2.0 U	**12**	2.0 U	2.0 U	2.0 U	5.0 U	100 U	160	-	-	-	-	-	-	-	-	3.82	4.236	2.41	6.77	11.8	281.0
Area 1	G6M-95-19X	9/12/2007	1.0 U	4.0	**21**	2.0 U	2.0 U	2.0 U	5.0 U	100 U	200	-	-	-	-	-	-	-	-	5.28	6.566	0.40	7.62	12.5	175.1
Area 1	G6M-95-19X	10/15/2008	0.5 U	1.6 J	**14 J**	0.5 U	0.39 J	0.5 U	8.0 U	200 U	212	-	-	-	-	-	-	-	-	5.35	5.306	0.90	6.63	12.2	267.9
Area 1	G6M-95-19X	10/16/2009	20 U	20 U	20 U	20 U	**540**	20 U	8.0 U	200 U	153	-	-	-	-	-	-	-	-	5.22	4.529	1.49	4.53	11.5	232.0
Area 1	G6M-95-19X	1/15/2010	0.75 U	0.46 J	**6.9**	0.75 U	0.5 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	5.46	4.733	2.17	4.09	10.5	243.8
Area 1	G6M-95-19X	10/7/2010	0.5 U	0.5 U	1.8	0.5 U	0.5 U	0.5 U	5.0 U	100 U	186	-	-	-	-	-	-	-	-	5.34	4.211	3.88	3.35	9.8	159.4
Area 1	G6M-95-19X	10/7/2011	0.5 U	0.5 U	2.2	0.5 U	0.5 U	0.5 U	5.0 U	100 U	242	-	-	-	-	-	-	-	-	5.51	2.319	1.10	2.90	12.7	132.2
Area 1	G6M-95-19X	10/15/2012	0.5 U	0.5 U	3.3	0.5 U	0.5 U	0.5 U	5.0 U	100 U	1,450	-	-	-	-	-	-	-	-	5.53	7.618	0.19	2.80	9.9	225.1
Area 1	G6M-95-19X	10/18/2013	0.5 U	0.5 U	2.4	0.5 U	0.5 U	0.5 U	5.0 U	100 U	**2,250**	-	-	-	-	-	-	-	-	5.49	3.827	5.42	1.44	10.3	154.9
Area 1	G6M-95-19X	11/3/2014	0.5 U	0.5 U	3.0	0.5 U	0.5 U	0.5 U	2.5 U	85 U	1,190	-	-	-	-	-	-	-	-	5.73	2.189	2.78	3.06	10.0	202.5
Area 1	G6M-95-19X	10/14/2015	1.0 U	1.0 U	1.9	1.0 U	1.0 U	1.0 U	4.0 U	100 U	739	-	-	-	-	-	-	-	-	5.85	4.126	1.43	1.10	10.9	170.4

		Analytical Method	VOCs						Dissolved Metals			Dissolved Gases			General Chemistry					Field Parameters					
		Analyte	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Nitrate/ Nitrite	Alkalinity	Sulfate	TOC	Sulfide	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mS/cm)	(NTU)	(mg/L)	°C	(mV)
		Cleanup Level[1]	7	70	5	70	5	2	10	3,129	1,460				10,000										
Area	Well ID	Date Sampled																							
Area 1	G6M-95-19X	11/8/2016	1.0 U	1.0 U	1.6	1.0 U	1.0 U	1.0 U	3.0 U	50 U	760	-	-	-	-	-	-	-	-	2.68	2.952	3.39	1.70	12.5	67.5
Area 1	G6M-95-19X	10/5/2017	1.0 U	1.0 U	1.9	1.0 U	1.0 U	1.0 U	3.0 U	50 U	1,400	-	-	-	-	-	-	-	-	5.60	3.530	3.41	1.22	13.0	171.7
Area 1	G6M-95-19X	10/17/2018	1.0 U	1.0 U	1.6	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	5.43	4.601	1.99	2.08	11.7	246.1
Area 1	G6M-95-19X	10/9/2019	1.0 U	1.0 U	1.9	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	5.58	4.800	0.77	2.75	12.0	103.0
Area 1	G6M-95-19X	10/16/2020	1.0 U	1.0 U	1.4	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	5.54	3.020	3.38	1.88	14.6	170.0
Area 1	G6M-95-19X	10/14/2021	1.0 U	1.0 U	0.92 J	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	5.44	5.980	2.38	4.46	11.3	242.0
Area 1	G6M-95-19X	10/4/2022	1.0 U	1.0 U	1.4 J	1.0 U	0.5 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	5.69	2.727	0.35	3.61	12.8	224.1
Area 1	G6M-95-19X	10/18/2023	1.0 U	1.0 U	1.0 J	1.0 U	0.5 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	5.53	2.990	0.72	4.17	12.8	-0.2
Area 1	G6M-95-20X	10/16/2001	1.0 U	2.0 U	4.4	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.90	0.270	4.10	7.20	11.2	212.0
Area 1	G6M-95-20X	2/25/2002	1.0 U	2.0 U	5.0	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.59	0.171	7.67	12.4	11.5	155.7
Area 1	G6M-95-20X	2/27/2002	-	-	-	-	-	-	-	-	-	-	-	-	4.7	-	-	-	-	-	-	-	-	10.4	-
Area 1	G6M-95-20X	9/21/2004	1.0 U	2.0 U	2.8	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	15 U	-	-	-	-	-	-	-	-	5.76	0.544	< 0.01	8.88	11.3	205.5
Area 1	G6M-95-20X	9/26/2005	1.0 U	2.0 U	2.3	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	15 U	-	-	-	-	-	-	-	-	5.62	0.741	0.95	8.75	11.4	328.7
Area 1	G6M-95-20X	9/19/2006	1.0 U	42	2.2	2.0 U	2.0 U	2.0 U	**71**	**350,000**	**39,000**	-	-	-	-	-	-	-	-	6.31	2.715	4.19	0.76	12.2	-108.0
Area 1	G6M-95-20X	9/12/2007	1.0 U	11	2.0 U	2.0 U	2.0 U	2.0 U	**160**	**110,000**	**15,000**	-	-	-	-	-	-	-	-	6.49	0.740	73.7	3.19	12.6	-114.3
Area 1	G6M-95-20X	10/15/2008	0.5 U	2.5	0.38 J	0.5 U	0.20 J	0.5 U	**97**	**45,600**	**5,250**	-	-	-	-	-	-	-	-	6.45	0.511	4.20	0.49	9.5	-104.4
Area 1	G6M-95-20X	10/16/2009	0.5 U	3.1	0.5 U	0.5 U	**37 J**	0.5 U	**166**	**206,000**	**7,660**	-	-	-	-	-	-	-	-	6.61	0.898	8.81	0.29	13.4	-81.4
Area 1	G6M-95-20X	10/6/2010	0.5 U	5.1	0.5 U	0.5 U	0.5 U	1.8	**149**	**546,000**	**12,200**	-	-	-	-	-	-	-	-	6.49	2.047	36.6	0.11	14.2	-124.3
Area 1	G6M-95-20X	10/7/2011	0.5 U	1.5	0.5 U	0.5 U	0.5 U	0.5 U	**108**	**57,800**	**3,610**	-	-	-	-	-	-	-	-	6.59	0.234	4.00	0.10	14.3	-112.9
Area 1	G6M-95-20X	10/15/2012	0.5 U	1.0	0.5 U	0.5 U	0.5 U	0.5 U	**112**	**67,900**	**3,140**	-	-	-	-	-	-	-	-	6.58	0.526	4.83	0.60	12.7	-98.2
Area 1	G6M-95-20X	10/18/2013	0.5 U	0.59	0.5 U	0.5 U	0.29 J	0.5 U	**80**	**30,000**	**1,760**	-	-	-	-	-	-	-	-	6.56	0.410	3.37	0.18	12.6	-79.5
Area 1	G6M-95-20X	10/31/2014	0.5 U	0.5 U	2.7	0.5 U	0.53	0.5 U	7.9	**20,300**	1,160	-	-	-	-	-	-	-	-	6.59	0.688	4.03	0.16	10.9	-105.1
Area 1	G6M-95-20X	10/13/2015	1.0 U	1.0 U	1.2	1.0 U	1.0 U	1.0 U	**32**	**110,000**	614	-	-	-	-	-	-	-	-	6.61	0.722	2.86	0.55	12.2	-55.0
Area 1	G6M-95-20X	11/8/2016	1.0 U	1.0 U	0.82 J	1.0 U	1.0	1.0 U	**26**	**14,000**	940	-	-	-	-	-	-	-	-	4.99	0.799	7.04	0.54	13.6	-5.6
Area 1	G6M-95-20X	10/5/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**18**	**6,300**	410	-	-	-	-	-	-	-	-	5.80	0.603	11.0	0.35	14.5	27.8
Area 1	G6M-95-20X	10/17/2018	1.0 U	1.0 U	1.1	1.0 U	0.64 J	1.0 U	**18**	**3,500**	170	-	-	-	-	-	-	-	-	5.84	0.426	24.9	0.13	12.2	154.3
Area 1	G6M-95-20X	10/15/2019	1.0 U	1.5	1.0 U	1.0 U	0.55 J	1.0 U	**73**	**39,000**	**1,500**	-	-	-	-	-	-	-	-	6.92	0.310	9.70	0.15	12.0	-39.8
Area 1	G6M-95-20X	10/14/2020	1.0 U	0.41 J	1.0 U	1.0 U	1.0 U	1.0 U	**87**	**54,000**	**2,200**	-	-	-	-	-	-	-	-	6.49	0.255	3.45	0.50	11.8	-52.1
Area 1	G6M-95-20X	10/14/2021	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	**37**	**6,500**	440	-	-	-	-	-	-	-	-	6.04	0.887	44.80	1.11	11.5	22.9
Area 1	G6M-95-20X	10/4/2022	1.0 U	1.0 U	0.49 J	1.0 U	0.20 J	1.0 U	**32**	3,000	220	-	-	-	-	-	-	-	-	6.38	0.133	3.18	1.35	13.6	56.7
Area 1	G6M-95-20X	10/17/2023	1.0 U	1.0 U	0.48 J	1.0 U	0.29 J	1.0 U	8.5	1,800	120	-	-	-	-	-	-	-	-	6.10	0.159	2.12	0.68	13.4	-13.7
Area 1	G6M-96-13B	10/15/2001	1.0 U	**220**	**3,600**	12	**39**	1.1 J	-	-	-	-	-	-	-	-	-	-	-	6.10	0.120	6.80	2.90	12.6	219.0
Area 1	G6M-96-13B	2/25/2002	1.0 U	**200**	**5,200**	1.4 J	**34**	1.5 J	-	-	-	-	-	-	-	-	-	-	-	6.40	1.142	6.59	3.85	13.6	181.5
Area 1	G6M-96-13B	1/31/2003	1.0 U	**190**	**3,800**	2.0 U	**31**	2.0 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.1	-
Area 1	G6M-96-13B	9/20/2004	1.0 U	**210**	**4,500**	2.0 U	**35**	**2.1**	5.0 U	1,000	15 U	0.022	0.12	1.7	5.4 J	38	19	1.0 U	2.0	6.30	1.035	0.50	3.57	11.4	186.4
Area 1	G6M-96-13B	12/13/2004	1.0 U	**150**	**2,500**	2.0 U	**24**	2.0 U	5.0 U	1,000 U	23	0.050	0.025	24	5.0	35	31 J	5.0 U	2.0 U	6.26	0.787	2.68	2.57	12.5	316.5
Area 1	G6M-96-13B	3/28/2005	200 U	**180 J**	**4,500**	200 U	200 U	200 U	5.0 U	2,600	**1,600**	0.17	0.22	37	0.46	47	17	5.7	2.0 U	6.24	0.943	0.68	0.87	10.1	21.2
Area 1	G6M-96-13B	8/10/2005	4.8	**1,500**	**2,800**	3.6	**190**	**6.8**	**32**	**24,000 J**	**8,100**	0.15	0.44	2.9	0.23	99	4.6	140	5.3	4.35	0.838	3.50	0.16	-	-35.6
Area 1	G6M-96-13B	9/26/2005	5.0 U	**570**	**3,700**	5.0 U	**140**	5.0 U	**44**	**51,000 J**	**12,000**	0.054	0.33	18	0.28	134	11	200	11	4.98	1.071	4.54	1.32	13.5	-45.9
Area 1	G6M-96-13B	12/13/2005	5.0 U	**350**	**3,400**	10 U	**130**	10 U	**46**	**63,000 J**	**12,100**	0.069	0.35	31	0.05 U	150	11	140	4.5	5.51	0.851	0.90	0.13	16.4	-52.1
Area 1	G6M-96-13B	3/20/2006	1.2	**400**	**2,100**	2.0 U	**250**	**2.5**	**38**	**96,000**	**17,000**	0.036	0.42	97	0.21	300	6.8	360	2.4	5.68	0.759	7.10	0.17	15.1	-161.5
Area 1	G6M-96-13B	6/20/2006	1.0 U	**370**	**1,900**	2.0 U	**280**	**3.5**	**48 J**	**100,000**	**16,000**	0.044	0.27	200	0.2 U	310	4.2	110	4.8	5.46	1.252	2.63	0.62	13.3	-86.8
Area 1	G6M-96-13B	9/18/2006	1.3	**530**	**880**	2.0 U	**370**	**9.4**	**150**	**110,000**	**20,000**	0.022 J	0.43	2,400	0.26	370	4.6	300	3.0	6.14	1.555	2.19	0.48	12.5	-120.9
Area 1	G6M-96-13B	3/27/2007	2.1	**590**	**940**	2.6	**290**	**26**	**250**	**230,000**	**35,000 J**	0.025 U	0.96	22,000	-	-	4.3	140	1.6	5.71	1.861	1.79	0.10	12.5	-16.8
Area 1	G6M-96-13B	6/11/2007	1.7	**610**	**1,200**	2.0 U	**280**	**55**	**200**	**200,000**	15 U	0.025 U	0.68	22,000	-	-	8.2	260	2.2	6.24	1.870	1,322	0.15	12.0	-97.5
Area 1	G6M-96-13B	9/10/2007	1.6	**590**	**2,600**	2.0 U	**130 J**	**38**	**240**	**210,000**	**25,000**	0.036	6.3	32,000	0.2 U	410	580	270	2.8	6.25	1.866	15.5	0.40	13.0	-136.3
Area 1	G6M-96-13B	12/11/2007	1.5	**830**	**750**	2.0 U	**99**	**110**	**260**	**230,000**	**25,000**	0.005 J	3.6	26,000	-	-	429	240	2.4	6.11	1.907	8.00	1.92	12.0	-25.7
Area 1	G6M-96-13B	3/10/2008	1.7	**1,000**	**1,200**	2.0 U	**140**	**140**	**240**	**240,000**	**26,000**	0.025 U	8.3	29,000	-	-	5.0 U	210	2.0	6.18	1.958	6.40	1.55	11.3	-90.2
Area 1	G6M-96-13B	10/15/2008	10 U	**490**	**7.3 J**	10 U	**6.5 J**	**350**	**172**	**290,000**	**39,500**	1.2 U	5.7	9,700	0.13 U	470	21	92	0.03 U	6.19	2.046	11.0	0.90	13.0	-59.2
Area 1	G6M-96-13B	5/7/2009	10 U	**310**	**190**	10 U	**75**	**95**	**169**	**323,000**	**38,600**	1.2 U	13	46,000	0.13 U	740 J	32	74	0.03 U	6.09	1.909	4.00	0.10	10.5	-97.6
Area 1	G6M-96-13B	10/19/2009	10 U	**290**	**440**	10 U	**140**	**89**	**173**	**325,000**	**36,000**	1.2 U	9.2	52,000	0.022 U	630	53	54	0.041	6.32	2.054	13.6	1.53	-	-93.1
Area 1	G6M-96-13B	4/21/2010	2.0 U	**100**	**93**	2.0 U	**29**	**57**	**217**	**400,000 J**	**39,100**	1.3 U	15	37,000	0.13 U	610	0.71 J	130	0.041	6.21	2.496	11.0	0.13	-	18.2
Area 1	G6M-96-13B	10/6/2010	0.70	**150**	**360**	1.5	**150**	**65**	**222**	**366,000**	**37,500**	1.2 U	18	96,000	0.045 J	95	1.1 J	57	0.03 U	6.19	2.547	12.9	0.22	12.3	-103.4
Area 1	G6M-96-13B	6/9/2011	1.4	**270**	**740**	1.9	**90**	**86**	**242**	**304,000**	**25,100**	3.7	44	110,000	0.023 J	300	0.49J	75	0.03 U	6.22	2.126	13.1	0.09	11.5	-112.0
Area 1	G6M-96-13B	10/4/2011	8.0 U	**79**	**160**	8.0U	**24**	**43**	**284**	**335,000**	**25,300**	1.2 U	1.5 U	98,000	0.13 U	620	0.35 J	73	0.03 U	6.36	1.733	20.0	0.02	10.8	-77.8
Area 1	G6M-96-13B	5/9/2012	5.0 U	**150**	**130**	5.0 U	**47**	**38**	**298**	**231,000**	**16,600**	44	100	29,000	0.13 U	500	0.58 J	51	0.13	6.47	1.680	12.1	1.70	16.9	-89.7
Area 1	G6M-96-13B	10/11/2012	5.0 U	**130**	**130**	5.0 U	**48**	**76**	**282**	**209,000**	**17,100**	81	190	62,000	0.13 U	480	5.0 U	38	0.14	6.26	2.335	7.09	0.44	10.9	-66.4
Area 1	G6M-96-13B	5/22/2013	5.0 U	**230**	**170**	2.7 J	**55**	**100**	**395**	**241,000**	**18,600**	1.1 U	86	23,000	0.13 U	540 J	5.0 U	29	0.12 J	6.23	2.270	13.0	0.15	9.7	-84.3
Area 1	G6M-96-13B	10/17/2013	4.0 U	**200**	**78**	4.0 U	**38**	**170**	**365**	**234,000**	**17,600**	2.4	36	18,000	0.13 U	560	5.0 U	37	0.058	6.46	1.728	17.3	0.15	10.9	-113.1
Area 1	G6M-96-25B	10/15/2001	1.0 U	2.0 U	**360**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.81	0.498	3.90	5.30	12.0	142.0
Area 1	G6M-96-25B	2/25/2002	1.0 U	2.0 U	**130**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.70	0.150	9.75	11.5	13.7	158.5
Area 1	G6M-96-25B	2/27/2002	-	-	-	-	-	-	-	-	-	-	-	-	7.2	-	-	-	-	-	-	-	-	13.8	-
Area 1	G6M-96-25B	1/31/2003	1.0 U	2.0 U	**52**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17.0	-
Area 1	G6M-96-25B	9/20/2004	1.0 U	2.0 U	**56**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	4.98	0.589	< 0.01	7.63	13.7	593.0
Area 1	G6M-96-25B	9/26/2005	1.0 U	2.0 U	**40**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.82	0.587	1.10	6.74	17.0	314.1
Area 1	G6M-96-25B	9/19/2006	1.0 U	2.0 U	**44**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.20	0.496	1.46	7.64	12.2	223.5
Area 1	G6M-96-25B	9/11/2007	1.0 U	2.0 U	**16**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.91	0.802	9.50	6.29	16.3	96.6
Area 1	G6M-96-25B	10/17/2008	0.5 U	0.5 U	1.7	0.5 U	0.5 U	0.5 U	-	-	-	-	-	-	-	-	-	-	-	6.80	0.151	4.00	8.41	14.5	89.7

		Analytical Method	VOCs						Dissolved Metals			Dissolved Gases			General Chemistry					Field Parameters					
		Analyte	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Nitrate/ Nitrite	Alkalinity	Sulfate	TOC	Sulfide	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mS/cm)	(NTU)	(mg/L)	°C	(mV)
		Cleanup Level[1]	7	70	5	70	5	2	10	3,129	1,460				10,000										
Area	Well ID	Date Sampled																							
Area 1	G6M-96-25B	10/16/2009	0.5 U	0.5 U	1.9	0.5 U	**38 J**	0.5 U	-	-	-	-	-	-	-	-	-	-	-	6.27	0.404	4.70	8.08	10.5	183.5
Area 1	G6M-96-25B	10/8/2010	0.5 U	0.5 U	3.1	0.5 U	0.5 U	0.5 U	-	-	-	-	-	-	-	-	-	-	-	5.80	0.622	1.59	6.70	16.3	190.2
Area 1	G6M-96-25B	10/6/2011	0.5 U	0.5 U	0.58	0.5 U	0.5 U	0.5 U	-	-	-	-	-	-	-	-	-	-	-	6.85	0.131	4.50	8.11	16.8	69.8
Area 1	G6M-96-25B	10/16/2012	0.5 U	0.5 U	2.0	0.5 U	0.5 U	0.5 U	-	-	-	-	-	-	-	-	-	-	-	5.87	0.572	7.76	7.09	12.7	181.7
Area 1/FDSA	G6M-03-04X	10/21/2009	4.0 U	**81**	4.2 U	4.0 U	4.0 U	**4.1**	-	-	-	-	-	-	-	-	-	-	-	6.04	0.635	24.5	0.70	19.6	-99.6
Area 1/FDSA	G6M-03-04X	10/16/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.3	-	-	-	-	-	-	-	-	-	-	-	6.79	0.622	80.4	0.70	23.0	-123.0
Area 1/FDSA	G6M-04-10A	9/20/2004	1.0 U	3.4	**2,900**	2.0 U	2.5	2.0 U	5.0 U	1,000	170	0.021	0.030	1.1	4.5 J	41	22	1.0 U	2.0	5.91	0.552	1.70	3.75	10.8	206.5
Area 1/FDSA	G6M-04-10A	12/14/2004	1.0 U	2.0 U	**2,400**	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	120	0.015	0.096	1,500	1.7	25	13	5.0 U	2.0 U	5.89	0.965	2.04	2.81	9.6	215.4
Area 1/FDSA	G6M-04-10A	3/30/2005	40 U	40 U	**640**	40 U	40 U	40 U	8.4	1,200	**8,100**	0.33	0.070	1.4	0.33	107	16	52	2.0 U	5.90	1.010	1.76	4.22	11.0	68.3
Area 1/FDSA	G6M-04-10A	8/11/2005	2.0 U	**390**	**380**	2.0 U	**45**	2.0 U	**77**	**87,000 J**	**50,000 J**	0.24	0.23	3.4	0.05 U	359	7.8	240	1.0 U	5.65	0.977	14.9	1.84	10.1	11.9
Area 1/FDSA	G6M-04-10A	9/27/2005	1.0 U	**260**	**340**	1.0 U	**88**	1.0 U	**190**	**230,000 J**	**76,000**	0.080	0.15	110	0.084	442	3.0 J	330	5.9	6.33	1.135	4.30	1.89	10.8	-1.9
Area 1/FDSA	G6M-04-10A	12/14/2005	1.0 U	**220**	**1,500**	2.0 U	**180**	2.0 U	**179**	**250,000 J**	**32,500**	0.048	0.13	6,800	0.05 U	480	3.7	370	7.4	6.41	0.985	1.90	1.57	10.2	-64.8
Area 1/FDSA	G6M-04-10A	3/21/2006	1.0 U	**450**	**4,400**	2.0 U	**180**	**8.3**	**180**	**220,000**	**8,100**	0.025 U	0.69	20,000	0.2 U	390	4.1	180	2.0	6.72	0.676	7.51	0.27	9.8	-121.4
Area 1/FDSA	G6M-04-10A	6/20/2006	1.0 U	**330**	**6,100**	2.0 U	**650**	**27**	**160**	**220,000**	**5,700**	0.025 U	0.12	16,000	0.2 U	340	4.3	120	3.2	6.34	0.893	9.82	0.22	11.0	-99.8
Area 1/FDSA	G6M-04-10A	9/19/2006	1.0 U	59	**1,000**	2.0 U	**15**	**14**	**170**	**97,000**	**5,000**	0.23	0.11	11,000	0.31	150	5.2	61	1.2	6.56	0.430	6.00	1.14	14.6	-86.9
Area 1/FDSA	G6M-04-10A	3/28/2007	1.6 J	**680 J**	**1,200 J**	2.0 U	**230 J**	**60 J**	**380**	**260,000**	**27,000 J**	0.65	0.26	20,000	-	-	2.1	130	1.0 U	6.10	1.188	15.4	0.19	11.2	-89.9
Area 1/FDSA	G6M-04-10A	6/12/2007	2.1	**900**	**760**	2.0 U	**140**	**130**	**310**	**260,000**	**15,000**	0.54	1.1	23,000	-	-	1.0 U	190	2.4	6.58	1.295	129	0.19	15.8	-145.2
Area 1/FDSA	G6M-04-10A	9/11/2007	1.0 U	**400**	**2,700**	2.0 U	**99 J**	**91**	**240**	**290,000**	**13,000**	0.35	0.47	18,000	0.2 U	440	54	220	2.4	6.42	0.864	42.3	1.72	14.0	-138.2
Area 1/FDSA	G6M-04-10A	12/11/2007	1.0 U	**280**	**830**	2.0 U	**8.8**	**90**	**330**	**280,000**	**12,000**	0.30	0.52	31,000	-	-	3.6	270	3.0	6.40	1.366	8.00	1.20	10.1	-70.1
Area 1/FDSA	G6M-04-10A	3/10/2008	1.8	**670**	**200**	3.4	**830**	**37**	**340**	**230,000**	**35,000**	0.34	0.61	25,000	-	-	10	210	2.2	6.53	1.362	24.0	0.94	9.8	-123.8
Area 1/FDSA	G6M-04-10A	10/6/2008	100 U	**990**	**4,000**	100 U	**450**	**1,400**	**247**	**187,000**	**9,100**	1.3 U	11	16,000	0.13 U	210	12	34	0.03 U	6.38	0.948	15.0	0.21	15.3	-168.0
Area 1/FDSA	G6M-04-10A	1/21/2009	0.67 J	**1,400**	**1,500**	1.0 U	**390**	**1,200**	**250**	**234,000 J**	7.8	1.2 U	9.6	53,000	0.13 U	20 U	20	46 J	0.03 U	6.60	0.937	7.02	0.20	14.3	-112.6
Area 1/FDSA	G6M-04-10A	5/7/2009	10 U	**390 J**	**380**	10 U	**41**	**420**	**292**	**194,000**	**17,200**	1.2 U	11	34,000	0.13 U	590 J	24	49	0.03 U	6.40	1.165	4.20	0.80	11.3	-125.0
Area 1/FDSA	G6M-04-10A	10/20/2009	50 U	**2,100**	**2,700**	50 U	**290**	**1,400**	**220**	**127,000**	**8,960**	1.3 U	15	11,000	0.13 U	350	8.7	21	0.03 U	6.42	0.805	11.4	0.17	12.6	-121.4
Area 1/FDSA	G6M-04-10A	4/21/2010	4.0 U	**170**	**170**	4.0 U	**21**	**130**	**286**	**297,000 J**	**18,200 J**	1.3 U	15	21,000 J	0.017 J	670	0.65 J	120	0.03 U	6.58	0.880	7.00	0.70	14.7	-139.5
Area 1/FDSA	G6M-04-10A	10/6/2010	20 U	**600**	**25**	20 U	**10 J**	**190**	**296**	**119,000**	**4,280**	1.2 U	14	51,000	0.13 U	260	0.98 J	26	0.03 U	6.32	0.694	6.24	0.17	13.6	-85.2
Area 1/FDSA	G6M-04-10A	6/9/2011	0.5 U	**300**	**110**	0.5 U	**36**	**170**	**295**	**198,000**	**9,140**	1.2 U	5.7	92,000	0.13 U	660	1.2 J	63	0.03 U	6.40	1.243	5.10	0.39	10.5	-105.1
Area 1/FDSA	G6M-04-10A	10/4/2011	40 U	**1,100**	**850**	40 U	**170**	**270**	**322**	**304,000**	**17,600**	1.2 U	74	36,000	0.13 U	750	1.1 J	160	0.22	6.07	0.629	8.18	0.21	8.3	-94.0
Area 1/FDSA	G6M-04-10A	5/10/2012	20 U	**610**	**180**	20 U	**120**	**200**	**367**	**183,000**	**6,700**	1.1 U	250	46,000	0.13 U	340	0.70 J	16	0.10	6.49	0.710	9.05	0.48	11.0	-107.7
Area 1/FDSA	G6M-04-10A	10/15/2012	2.0 U	26	2.0 U	2.0 U	2.0 U	**110**	**291**	**185,000**	**8,250**	1.2 U	44	14,000	0.092 J	340	5.0 U	64	0.13 J	6.43	0.920	5.50	0.60	10.4	-103.7
Area 1/FDSA	G6M-04-10A	5/23/2013	0.5 U	13	0.5 U	0.53	0.5 U	**15**	**342**	**400,000**	**7,110**	1.2 U	1.5 U	18,000	0.11 J	650	0.84 J	200	0.10 J	6.37	1.311	11.0	1.30	10.6	-84.4
Area 1/FDSA	G6M-04-10A	10/17/2013	10 U	**130 J**	**360 J**	10 U	**92 J**	**14 J**	**292**	**341,000**	**5,000**	1.2 U	9.4	24,000 J	0.13 U	650	1.1 J	150	0.034 J	6.37	1.756	9.78	0.29	10.5	-95.5
Area 1/FDSA	G6M-04-10A	6/12/2014	0.5 U	1.4	0.5 U	0.5 U	0.23 J	**5.1**	**264**	**164,000**	**3,730**	2.2 J	1.6 U	9,500 J	0.13 U	200 J	17	29	0.03 U	6.36	1.761	10.9	0.59	10.9	-82.7
Area 1/FDSA	G6M-04-10A	11/3/2014	0.5 U	0.92	0.5 U	0.5 U	0.5 U	**4.4**	**288**	**184,000**	**2,100**	1.2 U	3.6 J	21,000	0.13 U	240	16 J	34	0.03 U	6.62	1.742	17.0	0.15	11.2	-136.9
Area 1/FDSA	G6M-04-10A	6/19/2015	0.5 U	0.50 J	0.5 U	0.5 U	0.5 U	**5.0**	**274**	**145,000**	**1,940**	5.0 U	5.0 U	7,510	0.11 U	278	22	18	1.0 U	6.62	2.201	8.06	0.51	10.5	-94.6
Area 1/FDSA	G6M-04-10A	10/13/2015	1.0 U	0.72 J	1.0 U	1.0 U	1.0 U	1.6	**292**	**205,000**	**2,360**	10 U	10 U	15,000	0.099 J	241	8.6 J	27	2.0 U	6.53	2.367	17.0	0.08	11.3	-119.6
Area 1/FDSA	G6M-04-10A	6/14/2016	1.0 U	1.1	1.0 U	1.0 U	0.64 J	**4.0**	**220**	**82,000**	**1,700**	1.1 U	1.0 U	13,000	0.05 U	190	7.3	10	1.0 U	5.94	1.878	7.73	0.23	11.9	-66.6
Area 1/FDSA	G6M-04-10A	11/9/2016	1.0 U	0.96 J	1.0 U	1.0 U	0.49 J	1.4	**220**	**92,000**	**3,200**	1.1 U	1.0 U	7,100	0.05 U	86	17	5.5	1.5	6.50	1.440	5.27	0.37	8.5	-96.9
Area 1/FDSA	G6M-04-10A	5/18/2017	1.0 U	1.4	1.0 U	1.0 U	0.52 J	0.85 J	**170**	**74,000**	**4,800**	1.1 U	1.0 U	5,500	0.12	38	15	5.7	1.0 U	6.59	1.780	19.2	0.33	10.9	-98.6
Area 1/FDSA	G6M-04-10A	10/12/2017	1.0 U	1.2	1.0 U	1.0 U	1.0 U	0.81 J	**290**	**100,000**	**4,600**	1.1 U	3.6	9,200	0.12	78	8.4	8.4	1.2	6.62	1.870	16.0	0.97	10.0	-94.7
Area 1/FDSA	G6M-04-10A	4/4/2018	1.0 U	0.89 J	1.0 U	1.0 U	1.0 U	0.60 J	**250**	**98,000**	**2,600**	1.1 U	3.6	25,000	0.17	190	11	19	1.0 U	6.61	1.279	9.76	1.04	9.6	-90.7
Area 1/FDSA	G6M-04-10A	10/16/2018	1.0 U	1.9	1.0 U	1.0 U	1.0 U	1.2	**230**	**140,000**	**6,100**	0.99 J	1.0 U	32,000	0.05 U	210	6.5 J	240	1.0 U	5.51	1.243	346	0.72	10.7	-47.2
Area 1/FDSA	G6M-04-10A	4/4/2019	1.0 U	29	1.0 U	1.0 U	**12**	**9.3**	**240**	**140,000**	**4,400**	3.8	46	19,000 J	0.26	-	4.3	95	1.0 U	5.80	0.800	11.0	1.70	9.5	-29.0
Area 1/FDSA	G6M-04-10A	10/16/2019	1.0 U	**150**	**11**	1.2	**34**	**45**	**210**	**89,000**	**2,300**	4.0	160	33,000	0.05 U	170	5.6	65	0.96 U	6.37	0.700	21.0	1.12	10.0	-75.7
Area 1/FDSA	G6M-04-10A	05/12/2020	1.0 U	11	1.0 U	0.93 J	1.0 U	**2.9**	**270**	**130,000**	**3,700**	0.90 J	18	14,000	0.10 U	300	3.8 J	44	0.83 U	6.26	0.628	30.8	0.25	9.9	29.8
Area 1/FDSA	G6M-04-10A	10/14/2020	1.0 U	**120**	**35**	0.65 J	**49**	**26**	**230**	**96,000**	**3,000**	1.2	25	10,000	0.087 J	210	6.2	22	0.81 U	6.52	0.530	9.96	0.37	15.4	-91.2
Area 1/FDSA	G6M-04-10A	6/17/2021	1.0 U	4.7	0.5 U	0.62 J	0.5 U	1.5 J	**310**	**85,000**	1,200 J	5.0 U	5.0 U	17,000	0.025 U	220 J	13 J	17	0.80 U	6.22	0.739	7.84	2.80	11.6	-68.8
Area 1/FDSA	G6M-04-10A	10/13/2021	1.0 U	3.6	2.0 U	1.0 U	1.0 U	1.7	**320 J**	**85,000**	1,100	6.9	9.3	27,000	0.05 U	140	2.8	22	0.81 U	6.52	0.596	76.20	0.54	11.4	-121.0
Area 1/FDSA	G6M-04-10A	5/2/2022	1.0 UJ	2.3 J	1.0 UJ	1.0 J	0.24 J	1.0 UJ	**290 J**	**80,000**	900	10	24	19,000 J	0.05 UJ	130	1.0 U	14	1.3 UJ	6.55	0.381	4.13	0.79	10.0	-115.0
Area 1/FDSA	G6M-04-10A	10/4/2022	1.0 U	0.74 J	1.0 U	0.35 J	0.39 J	1.0 U	**270 J**	**80,000**	770 J	16	8.4	20,000 J	0.025 U	180	1.2 J	13	1.7 U	6.58	0.325	7.65	1.33	10.8	-86.3
Area 1/FDSA	G6M-04-10A	6/6/2023	1.0 U	0.71 J	1.0 U	1.0 U	0.5 U	1.0 U	**380 J**	**81,000**	810	7	3.8	18,000 J	0.057 J	170	0.49 J	18	1.5 U	6.37	0.700	11.40	0.61	13.3	-129.0
Area 1/FDSA	G6M-04-10A	10/19/2023	2.0 U	11	2.0 U	2.0 U	**9.4**	**3.0**	**310**	**85,000**	860	6.2	9.5	18,000	0.025 U	200	1.0 U	18	1.6 U	6.50	0.360	1.36	0.33	15.5	-67.4
Area 1/FDSA	G6M-04-10X	9/20/2004	1.0 U	32	**70**	2.0 U	**7.5**	2.0 U	5.0 U	1,000	260	0.019	0.039	1.0	6.7 J	11	21	1.0 U	3.4	5.59	0.902	0.95	6.87	10.2	246.2
Area 1/FDSA	G6M-04-10X	12/14/2004	1.0 U	35	**65**	2.0 U	**7.8**	2.0 U	5.0 U	1,000 U	200	0.022	0.053	2.2	6.6	10 U	23	5.0 U	2.0 U	5.40	0.816	5.50	7.57	16.2	424.2
Area 1/FDSA	G6M-04-10X	3/31/2005	2.0 U	30	**56**	2.0 U	**6.8**	2.0 U	5.0 U	1,000 U	190	0.022	0.86	1.1	1.5	10 U	25	0.4 J	2.0 U	5.18	1.337	0.41	7.65	13.1	256.7
Area 1/FDSA	G6M-04-10X	7/1/2005	1.0 U	23	**50**	2.0 U	**5.4**	2.0 U	4.2	1,000 U	10 U	0.035	0.050	12	1.7	44	12	5.9	1.0 U	5.33	1.502	0.90	6.09	17.5	265.2
Area 1/FDSA	G6M-04-10X	9/27/2005	1.0 U	23	**48**	2.0 U	4.7	2.0 U	5.0 U	1,000 U	170	0.010 J	0.018 J	16	1.4	7.7	26	4.0	1.0 U	5.26	1.123	0.50	6.68	14.7	450.9
Area 1/FDSA	G6M-04-10X	12/14/2005	1.0 U	27	**67**	2.0 U	**6.3**	2.0 U	5.0 U	1,000 U	164	0.016 J	0.034	11	1.5	9.8	28	5.0 U	1.0 U	5.49	1.032	3.40	6.78	10.8	205.1
Area 1/FDSA	G6M-04-10X	3/22/2006	1.0 U	32	**76**	2.0 U	**9.1 J**	2.0 U	5.0 U	1,000 U	200	0.015 J	0.025 J	25	1.4	10 U	24	5.6	1.0 U	5.57	0.940	1.45	6.74	10.6	195.7
Area 1/FDSA	G6M-04-10X	6/20/2006	1.0 U	47	**87**	2.0 U	**10**	2.0 U	5.0 U	100 U	240	0.013 J	0.012 J	18	1.7	10 U	25	5.0 U	1.0 U	5.08	1.512	1.90	6.23	10.9	248.8
Area 1/FDSA	G6M-04-10X	9/19/2006	1.0 U	32	**65**	2.0 U	**6.8**	2.0 U	5.0 U	100 U	240	0.026	0.025 J	13	1.3	8.0	22	2.2 J	1.0 U	5.21	1.660	4.68	6.94	12.2	273.9
Area 1/FDSA	G6M-04-10X	12/13/2006	1.0 U	35	**64**	2.0 U	**7.2**	2.0 U	5.0 U	100 U	280	0.008 J	0.011 J	28	-	-	27	5.0 U	1.0 U	5.38	2.160	0.59	7.90	11.3	39.3
Area 1/FDSA	G6M-04-10X	3/28/2007	1.0 U	26	**56**	2.0 U	**5.9**	2.0 U	5.0 U	210	290 J	0.017 J	0.054	21	-	-	28	5.0 U	1.0 U	5.21	1.947	3.71	6.37	10.6	77.9
Area 1/FDSA	G6M-04-10X	6/12/2007	1.0 U	9.9	**28**	2.0 U	2.4	2.0 U	5.0 U	100 U	250	0.010 J	0.065	18	-	-	31	5.0 U	1.0 U	5.35	3.150	14.0	6.31	15.9	230.7
Area 1/FDSA	G6M-04-10X	9/11/2007	1.0 U	13	**35**	2.0 U	3.4	2.0 U	6.0 U	100 U	270	0.008 J	0.010 J	13	1.4	10 U	2,000	5.0 U	1.0 U	5.29	2.617	10.5	8.98	14.3	-40.6
Area 1/FDSA	G6M-04-10X	12/11/2007	1.0 U	6.4	**20**	2.0 U	2.0 U	2.0 U	5.0 U	100 U	230	0.010 J	0.028	5.3	-	-	35	5.0 U	1.0 U	5.46	3.660	2.80	5.62	14.5	27.7
Area 1/FDSA	G6M-04-10X	3/11/2008	1.0 U	9.7	**22**	2.0 U	2.1	2.0 U	5.0 U	160	250	0.004 J	0.010 J	4.1	-	-	28	5.0 U	1.0 U	4.99	2.890	< 0.01	6.42	13.6	213.5
Area 1/FDSA	G6M-04-10X	10/15/2008	0.5 U	8.4	**18**	0.5 U	1.6	0.5 U	8.0 U	200 U	265	1.2 U	1.5 U	6.1	1.4	30	27	10 U	0.03 U	5.28	3.339	1.40	6.58	11.8	247.1

		Analytical Method	VOCs						Dissolved Metals			Dissolved Gases			General Chemistry					Field Parameters					
		Analyte	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Nitrate/ Nitrite	Alkalinity	Sulfate	TOC	Sulfide	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mS/cm)	(NTU)	(mg/L)	°C	(mV)
		Cleanup Level[1]	7	70	5	70	5	2	10	3,129	1,460				10,000										
Area	Well ID	Date Sampled																							
Area 1/FDSA	G6M-04-10X	5/7/2009	0.5 U	5.0	**15**	0.5 U	1.2	0.5 U	8.0 U	200 U	213	1.3 U	1.6 U	0.76	1.2	20 U	33	10 U	0.03 U	5.20	2.229	1.53	5.86	11.2	196.8
Area 1/FDSA	G6M-04-10X	10/20/2009	0.5 U	5.2	**9.8**	0.5 U	4.8	0.27 J	8.0 U	139 U	197	1.3 U	1.6 U	19	1.1	20 U	29	10 U	0.03 U	5.20	2.651	2.68	5.72	11.6	226.2
Area 1/FDSA	G6M-04-10X	4/21/2010	0.5 U	6.5	**24**	0.5 U	1.5	0.5 U	5.0 U	100 U	200	1.3 U	1.6 U	87	1.4	25	31	10 U	0.03 U	5.26	2.760	4.00	5.13	14.4	187.2
Area 1/FDSA	G6M-04-10X	10/6/2010	0.5 U	7.9	**24**	0.5 U	1.8	0.5 U	5.0 U	100 U	208	1.2 U	1.5 U	3.7	1.8	25	28	10 U	0.03 U	5.18	2.937	< 0.01	5.63	12.4	225.7
Area 1/FDSA	G6M-04-10X	10/4/2011	0.5 U	1.9	**9.0**	0.5 U	0.5 U	0.5 U	5.0 U	100 U	173	1.2 U	1.5 U	47	1.3	20 U	28	4.5 J	0.03 U	5.01	1.078	1.16	4.46	11.3	192.8
Area 1/FDSA	G6M-04-10X	10/15/2012	0.5 U	1.9	**15**	0.5 U	0.72	0.5 U	5.0 U	100 U	224	1.2 U	1.5 U	32	1.2	20 U	35	10 U	0.03 U	5.53	3.135	0.33	5.25	12.9	204.0
Area 1/FDSA	G6M-04-10X	10/17/2013	0.5 U	0.50 J	**6.2**	0.5 U	0.28 J	0.5 U	3.3 J	1,270	262	1.2 U	1.5 U	5,500	0.95	20 U	37	2.7 J	0.03 U	5.32	4.698	2.89	3.90	13.0	164.1
Area 1/FDSA	G6M-04-10X	11/3/2014	0.5 U	0.47 J	**7.4**	0.5 U	0.27 J	0.5 U	2.5 U	1,320	308	1.2 U	1.5 U	200	1.3 J	20 U	30 J	5.0 U	0.03 U	5.27	2.562	0.97	5.28	12.6	148.4
Area 1/FDSA	G6M-04-10X	9/9/2015	0.5 U	0.5 U	2.8	0.5 U	0.5 U	0.5 U	2.0 U	114	383	5.0 U	5.0 U	5.0 U	0.92	-	35	0.81 U	1.0 U	5.38	2.257	4.98	3.32	13.1	169.9
Area 1/FDSA	G6M-04-10X	10/13/2015	1.0 U	1.0 U	3.1	1.0 U	1.0 U	1.0 U	4.0 U	100 U	344	10 U	10 U	10 U	1.1	7.2	35	1.0 U	2.0 U	5.31	3.174	28.5	2.86	12.3	202.1
Area 1/FDSA	G6M-04-10X	2/9/2016	1.0 U	1.0 U	2.3	1.0 U	1.0 U	1.0 U	4.0 U	53 J	274	10 U	10 U	6.9 J	0.91	7.1	35	1.0 U	2.0 U	5.49	1.922	19.3	2.49	8.6	196.7
Area 1/FDSA	G6M-04-10X	6/14/2016	1.0 U	1.0 U	3.0	1.0 U	1.0 U	1.0 U	3.0 U	73	330	5.3	5.1 J	27	1.0	9.4	35	0.63 J	1.0 U	5.72	3.364	0.96	1.77	11.6	102.1
Area 1/FDSA	G6M-04-10X	11/9/2016	1.0 U	1.0 U	2.1	1.0 U	1.0 U	1.0 U	3.0 U	36 J	420	1.1 U	1.0 U	170	0.58	10	32	0.72 J	2.2	5.70	1.546	4.27	0.76	9.2	67.9
Area 1/FDSA	G6M-04-10X	5/18/2017	1.0 U	1.0 U	1.2	1.0 U	1.0 U	1.0 U	3.0 U	20 J	1,100	1.1 U	1.0 U	180	0.42	12	32	1.0 U	1.0 U	5.51	1.523	11.3	0.63	10.9	162.1
Area 1/FDSA	G6M-04-10X	10/12/2017	1.0 U	1.0 U	1.2	1.0 U	1.0 U	1.0 U	3.0 U	75 U	1,200	1.1 U	1.0 U	760	0.46	13	34	1.0 U	1.0 U	5.56	2.020	4.17	1.11	10.3	195.3
Area 1/FDSA	G6M-04-10X	10/17/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	5.20	1.534	4.23	0.26	11.3	181.2
Area 1/FDSA	G6M-04-10X	10/9/2019	1.0 U	1.0 U	1.3	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	1.3	-	7.21	2.300	2.10	0.30	11.0	93.9
Area 1/FDSA	G6M-04-10X	10/14/2020	1.0 U	1.0 U	1.1	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	5.28	1.910	3.33	0.44	13.2	118.0
Area 1/FDSA	G6M-04-10X	10/13/2021	1.0 U	1.0 U	1.7 J	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	5.26	2.260	1.40	0.89	12.0	122.0
Area 1/FDSA	G6M-04-10X	10/4/2022	1.0 U	1.0 U	0.36 J	1.0 U	0.5 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	6.24	1.264	1.28	0.72	11.8	31.9
Area 1/FDSA	G6M-04-10X	10/18/2023	1.0 U	1.0 U	1.0 U	1.0 U	0.29 J	1.0 U	-	-	-	-	-	-	-	-	-	-	-	6.34	1.960	0.09	1.49	16.1	-74.5
Area 1/FDSA	G6M-04-13X	9/21/2004	1.0 U	2.0 U	**8.0**	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	350	-	-	-	-	-	-	-	-	5.96	0.138	1.75	8.00	16.0	551.8
Area 1/FDSA	G6M-04-13X	9/26/2005	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	15 U	-	-	-	-	-	-	-	-	6.43	0.042	3.80	10.5	17.2	180.0
Area 1/FDSA	G6M-04-13X	9/18/2006	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	100 U	15 U	-	-	-	-	-	-	-	-	5.65	0.076	12.1	8.63	13.3	213.9
Area 1/FDSA	G6M-04-13X	9/12/2007	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	100 U	15 U	-	-	-	-	-	-	-	-	6.07	0.140	14.1	8.70	13.4	147.4
Area 1/FDSA	G6M-04-13X	10/17/2008	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	8.0 U	200 U	50 U	-	-	-	-	-	-	-	-	5.22	0.046	45.0	9.98	10.6	124.4
Area 1/FDSA	G6M-04-13X	10/20/2009	25 U	25 U	25 U	25 U	**16 J**	25 U	2.0 J	132 U	50 U	-	-	-	-	-	-	-	-	5.78	0.049	12.2	10.6	11.1	283.7
Area 1/FDSA	G6M-04-13X	10/7/2010	0.5 U	0.5 U	0.29 J	0.5 U	0.5 U	0.5 U	5.0 U	100 U	25 U	-	-	-	-	-	-	-	-	5.83	0.048	2.87	8.84	10.3	147.3
Area 1/FDSA	G6M-04-13X	10/4/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	100 U	14 J	-	-	-	-	-	-	-	-	5.54	0.024	13.5	9.15	11.4	208.7
Area 1/FDSA	G6M-04-13X	10/16/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	100 U	5.1 J	-	-	-	-	-	-	-	-	6.28	0.047	17.2	9.95	11.1	108.1
Area 1/FDSA	G6M-04-13X	10/22/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	100 U	25 U	-	-	-	-	-	-	-	-	5.92	0.021	45.6	10.7	10.3	120.9
Area 1/FDSA	G6M-04-13X	11/3/2014	0.5 U	0.5 U	0.36 J	0.5 U	0.5 U	0.5 U	2.5 U	24 J	7.5 U	-	-	-	-	-	-	-	-	6.23	0.029	35.2	6.38	15.2	147.6
Area 1/FDSA	G6M-04-13X	10/14/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	100 U	15 U	-	-	-	-	-	-	-	-	6.85	0.045	1.07	8.83	14.7	114.7
Area 1/FDSA	G6M-04-13X	11/10/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	50 U	3.0 U	-	-	-	-	-	-	-	-	6.13	0.027	2.69	8.22	6.8	-8.8
Area 1/FDSA	G6M-04-13X	5/16/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	50 U	3.6 J	12	10	21	0.62	9.5	4.8	1.0 U	1.0 U	6.47	0.034	2.36	9.01	9.7	210.7
Area 1/FDSA	G6M-04-13X	10/6/2017	1.0 U	1.0 U	1.3	1.0 U	1.0 U	1.0 U	3.0 U	50 U	3.0 U	1.1 U	1.0 U	0.33 J	0.84	8.7 U	4.6	0.45 J	1.0 U	5.86	0.056	2.60	3.64	10.4	223.4
Area 1/FDSA	G6M-04-13X	10/19/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	5.02	0.162	3.31	10.4	10.4	77.8
Area 1/FDSA	G6M-04-13X	10/9/2019	1.0 U	2.4	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	7.41	0.100	3.10	1.6	10.0	14.3
Area 1/FDSA	G6M-04-13X	10/14/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	6.45	0.060	3.32	1.77	12.1	-14.6
Area 1/FDSA	G6M-04-13X	10/13/2021	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	6.69	0.070	8.48	1.91	12.0	-75.5
Area 1/FDSA	G6M-04-13X	10/4/2022	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	7.16	0.074	2.33	0.75	11.8	-107.2
Area 1/FDSA	G6M-04-13X	10/18/2023	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	6.78	0.110	3.31	0.51	13.8	-58.7
Area 1/FDSA	G6M-07-02X	12/12/2007	1.0 U	2.0 U	**50**	2.0 U	2.0 U	2.0 U	5.0 U	100 U	64	0.024 J	0.022 J	0.73	-	-	16	5.0 U	1.0 U	5.90	0.148	5.40	7.54	9.8	194.2
Area 1/FDSA	G6M-07-02X	3/11/2008	1.0 U	2.0 U	**1,800**	2.0 U	2.0 U	2.0 U	5.0 U	100 U	35	0.014 J	0.019 J	7.1	-	-	26	5.0 U	1.0 U	5.70	0.108	< 0.01	7.50	11.0	165.5
Area 1/FDSA	G6M-07-02X	10/15/2008	5.0 U	5.0 U	**170**	5.0 U	5.0 U	5.0 U	5.5 J	200 U	21 J	1.2 U	10	12,000	0.13 U	20 U	11	10 U	0.03 U	5.34	0.067	19.0	9.25	10.7	93.2
Area 1/FDSA	G6M-07-02X	5/11/2009	0.5 U	0.5 U	**46**	0.5 U	0.5 U	0.5 U	7.1	200 U	5.8 J	1.2 U	1.5 U	7.0	0.062	20 U	8.6 J	5.7 J	0.03 U	6.17	0.055	4.00	9.40	11.3	115.7
Area 1/FDSA	G6M-07-02X	10/20/2009	0.5 U	0.5 U	**30 J**	0.5 U	0.5 U	0.5 U	6.6	200 U	50 U	1.3 U	1.6 U	6.2 J	0.13 U	20 U	7.2	10 U	0.03 U	6.00	0.053	9.35	9.34	14.5	128.9
Area 1/FDSA	G6M-07-02X	4/21/2010	2.0 U	2.0 U	**63**	2.0 U	2.0 U	2.0 U	6.2	176 U	25 U	1.2 U	1.5 U	3,200	0.0098 J	30	6.8	10 U	0.03 U	6.10	0.034	12.0	0.33	16.3	139.3
Area 1/FDSA	G6M-07-02X	10/6/2010	0.5 U	0.5 U	**26 J**	0.5 U	0.5 U	0.5 U	3.4 J	100 U	25 U	1.2 U	1.5 U	28	0.21	32	5.6	10 U	0.03 U	5.31	0.053	5.48	6.13	13.0	170.0
Area 1/FDSA	G6M-07-02X	10/4/2011	0.5 U	0.5 U	**700**	0.5 U	0.5 U	0.5 U	4.6 J	100 U	80	1.2 U	1.5 U	46,000	0.13 U	31	4.4 J	10 U	0.03 U	5.17	0.045	8.20	0.09	10.9	176.5
Area 1/FDSA	G6M-07-02X	10/11/2012	5.0 U	6.4	**90**	5.0 U	**190**	5.0 U	5.0 U	286	40	1.2 U	1.5 U	46,000 J	0.056 J	20 U	6.4	10 U	0.03 U	6.28	0.068	11.3	1.60	19.8	76.1
Area 1/FDSA	G6M-07-02X	10/17/2013	20 U	20 U	**1,000**	20 U	**8.7 J**	20 U	5.0 U	100 U	32	1.2 U	1.5 U	520 J	0.13 U	21	4.5 J	10 U	0.03 U	6.03	0.060	1.17	4.25	20.2	143.0
Area 1/FDSA	G6M-07-02X	11/3/2014	50 U	31 J	**14,000**	50 U	**40 J**	50 U	2.2 J	421 J	43	1.2 U	1.5 U	6,200	0.13 U	22	4.2 J	5.0 U	0.03 U	5.85	0.040	12.1	0.23	9.2	70.2
Area 1/FDSA	G6M-07-02X	12/11/2014	50 U	50 U	**6,200**	50 U	**57**	50 U	-	-	-	-	-	-	-	-	-	-	-	5.39	0.098	0.85	0.51	7.4	218.1
Area 1/FDSA	G6M-07-02X	10/13/2015	1.0 U	1.0 U	**482**	3.1 J	**13**	1.0 U	4.0 U	303	33	10 U	10 U	3,200 J	0.11 U	10	10	1.0 U	2.0 U	5.86	0.055	5.95	0.27	15.6	59.3
Area 1/FDSA	G6M-07-02X	6/14/2016	20 U	20 U	**1,400**	20 U	**10 J**	20 U	3.0 U	110	37	1.1 U	1.0 U	970	0.05 U	12	6.6	1.2	1.0 U	5.56	0.060	0.92	1.86	10.3	94.3
Area 1/FDSA	G6M-07-02X	11/9/2016	20 U	20 U	**3,200**	20 U	20 U	20 U	3.0 U	100	41	1.1 U	1.0 U	100	0.062 J	15	6.0	0.93 J	1.0 U	5.91	0.042	2.63	1.18	8.2	39.5
Area 1/FDSA	G6M-07-02X	5/16/2017	20 U	20 U	**1,800**	20 U	20 U	20 U	3.0 U	50 U	17	1.1 U	1.0 U	1.8	0.32	14	6.2	1.0 U	1.0 U	5.70	0.042	2.73	3.69	9.7	213.3
Area 1/FDSA	G6M-07-02X	10/10/2017	20 U	20 U	**910 J**	20 U	20 U	20 U	**37 J**	**220,000 J**	**14,000 J**	24 J	4.3 J	1,200	2.0	520	20	3,400	1.0 U	6.21	2.080	> 5,000	0.51	11.1	-161.2
Area 1/FDSA	G6M-07-02X	4/4/2018	5.0 U	33	**350**	5.0 U	5.0 U	5.0 U	**89**	**85,000**	**2,800**	10	17	25,000	0.13	150	10	580	1.0 U	5.91	0.652	1,700	0.81	9.0	-69.7
Area 1/FDSA	G6M-07-02X	10/17/2018	5.0 U	**110**	**370**	5.0 U	4.1 J	**3.3 J**	**69**	**370,000**	**6,100**	14	43	25,000	0.43 J	400	6.6 J	1,300	1.0 U	5.48	1.315	> 5,000	0.15	10.7	44.9
Area 1/FDSA	G6M-07-02X	4/5/2019	1.0 U	**110**	**71 J**	1.0 U	1.8	**3.4**	**40**	**210,000**	**5,600**	7.6	11	16,000	0.27	-	1.0 U	350	1.0 U	6.10	0.850	35.0	0.37	8.4	82.0
Area 1/FDSA	G6M-07-02X	10/9/2019	5.0 U	**140**	**5.3**	5.0 U	5.0 U	**4.6 J**	**48**	**210,000**	**5,500**	5.0	6.2	13,000	0.39	210	1.0 U	260	0.83 U	7.34	0.730	12.0	0.21	11.0	-55.3
Area 1/FDSA	G6M-07-02X	05/12/2020	1.0 U	**110**	2.4	1.0 U	0.72 J	**3.6**	**43**	**250,000**	**4,900**	3.6	4.4	14,000	0.13 U	250	5.0 U	290	1.9	6.58	0.620	27.8	0.32	9.8	7.0
Area 1/FDSA	G6M-07-02X	10/14/2020	1.0 U	40	1.1	1.0 U	1.0 U	1.7	**42**	**220,000**	**4,500**	1.3	2.0	6,600	0.17	190	5.0 U	230	0.81 U	6.63	0.526	20.9	0.51	12.0	-111.0
Area 1/FDSA	G6M-07-02X	5/12/2021	1.0 U	14	2.0 U	1.0 U	1.0 U	**2.6**	6.2	**240,000**	**4,500**	4.6	5.7	20,000	0.12	230	1.0 U	260	4.0 U	6.50	0.737	23.4	1.46	19.4	-166.9
Area 1/FDSA	G6M-07-02X	10/12/2021	1.0 U	9.8	2.0 U	1.0 U	1.0 U	1.5	**25**	**170,000**	**4,300**	3.4	3.2	15,000	0.074 J	130	1.0 U	190	0.81 U	6.96	0.459	62.4	0.64	13.3	-169.9
Area 1/FDSA	G6M-07-02X	5/2/2022	1.0 U	2.3	1.0 U	1.0 U	1.0 U	0.83 J	**47**	**120,000**	**3,000**	3.6	3.8	16,000 J	0.15	110	1.0 U	160	1.5 U	6.48	0.433	5.75	0.88	10.2	-113.0

		Analytical Method	VOCs						Dissolved Metals			Dissolved Gases			General Chemistry					Field Parameters					
		Analyte	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Nitrate/ Nitrite	Alkalinity	Sulfate	TOC	Sulfide	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mS/cm)	(NTU)	(mg/L)	°C	(mV)
		Cleanup Level[1]	7	70	5	70	5	2	10	3,129	1,460				10,000										
Area	Well ID	Date Sampled																							
Area 1/FDSA	G6M-07-02X	10/5/2022	1.0 U	2.1 J	1.0 U	1.0 U	0.5 U	0.64 J	**35**	**120,000**	**3,400**	1.9	2.2	14,000	0.025 U	120	1.0 U	160	1.7 U	6.17	0.442	2.45	0.68	10.9	-78.4
Area 1/FDSA	G6M-07-02X	6/6/2023	1.0 U	0.94 J	1.0 U	1.0 U	0.5 U	1.0 U	7.3	**100,000**	**3,300**	6.7	7.6	16,000	0.064 J	95	1.0 U	100	1.5 U	6.47	0.430	21.30	0.69	13.9	-115.0
Area 1/FDSA	G6M-07-02X	10/18/2023	1.0 U	1.1 J	1.0 U	1.0 U	0.5 U	1.0 U	**25**	**93,000**	**2,800**	1.7	1.7	14,000	0.025 U	81	1.0 U	95	1.6 U	6.87	0.280	2.56	0.45	12.2	-90.2
Area 2	G6M-02-01X	2/28/2002	1.0 U	2.0 U	**11**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.91	0.624	14.0	4.70	13.5	66.6
Area 2	G6M-02-01X	9/23/2004	1.0 U	2.0 U	**24**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.64	0.784	6.11	2.54	19.4	145.0
Area 2	G6M-02-01X	9/30/2005	1.0 U	3.1	**110**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.07	0.555	10.9	3.82	18.0	384.8
Area 2	G6M-02-01X	9/20/2006	1.0 U	**91**	**1,300**	2.0 U	**12**	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.19	0.708	9.07	3.68	17.3	-108.2
Area 2	G6M-02-01X	3/30/2007	1.0 U	**120**	**1,700**	2.0 U	**19**	2.0 U	5.0 U	100 U	120 J	0.012 J	0.081	-	-	-	9.4	3.3 J	1.0 U	6.64	0.800	0.78	4.22	14.1	-35.3
Area 2	G6M-02-01X	6/14/2007	1.0 U	**97**	**1,700**	2.0 U	**16**	2.0 U	-	-	-	-	-	-	-	-	-	1.9 J	-	6.72	0.853	10.4	3.30	14.8	69.6
Area 2	G6M-02-01X	9/14/2007	1.0 U	**150**	**1,900**	2.0 U	**24**	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.57	0.747	0.10	3.32	14.4	102.4
Area 2	G6M-02-01X	12/13/2007	1.0 U	**130 J**	**1,600**	2.0 U	**21 J**	2.0 U	-	-	-	-	-	-	-	-	-	3.6 J	-	6.61	0.807	< 0.01	2.73	12.6	128.0
Area 2	G6M-02-01X	3/14/2008	2.2	**600**	**520**	2.0 U	**70**	2.0 U	**150**	**26,000**	**23,000**	0.052	0.16	12	-	-	5.0 U	180	1.0 U	6.45	1.620	2.70	0.38	13.4	-99.2
Area 2	G6M-02-01X	10/7/2008	10 U	**360**	**180**	10 U	**49**	10 U	**141**	**14,500**	**5,880**	6.3 U	9.5	5,000	0.13 U	200	11	18	0.03 U	6.97	1.193	8.40	0.18	12.1	-112.9
Area 2	G6M-02-01X	1/21/2009	1.2 J	**170**	**280**	1.3 U	76 U	94 U	**148**	**11,200 J**	**4,500**	1.3 U	24	4,000	0.13 U	170	7.0 U	11 J	0.03 U	7.13	1.279	1.20	0.39	11.1	-142.7
Area 2	G6M-02-01X	5/6/2009	10 U	**100**	**610**	10 U	**190**	**54**	**133**	**18,700**	**3,950**	1.2 U	29	29,000	0.059 J	220 J	8.4	13	0.03 U	6.69	1.085	1.15	0.20	11.4	-127.7
Area 2	G6M-02-01X	10/20/2009	40 U	**76**	**820**	40 U	**180**	**47**	**108**	**11,800**	**2,470**	1.3 U	9.0	5,000 J	0.074 J	130	7.6	4.6 J	0.03 U	6.66	0.925	3.52	1.24	11.5	32.9
Area 2	G6M-02-01X	4/21/2010	2.0 U	0.47 J	**37 J**	2.0 U	**53 J**	**69 J**	**164**	**20,500 J**	**4,480**	1.3 U	43	12,000 J	0.024 J	280 J	4.0 J	40	0.03 U	6.70	1.180	1.60	0.42	11.6	-122.0
Area 2	G6M-02-01X	10/6/2010	1.4	**72**	**470**	1.4	**120**	**84**	**133**	**13,700**	**3,050**	1.2 U	49	25,000	0.13 U	120	5.2	10 U	0.03 U	6.39	1.039	3.65	0.28	12.5	-77.8
Area 2	G6M-02-01X	6/9/2011	0.5 U	11	0.5 U	0.69	4.3	**12**	**173**	**45,900**	**7,380**	1.2 U	230	71,000	0.11 J	400	3.3 J	90	0.03 U	6.42	1.423	< 0.01	0.30	14.6	-86.3
Area 2	G6M-02-01X	10/5/2011	0.5 U	3.6	0.5 U	0.5 U	0.88	**7.3**	**271**	**27,300**	**5,470**	1.2 U	290	72,000 J	0.13 U	190	1.4 J	18	0.03 U	6.60	0.681	0.87	0.02	12.5	-106.0
Area 2	G6M-02-01X	5/9/2012	8.0 U	65	**250**	8.0U	**310**	**63**	**271**	**10,800**	**2,050**	1.1 U	260	41,000	0.13 U	86	6.8	2.3 J	0.081	6.66	0.798	1.60	0.07	12.4	-79.2
Area 2	G6M-02-01X	10/10/2012	10 U	**75**	**350**	10 U	**120**	**160**	**220**	**10,400**	**2,080**	1.2 U	250	37,000 J	0.13 U	120 J	6.5	10 U	0.36 J	6.64	0.906	3.71	0.50	13.2	-80.5
Area 2	G6M-02-01X	5/21/2013	0.5 U	8.4	0.25 J	0.67	4.7	**5.2**	**272**	**35,600**	**7,450**	1.2 U	220	22,000	0.13 U	240 J	3.0 J	43	0.076 J	6.57	1.439	0.71	0.14	14.2	-91.7
Area 2	G6M-02-01X	10/17/2013	0.5 U	11	0.5 U	0.58	2.4	**14**	**323**	**40,300**	**4,000**	1.2 U	450 J	52,000	0.13 U	140	5.0 U	2.6 J	0.078	6.66	0.753	2.24	0.22	13.1	-117.5
Area 2	G6M-02-01X	6/11/2014	0.5 U	1.4	0.5 U	0.5 U	0.5 U	**2.6**	**449**	**84,000 J**	**4,260**	1.3 U	16 J	5,300 J	0.13 U	210 J	1.2 U	9.5 J	0.03 U	6.73	1.174	4.68	0.25	13.1	-103.1
Area 2	G6M-02-01X	10/30/2014	0.5 U	1.5	0.5 U	0.5 U	0.21 J	0.87	**384**	**47,900**	**1,820**	15	40	24,000	0.13 U	86	2.3 J	5.0 U	0.03 U	6.57	0.959	1.81	0.23	12.7	-130.8
Area 2	G6M-02-01X	6/17/2015	0.5 U	0.53 J	0.5 U	0.5 U	0.5 U	0.5 U	**418**	**61,900**	**1,760**	5.0 U	6.0 J	712	0.11 U	67	0.5 U	6.2	1.0 U	6.80	0.671	8.45	0.25	13.7	-91.1
Area 2	G6M-02-01X	10/16/2015	1.0 U	1.0 U	1.0 U	1.0 U	0.50 J	1.0 U	**374**	**60,900**	**1,750**	10 U	5.3 J	8,550	0.061 J	-	0.96 J	2.1	2.0 U	6.77	0.807	0.81	0.24	16.0	-110.5
Area 2	G6M-02-01X	2/18/2016	1.0 U	0.89 J	1.0 U	1.0 U	1.0 U	0.53 J	**360**	**56,200**	**1,750**	10 U	10 U	14,200	0.11 U	55	1.1 J	2.1	2.0 U	6.86	1.109	2.79	0.11	16.1	-128.2
Area 2	G6M-02-01X	6/13/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**347**	**52,500**	**2,420**	10 U	10 U	12,500	0.10 U	155	1.5 J	6.8	2.0 U	7.01	1.659	3.95	0.80	10.3	31.9
Area 2	G6M-02-01X	11/9/2016	1.0 U	0.69 J	1.0 U	1.0 U	1.0 U	1.0 U	**450**	**100,000**	**2,700**	1.1 U	1.0 U	22,000	0.021 J	150	0.8 U	7.7	1.0 U	6.87	1.691	5.91	0.21	17.2	-145.7
Area 2	G6M-02-01X	5/19/2017	1.0 U	0.52 J	1.0 U	1.0 U	1.0 U	1.0 U	**430**	**62,000**	**2,100**	1.1 U	1.0 U	18,000	0.05 U	140	1.0 U	3.1	1.8	6.92	1.743	4.67	0.23	13.1	-13.0
Area 2	G6M-02-01X	10/13/2017	1.0 U	0.77 J	1.0 U	1.0 U	1.0 U	0.52 J	**500**	**110,000**	**2,600**	1.1 U	1.0 U	24,000	0.09 J	220	0.51 J	4.9	1.0 U	6.85	1.590	7.23	0.42	14.4	-132.4
Area 2	G6M-02-01X	10/29/2018	1.0 U	1.3	1.0 U	1.0 U	0.73 J	1.0 U	**400**	**76,000**	1,300	1.1 U	3.8	12,000	0.10	64	0.57 J	3.3	1.0 U	6.66	0.958	7.14	0.46	12.1	-107.4
Area 2	G6M-02-01X	10/16/2019	1.0 U	2.0	1.0 U	1.0 U	4.1	0.63 J	**51**	3,100	**2,700**	-	-	-	-	-	-	-	-	7.48	3.070	18.2	0.17	12.8	-115.8
Area 2	G6M-02-01X	10/20/2020	1.0 U	4.5	**5.3**	1.0 U	**25**	**2.8**	**100**	**5,300**	**2,700**	-	-	-	-	-	-	-	-	6.60	2.700	16.0	0.13	12.0	-120.0
Area 2	G6M-02-01X	5/12/2021	1.0 U	1.2	2.0 U	1.0 U	2.2	1.0 U	**270**	**27,000**	**2,000**	-	-	-	-	-	-	-	-	6.95	1.450	17.8	0.20	13.7	-103.0
Area 2	G6M-02-01X	10/13/2021	1.0 U	1.4	2.0 U	1.0 U	2.4	0.72 J	**230**	**16,000**	**2,200**	0.76 U	11	24,000	0.05 U	140	13	2.0	0.81 U	6.94	1.968	109.0	0.55	13.8	-126.0
Area 2	G6M-02-01X	10/7/2022	1.0 U	3.7	**7.7**	1.0 U	**23**	**2.4**	**310**	**22,000**	**1,900**	-	-	-	-	-	-	-	-	6.87	3.780	39.9	0.51	15.4	-127.0
Area 2	G6M-02-01X	10/19/2023	1.0 U	2.0	1.0 U	1.0 U	**6.3**	1.4	**140**	**18,000**	**1,600**	1.1	18	29,000	0.025 U	110	8.3	2.4	1.7 U	7.05	1.498	1.67	0.63	15.9	-142.4
Area 2	G6M-04-01X	9/23/2004	1.0 U	21	**250**	2.0 U	3.6	2.0 U	**250**	**19,000**	**1,900**	0.4 J	9.0	19,000	0.025 U	130	8.0	2.9	1.8 U	6.80	2.660	16.20	0.80	15.3	-160.0
Area 2	G6M-04-01X	9/28/2005	1.0 U	9.2	**140**	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	220	-	-	-	-	-	-	-	-	6.82	2.391	9.42	3.92	15.4	245.2
Area 2	G6M-04-01X	9/20/2006	1.0 U	7.2	**150**	2.0 U	2.0 U	2.0 U	5.1	1,000 U	170	-	-	-	-	-	-	-	-	6.49	2.699	7.29	5.85	13.2	202.3
Area 2	G6M-04-01X	12/13/2006	1.0 U	**75**	**200**	2.0 U	**11**	2.0 U	5.0 U	100 U	220	-	-	-	-	-	-	-	-	5.87	2.920	3.53	4.88	11.9	-91.4
Area 2	G6M-04-01X	9/14/2007	1.0 U	8.6	**290**	2.0 U	2.0 U	2.0 U	**160**	**83,000**	**20,000**	0.004 J	0.038	1,700	-	-	50	440	2.8	6.07	3.107	5.21	1.43	13.6	-72.8
Area 2	G6M-04-01X	10/20/2008	10 U	10 U	**270 J**	10 U	**11 J**	10 U	6.0 U	100 U	130	-	-	-	-	-	-	-	-	6.00	2.055	35.8	5.21	12.2	155.3
Area 2	G6M-04-01X	10/20/2009	13 U	**360**	**190**	13 U	**130**	**15**	8.0 U	200 U	53.1 J	-	-	-	-	-	-	-	-	7.32	0.999	3.50	3.37	17.3	96.2
Area 2	G6M-04-01X	10/7/2010	0.29 J	**120**	**27**	0.68	**19**	**140**	8.0 U	100 U	113	-	-	-	-	-	-	-	-	5.79	0.908	4.80	2.25	13.4	342.4
Area 2	G6M-04-01X	10/5/2011	0.5 U	36	**14**	0.71	**7.6**	**160**	5.0 U	1,050	164	-	-	-	-	-	-	-	-	6.14	1.312	1.55	0.29	11.5	124.3
Area 2	G6M-04-01X	10/12/2012	4.0 U	18	**5.5**	4.0 U	4.0 U	**130**	3.7 J	381	261	-	-	-	-	-	-	-	-	6.27	1.132	3.30	0.48	12.7	69.9
Area 2	G6M-04-01X	10/17/2013	0.5 U	0.99	0.5 U	0.29 J	0.78	**14**	3.5 J	742	925	-	-	-	-	-	-	-	-	6.36	1.700	1.85	0.38	12.4	19.1
Area 2	G6M-04-01X	10/31/2014	0.5 U	0.56	0.39 J	0.37 J	0.52	**7.9**	6.0	1,060	**8,890**	-	-	-	-	-	-	-	-	6.46	2.509	2.49	0.40	14.5	17.4
Area 2	G6M-04-01X	9/10/2015	1.0 U	0.93 J	1.0 U	1.0 U	1.0 U	0.75 J	**164**	**59,400**	**28,900**	-	-	-	-	-	-	-	-	6.69	1.850	19.6	0.48	13.3	-95.3
Area 2	G6M-04-01X	10/14/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**162**	**31,700**	**9,040**	10 U	10 U	6,240	0.12	-	3.6 J	19	2.0 U	7.15	1.880	41.6	0.45	15.9	-152.7
Area 2	G6M-04-01X	2/18/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**382**	**96,400**	**24,400**	-	-	-	-	-	-	-	-	6.78	2.878	4.83	0.10	12.5	-133.0
Area 2	G6M-04-01X	6/13/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**76**	**16,400**	**7460**	10 U	10 U	7,060	0.10 U	411	14	12	2.0 U	6.68	1.624	6.39	1.67	9.5	182.6
Area 2	G6M-04-01X	11/9/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**380**	**80,000**	**19,000**	-	-	-	-	-	-	-	-	6.69	3.639	17.6	0.65	17.7	-120.3
Area 2	G6M-04-01X	10/13/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**320**	**95,000**	**19,000**	-	-	-	-	-	-	-	-	6.76	2.631	4.60	0.42	11.4	-82.0
Area 2	G6M-04-01X	10/30/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**450**	**81,000**	**18,000**	-	-	-	-	-	-	-	-	6.66	3.540	11.5	0.87	13.5	-99.2
Area 2	G6M-04-01X	10/16/2019	1.0 U	0.41 J	1.0 U	1.0 U	0.48 J	1.0 U	**470**	**68,000**	**19,000**	-	-	-	-	-	-	-	-	6.48	5.152	3.01	0.55	11.7	-73.1
Area 2	G6M-04-01X	10/19/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**540**	**52,000**	**13,000**	-	-	-	-	-	-	-	-	6.20	4.400	3.70	0.18	13.0	-67.0
Area 2	G6M-04-01X	10/13/2021	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	**580**	**45,000**	**13,000**	-	-	-	-	-	-	-	-	6.56	2.840	34.7	0.29	12.9	-73.4
Area 2	G6M-04-01X	10/7/2022	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	**680**	**42,000**	**11,000**	-	-	-	-	-	-	-	-	6.45	5.250	7.57	0.68	15.6	-79.2
Area 2	G6M-04-01X	10/20/2023	1.0 U	0.4 J	1.0 U	1.0 U	0.47 J	1.0 U	**650**	50 U	3.4 J	-	-	-	-	-	-	-	-	6.62	2.451	2.49	0.69	16.7	-80.4
Area 2	G6M-04-03X	9/23/2004	1.0 U	3.3	**440**	2.0 U	2.0 U	2.0 U	**600**	**33,000**	**8,100**	-	-	-	-	-	-	-	-	6.33	3.570	15.20	1.07	13.8	-78.8
Area 2	G6M-04-03X	9/27/2005	1.0 U	10	**680**	1.0 U	**14**	1.0 U	5.0 U	1,000 U	**3,100**	0.22	0.036	100	5.1	53	23	1.4	2.2	6.37	1.236	12.2	3.41	12.9	446.5
Area 2	G6M-04-03X	9/22/2006	1.0 U	6.3	**2,600**	2.0 U	**420**	2.0 U	5.0 U	600 J	**3,500**	0.19	0.32	52	0.35	82	38 J	6.0	1.0 U	6.29	1.361	9.62	0.79	12.9	377.5
Area 2	G6M-04-03X	10/5/2022	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	5.0 U	100 U	**2,900**	0.049	0.30	17	0.2 U	190	17	7.2	1.0 U	6.30	0.524	3.52	0.43	15.1	152.1

Appendix D
Historical Groundwater Analytical Results
2023 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

		Analytical Method	VOCs						Dissolved Metals			Dissolved Gases			General Chemistry					Field Parameters					
		Analyte	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Nitrate/ Nitrite	Alkalinity	Sulfate	TOC	Sulfide	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mS/cm)	(NTU)	(mg/L)	°C	(mV)
		Cleanup Level[1]	7	70	5	70	5	2	10	3,129	1,460				10,000										
Area	Well ID	Date Sampled																							
Area 2	G6M-04-03X	12/14/2006	1.0 U	120	1,600	2.0 U	18	2.0 U	-	-	-	-	-	-	-	-	-	5.0 U	-	6.54	0.831	2.81	3.64	14.3	-34.8
Area 2	G6M-04-03X	9/14/2007	1.0 U	2.7	770	2.0 U	68	2.0 U	38	870	2,300	0.062	0.11	3.0	0.2 U	100	24	1.6 J	1.0 U	7.29	0.294	3.60	0.49	14.2	-110.3
Area 2	G6M-04-03X	10/16/2008	5.0 U	7.6	160	5.0 U	18	5.0 U	95	200 U	930	1.3 U	1.6 U	6.2 J	0.10 U	150 J	8.0	10 U	0.03 U	10.48	0.539	5.80	2.01	14.0	18.0
Area 2	G6M-04-03X	10/15/2009	0.5 U	8.6	16	0.5 U	8.4	0.5 U	148	2,020	3,270	1.3 U	1.6 U	2,000	0.13 U	240	7.0 U	10 U	0.03 U	8.80	0.227	5.00	1.49	13.3	-46.9
Area 2	G6M-04-03X	10/7/2010	0.25 J	94	300	0.62	52	29	133	5,470	3,910	1.2 U	3.5	29,000	0.13 U	120	4.8 J	10 U	0.03 U	6.67	0.345	9.09	2.47	14.8	-35.2
Area 2	G6M-04-03X	10/5/2011	0.5 U	7.5	7.3	0.5 U	1.8	4.6	73	190 U	559	1.2 U	1.5 U	29,000	0.13 U	130	6.0	3.1 J	0.03 U	10.63	0.307	< 0.01	0.49	12.7	6.3
Area 2	G6M-04-03X	10/10/2012	0.5 U	6.3	8.7	0.5 U	1.9	16	66	261	1,320	1.2 U	170	38,000	0.096 J	160	8.0	10 U	0.03 U	10.65	0.556	6.84	1.09	13.8	-18.4
Area 2	G6M-04-03X	10/17/2013	4.0 U	200	190	4.0 U	87	86	32	32,700	8,450	1.2 U	270	51,000	0.13 U	67	8.6	2.5 J	0.03 U	6.55	0.583	28.0	0.69	15.4	-77.3
Area 2	G6M-04-03X	10/30/2014	0.5 U	53	20	0.38 J	15	19	14	290	114	1.2 U	17	6,700	0.13 U	420	7.5	4.7 J	0.03 U	10.60	1.152	24.3	1.99	13.5	-70.1
Area 2	G6M-04-03X	9/11/2015	1.0 U	40	11	1.0 U	9.3	5.5	105	22,900	2,720	10 U	10 U	3,450	0.068 J	-	7.0 J	5.3	2.0 U	7.71	1.079	11.6	0.36	14.6	-194.0
Area 2	G6M-04-03X	10/14/2015	1.0 U	43	5.0	1.0 U	3.2	6.8	232	75,100	11,300	10 U	10 U	8,190	0.13 J	337	7.0 J	8.2	2.0 U	6.79	1.208	9.64	1.03	12.8	-68.4
Area 2	G6M-04-03X	2/18/2016	1.0 U	25	0.60 J	1.0 U	0.59 J	7.3	673	97,000	15,200	10 U	10 U	12,500	0.10 U	456	1.2 J	8.1	2.0 U	8.56	0.799	11.2	0.99	6.7	212.9
Area 2	G6M-04-03X	11/10/2016	1.0 U	5.8	1.0 U	1.0 U	0.65 J	4.1	380	110,000	31,000	1.1 U	25 J	20,000	0.05 U	390	2.2	9.8	1.0 U	6.47	1.018	6.66	0.43	11.5	-74.1
Area 2	G6M-04-03X	10/20/2017	1.0 U	2.2	1.0 U	1.0 U	1.0 U	1.6	260	85,000	20,000	1.1 U	1.0 U	9,100	0.06 J	160	19	5.1	1.0 U	6.45	2.750	5.87	0.38	12.7	-55.0
Area 2	G6M-04-03X	10/30/2018	1.0 U	0.44 J	1.0 U	1.0 U	0.93 J	1.0 U	310	74,000	10,000	-	-	-	-	-	-	-	-	6.78	2.944	6.82	0.57	13.4	-113.0
Area 2	G6M-04-03X	10/16/2019	1.0 U	26	9.0	1.0 U	12	5.8	220	59,000	7,100	-	-	-	-	-	-	-	-	5.80	1.600	1.80	0.18	14.0	-46.0
Area 2	G6M-04-03X	05/12/2020	1.0 U	10	6.9	1.0 U	4.5	3.5	73	47,000	5,600	1.1 U	2.1	11,000	0.10 U	140	13	4.0	0.81 U	5.92	1.600	5.51	1.11	12.8	28.6
Area 2	G6M-04-03X	10/16/2020	1.0 U	0.70 J	1.0 U	1.0 U	0.80 J	1.0 U	180	27,000	3,100	1.1 U	1.5	22,000	0.082 J	190	6.4	6.0	0.81 U	6.55	0.772	3.43	0.16	13.1	-84.1
Area 2	G6M-04-03X	5/11/2021	1.0 U	4.2	2.0 U	1.0 U	2.3	3.2	190	44,000	5,200	0.73 J	4.2	16,000	0.03 J	160	4.2	6.7 J	0.81 U	6.48	1.077	18.44	0.69	18.6	-87.3
Area 2	G6M-04-03X	10/13/2021	1.0 U	0.58 J	2.0 U	0.72 J	0.60 J	0.71 J	210	36,000	3,600	1.9	3.5	20,000	0.05 U	200	2.3	7.3	0.81 U	6.87	2.690	32.4	0.70	19.2	-128.0
Area 2	G6M-04-03X	10/12/2022	1.0 U	0.65 J	1.0 U	1.0 U	1.7	1.0 U	190	9,900	1,200	2.0	0.71 U	20,000	0.025 U	240	0.44 J	6.5	1.6 U	7.07	0.638	4.49	0.75	16.0	-130.4
Area 2	G6M-04-03X	10/18/2023	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	410	50,000	3,900	4.6	0.71 U	33,000	0.023 J	140	7.1	5.5	1.8 U	6.59	1.190	600	0.13	14.4	-135.0
Area 2	G6M-07-01X	10/15/2008	0.5 U	0.5 U	26	0.5 U	0.24 J	0.5 U	-	-	-	-	-	-	-	-	-	-	-	7.78	0.591	608	2.22	12.4	53.9
Area 2	G6M-07-01X	10/20/2009	0.5 U	0.5 U	21	0.5 U	15	0.5 U	-	-	-	-	-	-	-	-	-	-	-	7.44	0.532	283	4.11	27.3	171.9
Area 2	G6M-07-01X	10/7/2010	0.5 U	0.25J	50	0.5 U	0.31 J	0.5 U	-	-	-	-	-	-	-	-	-	-	-	7.03	0.414	4.78	3.62	10.1	139.0
Area 2	G6M-07-01X	10/5/2011	0.5 U	0.5 U	11	0.5 U	0.5 U	0.5 U	5.0 U	100 U	11 J	-	-	-	-	-	-	-	-	7.06	0.285	130	4.43	12.0	72.9
Area 2	G6M-07-01X	10/12/2012	0.5 U	0.5 U	19	0.5 U	0.5 U	0.5 U	5.0 U	88 J	11 J	-	-	-	-	-	-	-	-	6.92	0.437	30.2	3.56	11.9	59.0
Area 2	G6M-07-01X	10/17/2013	0.5 U	0.5 U	15	0.5 U	0.37 J	0.5 U	5.0 U	100 U	5.4 J	-	-	-	-	-	-	-	-	6.86	0.450	16.4	4.34	12.7	95.1
Area 2	G6M-07-01X	4/5/2019	1.0 U	1.0 U	35	1.0 U	1.2	1.0 U	3.5	210	95	1.1 U	1.0 U	36	1.1	-	6.6	0.61 J	1.0 U	6.90	0.880	6.90	1.40	12.0	32.0
Area 2	G6M-07-01X	05/13/2020	1.0 U	1.0 U	27	1.0 U	0.97 J	1.0 U	3.0 U	93 U	19	1.1 U	1.0 U	1.4	1.2	35	7.6	0.47 J	0.83 U	6.12	0.972	3.81	2.30	13.8	101.0
Area 2	G6M-07-01X	10/19/2020	1.0 U	1.0 U	32	1.0 U	0.71 J	1.0 U	2.1 J	120	30	1.1 U	1.0 U	34	1.5	31	3.6	3.3	0.81 U	6.23	0.547	6.92	2.79	13.1	107.0
Area 2	G6M-07-01X	5/12/2021	1.0 U	8.6	10	1.0 U	2.1	1.0 U	1.6 J	180	61	0.76 U	0.71 U	17	0.84	39	14	3.2	0.81 U	6.50	0.991	50.07	1.40	16.9	64.0
Area 2	G6M-07-01X	11/3/2021	1.0 U	0.71 J	13	1.0 U	1.8	1.0 U	1.6 J	170	42	0.76 U	0.71 U	13 J	1.0	6.4 U	12	5.3	0.81 U	6.44	1.440	17.40	1.52	8.7	81.1
Area 2	G6M-07-01X	10/7/2022	1.0 U	1.0 U	14	1.0 U	0.75 J	1.0 U	1.3 J	44 J	50	0.76 U	0.71 U	730	1.3 J	34	11	1.1	1.6 U	6.45	0.665	18.78	0.99	16.6	98.8
Area 2	G6M-07-01X	10/20/2023	1.0 U	1.0 U	11	1.0 U	0.67 J	1.0 U	1.6 J	23 J	34	0.76 U	0.71 U	41	1.0	49	14	0.77 J	1.7 U	6.11	1.150	13.20	1.26	13.6	125.0
Area 2	G6M-97-08B	10/18/2001	1.0 U	36	92	1.6 J	6.1	2.0 U	-	-	-	-	-	-	-	-	1.0	-	-	5.60	0.130	18.0	4.80	14.2	224.0
Area 2	G6M-97-08B	2/26/2002	1.0 U	32	100	2.0 U	5.9	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.87	1.157	5.30	5.13	12.8	186.4
Area 2	G6M-97-08B	9/22/2004	1.0 U	41	220	2.0 U	9.3	2.0 U	5.0 U	1,000 U	26	0.008	0.005 U	1.3	6.1	10 U	12	1.0 U	1.5 J	5.69	1.516	18.3	4.66	12.9	252.8
Area 2	G6M-97-08B	12/16/2004	1.0 U	41	200	2.0 U	7.7	2.0 U	5.0 U	1,000 U	25	0.13	0.072	0.92	6.1	10 U	12	5.0 U	5.4	5.79	1.633	3.81	8.78	16.4	165.0
Area 2	G6M-97-08B	3/30/2005	2.0 U	16	95	4.0 U	3.4 J	4.0 U	5.0 U	1,000 U	21	0.015	0.032	0.54	0.80	12	7.0	0.4 J	2.0 U	5.58	0.999	9.42	8.06	15.6	202.8
Area 2	G6M-97-08B	6/28/2005	1.0 U	36	140	1.4	8.0	2.0 U	2.0 U	1,000 J	27	0.016	0.041	35	1.4	17	12	7.1	1.0 U	11.30	1.506	8.16	4.94	13.9	173.7
Area 2	G6M-97-08B	9/27/2005	1.0 U	42	180	2.0 U	7.5	2.0 U	5.0 U	1,000 U	33	0.013 J	0.027	0.39	1.3	16	16	4.4	1.0 U	5.60	1.713	2.82	5.73	13.5	319.2
Area 2	G6M-97-08B	12/12/2005	1.0 U	27	120	2.0 U	5.7	2.0 U	5.0 U	1,000 U	28	0.040	0.11	26	0.05 U	23	13	0.6 J	1.0 U	5.87	1.110	0.70	4.19	15.8	171.1
Area 2	G6M-97-08B	3/23/2006	1.0 U	44	240	2.0 U	8.8	2.0 U	5.0 U	100 U	46	0.022 J	0.13	12	1.3	13	14	5.0 U	1.0 U	5.85	1.440	3.16	5.13	14.2	181.5
Area 2	G6M-97-08B	6/21/2006	1.0 U	35	220	2.0 U	11	2.0 U	5.0 U	170	1,300	0.019 J	0.086	24	0.81	66	14	16	1.0	5.90	2.015	1.48	2.39	-	141.1
Area 2	G6M-97-08B	9/19/2006	1.0 U	55	190	2.0 U	14	2.0 U	130	21,000	13,000	0.078	0.13	18	0.2 U	300	24	270	2.8	5.79	2.287	4.58	1.58	12.5	47.6
Area 2	G6M-97-08B	12/14/2006	1.3	310	190	2.0 U	30	160	220	400,000	38,000	0.025	5.9	26,000	-	-	2.4	300	2.8	6.37	2.155	6.19	0.17	12.6	-160.0
Area 2	G6M-97-08B	3/30/2007	1.0 U	46	200	2.0 U	8.5	2.0 U	130	170,000	26,000 J	0.028	0.19	6,000	-	-	126	620	4.6	5.36	3.626	1.13	0.46	12.5	14.8
Area 2	G6M-97-08B	6/14/2007	1.0 U	37	140	2.0 U	5.5	2.0 U	100	370,000	24,000	0.025 U	0.021 J	7,900	-	-	120	760	6.4	5.66	3.659	1.00	1.68	9.9	-45.4
Area 2	G6M-97-08B	9/12/2007	1.0 U	43	170	2.0 U	8.4	3.0	120	370,000	18,000	0.004 J	0.050	8,400	0.2 U	650	1,500	630	3.2	5.66	3.924	5.50	2.72	11.0	-31.4
Area 2	G6M-97-08B	12/14/2007	1.0 U	31 J	150 J	2.0 U	5.7 J	4.5 J	150	280,000	12,000	0.006 J	0.054	10,000	-	-	92	520	5.6	5.84	3.673	< 0.01	0.75	11.8	-45.3
Area 2	G6M-97-08B	3/12/2008	1.0 U	32	150	2.0 U	6.5	6.8	160	190,000	8,100	0.008 J	0.15	9,800	-	-	38	270	2.8	5.94	3.091	< 0.01	2.15	12.4	-66.4
Area 3	G6M-03-07X	5/12/2003	1.0 U	34	1,200	2.0 U	7.2	2.0 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.7	-
Area 3	G6M-03-07X	9/24/2004	1.0 U	31	1,700	2.0 U	6.3	2.0 U	5.0 U	1,000 U	20	0.035	0.28	5.7	4.3 J	10 U	12	1.0 U	1.6 J	5.77	0.341	84.6	7.00	16.0	168.3
Area 3	G6M-03-07X	12/16/2004	1.0 U	35	1,500	2.0 U	6.0	2.0 U	5.0 U	1,000 U	190	0.026	0.080	0.39	4.2	10 U	12	5.0 U	2.9	6.02	0.348	8.46	17.1	14.0	321.7
Area 3	G6M-03-07X	3/30/2005	20 U	140	1,100	40 U	91	40 U	18	18,000	10,000	0.078	0.21	1.8	0.33	76	8.0	29	2.0 U	6.33	0.671	0.70	1.90	14.1	-54.6
Area 3	G6M-03-07X	6/29/2005	20 U	940	940	40 U	78	40 U	31	39,000 J	15,000 J	0.060	0.34	3.9	0.079	118	6.4	83	1.0 U	11.97	0.915	5.93	1.12	8.5	-20.1
Area 3	G6M-03-07X	9/29/2005	2.7	1,000	300	2.3	44	1.0 U	46	210,000 J	30,000	0.068	0.45	660	0.05 U	307	3.2	290	12	6.20	1.266	7.68	2.70	14.7	-62.0
Area 3	G6M-03-07X	12/12/2005	10 U	710	92	20 U	22	20 U	96	190,000	46,600	0.078	0.13	13,000	0.05 U	320	2.0 U	220	6.2	6.50	1.038	3.60	0.22	14.2	-82.1
Area 3	G6M-03-07X	3/24/2006	2.0	430	110	2.0 U	23	270	130	280,000	48,000	0.010 J	2.0	22,000	0.2 U	590	1.0	260	8.6	6.87	1.390	10.1	0.17	11.4	-130.5
Area 3	G6M-03-07X	6/21/2006	1.0 U	180	9.5	2.0 U	3.6	310	140	460,000	59,000	0.073	21	21,000	0.2 U	570	1.0 U	280	4.8	5.13	2.258	31.4	0.70	13.0	-170.4
Area 3	G6M-03-07X	3/29/2007	1.0 U	35	2.0 U	2.0 U	2.0 U	360	190	420,000	20,000 J	0.080	5.1	15,000	-	-	1.0 U	130	4.4	6.32	1.787	39.6	2.46	13.4	-69.3
Area 3	G6M-03-07X	6/14/2007	1.0 U	190	37	2.0 U	8.1	200	220	490,000	37,000	0.025 U	2.3	25,000	-	-	11	310	2.4	6.40	2.386	9.70	1.31	13.6	-159.0
Area 3	G6M-03-07X	9/13/2007	1.1	290	27	2.2	13	140	210	500,000	29,000	0.008 J	12	26,000	0.2 U	560	420	72	4.8	6.26	2.743	118	3.08	14.5	-174.9
Area 3	G6M-03-07X	12/14/2007	1.0 U	9.8	2.6	3.0	2.0 U	120	270	320,000	12,000	0.010 J	34	25,000	-	-	10 U	140	4.0	6.51	2.138	70.9	0.99	13.2	-123.7
Area 3	G6M-03-07X	3/14/2008	1.0 U	2.3	2.0 U	2.0 U	2.0 U	4.3	210	230,000	11,000	0.11	26	30,000	-	-	5.0 U	130	4.0	6.41	1.897	236	1.06	14.9	-85.5
Area 3	G6M-03-07X	10/7/2008	5.0 U	5.0 U	5.0 U	21	2.2 J	5.0 U	246	348,000	5,370	6.3 U	12	14,000	190	190	24	64	0.03 U	6.24	1.742	16.0	0.10	14.1	-44.4
Area 3	G6M-03-07X	1/22/2009	1.7 U	1.7 J	1.4 U	15	2.3 U	3.6	227	338,000 J	5,000	1.2 U	10	16,000	0.13 U	20 U	37	110 J	0.03 U	6.60	1.743	30.0	1.20	14.4	-74.9

		Analytical Method	VOCs						Dissolved Metals			Dissolved Gases			General Chemistry					Field Parameters					
		Analyte	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Nitrate/ Nitrite	Alkalinity	Sulfate	TOC	Sulfide	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mS/cm)	(NTU)	(mg/L)	°C	(mV)
		Cleanup Level[1]	7	70	5	70	5	2	10	3,129	1,460				10,000										
Area	Well ID	Date Sampled																							
Area 3	G6M-03-07X	5/6/2009	0.5 U	1.8	0.5 U	20	0.5 U	**2.6**	**351**	**361,000**	**5,500**	1.2 U	9.9	28,000	0.025 J	720 J	32	66	0.03 U	5.88	1.735	20.3	0.21	14.2	-117.9
Area 3	G6M-03-07X	10/15/2009	0.5 U	2.3	0.27 J	19	0.5 U	**2.2**	**318**	**251,000**	**4,870**	1.1 U	7.3	16,000	0.13 U	550	30	44	0.03 U	6.25	1.362	5.60	0.88	13.4	-100.4
Area 3	G6M-03-07X	4/21/2010	0.5 U	0.88	0.5 U	5.3	0.5 U	1.3	**339**	**176,000 J**	**2,000**	1.3 U	6.3	27,000	0.13 U	320	0.11 J	46	0.03 U	6.46	1.086	8.90	0.69	16.2	-106.3
Area 3	G6M-03-07X	10/5/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**346**	**164,000**	**4,650**	1.2 U	14	48,000	0.13 U	35	0.27 J	16	0.03 U	6.35	1.276	4.56	0.11	-	-106.1
Area 3	G6M-03-07X	6/8/2011	0.5 U	1.7	0.5 U	7.8	0.5 U	**2.1**	**381**	**158,000**	**3,540**	1.2 U	13	72,000	0.13 U	460	5.0 U	41	0.10	6.25	0.841	9.82	0.08	15.3	-87.0
Area 3	G6M-03-07X	10/5/2011	0.5 U	0.86	0.5 U	5.6	0.5 U	1.4	**375**	**133,000**	**2,500**	1.2 U	1.5 U	48,000	0.13 U	320	5.0 U	39	0.049	6.40	0.764	6.00	0.02	9.7	-42.0
Area 3	G6M-03-07X	5/9/2012	0.5 U	1.2	0.5 U	4.4	0.5 U	0.92	**388**	**131,000**	**3,090**	1.2 U	200	74,000	0.13 U	320	0.35 J	31	0.063	6.52	1.046	2.43	0.14	12.9	-111.7
Area 3	G6M-03-07X	10/11/2012	0.5 U	0.74	0.5 U	3.4	0.5 U	1.5	**365**	**116,000**	**2,900**	1.2 U	800	97,000	0.027J	270	5.0 U	26	0.040	6.50	0.962	4.81	0.34	15.3	-96.2
Area 3	G6M-03-07X	5/21/2013	0.5 U	1.0	0.5 U	3.4	0.5 U	0.77	**413**	**114,000**	**2,150**	1.2 U	1.5 U	22,000	0.13 U	180 J	5.0 U	23	0.03 U	6.01	0.923	1.28	0.17	14.8	-64.9
Area 3	G6M-03-07X	10/16/2013	0.5 U	0.86	0.5 U	2.9	0.5 U	1.3	**434**	**120,000**	**2,340**	1.2 U	33	31,000	0.13 U	340	5.0 U	26	0.065	6.53	0.901	1.01	0.21	9.7	-102.4
Area 3	G6M-03-07X	6/11/2014	0.5 U	0.72	0.40 J	3.0	0.5 U	**2.5**	**422**	**105,000 J**	**1,670**	1.3 U	3.5 J	10,000 J	0.13 U	260 J	0.52 U	45	0.03 U	6.32	0.787	2.54	0.28	11.6	-48.4
Area 3	G6M-03-07X	10/30/2014	0.5 U	0.69	0.5 U	2.8	0.5 U	1.1	**355**	**78,500**	1,400	1.2 U	1.8	54,000	0.13 U	180	0.38 J	22	0.03 U	6.49	0.532	5.63	0.24	12.9	-120.7
Area 3	G6M-03-07X	6/18/2015	0.5 U	0.62 J	0.5 U	2.1	0.5 U	0.77 J	**97**	**107,000**	**1,810**	5.0 U	5.7 J	12,400	0.15 U	262	0.5 U	27	1.0 U	6.40	0.626	15.1	0.16	16.2	-94.9
Area 3	G6M-03-07X	9/14/2015	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	**436**	**103,000**	**1,700**	10 U	6.0 J	11,900	0.086 J	-	0.94 J	25	2.0 U	6.45	0.545	5.16	0.56	14.2	-112.8
Area 3	G6M-03-07X	10/14/2015	1.0 U	0.59 J	1.0 U	1.8	1.0 U	0.73 J	**441**	**102,000**	**1,660**	10 U	6.5 J	16,600	0.085 J	161	2.3 J	243	2.0 U	6.61	0.754	5.37	0.24	12.3	-76.2
Area 3	G6M-03-07X	2/10/2016	1.0 U	1.0 U	1.0 U	1.8	1.0 U	0.78 J	**461**	**96,700**	1,360	10 U	5.0 J	12,800	0.18	194	10 U	25	2.0 U	6.49	0.704	16.1	0.84	11.2	-68.8
Area 3	G6M-03-07X	6/16/2016	1.0 U	0.73 J	1.0 U	1.5	0.61 J	0.73 J	**440**	**90,000**	**1,600**	1.1 U	1.0 U	28,000	0.05 U	200	0.8 U	26	1.0 U	6.46	0.759	9.00	0.29	17.0	-71.9
Area 3	G6M-03-07X	11/10/2016	1.0 U	0.44 J	1.0 U	1.4	1.0 U	0.63 J	**420**	**81,000**	1,400	1.1 U	16	23,000	0.05 U	170	1.0 U	22	1.0 U	5.50	0.480	17.4	0.29	14.9	-86.0
Area 3	G6M-03-07X	5/16/2017	1.0 U	0.51 J	1.0 U	0.76 J	1.0 U	1.0 U	**370**	**84,000**	**1,600**	1.2	7.2	14,000	0.14	200	1.0 U	19	1.0 U	6.59	0.589	11.0	0.35	17.5	-91.3
Area 3	G6M-03-07X	10/23/2017	1.0 U	0.55 J	1.0 U	0.97 J	1.0 U	0.72 J	**450**	**94,000**	**1,800**	2.7	14	21,000	0.13	170	1.0 U	24	1.0 U	6.32	0.657	5.78	0.07	13.5	-75.1
Area 3	G6M-03-07X	10/29/2018	1.0 U	0.55 J	1.0 U	0.66 J	1.0 U	0.74 J	**420**	**99,000**	**2,100**	2.8	19	37,000	0.20	170	5.0 U	18	1.0 U	6.54	0.795	3.12	0.27	13.2	-78.0
Area 3	G6M-03-07X	10/18/2019	1.0 U	0.70 J	1.0 U	1.0 U	1.0 U	0.55 J	**430**	**120,000**	**3,100**	3.0	17	29,000	0.075 J	170	1.0 U	15	0.86 U	6.30	0.930	3.70	0.12	14.0	-84.0
Area 3	G6M-03-07X	05/13/2020	50 U	50 U	50 U	50 U	**26 J**	50 U	**340**	**95,000**	**2,100**	6.1	1.0 U	11,000	0.032 J	160	1.0 U	19	0.96 U	6.01	0.498	8.60	0.51	11.9	32.1
Area 3	G6M-03-07X	10/21/2020	1.0 U	0.58 J	1.0 U	1.0 U	1.0 U	1.0 U	**410**	**110,000**	**2,900**	4.3	12	34,000	0.057 J	150	1.0 U	14	0.89 U	6.07	0.816	5.61	0.42	17.4	-79.4
Area 3	G6M-03-07X	5/12/2021	1.0 U	0.95 J	2.0 U	1.0 U	1.0 U	1.0 U	**480**	**100,000**	**2,400**	9.4	7.3	34,000	0.05 U	210	1.0 U	18	0.81 U	6.47	0.721	29.36	0.49	14.4	-99.2
Area 3	G6M-03-07X	10/18/2021	1.0 U	0.50 J	2.0 U	1.0 U	1.0 U	1.0 U	**580**	**98,000**	**2,400**	9.4	0.71 U	37,000	0.026 J	190	1.0 U	19	0.81 U	6.35	0.955	2.34	0.51	15.0	-105.0
Area 3	G6M-03-07X	10/5/2022	1.0 U	0.84 J	1.0 U	1.0 U	0.5 U	1.0 U	**490**	**86,000**	**2,000**	10	3.4	22,000	0.025 U	200	0.70 J	16	1.7 U	6.70	0.594	16.08	0.67	14.7	-102.3
Area 3	G6M-03-07X	10/19/2023	1.0 U	0.34 J	1.0 U	1.0 U	0.5 U	1.0 U	**570**	**99,000**	**2,300**	4.0	0.71 U	25,000	0.025 U	150	1.0 U	19	1.7 U	6.18	0.770	143.00	0.20	15.0	-87.0
Area 3	G6M-04-02X	9/23/2004	1.0 U	3.8	**1,900**	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	86	-	-	-	-	-	-	-	-	6.59	0.704	9.52	7.25	13.1	152.4
Area 3	G6M-04-02X	9/28/2005	5.0 U	5.0 U	**1,800**	5.0 U	5.0 U	5.0 U	5.0 U	1,000 U	15 U	-	-	-	-	-	-	-	-	5.21	0.607	12.0	6.54	18.4	294.0
Area 3	G6M-04-02X	9/20/2006	1.0 U	2.2	**1,100**	2.0 U	**170**	2.0 U	5.0 U	100 U	24	-	-	-	-	-	-	-	-	5.22	0.696	10.6	2.88	17.2	-101.5
Area 3	G6M-04-02X	9/14/2007	1.0 U	**290**	**710**	21	**98**	2.0 U	**48**	**16,000**	**13,000**	-	-	-	-	-	-	-	-	6.52	1.356	2.30	2.91	15.3	-31.3
Area 3	G6M-04-02X	10/16/2008	5.0 U	**290**	**320**	5.0 U	**47**	5.0 U	**135**	**56,600**	**6,530**	-	-	-	-	-	-	-	-	6.32	1.302	3.80	0.74	15.8	-143.6
Area 3	G6M-04-02X	10/15/2009	8.0 U	15	**400**	8.0U	**110**	8.0 U	**78**	**20,800**	**3,580**	-	-	-	-	-	-	-	-	6.19	1.011	4.00	0.90	14.1	-25.0
Area 3	G6M-04-02X	10/6/2010	20 U	27	**380**	20 U	**54**	20 U	**182**	**40,200**	**5,530**	-	-	-	-	-	-	-	-	6.25	1.071	3.53	0.51	13.0	-50.1
Area 3	G6M-04-02X	6/8/2011	-	-	-	-	-	-	**317**	**42,700**	**4,540**	-	-	-	-	-	-	-	-	6.44	0.678	1.90	0.76	13.6	-95.9
Area 3	G6M-04-02X	10/5/2011	13 U	13 U	**630**	13 U	**93**	13 U	**172**	**18,100**	**4,370**	-	-	-	-	-	-	-	-	6.24	0.669	6.60	0.41	15.2	1.0
Area 3	G6M-04-02X	5/8/2012	-	-	-	-	-	-	**225**	**15,500**	**3,980**	-	-	-	-	-	-	-	-	6.36	0.475	1.12	0.20	14.9	-25.6
Area 3	G6M-04-02X	10/12/2012	5.0 U	5.0 U	**160**	5.0 U	**30**	5.0 U	**228**	**16,900**	**4,890**	-	-	-	-	-	-	-	-	6.33	0.534	2.02	0.44	15.9	-33.5
Area 3	G6M-04-02X	5/21/2013	-	-	-	-	-	-	**143**	**7,290**	**5,400**	-	-	-	-	-	-	-	-	5.98	0.699	0.74	0.36	13.6	18.3
Area 3	G6M-04-02X	10/17/2013	4.0 U	5.7	**140**	4.0 U	**31**	4.0 U	**231**	**20,600**	**6,800**	-	-	-	-	-	-	-	-	5.70	0.485	3.75	0.37	15.8	-12.3
Area 3	G6M-04-02X	6/11/2014	-	-	-	-	-	-	**137**	**13,900**	**5,900**	-	-	-	-	-	-	-	-	6.15	0.795	2.48	0.62	18.3	4.5
Area 3	G6M-04-02X	10/30/2014	0.5 U	33	**480**	0.5 U	**70**	**2.7 J**	**160**	**40,500**	**5,980**	-	-	-	-	-	-	-	-	6.34	0.628	1.86	0.28	19.0	-63.1
Area 3	G6M-04-02X	6/18/2015	0.5 U	16	**62**	0.5 U	**20**	1.8	**362**	**82,400**	**7,220**	-	-	-	-	-	-	-	-	6.30	0.500	10.9	0.32	13.1	-101.0
Area 3	G6M-04-02X	9/11/2015	1.0 U	8.8	**16**	1.0 U	**7.4**	1.8	**343**	**91,400**	**6,920**	10 U	10 U	7,390	0.067 J	-	0.87 J	3.3	2.0 U	6.59	0.663	2.50	0.39	14.0	-147.8
Area 3	G6M-04-02X	10/16/2015	1.0 U	1.0 U	**105**	1.0 U	**31**	1.6	**237**	**65,800**	**7,570**	-	-	-	-	-	-	-	-	6.32	0.818	2.43	0.23	12.8	-56.1
Area 3	G6M-04-02X	2/10/2016	2.0 U	12	**333**	2.0 U	**60 J**	1.5 J	**118**	**28,300**	**8,730**	10 U	10 U	4,410 J	0.11	118	10	2.1	2.0 U	6.74	0.536	10.8	0.87	10.0	-112.9
Area 3	G6M-04-02X	6/13/2016	1.0 U	23	**120**	1.0 U	**48**	**3.4**	**200**	**44,000**	**8,000**	-	-	-	-	-	-	-	-	6.43	0.875	1.59	0.34	13.4	-56.2
Area 3	G6M-04-02X	11/10/2016	1.0 U	58	**160**	0.37 J	**60**	**8.4**	**180**	**48,000**	**9,100**	-	-	-	-	-	-	-	-	6.62	0.629	4.32	0.51	10.3	-67.3
Area 3	G6M-04-02X	5/16/2017	1.0 U	22 J	**280**	0.39 J	**120**	**2.3 J**	**42**	**15,000**	**11,000**	1.1 U	2.2	4,800	0.065 J	130	10	2.5 J	1.0 U	6.00	0.956	3.90	2.09	13.2	29.5
Area 3	G6M-04-02X	10/20/2017	2.0 U	13	**97**	2.0 U	**26**	1.8 J	**260**	**66,000**	**10,000**	1.1 U	1.0 U	16,000	0.08 J	160	6.2	3.3	1.0 U	6.36	0.910	4.26	0.28	12.5	-66.9
Area 3	G6M-04-02X	4/3/2018	2.0 U	19	**300**	2.0 U	**74**	1.7 J	**99**	**30,000**	**9,800**	1.1 U	3.4	23,000	0.10	120	11	2.5	1.0 U	6.34	1.139	1.90	0.96	10.9	-22.3
Area 3	G6M-04-02X	10/30/2018	2.0 U	27	**200**	2.0 U	**64**	**3.0**	**81**	**45,000**	**14,000**	1.1 U	4.1	14,000 J	0.13	140	9.1	8.4	1.0 U	6.01	1.317	0.58	0.90	12.1	-22.7
Area 3	G6M-04-02X	4/3/2019	1.0 U	29	**160**	0.61 J	**130**	**3.5**	**120**	**47,000**	**9,800**	1.1 U	7.9	16,000	0.17 U	-	7.1	3.1	1.0 U	6.20	1.500	0.49	1.10	11.0	-76.0
Area 3	G6M-04-02X	10/18/2019	0.90 J	**260**	**5.4**	2.0 U	**7.0**	1.7 J	**230 J**	**81,000**	**13,000**	2.9	3.6	11,000	0.04 J	150	1.0 U	170	0.88 U	5.40	1.600	1,000	0.08	13.0	-52.0
Area 3	G6M-04-02X	05/12/2020	0.88 J	**290 J**	1.7	0.92 J	2.3	**28**	**93**	**52,000**	**6,900**	1.3	31	18,000	0.10 U	130	2.0 J	100	0.88 U	5.54	1.380	344	1.19	11.9	31.6
Area 3	G6M-04-02X	10/20/2020	1.0 U	**120 J**	**5.7 J**	1.0 U	**6.1 J**	**5.1 J**	**82**	**44,000**	**8,200**	3.7	8.6	2,600	0.067 J	100	10 U	220	4.0	6.09	1.030	313	0.10	14.1	-63.1
Area 3	G6M-04-02X	6/17/2021	0.63 J	**170**	4.2	0.94 J	3.7	**32**	**50**	**28,000**	**7,900**	5.0 U	33	20,000	0.12 U	120	1.1	40	1.0 U	5.33	1.356	135	0.11	15.9	-45.8
Area 3	G6M-04-02X	10/18/2021	1.0 U	**130**	**21**	0.84 J	**13**	**18**	**61**	**22,000**	**6,500**	0.56 J	37	19,000	0.05 U	120	3.4	17	0.81 U	5.87	2.080	12.2	0.55	11.6	-55.5
Area 3	G6M-04-02X	5/2/2022	1.0 U	**98**	**38**	0.71 J	**35**	**16**	**61**	**22,000**	**7,800**	1.9	36	26,000 J	0.05 U	110	4.2	8.4	1.2 U	5.88	1.340	77.8	0.25	12.3	-78.3
Area 3	G6M-04-02X	10/5/2022	1.0 U	**100 J**	**43 J**	0.96 J	**44 J**	**24 J**	**62**	**23,000**	**8,900**	2.4	23	20,000	0.025 U	140	5.0	7.5	1.7 U	6.20	1.000	8.87	0.71	13.7	-71.2
Area 3	G6M-04-02X	6/7/2023	1.0 U	60	**26**	0.51 J	**50**	**9.3**	**73**	**35,000**	**12,000**	6.0	21	20,000	0.083 J	130	6.0	4.7	1.5 U	5.80	1.420	15.10	0.01	14.1	-142.0
Area 3	G6M-04-02X	10/20/2023	1.0 U	46	**9.9**	0.62 J	**26**	**8.1**	**48**	**24,000**	**13,000**	7.3	17	26,000	0.025 U	120	5.1	5.7	1.7 U	5.69	1.310	181.00	0.16	13.0	-41.8
Area 3	G6M-04-04X	9/24/2004	1.0 U	24	**2,300**	2.0 U	**7.8**	2.0 U	5.0 U	1,000 U	560	0.037	0.12	13	5.5	10 U	20	1.0 U	2.0 U	5.75	1.637	169	5.05	12.5	197.3
Area 3	G6M-04-04X	9/29/2005	2.5 U	15	**1,600**	2.5 U	**5.4**	2.5 U	5.0 U	1,000 U	430	0.018 J	0.060	0.44	1.4	5.3	23	0.5 J	1.0 U	5.34	1.666	7.39	5.66	13.9	295.9
Area 3	G6M-04-04X	9/19/2006	1.0 U	**260**	**1,600**	2.0 U	**45**	2.0 U	**110**	**84,000**	**31,000**	0.12	0.095	33	0.2 U	190	10	120	1.6	6.22	1.765	7.64	0.32	13.5	-71.5
Area 3	G6M-04-04X	9/13/2007	1.2	**210**	**600**	2.0	**130**	**300**	**280**	**130,000**	**25,000**	0.005 J	7.0	18,000	0.2 U	270	890	63	1.2	6.57	2.398	3.50	3.20	13.0	-186.6
Area 3	G6M-04-04X	10/16/2008	2.5 U	48	**6.0**	2.8	**8.1**	**150 J**	**523**	**248,000**	**19,300**	1.3 U	62	18,000	0.10 U	520	7.0	35	0.03 U	6.40	2.239	4.00	2.39	13.2	-106.2

Appendix D
Historical Groundwater Analytical Results
2023 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

		Analytical Method	VOCs						Dissolved Metals			Dissolved Gases			General Chemistry					Field Parameters					
		Analyte	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Nitrate/ Nitrite	Alkalinity	Sulfate	TOC	Sulfide	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mS/cm)	(NTU)	(mg/L)	°C	(mV)
		Cleanup Level[1]	7	70	5	70	5	2	10	3,129	1,460				10,000										
Area	Well ID	Date Sampled																							
Area 3	G6M-04-04X	10/15/2009	0.5 U	4.8	0.5 U	5.2	0.5 U	**6.9**	**615**	**239,000**	**16,800**	1.3 U	61	38,000 J	0.13 U	520	23 J	32	0.03 U	6.47	1.744	5.00	0.86	14.2	-123.0
Area 3	G6M-04-04X	10/5/2010	0.5 U	2.8	0.5 U	2.6	0.5 U	**3.2**	**529**	**155,000**	**16,900**	1.2 U	210	52,000 J	0.13 U	81 J	5.0 U	15	0.03 U	6.35	2.133	3.10	0.40	13.6	-112.0
Area 3	G6M-04-04X	10/5/2011	0.5 U	1.1	0.5 U	4.1	0.5 U	**2.7**	**615**	**145,000**	**16,400**	1.2 U	160	31,000 J	0.13 U	350 J	5.0 U	17	0.049	6.61	1.042	5.00	0.10	13.0	-88.0
Area 3	G6M-04-04X	10/11/2012	0.5 U	0.80	0.5 U	3.7	0.5 U	**2.6**	**590**	**133,000**	**15,700**	1.3 U	460	51,000	0.13 U	220	5.0 U	13	0.052	6.66	1.693	1.53	0.39	14.0	-108.6
Area 3	G6M-04-04X	10/16/2013	0.5 U	1.8	0.5 U	3.1	0.5 U	**3.0**	**601**	**114,000**	**11,000**	3.5	420	44,000	0.13 U	240	0.94 J	11	0.049	6.57	1.345	4.75	0.24	11.0	-109.9
Area 3	G6M-04-04X	10/30/2014	0.5 U	0.5 U	0.5 U	1.7	0.5 U	0.39 J	**453**	**113,000**	**8,520**	1.2 U	85	43,000	0.098 J	180	0.18 J	9.0 J	0.03 U	6.59	1.537	6.54	0.42	11.4	-145.8
Area 3	G6M-04-04X	9/14/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.91 J	**486**	**11,900 J**	**10,700 J**	10 U	33	9,170	0.068 J	-	3.4 J	7.5	2.0 U	6.70	1.264	3.25	0.28	15.0	-180.4
Area 3	G6M-04-04X	10/16/2015	2.8	1.0 U	0.76 J	1.0 U	1.0 U	1.0 U	**505**	**115,000**	**10,000**	10 U	61	20,000	0.11 U	167	1.6 J	8.5	2.0 U	5.99	1.727	3.13	0.57	10.7	-114.6
Area 3	G6M-04-04X	2/19/2016	1.0 U	0.50 J	1.0 U	2.8	1.0 U	1.0	**550**	**114,000**	**9,760**	10 U	65	13,900	0.10	278	1.3 J	7.3	2.0 U	7.68	1.173	3.97	1.29	11.5	-38.7
Area 3	G6M-04-04X	6/16/2016	1.0 U	0.65 J	1.0 U	1.0 U	1.0 U	1.1	**580**	**120,000**	**10,000**	9.2	86	31,000	0.05 U	160	30	8.6	1.0 U	6.51	1.407	4.20	1.46	16.2	-108.1
Area 3	G6M-04-04X	11/8/2016	1.0 U	0.43 J	1.0 U	1.2	1.0 U	0.57 J	**530**	**120,000**	**9,700**	3.0	38	20,000	0.05 U	180	1.0 U	7.3	4.4	6.01	1.402	3.49	0.32	13.8	-106.9
Area 3	G6M-04-04X	10/20/2017	1.0 U	0.51 J	1.0 U	1.4	1.0 U	1.0 U	**600**	**170,000**	**17,000**	3.8	39	19,000	0.11	250	0.72 J	11	1.0 U	6.64	0.940	4.39	0.24	12.7	-111.1
Area 3	G6M-04-04X	10/26/2018	1.0 U	0.83 J	1.0 U	0.37 J	1.0 U	0.60 J	**460**	**110,000**	**21,000**	-	-	-	-	-	-	-	-	6.44	2.529	9.98	0.21	13.0	-91.7
Area 3	G6M-04-04X	10/10/2019	1.0 U	0.93 J	1.0 U	1.0 U	1.0 U	0.55 J	3.0 U	50,000 U	61	-	-	-	-	-	-	-	-	6.40	3.000	2.30	0.34	13.0	-88.0
Area 3	G6M-04-04X	10/21/2020	1.0 U	0.64 J	1.0 U	0.39 J	1.0 U	1.0 U	**510**	**130,000**	**16,000**	-	-	-	-	-	-	-	-	6.23	2.460	3.79	0.15	15.1	-56.9
Area 3	G6M-04-04X	10/18/2021	1.0 U	0.68 J	2.0 U	1.0 U	1.0 U	1.0 U	**470**	**88,000**	**19,000**	-	-	-	-	-	-	-	-	6.48	2.220	29.30	0.01	15.5	-102.0
Area 3	G6M-04-04X	10/5/2022	1.0 U	0.79 J	1.0 U	0.38 J	0.23 J	1.0 U	**580**	**91,000**	**11,000**	-	-	-	-	-	-	-	-	6.77	1.571	18.76	0.74	13.4	-104.4
Area 3	G6M-04-04X	10/23/2023	1.0 U	0.30 J	1.0 U	1.0 U	0.5 U	1.0 U	**380**	**62,000**	**15,000**	-	-	-	-	-	-	-	-	6.45	1.830	3.20	0.13	15.0	-107.0
Area 3	G6M-13-03X	1/30/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	-	-	-	-	-	-	-	-	-	-	-	5.58	0.248	1.11	0.69	10.9	205.0
Area 3	G6M-13-03X	10/30/2014	0.5 U	0.5 U	0.50 J	0.5 U	0.5 U	0.5 U	2.5 U	29 J	407	-	-	-	-	-	-	-	-	6.39	0.192	15.3	1.65	6.7	183.6
Area 3	G6M-13-03X	10/16/2015	1.0 U	1.0 U	0.57 J	1.0 U	1.0 U	1.0 U	4.0 U	100,000 J	362	-	-	-	-	-	-	-	-	5.53	2.539	36.6	1.58	11.9	157.6
Area 3	G6M-13-03X	11/10/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.2 J	450	420	-	-	-	-	-	-	-	-	4.15	1.540	31.6	0.43	12.5	40.0
Area 3	G6M-13-03X	10/18/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	75 U	550	-	-	-	-	-	-	-	-	5.61	2.250	4.69	0.58	11.9	170.1
Area 3	G6M-13-03X	10/30/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	5.01	2.618	7.29	0.81	12.1	-5.1
Area 3	G6M-13-03X	10/16/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	50 U	430	-	-	-	-	-	-	-	-	5.33	1.820	3.11	0.42	13.7	172.0
Area 3	G6M-13-03X	10/10/2022	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	5.63	1.625	2.25	1.09	14.0	204.9
Area 4	G6M-02-03X	2/26/2002	1.0 U	2.0 U	**210**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	11.61	1.154	18.1	2.21	18.9	11.0
Area 4	G6M-02-03X	9/23/2004	1.0 U	2.0 U	**48**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	4.95	1.374	3.80	1.17	17.6	632.1
Area 4	G6M-02-03X	9/29/2005	1.0 U	2.0 U	**12**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.70	1.138	10.7	2.90	17.6	204.9
Area 4	G6M-02-03X	9/18/2006	1.0 U	2.0 U	**10**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.20	0.993	4.32	0.35	14.4	219.4
Area 4	G6M-02-03X	9/14/2015	1.0 U	1.0 U	0.82 J	1.0 U	1.0 U	1.0 U	4.0 U	100 U	79	10 U	10 U	284	1.3	-	9.7 J	1.1	2.0 U	5.67	0.722	3.00	5.09	14.1	93.2
Area 4	G6M-02-03X	6/16/2016	-	-	-	-	-	-	3.0 U	50 U	310	-	-	-	-	-	-	-	-	4.87	1.658	19.9	0.45	16.7	139.6
Area 4	G6M-02-03X	11/8/2016	-	-	-	-	-	-	3.0 U	29 J	99	-	-	-	-	-	-	-	-	7.58	0.960	3.88	1.03	11.7	-53.7
Area 4	G6M-02-03X	10/24/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	180	320	1.1 U	1.0 U	430	-	-	-	0.5 U	-	5.72	1.931	50.9	5.81	13.2	37.1
Area 4	G6M-02-04X	2/26/2002	1.0 U	1.3 J	**470**	2.0 U	0.88 J	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.47	0.260	24.0	3.40	18.0	189.5
Area 4	G6M-02-04X	9/23/2004	1.0 U	2.9	**170**	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	15 U	-	-	-	-	-	-	-	-	6.29	0.453	8.48	3.03	19.6	175.5
Area 4	G6M-02-04X	9/28/2005	1.0 U	6.2	**150**	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	15 U	-	-	-	-	-	-	-	-	5.61	0.502	12.6	2.75	17.3	302.3
Area 4	G6M-02-04X	9/20/2006	1.0 U	2.0 U	**48**	2.0 U	2.0 U	2.0 U	5.0 U	100 U	15 U	-	-	-	-	-	-	-	-	5.84	0.467	8.45	4.57	14.5	189.0
Area 4	G6M-02-04X	9/13/2007	1.0 U	2.0 U	**21**	2.0 U	4.2	2.0 U	6.0 U	100 U	15	-	-	-	-	-	-	-	-	6.39	0.927	4.80	3.13	14.9	93.0
Area 4	G6M-02-04X	10/16/2008	2.5 U	**150**	**9.0**	2.5 U	2.5 U	2.5 U	**78**	**8,560**	**7,370**	-	-	-	-	-	-	-	-	6.91	1.126	4.00	1.05	12.1	-80.0
Area 4	G6M-02-04X	10/15/2009	5.0 U	**120**	5.0 U	5.0 U	**17**	**10**	**309**	**81,700**	**10,900**	-	-	-	-	-	-	-	-	6.55	0.766	2.18	1.52	15.6	-139.8
Area 4	G6M-02-04X	10/4/2010	0.5 U	2.1	**5.3**	0.5 U	2.6	0.5 U	**101**	**20,200**	1,240	-	-	-	-	-	-	-	-	6.48	0.975	2.80	0.98	14.7	-86.9
Area 4	G6M-02-04X	6/9/2011	-	-	-	-	-	-	**246**	**28,200**	**3,180**	-	-	-	-	-	-	-	-	6.67	0.856	< 0.01	0.28	13.3	-88.3
Area 4	G6M-02-04X	10/6/2011	0.5 U	0.67	0.69	0.5 U	0.80	0.5 U	**292**	**35,600**	**2,480**	-	-	-	-	-	-	-	-	6.84	0.601	3.71	0.26	12.7	-112.5
Area 4	G6M-02-04X	5/9/2012	-	-	-	-	-	-	**451**	**43,400**	**2,510**	-	-	-	-	-	-	-	-	6.94	0.487	2.90	0.52	13.7	-114.8
Area 4	G6M-02-04X	10/9/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**374**	**30,000**	**1,860**	-	-	-	-	-	-	-	-	6.87	0.591	< 0.01	0.43	13.4	-129.3
Area 4	G6M-02-04X	5/21/2013	-	-	-	-	-	-	**313**	**28,100**	**1,890**	-	-	-	-	-	-	-	-	6.88	0.745	2.26	0.30	13.6	-110.5
Area 4	G6M-02-04X	10/16/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**370**	**23,900**	1,390	-	-	-	-	-	-	-	-	6.92	0.522	1.32	0.38	13.2	-124.4
Area 4	G6M-02-04X	6/11/2014	-	-	-	-	-	-	**175**	**14,200**	997	-	-	-	-	-	-	-	-	6.60	0.956	3.35	0.59	13.1	-10.8
Area 4	G6M-02-04X	11/3/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.24 J	0.5 U	**350**	**15,600**	971	-	-	-	-	-	-	-	-	7.08	0.550	1.38	1.42	14.7	-111.1
Area 4	G6M-02-04X	6/26/2015	0.5 U	0.91 J	0.60 J	0.5 U	0.52 J	0.5 U	**157**	**10,400**	1,060	-	-	-	-	-	-	-	-	7.39	1.238	1.55	0.71	14.7	-55.4
Area 4	G6M-02-04X	9/14/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**408**	**20,400**	995	10 U	10 U	4,350	0.057 U	-	9.6 J	1.6	2.0 U	7.01	0.400	1.30	0.40	14.6	-152.4
Area 4	G6M-02-04X	10/16/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**320**	**15,100**	1,000	-	-	-	-	-	-	-	-	6.78	0.665	0.86	0.43	13.0	-97.3
Area 4	G6M-02-04X	2/12/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**353**	**22,000**	1,370	10 U	10 U	964	0.12	42	8.0 J	1.1	2.0 U	7.08	0.711	1.94	0.79	11.3	-79.7
Area 4	G6M-02-04X	6/15/2016	1.0 U	1.0 U	1.0 U	1.0 U	0.59 J	1.0 U	**470**	**27,000**	1,400	-	-	-	0.05 U	250	0.8 U	4.4	1.0 U	6.88	1.031	2.84	0.30	16.7	-106.2
Area 4	G6M-02-04X	11/8/2016	1.0 U	1.2	1.0 U	1.0 U	1.0 U	1.0 U	**470**	**21,000**	1,100	-	-	-	-	-	-	-	-	7.00	0.268	2.57	0.89	13.2	-153.6
Area 4	G6M-02-04X	10/16/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**440**	**22,000**	1,300	-	-	-	-	-	-	-	-	7.07	0.626	4.31	0.42	12.6	-119.3
Area 4	G6M-02-04X	10/26/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**470**	**22,000**	1,400	5.1	1.0 U	6,500	-	-	-	-	-	7.12	0.741	9.32	0.25	13.5	-141.7
Area 4	G6M-02-04X	10/28/2019	-	-	-	-	-	-	**520**	**53,000**	**2,600**	-	-	-	-	-	-	-	-	7.00	0.890	4.60	0.34	12.0	-130.0
Area 4	G6M-02-04X	12/20/2019	1.0 U	1.4	1.0 U	1.0 U	0.85 J	1.0 U	-	-	-	-	-	-	-	-	-	-	-	7.21	0.391	2.80	2.93	6.4	-181.3
Area 4	G6M-02-04X	10/15/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**430**	**63,000**	**3,400**	-	-	-	-	-	-	-	-	6.91	0.731	3.10	0.46	13.7	-157.0
Area 4	G6M-02-04X	10/21/2021	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	**400**	**37,000**	**2,000**	-	-	-	-	-	-	-	-	7.04	0.727	47.0	0.68	15.0	-143.0
Area 4	G6M-02-04X	10/6/2022	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	**520**	**47,000**	**2,000**	-	-	-	-	-	-	-	-	7.15	0.604	7.58	0.68	18.6	-164.5
Area 4	G6M-02-04X	10/20/2023	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	**530**	**43,000**	**1,900**	-	-	-	-	-	-	-	-	6.89	0.590	96.50	0.13	14.0	-160.0
Area 4	G6M-02-13X	8/2/2002	1.0 U	2.0 U	**4,600**	2.0 U	4.0	2.0 U	5.0 U	-	-	-	-	-	-	-	-	-	-	6.17	0.665	7.62	0.54	14.0	141.0
Area 4	G6M-02-13X	9/23/2004	1.0 U	16	**5,000**	2.0 U	**13**	2.0 U	5.0 U	1,000 U	1,200	0.27	0.15	57	2.3	31	17	1.0 U	1.8 J	6.37	0.618	2.14	0.34	16.7	170.8
Area 4	G6M-02-13X	12/13/2004	1.0 U	21	**4,600**	2.0 U	**14**	2.0 U	5.0 U	1,000 U	1,300	0.27	0.11	88	2.5	34	16 J	5.0 U	2.0 U	5.79	0.518	2.63	0.89	18.3	274.8
Area 4	G6M-02-13X	3/30/2005	50 U	**210**	**2,100**	100 U	**64 J**	100 U	**36**	**4,200**	**4,000**	0.16	0.11	38	0.23	60	13	8.1	2.0 U	5.97	0.735	2.91	0.89	15.0	-22.6

		Analytical Method	VOCs						Dissolved Metals			Dissolved Gases			General Chemistry					Field Parameters					
		Analyte	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Nitrate/ Nitrite	Alkalinity	Sulfate	TOC	Sulfide	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mS/cm)	(NTU)	(mg/L)	°C	(mV)
		Cleanup Level[1]	7	70	5	70	5	2	10	3,129	1,460				10,000										
Area	Well ID	Date Sampled																							
Area 4	G6M-02-13X	8/11/2005	2.0 U	**460**	**2,300**	5.9	**190**	2.0 U	**150**	**34,000 J**	**12,000 J**	0.026	0.045	46	0.05 U	230	2.3	66	1.0 U	5.82	0.897	5.60	0.74	14.8	-68.8
Area 4	G6M-02-13X	9/29/2005	10 U	**470**	**3,700**	10 U	**120**	10 U	**74**	**22,000**	**6,800**	0.16	0.12	420	0.05 U	110	8.9	37	2.4	6.41	0.710	6.99	1.26	15.5	-89.1
Area 4	G6M-02-13X	12/14/2005	2.0	**850**	**210**	2.0 U	**50**	2.0 U	**477**	**200,000 J**	**36,200**	0.057	0.087	11,000	0.083	420	2.0 U	290	8.2	6.60	1.389	0.60	0.11	15.4	-134.4
Area 4	G6M-02-13X	3/22/2006	1.0 U	**640**	**660**	2.0 U	**37 J**	2.0 U	**320**	**170,000**	**29,000**	0.025 U	0.009 J	21,000	0.2 U	480	8.1	280	3.0	6.67	1.379	2.37	0.90	14.3	-214.4
Area 4	G6M-02-13X	6/22/2006	1.0 U	**440**	**160**	2.0 U	**8.8**	**280**	**750**	**420,000**	**30,000**	0.025 J	0.51	25,000	0.2 U	480	1.2	140	20	6.54	2.175	16.1	0.28	14.7	-138.7
Area 4	G6M-02-13X	9/18/2006	1.0 U	**160**	**550**	2.0 U	**52**	**280**	**420**	**160,000**	**9,900**	0.15	1.1	24,000	0.2 U	140	8.1	52	2.8	6.12	1.190	6.90	0.36	13.4	-119.3
Area 4	G6M-02-13X	12/14/2006	1.0 U	**190**	**460**	2.0 U	**20**	**220**	**460**	**260,000**	**12,000**	0.025	0.35	23,000	-	-	4.3	140	3.6	6.49	1.748	8.30	0.19	11.0	-73.7
Area 4	G6M-02-13X	3/27/2007	1.0 U	**120**	**460**	2.0 U	**39**	**170**	**400**	**170,000**	**8,400 J**	0.031	3.7	27,000	-	-	9.7	37	1.6	6.08	1.378	11.2	0.12	13.8	-14.6
Area 4	G6M-02-13X	6/13/2007	1.0 U	48	**440**	2.0 U	**45**	**46**	**380**	**300,000**	**9,400**	0.025 U	6.3	26,000	-	-	13	78	3.6	6.58	1.926	47.5	0.46	12.3	-178.7
Area 4	G6M-02-13X	9/13/2007	1.0 U	**120**	**510**	2.0 U	**150**	**53**	**230**	**88,000**	**4,800**	0.14	26	20,000	0.2 U	74	480	18	1.0 U	6.54	1.332	18.2	0.45	13.7	-145.3
Area 4	G6M-02-13X	12/14/2007	1.0 U	58 J	**690**	2.0 U	**84 J**	**21 J**	**210**	**46,000**	**4,500**	0.068	21	16,000	-	-	13	11	1.0 U	6.51	1.133	3.60	0.27	14.2	-133.2
Area 4	G6M-02-13X	3/12/2008	1.0 U	29	**130**	2.0 U	**96**	**12**	**260**	**68,000**	**7,600**	0.092	35	21,000	-	-	9.0	17	1.0 U	6.48	1.221	7.70	0.57	14.5	-140.5
Area 4	G6M-02-13X	10/6/2008	5.0 U	7.9	5.0 U	5.0 U	**9.7**	**7.5**	**380**	**91,000**	**4,940**	6.5 U	8.8	14,000	0.13 U	300	11	24	0.03 U	6.56	1.071	5.20	0.28	13.6	-173.6
Area 4	G6M-02-13X	1/21/2009	1.7 U	5.4	1.4 U	1.3 U	5.0	**5.7**	**371**	**72,000 J**	**3,990**	0.25 U	3.8	17,000	0.13 U	200	14	11 J	0.03 U	6.88	0.821	4.00	0.28	13.1	-121.2
Area 4	G6M-02-13X	5/6/2009	0.5 U	9.8	0.5 U	0.24 J	**5.1**	**6.2**	**351**	**69,400**	**3,820**	1.2 U	2.6	26,000	0.012 J	300 J	12	9.4 J	0.03 U	6.01	0.916	2.09	0.29	14.2	-93.4
Area 4	G6M-02-13X	10/15/2009	0.5 U	16	0.92	0.70	**8.6**	**8.5**	**369**	**93,300**	**6,800**	1.2 U	2.2	7,400	0.13 U	370	13	7.0 J	0.03 U	6.47	0.932	1.71	0.24	14.5	-148.8
Area 4	G6M-02-13X	4/20/2010	0.5 U	14	0.5 U	0.42 J	0.29 J	**13**	**322**	**134,000 J**	**5,790**	1.3 U	6.4	44,000	0.13 U	500	5.0 U	36	0.03 U	6.47	1.219	2.98	0.28	14.3	-7.3
Area 4	G6M-02-13X	10/4/2010	0.5 U	8.3	0.30 J	0.24 J	1.6	**8.4**	**281**	**58,500**	**4,690**	1.2 U	9.5	48,000	0.046 J	370	3.3 J	10 U	0.03 U	6.57	1.168	0.90	0.18	13.7	-124.5
Area 4	G6M-02-13X	6/9/2011	-	-	-	-	-	-	**302**	**72,300**	**6,820**	-	-	-	-	-	-	-	-	6.49	1.210	2.19	0.21	13.4	-110.8
Area 4	G6M-02-13X	10/6/2011	0.5 U	0.96	0.5 U	0.5 U	0.5 U	**2.4**	**258**	**36,200**	**5,690**	1.2 U	1.5 U	12,000	0.13 U	110	0.45 J	6.7 J	0.056	6.65	1.235	2.00	0.07	14.6	-94.6
Area 4	G6M-02-13X	5/9/2012	-	-	-	-	-	-	**205**	**25,900**	**6,670**	-	-	-	-	-	-	-	-	7.00	1.281	1.01	0.16	11.5	-118.5
Area 4	G6M-02-13X	10/11/2012	0.5 U	0.69	0.5 U	0.5 U	0.83	0.5 U	**159**	**24,900**	**8,190**	1.3 U	87	22,000	0.013 J	380	5.0 U	2.7 J	0.03 U	6.68	1.195	< 0.01	0.34	12.3	-109.8
Area 4	G6M-02-13X	5/21/2013	-	-	-	-	-	-	**212**	**22,300**	**12,500**	-	-	-	-	-	-	-	-	6.88	0.900	4.89	0.12	12.0	-118.0
Area 4	G6M-02-13X	10/16/2013	0.5 U	1.8	0.5 U	0.27 J	0.78	1.1	**140**	**19,100**	**11,400**	1.8	3.9	34,000	0.13 U	350	5.0 U	2.5 J	0.037	6.87	0.916	< 0.01	0.37	12.0	-110.0
Area 4	G6M-02-13X	6/11/2014	-	-	-	-	-	-	**195**	**20,400**	**15,800**	-	-	-	-	-	-	-	-	6.74	0.958	3.92	0.27	13.6	-85.0
Area 4	G6M-02-13X	10/29/2014	0.5 U	2.8	0.5 U	0.5 U	1.3	1.8	**128**	**12,000 J**	**7,920 J**	1.2 U	1.5 U	7,300	0.13 U	280	0.16 J	5.0 U	0.03 U	6.86	0.822	6.49	0.26	-	-81.0
Area 4	G6M-02-13X	6/23/2015	0.5 U	3.4	0.5 U	0.5 U	1.7	**2.5**	**142**	**12,500**	**11,100**	5.0 U	5.0 U	1,840	0.11 U	250	2.6 J	2.9	1.0 U	6.74	0.817	5.37	1.24	14.6	-107.2
Area 4	G6M-02-13X	9/11/2015	1.0 U	5.2	1.0 U	1.0 U	2.8	**4.9**	**142**	**10,500**	**9,980**	10 U	10 U	832	0.067 J	-	0.52 J	2.3	2.0 U	6.45	0.619	2.85	0.25	13.4	-76.0
Area 4	G6M-02-13X	10/16/2015	1.0 U	1.0 U	1.0 U	1.0 U	3.6	**3.3**	**114**	**9,770**	**12,300**	10 U	10 U	473	0.11 U	261	1.5 J	3.2	2.0 U	6.84	0.667	2.90	0.31	8.4	-87.2
Area 4	G6M-02-13X	2/12/2016	1.0 U	13	4.5	0.51 J	**14**	**7.7**	**145**	**10,200**	**11,100**	10 U	10 U	500	0.11	252	10 U	2.1	2.0 U	7.02	0.671	2.00	0.59	9.5	-102.3
Area 4	G6M-02-13X	6/16/2016	1.0 U	20	1.0 U	0.65 J	**22**	**9.4**	**96**	**7,900**	**11,000**	0.87 J	8.2	3,400	0.05 U	210	0.8 U	2.4	1.0 U	7.03	0.618	4.63	0.66	16.5	-86.6
Area 4	G6M-02-13X	11/8/2016	1.0 U	65	1.0 U	0.59 J	**9.7**	**23**	**110**	**7,700**	**12,000**	1.1 U	7.8	1,500	0.05 U	190	0.63 J	1.7	1.0 U	6.98	0.383	2.97	0.77	12.3	-152.9
Area 4	G6M-02-13X	10/19/2017	1.0 U	57	3.3	0.47 J	**21**	**17**	**120**	**6,400**	**8,500**	0.73 J	5.9	1,500	0.05 U	180	3.0	1.8	1.0 U	6.75	0.501	5.52	0.22	12.4	-58.1
Area 4	G6M-02-13X	10/24/2018	1.0 U	1.8	1.0 U	1.0 U	1.0 U	1.6	**150**	**11,000**	**18,000**	1.8	2.8	5,900	-	-	-	-	-	6.53	1.260	14.6	1.39	12.6	-40.1
Area 4	G6M-02-13X	10/14/2019	1.0 U	4.4	1.0 U	1.0 U	1.0 U	**5.1**	**140**	**10,000**	**20,000**	-	-	-	-	-	-	-	-	6.70	1.300	4.70	0.11	14.0	-82.0
Area 4	G6M-02-13X	10/16/2020	1.0 U	0.90 J	1.0 U	1.0 U	1.0 U	0.96 J	**160**	**12,000 J**	**26,000**	-	-	-	-	-	-	-	-	6.79	0.958	< 0.01	0.63	13.0	-79.7
Area 4	G6M-02-13X	10/15/2021	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	**250**	**14,000**	**22,000**	-	-	-	-	-	-	-	-	6.72	2.580	1.22	0.68	12.4	-96.8
Area 4	G6M-02-13X	10/5/2022	1.0 U	0.33 J	1.0 U	1.0 U	0.5 U	1.0 U	**270**	**11,000**	**19,000**	-	-	-	-	-	-	-	-	6.46	1.906	2.57	1.57	16.3	-64.4
Area 4	G6M-02-13X	10/23/2023	1.0 U	0.32 J	1.0 U	1.0 U	0.5 U	1.0 U	**310**	**11,000**	**15,000**	-	-	-	-	-	-	-	-	6.60	1.300	8.89	0.64	16.0	-99.1
Area 4	G6M-06-01X	3/30/2006	1.0 U	2.0 U	**30**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.03	0.652	70.7	3.73	8.2	-87.8
Area 4	G6M-06-01X	3/30/2007	1.0 U	2.0 U	**72**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.73	1.005	10.2	2.87	10.0	138.5
Area 4	G6M-06-01X	9/13/2007	1.0 U	2.1	**83**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.60	0.967	6.30	10.7	12.7	-93.9
Area 4	G6M-06-01X	12/14/2007	1.0 U	2.3	**110**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.96	0.991	3.90	2.43	17.5	132.9
Area 4	G6M-06-01X	10/16/2008	1.0 U	1.4	**71**	1.0 U	1.8	1.0 U	-	-	-	-	-	-	-	-	-	-	-	5.51	0.956	20.0	3.08	10.8	118.6
Area 4	G6M-06-01X	10/15/2009	8.0 U	6.3 J	**170**	8.0U	**28**	8.0 U	8.0 U	321	50 U	-	-	-	-	-	-	-	-	5.82	0.832	0.13	2.69	13.7	85.3
Area 4	G6M-06-01X	10/4/2010	4.0 U	7.2	**120**	4.0 U	3.4 J	4.0 U	5.0 U	211 U	33.2 U	-	-	-	-	-	-	-	-	6.00	1.160	25.1	1.72	13.2	57.1
Area 4	G6M-06-01X	6/8/2011	0.5 U	7.2	**190**	0.5 U	**7.7**	0.5 U	5.0 U	100 U	25 U	-	-	-	-	-	-	-	-	5.81	0.979	4.01	1.39	17.1	122.0
Area 4	G6M-06-01X	10/6/2011	1.3 U	46	**96**	1.3 U	**30**	**3.5**	3.7 J	139	39	-	-	-	-	-	-	-	-	6.22	0.825	13.1	0.59	11.0	40.8
Area 4	G6M-06-01X	5/8/2012	10 U	16	**310**	10 U	**18**	10 U	5.0 U	100 U	9.4 J	-	-	-	-	-	-	-	-	6.14	0.943	2.59	0.65	13.1	87.4
Area 4	G6M-06-01X	10/10/2012	4.0 U	9.1	**180**	4.0 U	**7.6**	4.0 U	5.0 U	52 J	8.8 J	-	-	-	-	-	-	-	-	5.94	0.819	2.61	0.54	10.6	56.2
Area 4	G6M-06-01X	5/21/2013	5.0 U	17	**170**	5.0 U	**30**	2.0 J	5.0 U	100 U	25 U	-	-	-	-	-	-	-	-	5.96	1.058	8.89	0.36	13.1	81.0
Area 4	G6M-06-01X	11/05/2020	1.0 U	9.0 J	0.95 J	1.0 U	1.1 J	1.0 U	**160**	**140,000**	**2,600**	-	-	-	-	-	-	-	-	4.18	0.909	> 5,000	0.44	16.7	123.0
Area 4	G6M-13-02X	1/30/2014	0.5 U	34	**120**	0.34 J	**20**	**14**	-	-	-	-	-	-	-	-	-	-	-	6.44	1.099	3.11	0.88	16.0	53.9
Area 4	G6M-13-02X	6/11/2014	0.29 J	**81**	**170**	0.53	**54**	**6.0**	3.2 J	472	33	-	-	-	-	-	-	-	-	6.05	0.900	4.29	0.71	11.6	144.8
Area 4	G6M-13-02X	11/3/2014	5.0 U	**95**	**210**	5.0 U	**39**	**6.7**	2.5 U	146 U	20 J	-	-	-	-	-	-	-	-	6.31	0.625	2.27	1.30	5.7	75.8
Area 4	G6M-13-02X	6/26/2015	0.5 U	38	**105**	0.5 U	**50**	1.1	2.1 J	50 U	9.4 J	-	-	-	-	-	-	-	-	5.99	0.917	9.69	1.03	17.1	101.6
Area 4	G6M-13-02X	10/16/2015	1.0 U	1.0 U	**70**	1.0 U	**31**	1.4 J	4.0 U	87	15	-	-	-	-	-	-	-	-	6.27	1.069	2.97	0.35	8.0	72.0
Area 4	G6M-13-02X	2/22/2016	1.0 U	21	**86**	0.54 J	**25**	0.65 J	4.0 U	100 U	22	10 U	10 U	3,560	0.28	56	16	0.81 J	2.0 U	6.23	0.818	4.89	0.90	11.5	21.6
Area 4	G6M-13-02X	6/16/2016	1.0 U	61	**77**	0.89 J	**34**	1.5	1.8 J	190	20	-	-	-	-	-	-	-	-	6.17	0.937	11.3	1.29	16.7	3.6
Area 4	G6M-13-02X	11/8/2016	1.0 U	38	**84**	1.0 U	**27**	0.93 J	3.0 U	50 U	4.7 J	-	-	-	-	-	-	-	-	6.30	0.689	2.01	0.94	11.9	-136.1
Area 4	G6M-13-02X	5/16/2017	1.0 U	30	**79**	0.39 J	**25**	0.90 J	3.0 U	50 U	16	0.64 J	1.0 U	4,300	0.34	54	12	1.0 U	1.0 U	6.07	0.841	5.79	0.47	12.9	89.7
Area 4	G6M-13-02X	10/19/2017	1.0 U	13	**65**	0.5 U	**15**	0.99 J	1.5 J	230	50	1.1 U	1.0 U	4,100	0.47	75	12	2.2	1.0 U	6.33	0.996	8.18	0.22	13.4	51.1
Area 4	G6M-13-02X	4/3/2018	1.0 U	15	**58**	0.65 J	**11**	1.1	3.0 U	160	54	1.1 U	1.0 U	6,300	0.35	53	11	6.8	1.0 U	6.51	1.063	4.17	0.81	11.3	-19.0
Area 4	G6M-13-02X	10/24/2018	1.0 U	24 J	**28 J**	1.0 J	**9.6 J**	**3.5 J**	3.6	100	160	1.6	1.3	6,700	0.095 J	67	10 J	29 J	1.0 U	5.79	1.217	38.7	0.32	13.4	-26.4
Area 4	G6M-13-02X	4/4/2019	1.0 U	11	**22**	0.42 J	**8.5**	1.5	1.5 J	400	80	1.3	1.0 U	7,800	0.23	-	12	1.8	1.0 U	6.20	1.200	6.80	0.92	13.0	-120.0
Area 4	G6M-13-02X	10/30/2019	-	-	-	-	-	-	2.4 J	750	130	1.2	1.0 U	11,000	0.048 J	57	12	0.86 J	0.83 U	6.00	1.200	7.00	0.15	13.0	4.8
Area 4	G6M-13-02X	12/26/2019	1.0 U	8.8	**16**	0.53 J	**8.6**	1.0 U	-	-	-	-	-	-	-	-	-	-	-	6.22	1.171	1.84	0.86	11.7	-22.4
Area 4	G6M-13-02X	05/12/2020	1.0 U	32	**5.6**	1.1	**12**	**17**	3.0 U	150	16	1.3	2.1	16,000	0.10 U	66	4.1	5.2	1.4	5.98	1.010	12.7	0.82	11.9	-13.9

		Analytical Method	VOCs						Dissolved Metals			Dissolved Gases			General Chemistry					Field Parameters					
		Analyte	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Nitrate/ Nitrite	Alkalinity	Sulfate	TOC	Sulfide	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mS/cm)	(NTU)	(mg/L)	°C	(mV)
		Cleanup Level[1]	7	70	5	70	5	2	10	3,129	1,460				10,000										
Area	Well ID	Date Sampled																							
Area 4	G6M-13-02X	10/19/2020	1.0 U	8.9 J	**14 J**	0.74 J	**8.4 J**	**3.8 J**	10	2,500	540	1.0 J	1.0 U	18,000	0.05 U	78	7.3	4.5	0.93 U	6.04	0.842	11.8	0.43	13.6	-14.8
Area 4	G6M-13-02X	5/14/2021	1.0 U	10	3.3	0.73 J	4.8	**3.2**	**15**	**3,500**	1200 J	1.5	2.5	13,000	0.02 J	75	7.9	2.5	0.81 U	6.22	0.739	7.8	2.80	11.6	-68.8
Area 4	G6M-13-02X	10/18/2021	1.0 U	13	**11**	0.68 J	**12**	**2.3**	**14**	1,700	**2,700**	0.69 J	0.84 J	6,500	0.05 U	100	8.0	7.0	0.81 U	6.25	1.980	7.4	0.60	11.0	-11.9
Area 4	G6M-13-02X	5/3/2022	1.0 U	6.8	3.4	0.67 J	**8.4**	1.0 U	3.2 J	290	**1,500**	0.68 J	0.71 U	11,000 J	0.053 J	48	7.6	1.1	1.2 U	5.87	0.978	53.0	0.52	11.7	47.3
Area 4	G6M-13-02X	10/10/2022	1.0 U	3.9	1.5 J	0.70 J	**3.1**	1.0 U	9.3	720	**11,000**	0.76 U	0.71 U	5,200	0.028 J	100	6.3	2.1	1.7 U	6.64	0.920	4.7	0.69	14.4	3.6
Area 4	G6M-13-02X	6/7/2023	1.0 U	11	1.0 U	0.65 J	**7.2**	0.45 J	**20**	600	**12,000**	0.76 U	0.71 U	780	0.016 J	93	8.8	2.0	1.5	6.38	1.610	1.7	0.72	21.2	20.1
Area 4	G6M-13-02X	10/20/2023	1.0 U	11	1.0 U	1.4 J	3.3	0.58 J	**27**	1,500	**12,000**	0.87 J	0.71 U	8,800	0.025 U	83	8.9	1.0 J	1.7 U	6.18	1.100	96.1	0.30	15.7	6.8
Area 4	G6M-97-28X	12/13/2006	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	100 U	15 U	0.025 U	0.019 J	870	-	-	-	5.0 U	-	6.21	0.162	5.60	3.38	11.5	142.8
Area 4	G6M-97-28X	9/14/2015	1.0 U	37	0.57 J	1.6	**63**	**22**	4.0 U	234	**2,110**	10 U	10 U	85	0.11 U	-	12	1.1	2.0 U	6.21	0.256	-	0.30	14.4	67.7
Area 4	G6M-97-28X	2/12/2016	1.0 U	1.4	1.0 U	1.0 U	1.1	0.53 J	**48**	2,490	**5,690**	10 U	10 U	235	0.085 J	111	4.2 J	1.6	2.0 U	6.92	0.210	8.64	1.99	6.1	72.8
Area 4	G6M-97-28X	6/16/2016	-	-	-	-	-	-	**190**	**6,000**	**2,200**	-	-	-	-	-	-	-	-	6.68	0.312	2.15	0.28	23.1	-85.3
Area 4	G6M-97-28X	11/8/2016	-	-	-	-	-	-	**27**	2,200	**18,000**	-	-	-	-	-	-	-	-	6.72	0.537	11.9	0.86	12.8	-70.9
Area 4	G6M-97-28X	10/26/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**92**	**9,500**	**9,500**	1.1 U	1.0 U	210	-	-	-	0.5 U	-	6.33	0.817	20.1	0.43	11.1	-37.8
Area 4	G6M-97-28X	10/28/2019	-	-	-	-	-	-	**71**	**7,900**	**10,000**	-	-	-	-	-	-	-	-	6.10	1.100	1.80	0.35	12.0	6.8
Area 4	G6M-97-28X	10/15/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**44**	**8,300**	**12,000**	-	-	-	-	-	-	-	-	6.08	0.875	6.24	0.59	14.7	-7.6
Area 4	G6M-97-28X	10/12/2021	-	-	-	-	-	-	**120**	**7,700**	**6,800**	-	-	-	-	-	-	-	-	6.69	0.550	4.89	1.25	17.5	-125.0
Area 4	G6M-97-28X	10/6/2022	-	-	-	-	-	-	**70**	**4,300**	**5,000**	-	-	-	-	-	-	-	-	6.77	0.528	7.49	0.76	14.7	-94.6
Area 4	G6M-97-28X	10/19/2023	-	-	-	-	-	-	**120**	**9,300**	**6,200**	-	-	-	-	-	-	-	-	6.60	0.710	62.70	0.17	14.9	-98.4
Area 5	G6M-02-05X	2/28/2002	1.0 U	1.9 J	**130**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.15	0.597	11.0	6.61	15.7	181.1
Area 5	G6M-02-05X	1/30/2003	1.0 U	2.3	**170**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.7	-
Area 5	G6M-02-05X	9/30/2005	1.0 U	2.6	**200**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	4.73	0.512	7.90	3.61	15.8	441.8
Area 5	G6M-02-05X	9/22/2006	1.0 U	2.2	**350**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.52	0.543	7.38	2.14	12.7	94.8
Area 5	G6M-02-05X	9/12/2007	1.0 U	7.9	**510**	2.0 U	**50**	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.39	0.723	30.6	0.78	12.3	-57.8
Area 5	G6M-02-05X	10/20/2008	10 U	4.4 J	**390**	10 U	**17**	10 U	-	-	-	-	-	-	-	-	-	-	-	7.00	0.588	3.00	1.83	12.4	-41.9
Area 5	G6M-02-05X	10/19/2009	10 U	10 U	**370**	10 U	**53**	10 U	**49**	**3,820**	**2,490**	1.3 U	1.6 U	410	0.26	57	19	10 U	0.03 U	6.22	0.699	1.40	0.31	12.5	30.6
Area 5	G6M-02-05X	10/5/2010	5.0 U	4.0 J	**240**	5.0 U	**100**	5.0 U	**71**	**5,420**	**2,420**	1.2 U	1.5 U	160	0.025 J	20 U	13	10 U	0.03 U	6.25	0.749	5.99	0.25	12.3	-37.5
Area 5	G6M-02-05X	6/8/2011	0.62	**78**	**200**	3.7	**230**	**18 J**	**105**	**8,580**	**2,700**	1.2 U	10	5,400	0.13 U	180	11	2.6 J	0.03 U	6.16	0.708	< 0.01	0.24	12.3	-42.8
Area 5	G6M-02-05X	10/6/2011	2.0 U	59	**37**	2.0 U	**140**	**25**	**125**	**10,800**	**2,300**	1.2 U	15	6,600	0.012 J	530	14	2.1 J	0.03 U	6.18	0.959	1.40	0.73	11.6	-4.0
Area 5	G6M-02-05X	10/6/2011	2.0 U	59	**37**	2.0 U	**140**	**25**	**125**	**10,800**	**2,300**	1.2 U	15	6,600	0.012 J	530	14	2.1 J	0.03 U	6.18	0.959	1.40	0.73	12.4	-4.0
Area 5	G6M-02-05X	5/9/2012	0.5 U	17	**140**	0.5 U	**68**	0.5 U	**103**	**8,630**	**2,060**	1.3 U	1.6 U	3,900	0.13 U	75	14	10 U	0.03 U	6.19	0.682	1.52	0.78	12.6	9.0
Area 5	G6M-02-05X	10/10/2012	2.0 U	16	**94**	2.0 U	**44**	2.0 U	**73**	**6,780**	1,460	1.2 U	1.5 U	4,400	0.11 J	64	14	10 U	0.03 U	6.14	0.809	< 0.01	1.92	11.2	15.2
Area 5	G6M-02-05X	5/21/2013	0.30 J	**78**	**38 J**	0.48 J	**33 J**	**2.3**	**84**	**8,430**	1,310	1.2 U	1.5 U	2,200	0.13 U	100 J	12	10 U	0.03 U	6.26	0.753	0.77	0.75	14.0	-19.1
Area 5	G6M-02-06X	3/1/2002	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	7.16	0.135	32.0	8.91	12.2	134.8
Area 5	G6M-02-06X	9/24/2004	1.0 U	2.0 U	**5.5**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	7.33	0.090	0.02	9.48	12.3	152.8
Area 5	G6M-02-06X	9/30/2005	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	7.22	0.107	4.39	8.22	13.3	66.4
Area 5	G6M-02-06X	9/21/2006	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	7.30	0.098	10.9	7.84	11.3	139.3
Area 5	G6M-02-06X	9/14/2007	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.94	0.149	7.70	8.50	10.9	-140.7
Area 5	G6M-02-06X	10/20/2008	0.5 U	0.5 U	0.47 J	0.5 U	0.5 U	0.5 U	-	-	-	-	-	-	-	-	-	-	-	7.09	0.109	6.50	7.71	11.3	88.8
Area 5	G6M-02-06X	10/14/2009	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	8.0 U	200 U	50 U	-	-	-	-	-	-	-	-	6.98	0.115	0.20	8.96	11.4	26.1
Area 5	G6M-02-06X	10/5/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	100 U	25 U	-	-	-	-	-	-	-	-	6.90	0.128	4.38	7.66	11.6	63.6
Area 5	G6M-02-06X	10/7/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 J	100 U	25 U	-	-	-	-	-	-	-	-	6.87	0.076	18.6	6.30	11.8	24.7
Area 5	G6M-02-06X	10/10/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	100 U	25 U	-	-	-	-	-	-	-	-	7.11	0.134	10.5	8.89	11.4	16.8
Area 5	G6M-02-06X	10/15/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	100 U	25 U	-	-	-	-	-	-	-	-	7.36	0.134	2.62	9.84	12.9	110.9
Area 5	G6M-02-06X	10/30/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	155 U	6.0 J	-	-	-	-	-	-	-	-	7.21	0.101	2.18	7.73	13.9	73.1
Area 5	G6M-02-06X	10/19/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	100 U	15 U	-	-	-	-	-	-	-	-	7.29	0.114	2.23	8.05	12.9	82.5
Area 5	G6M-02-06X	11/11/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	50 U	3.0 U	-	-	-	-	-	-	-	-	7.86	0.840	4.92	6.80	9.6	-32.7
Area 5	G6M-02-06X	10/19/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	75 U	5.0 U	-	-	-	-	-	-	-	-	7.02	0.123	4.41	5.72	11.9	40.2
Area 5	G6M-02-06X	10/22/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	50 U	3.0 U	-	-	-	-	-	-	-	-	7.21	0.152	11.8	5.35	11.2	168.4
Area 5	G6M-02-06X	10/15/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.7 J	50 U	3.0 U	-	-	-	-	-	-	-	-	7.30	0.150	3.50	8.40	11.0	63.0
Area 5	G6M-02-06X	10/16/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.5 J	50 U	1.3 J	-	-	-	-	-	-	-	-	7.37	0.095	3.93	8.55	11.8	224.0
Area 5	G6M-02-06X	10/14/2021	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.5 J	50 U	3.0 U	-	-	-	-	-	-	-	-	7.26	0.119	0.50	6.97	13.8	107.0
Area 5	G6M-02-06X	10/6/2022	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	1.5 J	50 U	5.0 U	-	-	-	-	-	-	-	-	7.21	0.153	2.69	6.20	13.1	605.6
Area 5	G6M-02-06X	11/2/2023	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	1.5 J	50 U	5.0 U	-	-	-	-	-	-	-	-	7.20	0.150	0.80	6.95	11.2	51.1
Area 5	G6M-02-07X	2/26/2002	1.0 U	2.0 U	**24**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	7.34	0.259	46.0	0.00	11.5	110.3
Area 5	G6M-02-07X	9/23/2004	1.0 U	2.0 U	**26**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	7.26	0.423	25.0	1.72	12.4	332.8
Area 5	G6M-02-07X	9/30/2005	1.0 U	2.0 U	**16**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	7.69	0.389	7.70	6.98	11.1	121.2
Area 5	G6M-02-07X	9/21/2006	1.0 U	2.0 U	**11**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	7.58	0.251	14.3	3.72	10.8	143.6
Area 5	G6M-02-07X	9/13/2007	1.0 U	2.0 U	**12**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	7.68	0.334	3.00	3.78	10.5	43.3
Area 5	G6M-02-07X	10/20/2008	0.5 U	0.5 U	**9.8 J**	0.5 U	0.27 J	0.5 U	-	-	-	-	-	-	-	-	-	-	-	7.46	0.271	12.0	3.15	10.5	42.8
Area 5	G6M-02-07X	10/15/2009	10 U	10 U	**6.7 J**	10 U	**210**	10 U	8.0 U	127 U	50 U	-	-	-	-	-	-	-	-	7.41	0.413	3.00	1.15	11.5	-14.0
Area 5	G6M-02-07X	1/15/2010	0.75 U	0.5 U	**5.7**	0.75 U	0.5 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	7.53	0.344	1.88	3.26	11.6	150.2
Area 5	G6M-02-07X	10/5/2010	0.5 U	0.5 U	4.7	0.5 U	0.24 J	0.5 U	5.0 U	100 U	25 U	-	-	-	-	-	-	-	-	7.39	0.296	1.33	2.57	11.8	60.3
Area 5	G6M-02-07X	10/3/2011	0.5 U	0.5 U	3.6	0.5 U	0.5 U	0.5 U	5.0 U	100 U	25 U	-	-	-	-	-	-	-	-	7.54	0.198	5.12	1.58	11.8	26.6
Area 5	G6M-02-07X	10/11/2012	0.5 U	0.57	4.6	0.5 U	0.5 U	0.5 U	5.0 U	28 J	25 U	-	-	-	-	-	-	-	-	7.68	0.352	2.69	1.31	-	98.1
Area 5	G6M-02-07X	10/15/2013	0.5 U	0.5 U	1.1	0.5 U	0.5 U	0.5 U	2.9 J	100 U	5.1 J	-	-	-	-	-	-	-	-	7.62	0.911	1.05	2.39	-	99.8
Area 5	G6M-02-07X	10/29/2014	0.5 U	0.62	3.9	0.5 U	0.27 J	0.5 U	2.4 J	25 U	7.8 J	-	-	-	-	-	-	-	-	7.41	0.535	3.71	0.22	11.4	10.9
Area 5	G6M-02-07X	10/19/2015	1.0 U	1.0 U	4.5	1.0 U	1.0 U	1.0 U	4.0 U	100 U	15 U	-	-	-	-	-	-	-	-	7.64	0.362	3.69	0.35	16.0	75.3
Area 5	G6M-02-07X	11/11/2016	1.0 U	1.0	**5.4**	1.0 U	0.75 J	1.0 U	3.0 U	50	11	-	-	-	-	-	-	-	-	7.86	0.084	4.92	6.80	9.6	-32.7

Appendix D
Historical Groundwater Analytical Results
2023 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

		Analytical Method	VOCs						Dissolved Metals			Dissolved Gases			General Chemistry					Field Parameters					
		Analyte	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Nitrate/ Nitrite	Alkalinity	Sulfate	TOC	Sulfide	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mS/cm)	(NTU)	(mg/L)	°C	(mV)
		Cleanup Level[1]	7	70	5	70	5	2	10	3,129	1,460				10,000										
Area	Well ID	Date Sampled																							
Area 5	G6M-02-07X	10/23/2017	1.0 U	1.0 U	4.2	1.0 U	1.0 U	1.0 U	1.9 J	110	12	-	-	-	-	-	-	-	-	7.57	0.335	9.82	0.29	11.9	-39.4
Area 5	G6M-02-07X	10/23/2018	1.0 U	1.0 U	3.4	1.0 U	1.0 U	1.0 U	3.0 U	50 U	3.0 U	-	-	-	-	-	-	-	-	7.65	0.575	8.66	0.31	11.7	81.7
Area 5	G6M-02-07X	10/9/2019	1.0 U	1.0 U	4.7	1.0 U	0.52 J	1.0 U	3.0 U	50 U	1.2 J	-	-	-	-	-	-	-	-	7.60	0.320	1.20	0.48	11.0	47.0
Area 5	G6M-02-07X	10/16/2020	1.0 U	1.0 U	3.8 J	1.0 U	1.0 U	1.0 U	1.5 J	17 J	6.1 J	-	-	-	-	-	-	-	-	7.81	0.217	39.1	0.73	12.0	-5.3
Area 5	G6M-02-07X	10/14/2021	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	3.0 U	42 J	13	-	-	-	-	-	-	-	-	7.78	1.510	4.41	0.01	14.3	-56.8
Area 5	G6M-02-07X	10/7/2022	1.0 U	1.0 U	2.0	1.0 U	0.5 U	1.0 U	1.1 J	**27,000**	**1,600**	-	-	-	-	-	-	-	-	7.36	0.408	2.78	0.58	12.8	579.6
Area 5	G6M-02-07X	10/18/2023	1.0 U	1.0 U	0.44 J	1.0 U	0.5 U	1.0 U	1.3 J	50 U	14	-	-	-	-	-	-	-	-	7.17	1.860	7.20	1.00	13.1	18.2
Area 5	G6M-02-11X	8/1/2002	1.0 U	2.0 U	**450**	2.0 U	2.8	2.0 U	5.0 U	-	-	-	-	-	-	-	-	-	-	6.01	0.984	8.13	0.46	13.9	184.0
Area 5	G6M-02-11X	8/28/2002	1.0 U	2.0 U	**540 J**	2.0 U	2.0 U	2.0 U	5.0 U	-	-	-	-	-	-	44	-	5.0 U	-	6.05	0.905	6.49	0.51	10.7	173.0
Area 5	G6M-02-11X	10/29/2002	1.0 U	3.0	**970**	2.0 U	**22**	2.0 U	5.0 U	1,000 U	**1,700**	-	-	-	0.10 U	51	17	5.0 U	2.0 U	6.02	0.920	5.04	0.49	13.2	51.0
Area 5	G6M-02-11X	2/3/2003	1.0 U	2.0 U	**710**	20 U	**22**	2.0 U	5.0 U	1,000 U	-	-	-	-	-	65	-	5.0 U	-	6.22	0.971	12.7	0.71	14.1	178.0
Area 5	G6M-02-11X	7/16/2003	1.0 U	33	**530**	2.0 U	**54**	2.0 U	5.0 U	1,000 U	-	0.005 U	0.014	460	-	120	16 J	5.0 U	2.0 U	6.31	0.813	11.9	0.86	16.1	166.0
Area 5	G6M-02-11X	9/26/2003	1.0 U	37	**590**	2.0 U	**31**	2.0 U	5.0 U	-	**1,700**	0.005 U	0.005 U	1,200	-	-	-	19	-	6.60	0.921	7.20	0.41	8.6	146.0
Area 5	G6M-02-11X	1/8/2004	1.0 U	49	**300**	2.0 U	**15**	2.0 U	5.0 U	1,000 U	**1,900**	0.005 U	0.0093	2,300	-	150	12 J	5.0 U	2.0 U	6.29	0.729	0.60	0.00	6.6	104.0
Area 5	G6M-02-11X	3/10/2004	1.0 U	53	**160**	2.0 U	**11**	2.0 U	5.0 U	1,000 U	**2,200**	0.005 U	0.068	14,000	-	130	9.6	1.8	2.0 U	6.39	0.847	7.50	0.82	15.6	103.0
Area 5	G6M-02-11X	6/4/2004	1.0 U	54	**440**	2.0 U	**23**	2.0 U	5.0 U	1,000 U	**1,900**	0.005 U	0.010	2,300	-	110	12	2.4 J	1.9 J	6.72	0.807	21.3	12.1	13.7	54.5
Area 5	G6M-02-11X	9/22/2004	1.0 U	**140**	**540**	2.0 U	**50**	2.0 U	5.0 U	1,000 U	**2,400**	0.005 U	0.005 U	13,000	0.5 U	100	12	1.2	1.5 J	6.19	0.996	1.25	0.96	11.1	412.7
Area 5	G6M-02-11X	12/15/2004	1.0 U	**120**	**760**	2.0 U	**47**	2.0 U	5.0 U	1,000 U	**2,100**	0.005 U	0.021	9,700	1.0	95	15	5.0 U	2.0 U	6.35	0.675	21.2	1.36	13.8	200.1
Area 5	G6M-02-11X	3/28/2005	4.0 U	45	**1,100**	40 U	**41**	40 U	5.0 U	1,000 U	**2,200**	0.005 U	0.065	10,000	0.2 U	90	13	3.6 J	2.0 U	6.19	0.938	48.3	1.02	16.0	84.3
Area 5	G6M-02-11X	7/1/2005	10 U	**280**	**1,500**	10 U	**90**	10 U	2.1	1,000 U	**1,800**	0.028	0.42	15,000	0.05 U	98	14	9.4	1.0 U	5.78	0.806	6.66	0.37	14.9	221.6
Area 5	G6M-02-11X	9/27/2005	1.0 U	**260**	**240**	2.0 U	**78**	**16**	5.0 U	1,000 U	**2,500**	0.020 J	8.1	21,000	0.05 U	148	5.9 J	3.4	1.0 U	5.92	0.755	0.69	0.40	13.0	93.6
Area 5	G6M-02-11X	12/12/2005	1.0 U	50	**220**	2.0 U	**28**	**9.1**	7.8	200 J	**3,100**	0.082	29	24,000	1.3 J	270	3.5	5.5	1.0 U	6.28	1.107	8.90	0.18	13.0	64.8
Area 5	G6M-02-11X	3/21/2006	1.0 U	**230**	**520**	2.3	**94**	**60**	5.0 U	100 U	**1,500**	0.025 U	34	17,000	0.2 U	120	8.8	8.2	1.0 U	6.45	0.765	7.15	12.0	14.5	326.6
Area 5	G6M-02-11X	6/22/2006	1.0 U	20	**130**	20	**44**	**9.2**	5.0 U	1,000 U	**6,300**	0.051	78	22,000	0.2 U	210	2.5	6.1	1.0 U	6.19	1.231	5.04	0.27	14.0	59.7
Area 5	G6M-02-11X	9/22/2006	1.0 U	8.6	**37**	2.8	**17**	**4.0**	6.9	580	**9,300**	0.089	15	21,000	0.2 U	180	4.9	9.8	1.0 U	5.93	1.079	4.55	1.22	13.0	-158.9
Area 5	G6M-02-11X	3/27/2007	1.0 U	3.6	**38**	9.8	**21**	2.0 U	**120**	**7,100**	**24,000 J**	6.8	28	23,000	-	-	-	10	-	6.25	0.912	19.0	0.61	12.6	-39.6
Area 5	G6M-02-11X	9/11/2007	1.0 U	7.9	4.4	12	**24**	**4.3**	**420**	**18,000**	**18,000**	2.8	36	30,000	0.2 U	270	470	14	1.0 U	6.24	1.423	9.70	3.52	11.0	-11.1
Area 5	G6M-02-11X	12/13/2007	1.0 U	6.0 J	2.8 J	5.5 J	**19 J**	**4.4 J**	**470**	**47,000**	**18,000**	8.3	16	29,000	-	-	5.0 U	15	1.0	6.36	1.409	0.50	0.52	11.8	-117.9
Area 5	G6M-02-11X	3/11/2008	1.0 U	2.5	2.0 U	9.7	**6.2**	2.0 U	**570**	**59,000**	**27,000**	24	5.8	28,000	-	-	5.0 U	17	2.8	6.35	1.560	0.30	0.41	11.7	-90.5
Area 5	G6M-02-11X	10/16/2008	0.5 U	6.9	1.3	0.80	**7.3**	**2.2**	**1,170**	**116,000**	**8,420**	1.2 U	5.4	39,000	0.10 U	240	9.3	21	0.03 U	5.80	0.154	4.00	1.51	13.7	-20.6
Area 5	G6M-02-11X	5/7/2009	0.5 U	0.47 J	0.5 U	0.92	0.76	0.5 U	**1,060**	**125,000**	**3,950**	3.1	3.5	42,000	0.13 U	370 J	17	31	0.03 U	6.04	1.605	0.32	0.24	12.1	-117.5
Area 5	G6M-02-11X	10/14/2009	0.5 U	0.58	0.23 J	0.63	1.4	0.46 J	**1,070**	**126,000**	**2,390**	1.2 U	1.5 U	55,000	0.13 U	430	9.7	8.7 J	0.03 U	6.46	1.342	5.00	0.52	11.1	-114.9
Area 5	G6M-02-11X	4/20/2010	0.5 U	24	0.5 U	0.24 J	1.6	**5.8**	**1,050**	**106,000 J**	**3,760**	1.2 U	2.0	17,000	0.13 U	500	5.0 U	8.7 J	0.03 U	6.75	0.778	1.50	0.38	11.6	-130.5
Area 5	G6M-02-11X	10/5/2010	0.5 U	0.52	0.5 U	0.38 J	0.94	0.66	**956**	**93,800**	**1,590**	1.2 U	1.5 U	47,000	0.13 U	700	1.4 J	10 U	0.03 U	6.51	1.368	0.86	0.72	11.6	-136.0
Area 5	G6M-02-11X	6/9/2011	-	-	-	-	-	-	**804**	**91,600**	**2,480**	-	-	-	-	-	-	-	-	6.60	1.131	4.53	0.10	11.7	-111.1
Area 5	G6M-02-11X	10/3/2011	0.5 U	0.64	0.5 U	0.5 U	0.5 U	1.2	**901**	**99,900**	**2,670**	1.2 U	1.5 U	19,000	0.13 U	520	5.0 U	7.6 J	0.03 U	6.58	0.740	0.95	0.44	11.7	-114.4
Area 5	G6M-02-11X	5/8/2012	-	-	-	-	-	-	**769**	**84,200**	**2,560**	-	-	-	-	-	-	-	-	6.83	1.014	1.03	0.14	11.6	-128.1
Area 5	G6M-02-11X	10/10/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**683**	**69,900**	**1,840**	3.9	1.5 U	12,000	0.11 J	390	1.3 J	4.2 J	0.03 U	6.52	1.341	0.84	0.28	12.5	-122.8
Area 5	G6M-02-11X	5/21/2013	-	-	-	-	-	-	**649**	**59,500**	**3,660**	-	-	-	-	-	-	-	-	6.70	1.247	< 0.01	0.24	18.2	-124.9
Area 5	G6M-02-11X	10/16/2013	0.5 U	0.26 J	0.5 U	0.20 J	0.5 U	0.5 U	**616**	**53,000**	**3,230**	17	1.6 U	56,000	0.13 U	320	5.0 U	4.2 J	0.03 U	6.80	1.243	0.39	0.22	14.2	-114.8
Area 5	G6M-02-11X	6/11/2014	-	-	-	-	-	-	**573**	**50,000**	**8,010**	-	-	-	-	-	-	-	-	6.84	1.069	1.38	0.32	13.5	-104.4
Area 5	G6M-02-11X	10/29/2014	0.5 U	0.42 J	0.5 U	0.34 J	0.5 U	0.44 J	**624**	**64,000 J**	**4,860 J**	8.1 J	1.5 U	15,000	0.13 U	340	0.17 J	5.0 U	0.03 U	6.96	1.224	0.65	0.35	12.8	-156.8
Area 5	G6M-02-11X	6/26/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**578**	**51,100**	**10,800**	5.0 U	5.0 U	8,180	0.17	312	2.0 J	5.8	1.0 U	5.98	0.934	9.20	2.49	12.5	-62.1
Area 5	G6M-02-11X	9/10/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**546**	**44,400**	**9,920**	5.5 J	10 U	11,500	0.087 J	-	0.78 J	5.3	2.0 U	6.29	0.570	5.37	3.21	14.6	44.2
Area 5	G6M-02-11X	10/15/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**551**	**44,200**	**10,400**	5.8 J	10 U	9,710	0.062 J	229	10 U	4.9	2.0 U	7.03	0.942	1.12	0.26	14.8	-132.7
Area 5	G6M-02-11X	2/11/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**584**	**45,900**	**9,880**	10 U	10 U	4,980	0.10 J	219	10 U	5.1	2.0 U	7.02	0.717	2.14	0.60	10.1	-117.2
Area 5	G6M-02-11X	6/15/2016	1.0 U	0.63 J	1.0 U	1.0 U	1.0 U	1.0 U	**550**	**35,000**	**9,000**	4.6	1.0 U	11,000	0.05 U	250	0.8 U	4.4	1.0 U	6.81	0.861	20.9	2.29	18.2	-130.1
Area 5	G6M-02-11X	11/14/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**530**	**32,000**	**7,600**	5.6	1.0 U	11,000	0.05 U	220	1.0 U	4.1	1.0 U	7.16	0.632	5.71	0.92	11.8	-127.9
Area 5	G6M-02-11X	10/19/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**530**	**33,000**	**7,300**	5.2	1.0 U	6,500	0.03 J	190	1.0 U	3.9	1.0 U	6.91	0.816	12.1	0.22	12.1	-115.9
Area 5	G6M-02-11X	10/23/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**480**	**38,000**	**8,800**	-	-	-	-	-	-	-	-	6.85	1.013	11.2	0.21	11.7	4.2
Area 5	G6M-02-11X	10/15/2019	1.0 U	0.46 J	1.0 U	1.0 U	1.0 U	1.0 U	**500**	**37,000**	**9,900**	-	-	-	-	-	-	-	-	6.80	1.400	12.0	0.34	12.0	-120.0
Area 5	G6M-02-11X	10/14/2020	1.0 U	0.47 J	1.0 U	1.0 U	0.49 J	1.0 U	**450**	**37,000**	**10,000**	-	-	-	-	-	-	-	-	7.08	1.070	15.2	0.73	12.9	-127.0
Area 5	G6M-02-11X	10/12/2021	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	**520**	**39,000**	**8,800**	-	-	-	-	-	-	-	-	6.98	0.917	9.3	0.90	15.1	-129.0
Area 5	G6M-02-11X	10/6/2022	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	**610**	**40,000**	**9,200**	-	-	-	-	-	-	-	-	6.80	1.361	3.9	0.66	12.1	-141.2
Area 5	G6M-02-11X	10/17/2023	1.0 U	0.25 J	1.0 U	1.0 U	0.5 U	1.0 U	**680**	**35,000**	**5,700**	-	-	-	-	-	-	-	-	6.90	0.753	3.2	0.41	12.1	-140.9
Area 5	G6M-02-12X	8/1/2002	1.0 U	2.0 U	**330**	2.0 U	2.0 U	2.0 U	5.0 U	-	-	-	-	-	-	-	-	-	-	6.24	0.924	37.6	0.64	14.0	19.0
Area 5	G6M-02-12X	8/28/2002	1.0 U	2.0 U	**520**	2.0 U	**6.5**	2.0 U	5.0 U	-	-	-	-	-	-	54	-	5.0 U	-	6.15	0.868	2.96	0.19	14.1	156.0
Area 5	G6M-02-12X	10/29/2002	1.0 U	2.0 U	**790**	2.0 U	**10**	2.0 U	5.0 U	1,000 U	1,100	-	-	-	0.10 U	40	17	2.0 J	2.0 U	6.14	0.927	2.08	0.27	14.8	68.0
Area 5	G6M-02-12X	2/3/2003	1.0 U	2.0 U	**580**	2.0 U	4.0	2.0 U	5.0 U	1,000 U	-	-	-	-	-	52	-	5.0 U	-	6.04	0.947	5.06	-	12.5	78.0
Area 5	G6M-02-12X	7/14/2003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.0 U	-	-	-	-	-	11.0	-
Area 5	G6M-02-12X	9/22/2004	1.0 U	**110**	**1,000**	2.0 U	**43**	2.0 U	5.0 U	1,000 U	450	0.005 U	0.005 U	2,900	0.5 U	84	13	1.0 U	2.0 U	5.87	0.873	4.95	0.35	11.6	570.2
Area 5	G6M-02-12X	9/27/2005	1.0 U	**250**	**1,100**	1.4	**38**	**5.4**	5.0 U	1,000 U	690	0.025 U	1.1	14,000	0.05 U	106	13 J	3.5	1.0 U	6.11	6.920	24.5	1.17	11.7	238.5
Area 5	G6M-02-12X	9/21/2006	1.0 U	64	**190**	23	**88**	**67**	5.0 U	370	**3,200**	0.038	46	15,000	0.2 U	170	5.7	7.6	1.0 U	6.23	0.799	60.6	0.17	11.7	78.0
Area 5	G6M-02-12X	12/13/2006	1.0 U	3.6	**45**	4.4	**7.9**	2.0 U	**22**	1,000	**16,000**	0.24	19	28,000	-	-	1.1	9.3	1.2	6.39	1.277	6.94	0.19	13.7	169.6
Area 5	G6M-02-12X	9/12/2007	1.0 U	28	**62**	4.4	**50**	**18**	20 U	580	**5,500**	0.40	8.4	11,000	0.2 U	180	340	2.6 J	1.0	6.52	0.934	5.80	3.06	11.8	52.8
Area 5	G6M-02-12X	10/16/2008	0.5 U	18	0.37 J	1.6	**7.1**	**4.8**	**174**	**11,800**	**15,800**	1.2 U	3.1	19,000	0.10 U	310	7.0 U	10 U	0.03 U	6.09	1.091	10.0	0.53	11.7	-67.4
Area 5	G6M-02-12X	10/14/2009	0.5 U	13	0.5 U	0.74	0.30 J	1.6	**540**	**24,400**	**11,000**	1.3 U	1.6 U	6,900	0.13 U	350	7.0 U	4.6 J	0.03 U	6.27	1.025	1.50	1.27	19.7	-40.0

		Analytical Method	VOCs						Dissolved Metals			Dissolved Gases			General Chemistry					Field Parameters					
		Analyte	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Nitrate/ Nitrite	Alkalinity	Sulfate	TOC	Sulfide	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mS/cm)	(NTU)	(mg/L)	°C	(mV)
		Cleanup Level[1]	7	70	5	70	5	2	10	3,129	1,460				10,000										
Area	Well ID	Date Sampled																							
Area 5	G6M-02-12X	10/5/2010	0.5 U	5.6	0.5 U	0.27 J	0.5 U	1.5	**1,040**	**72,200**	**13,700**	1.2 U	2.0	40,000	0.05 J	810	2.8 J	10 U	0.03 U	6.34	1.217	1.11	0.58	17.1	-88.1
Area 5	G6M-02-12X	10/4/2011	0.5 U	6.3	0.5 U	0.5 U	0.5 U	**4.3**	**1,020**	**71,200**	**9,540**	1.2 U	1.5 U	21,000	0.13 U	440	0.33 J	6.4 J	0.03 U	6.65	0.807	1.90	0.48	13.1	-89.1
Area 5	G6M-02-12X	10/10/2012	0.5 U	1.0	0.5 U	0.5 U	0.5 U	1.0	**865**	**65,800**	**5,010**	1.8	1.5 U	14,000	0.13 U	320	0.59 J	4.0 J	0.03 U	6.76	1.068	1.68	0.70	14.4	-111.4
Area 5	G6M-02-12X	10/16/2013	0.5 U	0.72	0.5 U	0.21 J	0.5 U	0.54	**809**	**61,300**	**4,910**	10	1.5 U	55,000	0.13 U	83	5.0 U	4.2 J	0.03 U	6.85	1.010	1.87	0.45	21.3	-127.7
Area 5	G6M-02-12X	10/29/2014	0.5 U	0.90	0.5 U	0.56	0.5 U	0.79	**760**	**56,000 J**	**4,870 J**	9.2	1.5 U	25,000	0.13 U	330	0.22 J	6.2 J	0.03 U	6.96	0.995	2.48	0.83	15.5	-103.4
Area 5	G6M-02-12X	10/15/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**714**	**42,600**	**8,540**	10 U	10 U	11,300	0.11 U	243	10 U	6.4	2.0 U	7.26	0.630	6.17	1.07	13.7	-108.0
Area 5	G6M-02-12X	11/14/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**720**	**40,000**	**7,700**	3.2	1.0 U	9,400	0.05 U	210	2.0	4.5	1.0 U	6.90	0.530	13.9	1.24	11.9	-131.0
Area 5	G6M-02-12X	10/23/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**670**	**41,000**	**8,100**	4.0	1.0 U	8,000	0.055 J	200	1.0 U	4.3	1.0 U	6.90	0.678	7.49	0.29	12.2	-117.9
Area 5	G6M-02-12X	10/23/2018	1.0 U	1.0 U	1.0 U	0.39 J	1.0 U	1.0 U	**590**	**40,000**	**7,800**	-	-	-	-	-	-	-	-	7.02	0.731	18.9	0.49	11.4	-16.1
Area 5	G6M-02-12X	10/15/2020	1.0 U	0.42 J	1.0 U	1.0 U	1.0 U	1.0 U	**530**	**44,000**	**8,100**	-	-	-	-	-	-	-	-	6.95	0.871	2.03	0.62	12.1	-137.0
Area 5	G6M-02-12X	10/12/2022	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	**660**	**39,000**	**6,900**	-	-	-	-	-	-	-	-	7.38	1.066	20.18	1.03	12.3	-137.3
Area 5	G6M-03-08X	5/14/2003	1.0 U	2.0 U	**750**	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	-	-	-	-	-	-	-	-	-	-	-	-	-	13.3	-
Area 5	G6M-03-08X	9/22/2004	1.0 U	5.4	**690**	2.0 U	**6.3**	2.0 U	5.0 U	1,000 U	15 U	0.005 U	0.005 U	1.8	8.3	16	13	1.0 U	1.5 J	5.89	0.463	3.22	1.81	14.1	247.6
Area 5	G6M-03-08X	12/16/2004	1.0 U	9.6	**1,100**	2.0 U	**11**	2.0 U	5.0 U	1,000 U	17	0.069	0.030	4.7	5.7	20	13	5.0 U	2.9	5.93	0.495	8.98	0.70	13.3	135.7
Area 5	G6M-03-08X	3/31/2005	20 U	9.6 J	**340**	20 U	20 U	20 U	5.0 U	1,000 U	15 U	0.011	0.45	14	2.3	12	17	0.3 J	2.0 U	5.94	0.205	0.93	1.96	12.8	166.3
Area 5	G6M-03-08X	7/6/2005	1.0 U	15	**780**	2.0 U	**8.2**	2.0 U	4.0 U	1,000 U	10 U	0.11	0.068	410	1.8	29	14	5.5	1.0 U	5.85	0.463	5.37	0.78	13.4	236.1
Area 5	G6M-03-08X	9/28/2005	1.0 U	14	**620**	1.0 U	4.8	1.0 U	5.0 U	1,000 U	15 U	0.025 U	0.009 J	2,400	1.6	28	12	5.0 U	1.0 U	5.60	0.352	8.30	3.56	10.8	172.3
Area 5	G6M-03-08X	12/14/2005	1.0 U	17	**700**	2.0 U	**8.0**	2.0 U	5.0 U	1,000 U	15 U	0.025 U	0.025 U	7,000	1.2	32	12	5.0 U	1.0 U	6.16	0.404	3.70	0.54	11.5	153.8
Area 5	G6M-03-08X	3/22/2006	1.0 U	34	**1,100**	2.6	**21 J**	2.0 U	5.0 U	100 U	15 U	0.025 U	0.006 J	12,000	0.59	29	12	6.5	1.0 U	6.28	0.299	9.75	5.43	10.7	394.2
Area 5	G6M-03-08X	6/21/2006	1.0 U	48	**610**	2.0 U	**16**	2.0 U	5.0 U	1,800	42	0.004 J	0.14	16,000	0.33	41J	10	5.0 U	1.0 U	5.91	0.490	21.4	0.29	10.6	141.6
Area 5	G6M-03-08X	3/29/2007	1.0 U	**74**	**570**	2.0 U	**37**	**11**	5.0 U	100 U	15 U	0.006 J	0.72	14,000	-	-	-	5.0 U	-	5.79	0.392	1.41	0.07	11.6	21.3
Area 5	G6M-03-08X	6/12/2007	1.0 U	**88**	**740**	2.0 U	**55**	**14**	5.0 U	100 U	15 U	0.025 U	0.70	15,000	-	-	-	0.6 J	-	5.93	0.413	41.3	0.25	10.2	135.2
Area 5	G6M-03-08X	9/10/2007	1.0 U	**75**	**520**	2.0 U	**75**	**21**	2.0 U	100 U	15 U	0.025 U	1.7	14,000	0.2 U	42	200	5.0 U	1.0 U	5.92	0.385	9.70	2.55	11.4	154.2
Area 5	G6M-03-08X	12/11/2007	1.0 U	49	**390**	2.0 U	**53**	**15**	5.0 U	100 U	20	0.004 J	1.6	15,000	-	-	-	5.0 U	-	5.76	0.437	0.80	0.23	11.1	129.3
Area 5	G6M-03-08X	3/13/2008	1.0 U	10	**390**	2.0 U	5.0	2.0 U	5.0 U	100 U	20	0.003 J	0.051	2,800	-	-	-	5.0 U	-	5.89	0.195	0.30	0.22	11.6	111.6
Area 5	G6M-03-08X	10/20/2008	5.0 U	**140**	**290**	5.0 U	**61**	**26**	8.0 U	200 U	33	1.3 U	2.1	21,000	0.13 U	110	14	10 U	0.03 U	6.42	0.548	2.00	1.58	12.1	68.9
Area 5	G6M-03-08X	5/6/2009	4.0 U	**150**	**120**	4.0 U	**38**	**15**	3.1 J	200 U	144	1.2 U	1.6	37,000	0.13 U	190 J	10	10 U	0.03 U	5.93	0.701	1.50	0.32	13.2	100.8
Area 5	G6M-03-08X	4/20/2010	2.0 U	**88 J**	**26 J**	2.0 U	**9.9 J**	1.5 J	9.0	194 U	**6,520**	1.3 U	1.6 U	3,500	0.13 U	250	7.8	10 U	0.03 U	6.31	0.382	0.30	0.90	14.3	87.9
Area 5	G6M-03-08X	10/4/2010	2.0 U	**80**	**8.2**	2.0 U	**5.2**	**3.5**	3.4 J	132 U	**11,300**	1.2 U	1.5 U	890	0.13 U	360	5.5	10 U	0.03 U	6.07	0.549	< 0.01	0.68	10.2	84.9
Area 5	G6M-03-08X	6/8/2011	-	-	-	-	-	-	**14**	266	**16,100**	-	-	-	-	-	-	-	-	6.28	0.686	0.50	0.21	11.3	49.5
Area 5	G6M-03-08X	10/3/2011	2.5 U	62	4.3	2.5 U	3.4	**9.6**	5.1 J	194 J	**16,800**	1.2 U	1.5 U	590	0.13 U	360	3.2 J	10 U	0.03 U	6.17	0.603	0.51	0.43	15.2	77.2
Area 5	G6M-03-08X	5/8/2012	-	-	-	-	-	-	5.0 U	127 U	**17,700**	-	-	-	-	-	-	-	-	6.58	0.618	0.55	1.87	13.1	39.7
Area 5	G6M-03-08X	10/9/2012	0.5 U	9.8	0.5 U	0.76	0.78	**7.4**	5.0 U	152	**18,600**	1.3 U	3.6	110	0.13 U	380	1.4 J	2.5 J	0.03 U	6.34	0.648	1.42	0.43	11.9	53.9
Area 5	G6M-03-08X	5/22/2013	-	-	-	-	-	-	3.1 J	117 U	**12,500**	-	-	-	-	-	-	-	-	6.56	0.591	0.14	1.40	11.9	36.5
Area 5	G6M-03-08X	10/15/2013	0.5 U	2.8	0.5 U	1.2	0.87	1.6	5.2	121 U	**12,300**	1.8	1.5 U	360	0.13 U	450	5.0 U	3.0 J	0.03 U	6.57	0.851	< 0.01	0.39	16.0	82.7
Area 5	G6M-03-08X	6/12/2014	-	-	-	-	-	-	4.3 J	152	**9,850**	-	-	-	-	-	-	-	-	6.57	0.592	6.31	1.84	13.0	58.9
Area 5	G6M-03-08X	6/18/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.51 J	0.5 U	2.5 J	50 U	**2,320**	5.0 U	5.0 U	5.0 U	0.11 U	83	8.4 J	5.4	1.0 U	6.32	0.273	8.42	1.11	13.2	113.0
Area 5	G6M-03-08X	10/14/2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Area 5	G6M-03-08X	2/24/2016	1.0 U	3.0	1.0 U	1.0 U	1.0 U	1.0 U	8.2	1,030	**4,710**	10 U	10 U	91	0.10 U	155	3.1 J	1.8	2.0 U	6.79	0.244	3.93	1.03	7.5	-54.7
Area 5	G6M-03-08X	11/14/2016	1.0 U	0.84 J	1.0 U	1.0 U	0.96 J	1.0 U	**12**	180	**4,200**	1.1 U	1.0 U	170	0.053 J	140	9.8	1.3	1.0 U	7.03	0.339	7.46	1.19	8.3	-99.6
Area 5	G6M-03-08X	10/4/2017	1.0 U	0.50 J	1.0 U	1.0 U	1.0 U	1.0 U	6.6	230	**6,900**	1.1 U	0.90 J	91	0.05 U	110	9.5	0.84 J	1.0 U	6.70	0.374	5.94	0.65	13.3	-29.9
Area 5	G6M-03-08X	10/31/2018	1.0 U	0.60 J	1.0 U	1.0 U	1.0 U	1.0 U	8.6	270	**7,300**	-	-	-	-	-	-	-	-	6.67	0.478	25.0	1.69	10.8	30.9
Area 5	G6M-03-08X	10/22/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**87**	1,600	**7,800**	-	-	-	-	-	-	-	-	6.85	0.391	20.4	0.75	12.4	-20.0
Area 5	G6M-03-08X	10/10/2022	1.0 U	0.34 J	1.0 U	1.0 U	0.5 U	1.0 U	**270**	2,600	**8,800**	-	-	-	-	-	-	-	-	6.83	0.725	3.51	2.59	13.3	-55.3
Area 5	G6M-03-09X	5/14/2003	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	-	-	-	-	-	-	-	-	-	-	-	-	-	13.3	-
Area 5	G6M-03-09X	9/23/2004	1.0 U	2.0 U	3.7	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	15 U	0.005 U	0.005 U	1.9	19	23	15	1.0 U	2.2	6.23	0.130	4.57	8.67	13.2	176.2
Area 5	G6M-03-09X	12/14/2004	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	15 U	0.015	0.026	2.0	11	25	15	5.0 U	2.0 U	6.08	0.106	12.1	8.17	12.4	417.6
Area 5	G6M-03-09X	3/29/2005	1.0 U	2.0 U	1.5 J	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	15 U	0.013	0.26	1.4	1.5	18	13	0.3 J	2.0 U	6.18	0.123	72.4	6.00	13.3	113.2
Area 5	G6M-03-09X	6/30/2005	1.0 U	2.0 U	**5.8**	2.0 U	2.0 U	2.0 U	2.0 U	1,000 U	10 U	0.077	0.032	1.2	1.3	25	13	15	1.0 U	5.75	0.135	53.6	2.81	10.2	160.2
Area 5	G6M-03-09X	9/28/2005	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	15 U	0.006 J	0.009 J	29	3.7	38	13	4.0 J	1.0 U	5.90	0.108	7.60	10.6	11.2	181.0
Area 5	G6M-03-09X	12/13/2005	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	15 U	0.005 J	0.014 J	790	0.05 U	53	13	5.0 U	1.0 U	6.21	1.720	4.90	3.06	10.6	259.3
Area 5	G6M-03-09X	3/22/2006	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	100 U	20	0.006 J	0.016 J	39	1.8	36	12	7.9	1.0 U	6.40	0.102	10.8	3.00	11.0	415.5
Area 5	G6M-03-09X	6/23/2006	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	100 U	15 U	0.025 U	0.042	390	2.7	39	13	5.0 U	1.0 U	5.92	0.156	16.9	4.55	11.0	164.9
Area 5	G6M-03-09X	9/21/2006	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	100 U	15 U	0.014 J	0.12	140	2.5	36	9.2	0.80 J	1.0 U	6.71	0.212	4.56	2.24	13.8	127.6
Area 5	G6M-03-09X	3/29/2007	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	100 U	15 U	0.006 J	0.032	1,600	-	-	-	1.8 J	-	6.08	0.217	2.45	0.16	10.6	16.4
Area 5	G6M-03-09X	6/13/2007	1.0 U	2.0 U	3.8	2.0 U	2.0 U	2.0 U	5.0 U	100 U	15 U	0.005 J	0.011 J	870	-	-	-	0.5 J	-	6.26	0.154	7.60	0.36	11.4	111.0
Area 5	G6M-03-09X	9/10/2007	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	6.0 U	100 U	15 U	0.025 U	0.025 U	18,000	2.0	53	20	5.0 U	1.0 U	6.26	0.193	9.90	2.74	11.1	128.0
Area 5	G6M-03-09X	12/11/2007	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	100 U	15 U	0.006 J	0.022 J	2,200	-	-	-	5.0 U	-	6.03	0.190	2.10	0.11	11.4	110.3
Area 5	G6M-03-09X	3/12/2008	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	110	18	0.027	0.016 J	5,200	-	-	-	5.0 U	-	6.33	0.159	0.50	0.24	11.5	24.6
Area 5	G6M-03-09X	10/20/2008	0.5 U	0.5 U	0.37 J	0.5 U	0.5 U	0.5 U	8.0 U	200 U	50 U	1.3 U	1.6 U	1,600	0.84	48	19	10 U	0.03 U	5.98	0.129	6.50	0.24	11.3	177.8
Area 5	G6M-03-09X	5/6/2009	0.5 U	0.5 U	0.78	0.5 U	0.5 U	0.5 U	8.0 U	200 U	50 U	1.2 U	1.5 U	340	0.90	52 J	14	10 U	0.03 U	5.99	0.171	1.00	0.33	11.4	104.0
Area 5	G6M-03-09X	10/14/2009	0.5 U	0.5 U	0.35 J	0.5 U	0.5 U	0.5 U	8.0 U	200 U	50 U	1.2 U	1.5 U	230	0.32	53	13	10 U	0.03 U	5.49	0.161	< 0.01	0.26	-	-89.9
Area 5	G6M-03-09X	4/20/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	100 U	25 U	1.3 U	1.6 U	700	0.13 U	90	12	10 U	0.03 U	6.19	0.102	0.60	0.40	15.4	166.0
Area 5	G6M-03-09X	10/4/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	100 U	25 U	1.2 U	1.5 U	35 J	0.86	44	12	10 U	0.03 U	5.90	0.159	0.60	1.18	12.1	146.6
Area 5	G6M-03-09X	6/8/2011	-	-	-	-	-	-	5.0 U	1,680	11 J	-	-	-	-	-	-	-	-	5.99	0.154	0.40	0.42	11.1	122.8
Area 5	G6M-03-09X	10/3/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	200 U	50 U	1.2 U	1.5 U	230	0.39	35	11	10 U	0.03 U	5.82	0.107	0.23	0.61	16.6	163.2
Area 5	G6M-03-09X	5/8/2012	-	-	-	-	-	-	5.0 U	100 U	25 U	-	-	-	-	-	-	-	-	6.12	0.095	0.71	2.27	13.4	186.4

Appendix D
Historical Groundwater Analytical Results
2023 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

		Analytical Method	VOCs						Dissolved Metals			Dissolved Gases			General Chemistry					Field Parameters					
		Analyte	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Nitrate/ Nitrite	Alkalinity	Sulfate	TOC	Sulfide	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mS/cm)	(NTU)	(mg/L)	°C	(mV)
		Cleanup Level[1]	7	70	5	70	5	2	10	3,129	1,460				10,000										
Area	Well ID	Date Sampled																							
Area 5	G6M-03-09X	10/9/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	100 U	6.2 J	1.3 U	1.6 U	2.6	2.8	25	8.9	10 U	0.03 U	5.71	0.136	0.58	4.36	12.1	167.9
Area 5	G6M-03-09X	5/22/2013	-	-	-	-	-	-	5.0 U	100 U	25 U	-	-	-	-	-	-	-	-	6.01	0.084	1.83	0.46	13.9	172.9
Area 5	G6M-03-09X	10/15/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	100 U	9.6 J	1.2 U	1.5 U	7,600	0.82	29	10	10 U	0.03 U	6.08	0.144	< 0.01	1.16	16.0	150.3
Area 5	G6M-03-09X	6/12/2014	-	-	-	-	-	-	5.0 U	21 J	7.4 J	-	-	-	-	-	-	-	-	5.89	0.102	2.49	0.54	14.1	163.9
Area 5	G6M-03-09X	10/28/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	268 J	13 J	1.4	1.5 U	20	1.6	35	11	5.0 U	0.03 U	6.24	0.139	2.78	1.65	13.6	124.1
Area 5	G6M-03-09X	6/18/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	50 U	20	5.0 U	5.0 U	30	0.057 U	27	8.6 J	0.70 U	1.0 U	5.39	0.191	2.25	0.45	11.4	169.7
Area 5	G6M-03-09X	10/15/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	100 U	57	10 U	10 U	1,090	0.11 U	28	11	1.0 U	2.0 U	6.06	0.144	0.81	0.22	15.7	123.1
Area 5	G6M-03-09X	2/19/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	100 U	100	14	6.4 J	270	0.19	37	11	1.0 U	2.0 U	8.64	0.100	3.99	2.29	9.6	513.6
Area 5	G6M-03-09X	6/16/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	50 U	81	1.1 U	1.0 U	8.8	0.05 U	43	16	0.78 J	1.0 U	6.02	0.220	3.32	1.80	11.8	131.6
Area 5	G6M-03-09X	11/14/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	50 U	90	1.1 U	1.0 U	0.58 U	1.5	31	8.4	0.78 J	1.0 U	6.23	0.119	4.19	1.27	9.4	8.0
Area 5	G6M-03-09X	10/17/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	75 U	180	1.1 U	1.0 U	0.48 J	1.7	24	11	1.0 U	1.0 U	6.10	0.158	3.92	2.03	10.7	143.1
Area 5	G6M-03-10X	5/14/2003	1.0 U	2.0 U	**15**	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	-	-	-	-	-	-	-	-	-	-	-	-	-	14.2	-
Area 5	G6M-03-10X	9/22/2004	1.0 U	2.0 U	**27**	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	340	0.050	0.68	680	2.8	51	12	1.0 U	1.5 J	6.28	0.539	20.5	1.28	13.1	-77.2
Area 5	G6M-03-10X	12/14/2004	1.0 U	44	**19**	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	880	0.020	0.025	1.9	3.8	110	21	5.0 U	2.0 U	6.52	0.801	1.57	0.94	13.9	62.0
Area 5	G6M-03-10X	3/29/2005	1.0 U	68	**14**	1.2 J	0.98 J	2.0 U	5.0 U	1,000 U	1,200	0.005 U	0.38	2,600	0.2 U	146	12	5.9	2.0 U	6.44	0.869	6.77	0.59	11.8	-14.5
Area 5	G6M-03-10X	6/30/2005	1.0 U	2.0 U	3.6	2.0 U	2.0 U	2.0 U	2.0 U	1,000 U	**1,900**	0.026	0.021	8,600	0.10	199	11	19	1.0 U	5.18	0.702	5.06	0.39	12.5	273.2
Area 5	G6M-03-10X	9/28/2005	1.0 U	2.0 U	**6.7**	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	720	0.025 U	0.020 J	1,100	0.20	140	16	0.6 J	1.0 U	6.43	0.588	7.36	4.30	11.3	74.1
Area 5	G6M-03-10X	12/13/2005	1.0 U	2.0 U	3.4	2.0 U	2.0 U	2.0 U	6.9	1,000 U	**3,020**	0.009 J	0.027	12,000	0.48	250	8.4	5.0 U	1.0 U	6.73	1.032	1.30	0.15	12.3	57.2
Area 5	G6M-03-10X	3/23/2006	1.0 U	2.0 U	**9.9**	2.0 U	2.0 U	2.0 U	5.0 U	220	**3,800**	0.020 J	0.052	7,000	0.2 U	170	8.9	3.5 J	1.0 U	6.64	0.663	5.39	0.67	12.2	36.6
Area 5	G6M-03-10X	6/22/2006	1.0 U	2.0 U	2.6	2.0 U	2.0 U	2.0 U	5.0 U	740	**7,300**	0.004 J	0.042	14,000	0.2 U	200	4.4	5.0 J	1.0 U	4.87	0.770	0.64	0.64	14.0	610.8
Area 5	G6M-03-10X	9/20/2006	1.0 U	2.0 U	2.2	2.0 U	2.0 U	2.0 U	5.0 U	210	**6,200**	0.006 J	0.14	14,000	0.2 U	180	7.0	6.0	1.0 U	6.41	0.856	3.90	1.26	12.3	-140.2
Area 5	G6M-03-10X	3/29/2007	1.0 U	4.2	2.2	2.0 U	2.1	2.0 U	8.6	300	**9,100 J**	0.007 J	0.16	24,000	-	-	-	4.8 J	-	6.20	0.970	2.99	0.32	12.1	-60.7
Area 5	G6M-03-10X	6/11/2007	1.0 U	4.1	2.5	2.0 U	2.0 U	2.0 U	**23**	1,000	**11,000**	0.025 U	0.095	29,000	-	-	-	6.7	-	6.27	0.947	8.50	0.41	11.6	45.5
Area 5	G6M-03-10X	9/10/2007	1.0 U	3.8	2.0 U	2.0 U	2.0 U	2.0 U	**29**	400	**8,100**	0.10	0.057	620	0.2 U	150	290	3.5 J	1.0 U	6.28	0.859	13.6	0.24	12.3	61.3
Area 5	G6M-03-10X	12/12/2007	1.0 U	2.8	2.0 U	2.0 U	2.0 U	2.0 U	**26**	330	**9,200**	0.025 U	0.043	20,000	-	-	-	5.8	-	6.14	0.755	7.50	0.66	12.5	69.8
Area 5	G6M-03-10X	3/11/2008	1.0 U	16	**16**	2.0 U	**8.7**	**4.0**	**91**	**15,000**	**9,200**	0.040	59	28,000	-	-	-	5.0 J	-	6.32	1.029	7.30	0.22	11.7	-62.9
Area 5	G6M-03-10X	10/20/2008	0.5 U	5.4	1.0	0.5 U	2.0	1.0	**248**	**7,070**	**10,300**	1.3 U	1.6 U	21,000	0.13 U	170	8.3	170	0.03 U	5.98	0.781	8.20	0.21	18.1	-10.9
Area 5	G6M-03-10X	10/14/2009	0.5 U	9.1	1.0	0.5 U	5.0	1.5	**522**	**54,400**	**9,210**	1.2 U	1.5 U	31,000	0.0076 J	230 J	9.3	11	0.03 U	5.91	1.040	0.50	0.33	18.6	-64.0
Area 5	G6M-03-10X	10/14/2009	0.5 U	10	0.61	0.5 U	3.7	**2.2**	**518**	**57,800**	**7,410**	1.3 U	1.6 U	9,000 J	0.13 U	310	21	7.4 J	0.03 U	6.32	0.896	1.20	0.67	19.1	-62.2
Area 5	G6M-03-10X	4/20/2010	0.5 U	2.0	1.2	0.21 J	**5.6**	1.1	**648**	**61,000 J**	**4,910**	1.2 U	1.5 U	4,100	0.13 U	130	6.5	4.7 J	0.03 U	6.78	0.799	1.40	0.77	16.3	-101.1
Area 5	G6M-03-10X	10/4/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**475**	**58,100**	**5,650**	1.2 U	6.2	20,000	0.13 U	230	5.9	10 U	0.03 U	6.52	0.729	0.50	0.22	11.3	-115.6
Area 5	G6M-03-10X	6/9/2011	-	-	-	-	-	-	**520**	**53,900**	**2,550**	-	-	-	-	-	-	-	-	6.74	0.704	4.62	0.58	12.1	-118.8
Area 5	G6M-03-10X	10/3/2011	0.5 U	1.2	0.5 U	0.5 U	2.7	0.53	**528**	**54,500**	**3,980**	1.2 U	1.5 U	9,800	0.21	100	7.6	3.0 J	0.03 U	6.75	0.633	0.85	0.10	12.3	-85.8
Area 5	G6M-03-10X	5/8/2012	-	-	-	-	-	-	**480**	**56,000**	**4,070**	-	-	-	-	-	-	-	-	7.00	0.817	0.77	0.15	13.0	-119.1
Area 5	G6M-03-10X	10/9/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.55	0.5 U	**456**	**47,500**	**2,280**	22	1.6 U	13,000	0.13 U	100	8.4	10 U	0.03 U	6.88	0.940	< 0.01	0.43	12.1	-109.6
Area 5	G6M-03-10X	5/22/2013	-	-	-	-	-	-	**514**	**57,100**	**2,340**	-	-	-	-	-	-	-	-	6.80	1.111	0.40	0.16	12.0	-137.6
Area 5	G6M-03-10X	10/15/2013	0.5 U	0.52	0.5 U	0.5 U	0.68	0.5 U	**452**	**50,600**	**2,770**	1.8	1.5 U	23,000	0.042 U	80	9.2	10 U	0.03 U	6.87	1.018	0.19	4.57	12.2	-122.7
Area 5	G6M-03-10X	6/12/2014	-	-	-	-	-	-	**510**	**51,900**	**2,400**	-	-	-	-	-	-	-	-	6.82	0.857	> 5,000	0.51	22.1	-88.0
Area 5	G6M-03-10X	10/29/2014	0.5 U	0.92	0.5 U	0.5 U	0.77	0.41 J	**418**	**43,000 J**	3,090 J	1.2 U	1.5 U	14,000	0.13 U	92	8.6	5.0 U	0.03 U	7.02	0.787	4.94	0.29	19.6	-122.4
Area 5	G6M-03-10X	9/10/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**453**	**68,100**	**2,020**	10 U	10 U	8,910	0.08 J	-	11	1.5	2.0 U	6.56	0.787	3.00	0.51	12.6	-107.5
Area 5	G6M-03-10X	10/15/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**457**	**69,300**	**2,410**	10 U	10 U	11,500	0.11 U	65	7.8 J	1.9	2.0 U	7.03	1.206	1.74	0.49	19.3	-128.0
Area 5	G6M-03-10X	2/11/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**492**	**72,000**	**2,370**	10 U	10 U	7,550	0.11	105	2.0 J	3.3	2.0 U	7.02	1.345	0.10	0.40	10.0	-131.1
Area 5	G6M-03-10X	6/16/2016	1.0 U	1.0 U	**16**	1.0 U	0.65 J	1.0 U	**400**	**61,000**	**1,600**	1.1 U	1.0 U	14,000	0.05 U	88	3.3	1.8	1.0 U	6.18	1.407	8.39	1.16	13.1	-86.0
Area 5	G6M-03-10X	11/14/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**430**	**68,000**	**2,700**	1.1 U	1.0 U	8,000	0.05 U	110	3.7	1.6	1.0 U	7.11	0.745	6.94	11.7	7.4	-101.7
Area 5	G6M-03-10X	10/23/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**420**	**62,000**	**2,100**	1.1 U	1.0 U	6,500	0.07 J	62	5.5	1.4	1.0 U	6.88	1.190	3.99	0.22	12.2	-115.0
Area 5	G6M-03-10X	10/23/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**380**	**51,000**	**1,900**	-	-	-	-	-	-	-	-	6.93	1.576	3.98	0.14	11.6	-30.2
Area 5	G6M-03-10X	10/15/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**360**	**45,000**	**2,100**	-	-	-	-	-	-	-	-	6.80	1.500	1.20	0.31	12.0	-140.0
Area 5	G6M-03-10X	10/22/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**360**	**59,000**	**2,000**	-	-	-	-	-	-	-	-	6.94	0.853	11.3	0.66	12.4	-128.0
Area 5	G6M-03-10X	10/12/2021	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	**290**	**44,000**	**1,900**	-	-	-	-	-	-	-	-	6.94	1.070	24.7	1.10	13.7	-118.0
Area 5	G6M-03-10X	10/6/2022	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	**370**	**48,000**	**2,000**	-	-	-	-	-	-	-	-	6.81	1.426	3.87	0.66	12.6	-145.0
Area 5	G6M-03-10X	10/17/2023	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	**310**	**43,000**	1,300	-	-	-	-	-	-	-	-	6.93	0.976	2.85	0.42	12.1	-130.0
Area 5	G6M-04-05X	9/22/2004	1.0 U	2.0 U	**140**	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	15 U	0.005 U	0.0092	1.3	4.9	14	14	1.0 U	2.0 U	6.10	0.099	0.68	9.68	11.3	233.9
Area 5	G6M-04-05X	12/15/2004	1.0 U	2.0 U	**17**	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	15 U	0.005 U	0.016	1.4	7.5	14	13	5.0 U	2.0 U	5.87	0.098	1.04	1.17	11.4	228.7
Area 5	G6M-04-05X	3/30/2005	5.0 U	10 U	**130**	10 U	10U	10 U	5.0 U	1,000 U	15 U	0.007	0.028	15	1.2	14	10	0.5 J	2.0 U	6.04	0.093	1.92	2.80	11.8	123.1
Area 5	G6M-04-05X	6/30/2005	1.0 U	2.0 U	**200**	2.0 U	2.0 U	2.0 U	2.0 U	1,000 U	10 U	0.041	0.022	96	0.87	16	8.9	2.4	1.0 U	5.48	0.094	8.19	0.88	11.5	207.1
Area 5	G6M-04-05X	9/29/2005	1.0 U	2.0 U	**110**	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	33	0.006 J	0.012 J	220	0.98	3.3	14	5.0 U	1.0 U	6.08	0.061	2.10	0.20	10.5	215.3
Area 5	G6M-04-05X	12/14/2005	1.0 U	2.0 U	**36**	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	15 U	0.007 J	0.016 J	550	1.6	21	11	5.0 U	1.0 U	6.10	0.091	0.30	0.23	11.3	179.3
Area 5	G6M-04-05X	3/22/2006	1.0 U	2.0 U	**330**	2.0 U	2.0 U	2.0 U	5.0 U	100 U	15 U	0.025 U	0.019 J	2,200	1.1	13	9.3	3.4 J	1.0 U	6.21	0.062	0.86	0.77	11.1	343.3
Area 5	G6M-04-05X	6/22/2006	1.0 U	2.0 U	**38**	2.0 U	2.0 U	2.0 U	5.0 U	100 U	15 U	0.025 U	0.082	33	1.8	22 J	9.0	5.0 U	1.0 U	4.40	0.083	< 0.01	2.55	11.6	760.6
Area 5	G6M-04-05X	9/22/2006	1.0 U	2.0 U	**30**	2.0 U	2.0 U	2.0 U	5.0 U	100 U	15 U	0.009 J	0.084	140	1.5	15	11	5.0 U	1.0 U	5.78	0.123	0.34	1.48	11.6	-127.3
Area 5	G6M-04-05X	3/29/2007	1.0 U	2.0 U	**16**	2.0 U	2.0 U	2.0 U	5.0 U	120	15 U	0.025 U	0.022 J	460	-	-	-	1.4 J	-	5.79	0.185	0.01	0.13	-	57.9
Area 5	G6M-04-05X	6/12/2007	1.0 U	2.0 U	**12**	2.0 U	2.0 U	2.0 U	5.0 U	100 U	15 U	0.005 J	0.041	330	-	-	-	0.4 J	-	5.89	0.116	4.40	0.52	15.8	168.2
Area 5	G6M-04-05X	9/10/2007	1.0 U	2.0 U	**43**	2.0 U	2.0 U	2.0 U	2.0 U	100 U	15 U	0.24	0.089	340	1.6	20	17	5.0 U	1.0 U	5.89	0.103	3.90	2.60	12.8	142.8
Area 5	G6M-04-05X	12/11/2007	1.0 U	2.0 U	**7.2**	2.0 U	2.0 U	2.0 U	5.0 U	190	15 U	0.025 U	0.013 J	1,900	-	-	-	5.0 U	-	5.75	0.118	0.60	0.23	15.3	134.1
Area 5	G6M-04-05X	3/13/2008	1.0 U	2.0 U	2.5	2.0 U	2.0 U	2.0 U	5.0 U	100 U	17	0.009 J	0.020 J	1,300	-	-	-	5.0 U	-	5.90	0.129	0.20	0.18	17.2	121.0
Area 5	G6M-04-05X	10/20/2008	0.5 U	0.5 U	3.7	0.5 U	0.5 U	0.5 U	8.0 U	200 U	50 U	1.3 U	1.6 U	3,300	1.5	30	10	10 U	0.03 U	5.92	0.152	< 0.01	0.73	15.2	80.0
Area 5	G6M-04-05X	5/6/2009	0.5 U	0.84	**16**	0.5 U	0.38 J	0.27 J	8.0 U	200 U	50 U	1.3 U	1.6 U	2,200	0.37	59 J	17	10 U	0.03 U	5.72	0.187	< 0.01	0.20	11.9	125.5
Area 5	G6M-04-05X	10/14/2009	0.5 U	0.29 J	**8.2**	0.5 U	0.5 U	0.5 U	8.0 U	127 U	60 U	1.3 U	1.6 U	2,000 J	0.39	29	15	10 U	0.03 U	5.62	0.203	< 0.01	0.50	14.1	184.0

		Analytical Method	VOCs						Dissolved Metals			Dissolved Gases			General Chemistry					Field Parameters					
		Analyte	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Nitrate/ Nitrite	Alkalinity	Sulfate	TOC	Sulfide	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mS/cm)	(NTU)	(mg/L)	°C	(mV)
		Cleanup Level[1]	7	70	5	70	5	2	10	3,129	1,460				10,000										
Area	Well ID	Date Sampled																							
Area 5	G6M-04-05X	4/20/2010	0.5 U	0.5 U	2.3 J	0.5 U	0.5 U	0.5 U	5.0 U	100 U	25 U	1.2 U	1.5 U	3,200	0.30	80	15	10 U	0.03 U	5.92	0.144	0.20	0.40	17.7	152.5
Area 5	G6M-04-05X	10/4/2010	0.5 U	0.5 U	0.28 J	0.5 U	0.5 U	0.5 U	5.0 U	100 U	25 U	1.2 U	1.5 U	18	1.7	30	13	10 U	0.03 U	5.67	0.131	0.80	1.51	15.3	145.5
Area 5	G6M-04-05X	6/8/2011	-	-	-	-	-	-	5.0 U	100 U	12.7	-	-	-	-	-	-	-	-	5.78	0.193	1.00	0.12	13.2	134.1
Area 5	G6M-04-05X	10/3/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	200 U	11 J	1.2 U	1.5 U	2,000	0.47	39	19	2.3 J	0.03 U	5.76	0.174	0.44	0.20	14.1	158.9
Area 5	G6M-04-05X	5/8/2012	-	-	-	-	-	-	5.0 U	100 U	11 J	-	-	-	-	-	-	-	-	6.01	0.160	0.56	0.83	14.8	157.2
Area 5	G6M-04-05X	10/9/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	100 U	22 J	1.3 U	1.6 U	1,800	0.063 J	32	16	10 U	0.03 U	5.76	0.171	0.84	0.27	14.4	108.4
Area 5	G6M-04-05X	5/22/2013	-	-	-	-	-	-	2.7 J	100 U	25 U	-	-	-	-	-	-	-	-	5.90	0.156	1.75	0.25	13.2	134.1
Area 5	G6M-04-05X	10/15/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	100 U	15 J	1.3 U	1.6 U	28,000	0.13 U	60	18	10 U	0.03 U	6.01	0.199	< 0.01	0.47	14.2	145.8
Area 5	G6M-04-05X	6/12/2014	-	-	-	-	-	-	2.4 J	195 U	13 J	-	-	-	-	-	-	-	-	6.09	0.193	0.68	0.41	12.3	86.2
Area 5	G6M-04-05X	10/28/2014	0.5 U	0.5 U	0.42 J	0.5 U	0.5 U	0.5 U	4.1 J	29	12 J	2.8	1.6	48	0.31	39	13	10 U	0.03 U	6.49	0.182	0.48	0.62	11.6	81.9
Area 5	G6M-04-05X	6/17/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	50 U	12 J	5.0 U	5.0 U	22 J	0.29	23	23	0.81 U	1.0 U	-	-	-	-	-	-
Area 5	G6M-04-05X	9/10/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	100 U	7.5 J	10 U	10 U	10 U	0.21	-	25	1.0 U	2.0 U	5.75	0.245	2.08	0.95	12.1	67.6
Area 5	G6M-04-05X	10/15/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	100 U	20	10 U	10 U	53	0.20	32	22	1.1	2.0 U	5.96	0.264	2.44	0.50	11.8	116.4
Area 5	G6M-04-05X	2/22/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	100 U	22	10 U	10 U	305	0.11 U	35	27	1.0 U	2.0 U	5.93	0.187	1.92	1.03	10.4	112.9
Area 5	G6M-04-05X	11/14/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	50 U	20	1.1 U	1.0 U	15	0.19	36	24	0.75 J	1.0 U	6.33	0.176	4.16	1.22	9.6	23.9
Area 5	G6M-04-05X	10/17/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	75 U	15	1.1 U	1.0 U	260	0.17	31	16	1.0 U	1.0 U	5.66	0.171	3.27	0.19	11.2	185.7
Area 5	G6M-04-05X	10/23/2018	1.0 U	1.0 U	1.2	1.0 U	1.0 U	1.0 U	--	--	--	-	-	-	-	-	-	-	-	6.03	0.187	2.10	0.37	11.0	18.9
Area 5	G6M-04-05X	10/20/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	6.35	0.123	1.28	0.59	11.8	206.0
Area 5	G6M-04-05X	10/10/2022	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	6.74	0.258	5.30	2.28	11.8	135.5
Area 5	G6M-04-06X	9/22/2004	1.0 U	2.0 U	**160**	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	15 U	0.056	0.005 U	3.4	5.3	110	8.7	1.0 U	2.0 U	11.01	0.341	1.34	9.17	11.4	-0.6
Area 5	G6M-04-06X	12/16/2004	1.0 U	2.0 U	**24**	2.0 U	2.0 U	2.0 U	**21**	1,000 U	15 U	0.017	0.028	0.47	7.9	54	10	5.0 U	2.9	10.89	0.254	2.26	9.42	13.1	106.9
Area 5	G6M-04-06X	3/30/2005	1.0 U	2.0 U	**37**	2.0 U	2.0 U	2.0 U	7.5	1,000 U	15 U	0.009	0.051	0.58	2.0	37	12	5.0 U	2.0 U	9.47	0.235	0.32	10.5	11.6	10.6
Area 5	G6M-04-06X	7/1/2005	1.0 U	2.0 U	**140**	2.0 U	2.0 U	2.0 U	2.0 U	1,000 U	190	0.034	0.056	9.7	1.5	10	25	2.8 J	1.0 U	9.08	0.214	0.95	9.77	11.8	457.2
Area 5	G6M-04-06X	9/29/2005	1.0 U	2.0 U	**32**	2.0 U	2.0 U	2.0 U	**11**	1,000 U	15 U	0.009 J	0.018 J	0.70	1.9	70	12	5.4	1.0 U	9.32	0.192	1.99	9.43	11.5	390.6
Area 5	G6M-04-06X	12/15/2005	1.0 U	2.0 U	**26**	2.0 U	2.0 U	2.0 U	**81**	1,000 U	150	0.009 J	0.022 J	3.3	1.9	39	12	7.6	1.0 U	9.74	0.226	0.30	10.2	14.6	151.2
Area 5	G6M-04-06X	3/23/2006	1.0 U	2.0 U	**100**	2.0 U	2.0 U	2.0 U	5.0 U	100 U	15 U	0.006 J	0.036	3.1	1.7	23	9.3	5.0 U	1.0 U	8.94	0.188	1.72	9.46	10.3	452.5
Area 5	G6M-04-06X	6/23/2006	1.0 U	2.0 U	**190**	2.0 U	2.0 U	2.0 U	**13 J**	100 U	15 U	0.012 J	0.041	10	1.7	41	9.4	5.0 U	1.0 U	8.66	0.254	3.55	9.75	12.8	165.3
Area 5	G6M-04-06X	12/11/2006	1.0 U	2.0 U	**37**	2.0 U	2.0 U	2.0 U	5.0 U	100 U	15 U	0.010 J	0.044	4.3	-	-	-	5.0 U	-	9.67	0.257	4.40	9.67	14.2	108.0
Area 5	G6M-04-06X	12/13/2006	1.0 U	3.4	2.8	2.0 U	2.0 U	2.0 U	5.0 U	270	**8,500**	0.025 U	0.025 U	20,000	-	-	-	2.0 J	-	6.45	0.870	5.00	0.26	11.4	168.2
Area 5	G6M-04-06X	3/29/2007	1.0 U	2.0 U	**18**	2.0 U	2.0 U	2.0 U	5.0 U	100 U	15 U	0.011 J	0.021 J	13	-	-	-	5.0 U	-	8.99	0.137	11.1	14.6	11.9	150.7
Area 5	G6M-04-06X	6/12/2007	1.0 U	3.5	**25**	2.0 U	2.0 U	2.0 U	5.0 U	100 U	15 U	0.010 J	0.061	19	-	-	-	5.0 U	-	8.82	0.272	4.90	10.1	13.9	118.1
Area 5	G6M-04-06X	9/10/2007	1.0 U	3.0	**23**	2.0 U	2.0 U	2.0 U	8.0 U	100 U	15 U	0.005 J	0.007 J	0.13	1.3	38	82	5.0 U	1.0 U	8.14	0.248	9.90	6.73	16.1	50.1
Area 5	G6M-04-06X	12/12/2007	1.0 U	6.3	**22**	2.0 U	2.0 U	2.0 U	5.0 U	100 U	15 U	0.004 J	0.025 U	0.21	-	-	-	5.0 U	-	7.36	0.335	0.20	12.3	13.7	81.7
Area 5	G6M-04-06X	3/14/2008	1.0 U	2.4	**14**	2.0 U	2.0 U	2.0 U	5.0 U	100 U	15 U	0.005 J	0.025 U	2.8	-	-	-	5.0 U	-	7.29	0.224	0.30	10.9	13.1	186.9
Area 5	G6M-04-06X	10/16/2008	0.5 U	2.2	**24**	0.5 U	0.68	0.5 U	8.5	200 U	12 J	1.3 U	1.6 U	2.0	1.5 U	34	11	10 U	0.03 U	7.69	0.198	1.00	9.11	13.0	209.6
Area 5	G6M-04-06X	5/6/2009	0.5 U	1.8	**13**	0.5 U	0.51	0.5 U	6.9	200 U	50 U	1.3 U	1.6 U	1.6	1.3	44	14	10 U	0.03 U	7.35	0.209	1.90	9.41	15.3	9.2
Area 5	G6M-04-06X	10/14/2009	0.5 U	1.8	**10**	0.5 U	0.46 J	0.5 U	7.4 U	200 U	50 U	1.3 U	1.6 U	22 J	1.3	44	11	10 U	0.03 U	7.15	0.197	< 0.01	9.40	13.7	150.0
Area 5	G6M-04-06X	4/20/2010	0.5 U	0.5 U	3.0 J	0.5 U	0.5 U	0.5 U	7.3	100 U	25 U	1.2 U	1.5 U	150	1.8	60	11	10 U	0.03 U	6.75	0.147	< 0.01	2.86	12.9	27.1
Area 5	G6M-04-06X	10/4/2010	0.5 U	0.5 U	0.95	0.5 U	0.5 U	0.5 U	6.1	100 U	25 U	1.2 U	1.5 U	2,000	1.8	57	9.1	10 U	0.03 U	6.50	0.216	< 0.01	0.38	14.0	121.6
Area 5	G6M-04-06X	10/3/2011	0.5 U	2.0	4.0	0.5 U	0.5 U	0.5 U	4.7 J	200 U	11 J	1.2 U	1.5 U	9,200	0.74	71	11	10 U	0.03 U	6.06	0.133	0.24	1.46	12.0	70.2
Area 5	G6M-04-06X	10/9/2012	0.5 U	0.5 U	3.7	0.5 U	0.5 U	0.5 U	5.0 U	100 U	21 J	1.2 U	1.5 U	14,000	0.48	62	16	10 U	0.03 U	6.05	0.239	< 0.01	0.31	11.6	135.7
Area 5	G6M-04-06X	10/15/2013	0.5 U	0.55	4.5	0.5 U	0.37 J	0.5 U	5.0 U	100 U	88	1.2 U	1.5 U	36,000	0.13 U	140	12	10 U	0.03 U	6.09	0.242	0.04	1.07	10.6	171.1
Area 5	G6M-04-06X	10/28/2014	0.5 U	0.41 J	1.2	0.5 U	0.78	0.5 U	2.5 U	24 J	157 J	8.1 J	1.5 U	1,200	0.29	70	15	5.0 U	0.03 U	6.51	0.205	1.63	0.29	11.3	164.7
Area 5	G6M-04-06X	10/19/2015	1.0 U	1.0 U	1.7	1.0 U	0.70 J	1.0 U	4.0 U	100 U	74	10 U	10 U	10 U	0.11 U	60	13	1.0	2.0 U	-	-	-	-	-	-
Area 5	G6M-04-06X	11/14/2016	1.0 U	1.0 U	1.5	1.0 U	1.0 U	1.0 U	3.0 U	17 J	77	1.1 U	1.0 U	0.82	0.05 U	62	15	1.0	2.0	6.47	0.189	5.87	1.01	10.0	-8.6
Area 5	G6M-04-06X	10/17/2017	1.0 U	0.60 J	1.8	1.0 U	1.0 U	1.0 U	3.0 U	30 U	98	1.1 U	1.0 U	1.6	0.07 J	58	16	1.0 U	1.0 U	6.42	0.271	5.72	0.28	11.0	81.7
Area 5	G6M-04-06X	10/22/2018	1.0 U	1.0 U	1.4	1.0 U	1.0 U	1.0 U	3.0 U	50 U	62	-	-	-	-	-	-	-	-	5.90	0.246	8.69	0.53	10.9	51.1
Area 5	G6M-04-06X	10/10/2019	1.0 U	0.54 J	1.1	1.0 U	1.0 U	1.0 U	0.55	130	17	-	-	-	-	-	-	-	-	6.10	0.190	2.40	0.20	11.0	100.0
Area 5	G6M-04-06X	10/14/2020	1.0 U	0.94 J	1.7	1.0 U	2.1	1.0 U	3.0 U	86 U	140	-	-	-	-	-	-	-	-	6.39	0.132	2.51	0.64	11.4	228.0
Area 5	G6M-04-06X	10/14/2021	1.0 U	0.82 J	1.5 J	1.0 U	1.1	1.0 U	3.0 U	26 J	100	-	-	-	-	-	-	-	-	6.32	0.174	0.25	0.89	12.1	104.8
Area 5	G6M-04-06X	10/6/2022	1.0 U	1.0 U	0.52 J	1.0 U	0.5 U	1.0 U	3.0 U	50 U	53	-	-	-	-	-	-	-	-	6.57	0.215	7.88	1.35	12.0	225.9
Area 5	G6M-04-06X	11/2/2023	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	3.0 U	50 U	88	-	-	-	-	-	-	-	-	6.36	0.195	0.10	1.47	9.3	184.5
Area 5	G6M-04-07X	9/22/2004	1.0 U	8.4	**900**	2.0 U	2.7	2.0 U	5.0 U	1,000 U	260	0.061	0.12	3.1	5.4	56	32	1.0 U	2.0 U	7.10	0.243	9.28	3.42	12.0	110.1
Area 5	G6M-04-07X	12/17/2004	1.0 U	9.3	**1,100**	2.0 U	2.0	2.0 U	**28**	1,000 U	47	0.11	2.2	2.1	6.4	43	14	0.6 J	2.0 U	7.51	0.246	74.7	1.98	11.9	-38.9
Area 5	G6M-04-07X	3/29/2005	5.0 U	10 U	**240**	10 U	10U	10 U	**12**	1,000 U	27	0.031	0.64	1.9	1.5	43	14	0.5 J	2.0 U	6.88	0.229	4.20	4.19	10.8	22.0
Area 5	G6M-04-07X	7/5/2005	1.0 U	2.0 U	**170**	2.0 U	2.0 U	2.0 U	4.0	1,000 U	37	0.070	0.042	1.8	1.7	41	14	5.0 U	1.0 U	5.83	0.186	23.4	5.44	11.5	369.9
Area 5	G6M-04-07X	9/29/2005	1.0 U	8.3	**470**	2.0 U	3.0	2.0 U	5.0 U	1,000 U	43	0.010 J	0.010 J	2.4	1.9	1.0 U	16	5.0 U	1.0 U	6.19	0.277	6.62	0.86	11.3	478.3
Area 5	G6M-04-07X	12/14/2005	1.0 U	2.0	**390**	2.0 U	2.0 U	2.0 U	3.8	1,000 U	18	0.006	0.016	7.9	1.6	40	13	6.1	1.0 U	6.65	0.218	34.1	4.72	11.7	149.3
Area 5	G6M-04-07X	3/23/2006	1.0 U	2.0 U	**260**	2.0 U	2.0 U	2.0 U	5.0 U	100 U	15 U	0.005 J	0.029	250	1.6	36	13	5.0 U	1.0 U	6.28	0.267	4.09	2.14	12.1	619.7
Area 5	G6M-04-07X	6/23/2006	1.0 U	2.0 U	**150**	2.0 U	2.0 U	2.0 U	5.0 U	100 U	24	0.005 J	0.022 J	22	1.3	30	13	0.3 J	1.0 U	6.29	0.240	8.07	5.50	11.8	117.8
Area 5	G6M-04-07X	9/21/2006	1.0 U	2.0 U	**110**	2.0 U	2.0 U	2.0 U	5.0 U	100 U	19	0.014 J	0.088	2.4	2.5	32	10	3.4 J	1.0 U	6.34	0.197	2.63	4.43	14.5	99.8
Area 5	G6M-04-07X	12/12/2006	1.0 U	3.1	2.0 U	16	3.1	**7.1**	**490**	**92,000**	**3,700**	0.032	170	24,000	-	-	1.0 U	7.8	1.0 U	6.60	0.990	4.36	0.17	12.3	-116.0
Area 5	G6M-04-07X	12/12/2006	1.0 U	2.0 U	**8.7**	2.0 U	2.0 U	2.0 U	5.0 U	100 U	15 U	0.025 U	0.010 J	850	-	-	-	5.0 U	-	5.66	0.105	< 0.01	0.39	11.2	156.7
Area 5	G6M-04-07X	3/29/2007	1.0 U	2.0 U	**45**	2.0 U	2.0 U	2.0 U	5.0 U	100 U	17 J	0.006 J	0.018 J	5.2	-	-	-	5.0 U	-	6.55	0.123	3.71	10.3	15.4	143.7
Area 5	G6M-04-07X	6/12/2007	1.0 U	2.0 U	**44**	2.0 U	2.0 U	2.0 U	5.0 U	670	18	0.010 J	0.079	46	-	-	-	1.2 J	-	6.26	0.129	16.1	8.12	13.2	162.7
Area 5	G6M-04-07X	9/10/2007	1.0 U	2.0 U	**25**	2.0 U	2.0 U	2.0 U	2.0 U	100 U	15 U	0.006 J	0.006 J	0.11	1.9	19	45	5.0 U	1.0 U	6.20	0.130	31.2	8.68	14.7	117.7
Area 5	G6M-04-07X	12/12/2007	1.0 U	2.0 U	**23**	2.0 U	2.0 U	2.0 U	5.0 U	100 U	15 U	0.004 J	0.013 J	0.48	-	-	-	5.0 U	-	6.48	0.134	3.00	10.1	10.2	140.2

		Analytical Method	VOCs						Dissolved Metals			Dissolved Gases			General Chemistry					Field Parameters					
		Analyte	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Nitrate/ Nitrite	Alkalinity	Sulfate	TOC	Sulfide	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mS/cm)	(NTU)	(mg/L)	°C	(mV)
		Cleanup Level[1]	7	70	5	70	5	2	10	3,129	1,460				10,000										
Area	Well ID	Date Sampled																							
Area 5	G6M-04-07X	3/13/2008	1.0 U	2.0 U	**19**	2.0 U	2.0 U	2.0 U	5.2	100 U	15 U	0.003 J	0.025 U	1.6	-	-	-	5.0 U	-	6.54	0.143	0.30	10.5	10.5	83.4
Area 5	G6M-04-07X	10/16/2008	0.5 U	0.5 U	**11**	0.5 U	0.5 U	0.5 U	8.0 U	200 U	15 J	1.2 U	1.5 U	390	1.8 U	28	10	10 U	0.03 U	5.85	0.129	0.45	1.62	10.7	205.0
Area 5	G6M-04-07X	5/6/2009	0.5 U	0.5 U	2.2	0.5 U	0.5 U	0.5 U	2.9 J	200 U	50 U	1.3 U	1.6 U	660	2.3	41 J	12	10 U	0.03 U	5.90	0.103	1.25	0.70	13.2	119.2
Area 5	G6M-04-07X	10/14/2009	0.5 U	0.5 U	1.3	0.5 U	0.5 U	0.5 U	8.0 U	200 U	50 U	1.3 U	1.6 U	2,500 J	1.9	32	15	10 U	0.03 U	6.00	0.104	< 0.01	0.35	10.8	141.6
Area 5	G6M-04-07X	4/20/2010	0.5 U	0.5 U	**13 J**	0.5 U	0.5 U	0.5 U	5.0 U	100 U	31.8 U	1.3 U	1.6 U	630	1.5	50	12	10 U	0.03 U	5.90	0.167	< 0.01	1.11	10.3	24.2
Area 5	G6M-04-07X	10/4/2010	0.5 U	4.5	**19**	0.5 U	2.2	0.5 U	5.0 U	100 U	25 U	1.2 U	1.5 U	5,100	1.1	43	10	10 U	0.03 U	6.06	0.181	0.32	0.94	10.5	116.9
Area 5	G6M-04-07X	6/8/2011	-	-	-	-	-	-	5.0 U	148	68	-	-	-	-	-	-	-	-	5.81	0.172	< 0.01	1.06	10.4	34.1
Area 5	G6M-04-07X	10/3/2011	0.5 U	2.2	**8.7**	0.5 U	1.2	0.5 U	20 U	200 U	68	1.2 U	1.5 U	8,300	0.59	53	12	10 U	0.03 U	5.76	0.105	0.96	0.28	10.7	-57.7
Area 5	G6M-04-07X	5/8/2012	-	-	-	-	-	-	4.0 J	100 U	27	-	-	-	-	-	-	-	-	6.26	0.198	0.48	0.35	10.5	122.0
Area 5	G6M-04-07X	10/9/2012	0.5 U	33 J	**31 J**	0.5 U	**6.2**	0.97	5.0 U	100 U	35	1.2 U	1.5 U	6,400	0.50	99	10	10 U	0.03 U	6.05	0.264	< 0.01	0.41	10.3	138.9
Area 5	G6M-04-07X	5/22/2013	-	-	-	-	-	-	3.9 J	100 U	51	-	-	-	-	-	-	-	-	6.14	0.220	< 0.01	0.39	14.0	154.1
Area 5	G6M-04-07X	10/15/2013	0.5 U	16	**26**	0.5 U	**5.7**	0.5 U	3.8 J	100 U	**3,480**	1.2 U	1.5 U	37,000	0.30	110	11	10 U	0.03 U	6.24	0.262	0.05	0.37	13.6	218.4
Area 5	G6M-04-07X	6/10/2014	-	-	-	-	-	-	3.0 J	21 J	**6,710**	-	-	-	-	-	-	-	-	6.01	0.257	5.18	0.32	8.8	210.9
Area 5	G6M-04-07X	10/28/2014	0.5 U	54	**55**	0.31 J	**11**	0.61	9.5	195 J	**4,370 J**	1.3 U	1.6 U	4,900	0.13	130	9.6	5.0 U	0.03 U	6.57	0.254	4.69	0.24	10.6	108.0
Area 5	G6M-04-07X	10/19/2015	1.0 U	1.0 U	**59**	1.0 U	**12**	1.0	**14**	**564,000**	**4,590**	10 U	10 U	3,120	0.11 U	143	11	0.98 J	2.0 U	6.35	0.324	1.68	0.05	10.7	23.3
Area 5	G6M-04-07X	11/14/2016	1.0 U	**73**	**78**	0.42 J	**18**	1.8	**29**	1,900	**4,400**	1.1 U	1.0 U	1,000	0.05 U	160	9.4	1.2	1.0 U	6.42	0.278	6.77	1.01	10.2	-28.3
Area 5	G6M-04-07X	10/17/2017	1.0 U	56	**38**	0.39 J	**20**	**3.1**	**18**	1,700	**5,200**	1.1 U	1.0 U	760	0.05 U	170	7.6	1.1	1.0 U	6.47	0.409	9.59	0.38	10.8	37.8
Area 5	G6M-04-07X	4/3/2018	1.0 U	7.7	4.2	1.0 U	3.4	1.0 U	7.2	50 U	**2,100**	-	-	-	-	-	-	-	-	7.16	0.508	2.90	1.14	10.5	39.4
Area 5	G6M-04-07X	10/22/2018	2.0 U	**120**	**15**	2.0 U	**47**	**4.4**	**18**	1,500	**4,200**	-	-	-	-	-	-	-	-	6.15	0.538	4.21	0.28	11.2	33.7
Area 5	G6M-04-07X	4/4/2019	1.0 U	**78**	**25**	0.52 J	**48**	**5.7**	**14**	1,200	**4,100**	-	-	-	-	-	-	0.89 J	-	6.40	0.560	4.50	0.89	11.0	7.9
Area 5	G6M-04-07X	10/10/2019	1.0 U	**110**	**36**	0.77 J	**53**	**8.5**	9.3	860	**4,000**	-	-	-	-	-	-	1.2	-	6.20	0.610	8.40	0.42	11.0	51.0
Area 5	G6M-04-07X	05/12/2020	1.0 U	**110**	**18**	0.59 J	**38**	**10**	8.3	952	**3,800**	1.1 U	1.0 U	360	0.10 U	220	9.4	1.1	0.83 U	6.91	1.260	18.4	10.4	11.8	-83.9
Area 5	G6M-04-07X	10/14/2020	1.0 U	**76**	**9.1**	0.58 J	**37**	**11**	7.6	1,000	**3,800**	1.1 U	0.54 J	540	0.05 U	230	9.9	1.1	0.81 U	6.43	0.397	4.78	0.72	11.6	57.0
Area 5	G6M-04-07X	5/12/2021	1.0 U	**89**	2.0 U	0.96 J	**22**	**10**	6.9	1,100	**3,600**	0.76 U	0.57 J	350	0.05 U	230	7.4	1.4 U	0.81 U	6.46	0.402	2.68	1.09	11.3	12.2
Area 5	G6M-04-07X	10/14/2021	1.0 U	**120**	4.8	0.66 J	**38**	**14**	8.0	1,200	**4,200**	0.34 J	0.64 J	520	0.05 U	260	7.5	1.4	0.81 U	6.24	0.536	0.03	1.04	12.0	55.4
Area 5	G6M-04-07X	5/2/2022	1.0 U	**79**	4.1	0.82 J	**31**	**12**	7.2	950	**3,800**	0.42 J	0.48 J	280 J	0.05 U	230	6.3	1.4	1.2 U	6.34	0.560	4.40	0.72	11.2	23.3
Area 5	G6M-04-07X	10/5/2022	1.0 U	**150 J**	0.42 J	1.3 J	**24 J**	**28 J**	7.4	1,100	**4,200**	0.54 J	0.46 J	270	0.025 U	260	5.6	1.4	3.7	6.56	0.754	2.49	2.85	12.5	71.9
Area 5	G6M-04-07X	6/6/2023	1.0 U	67	2.1	0.66 J	**20**	**11**	6.9	1,200	**3,700**	0.55 J	0.48 J	230	0.02 J	250	6.2	0.99 J	1.5 U	6.24	0.610	1.25	0.29	11.6	12.4
Area 5	G6M-04-07X	11/2/2023	1.0 U	**74**	4.7	1.0 U	**24**	**10**	7.4	1,200	**3,800**	0.56 J	0.46 J	160	0.025 U	250	5.0	1.3 J	1.8 U	6.25	0.540	0.90	1.17	10.6	3.2
Area 5	G6M-13-01X	12/12/2006	1.0 U	**120**	**750**	2.0 U	**45**	**7.8**	5.0 U	1,000 U	15 U	0.013	0.59	16,000	-	-	-	5.0 U	-	5.98	0.350	7.00	0.22	11.9	145.0
Area 5	G6M-13-01X	1/30/2014	0.5 U	0.73	**12**	0.5 U	0.42 J	0.5 U	-	-	-	-	-	-	-	-	-	-	-	6.21	0.860	38.0	1.64	16.4	188.4
Area 5	G6M-13-01X	10/28/2014	0.5 U	7.8	**150**	0.5 U	2.8	0.5 U	2.5 U	25 U	27 J	-	-	-	-	-	-	-	-	6.25	0.495	9.14	1.77	12.8	100.3
Area 5	G6M-13-01X	6/22/2015	0.5 U	1.3	**16**	0.5 U	0.65 J	0.5 U	2.3 J	50 U	8.7 J	-	-	-	-	-	-	-	-	5.80	0.848	1.11	0.89	17.5	172.2
Area 5	G6M-13-01X	10/16/2015	1.0 U	1.0 U	**26**	1.0 U	1.1	1.0 U	4.0 U	61 J	16	-	-	-	-	-	-	-	-	5.57	0.727	22.1	0.52	13.7	42.7
Area 5	G6M-13-01X	2/11/2016	1.0 U	1.6	**10**	1.0 U	0.69 J	1.0 U	4.0 U	100 U	10 J	10 U	10 U	126	0.31	32	17	1.0 U	2.0 U	6.05	0.880	1.02	0.57	10.3	38.8
Area 5	G6M-13-01X	6/15/2016	1.0 U	2.8	**18**	1.0 U	1.1	1.0 U	2.1 J	83	14	-	-	-	-	-	-	-	-	6.09	0.891	25.0	0.65	15.6	36.9
Area 5	G6M-13-01X	11/11/2016	1.0 U	6.5	**27**	1.0 U	3.5	**2.8**	3.5	1,200	29	-	-	-	-	-	-	-	-	5.63	0.638	22.1	1.11	12.4	83.3
Area 5	G6M-13-01X	5/18/2017	1.0 U	3.4	**13**	1.0 U	0.85 J	1.0 U	3.0 U	39 J	19	1.1 U	1.0 U	830	0.14	36	14	1.0 U	1.0 U	6.02	0.631	5.47	0.37	14.5	127.6
Area 5	G6M-13-01X	10/16/2017	1.0 U	0.65 J	**10**	1.0 U	0.79 J	1.0 U	3.6	830	34	-	-	-	-	-	-	-	-	6.09	0.809	38.9	0.40	12.1	49.7
Area 5	G6M-13-01X	4/4/2018	1.0 U	1.2	3.4	1.0 U	0.99 J	1.0 U	10	1,500	260	1.1 U	1.0 U	3,200	0.05 U	31	15	1.8	1.0 U	6.15	0.907	3.35	0.71	11.1	41.9
Area 5	G6M-13-01X	10/29/2018	1.0 U	3.6	0.85 J	1.0 U	1.3	1.0 U	**13**	1,500	200	1.1 U	1.0 U	2,300	0.05 U	35	14	6.7	1.0 U	5.63	0.975	23.6	0.46	12.1	-1.9
Area 5	G6M-13-01X	4/3/2019	1.0 U	3.1	1.0 U	1.0 U	1.0 U	1.0 U	3.4	460	**3,300**	0.66 J	1.5	4,500	0.05 U	-	13	36	1.0 U	6.00	1.000	29.0	1.40	12.0	-140.0
Area 5	G6M-13-01X	10/21/2019	1.0 U	30	1.8	1.0 U	**7.1**	**4.0**	6.2	1,300	**2,700**	1.1 U	2.2	6,200	0.21	34	12	14	0.85 U	5.70	0.790	190	0.15	12.0	33.0
Area 5	G6M-13-01X	05/11/2020	1.0 U	4.4	0.85 J	1.0 U	0.69 J	1.0 U	6.2	620	**5,100**	1.1 U	0.78 J	8,000	0.10 U	66	10	11	0.81 U	5.90	0.941	94.2	0.88	12.7	3.8
Area 5	G6M-13-01X	10/13/2020	1.0 U	2.2	2.0	1.0 U	1.6	1.0 U	1.8 J	180	**2,600**	1.1 U	1.0 U	3,100	0.05 U	45	15	3.8	0.83 U	6.20	0.639	322	1.53	11.8	-88.1
Area 5	G6M-13-01X	5/11/2021	1.0 U	24	2.0 U	1.0 U	1.0 U	**6.7**	**14**	1,100	**6,000**	2.5	6.8	9,300	0.05 U	170	8.3	3.0	0.81 U	6.50	0.686	291.9	0.89	11.9	-99.8
Area 5	G6M-13-01X	10/12/2021	1.0 U	1.9	2.0 U	1.0 U	1.6	1.0 U	**160**	1,400	**5,800**	0.76 U	0.60 J	2,200	0.05 U	98	11	1.3	0.81 U	6.48	1.620	8.77	0.69	12.2	-38.6
Area 5	G6M-13-01X	5/3/2022	1.0 U	0.73 J	1.0 U	1.0 U	0.50 J	1.0 U	**180**	2,900	**4,500**	0.76 U	0.71 U	1,400 J	0.05 U	68	14	1.4	1.2 U	6.47	0.987	3.11	0.37	12.0	-29.3
Area 5	G6M-13-01X	10/12/2022	1.0 U	10.0	1.0 U	1.0 U	0.5 U	3.8	**160**	**8,000**	**8,500**	0.57 J	2.7	910	0.025 U	180	7.1	1.9	1.8 U	6.38	1.007	30.21	1.54	17.0	-40.4
Area 5	G6M-13-01X	6/6/2023	1.0 U	0.61 J	1.0 U	1.0 U	0.31 J	1.0 U	**230**	**6,000**	**3,900**	0.76 U	0.47 J	750	0.036 J	81	15	0.97 J	1.5 U	6.59	0.880	3.1	1.08	16.1	-36.3
Area 5	G6M-13-01X	10/18/2023	1.0 U	0.60 J	1.0 U	1.0 U	0.42 J	1.0 U	**220**	**6,500**	**3,900**	0.76 U	0.71 U	680	0.025 U	79	14	1.5	1.7 U	6.49	0.860	2.6	0.39	13.8	-46.6
Area 5	G6M-13-04X	12/11/2006	1.0 U	2.0 U	**87**	2.0 U	2.0 U	2.0 U	5.0 U	100 U	15	0.007 J	0.033	2.2	-	-	-	5.0 U	-	6.65	0.134	10.5	6.99	17.2	116.4
Area 5	G6M-13-04X	1/30/2014	0.90 J	68	**41**	2.7	**51**	**150**	-	-	-	-	-	-	-	-	-	-	-	6.57	1.414	4.60	0.98	12.6	-36.4
Area 5	G6M-13-04X	6/10/2014	0.66	29	**25**	2.7	**31**	**130**	**360**	**49,000 J**	**5,900**	2.7 J	12 J	3,600 J	0.13 U	280 J	9.3	2.5 J	0.03 U	6.42	1.212	12.9	0.58	-	-49.4
Area 5	G6M-13-04X	10/29/2014	0.56	69	1.7	1.6	**17**	**72**	**321**	**5,500 J**	**6,170 J**	4.7	41	32,000	0.13 U	310	3.5 J	13	0.03 U	6.65	1.081	5.55	0.42	12.1	-95.2
Area 5	G6M-13-04X	6/22/2015	0.5 U	2.2	0.5 U	0.5 U	1.8	1.4	**360**	**29,300**	**3,840 J**	5.0 U	5.0 U	719	0.11 U	129	30.5 J	3.2	1.0 U	6.95	0.800	0.80	0.70	17.3	-156.6
Area 5	G6M-13-04X	10/15/2015	1.0 U	52	**19**	0.76 J	**19**	**33**	**388**	**33,100**	**7,930**	10 U	19	9,470	0.16	269	5.8 J	2.8	2.0 U	6.60	1.595	7.50	0.29	12.3	-69.4
Area 5	G6M-13-04X	2/11/2016	1.0 U	15	0.70 J	1.5	**5.9**	**51**	**392**	**33,900**	**7,390**	10 U	19	5,690	0.099 J	261	6.1 J	3.2	2.0 U	6.66	1.086	9.50	1.23	8.5	-2.9
Area 5	G6M-13-04X	6/15/2016	0.73 J	19	**12**	1.2	**18**	**55**	**340**	**27,000**	**6,800**	2.8	20 J	9,300	0.05 U	280	3.6	1.7	1.0 U	6.69	1.669	11.5	0.59	14.9	-54.2
Area 5	G6M-13-04X	11/11/2016	0.62 J	17	4.9	0.86 J	**17**	**36**	**340**	**28,000**	**7,600**	2.2	12	7,000	0.05 U	250	4.0	1.6	1.0 U	7.21	1.175	24.1	0.88	12.7	-80.4
Area 5	G6M-13-04X	10/16/2017	0.71 J	25	**40**	0.81 J	**40**	**33**	**340 J**	**27,000**	**7,100**	1.5	7.6	2,500	0.05 U	190	4.1	1.8	1.0 U	6.76	1.410	4.96	0.65	12.1	-79.1
Area 5	G6M-13-04X	4/5/2018	1.0 U	6.9	1.0 U	1.6	4.1	**8.6**	**350**	**34,000**	**7,500**	8.6	14	20,000	0.062 J	210	4.5	1.8	1.0 U	6.65	1.579	1.28	0.90	10.6	-31.2
Area 5	G6M-13-04X	10/29/2018	1.0 U	7.7	1.0 U	0.67 J	**6.9**	**6.1**	**330**	**23,000**	**8,700**	1.8	4.4	2,700	0.055 J	160	6.9	1.5	1.0 U	6.42	1.619	9.47	0.91	11.2	-53.9
Area 5	G6M-13-04X	4/4/2019	1.0 U	13	1.0 J	0.52 J	**12**	**6.5**	**350 J**	**35,000**	**10,000**	2.4	12	21,000	0.05 U	-	5.7 J	4.4	1.0 U	6.80	1.700	2.00	1.40	10.0	-97.0
Area 5	G6M-13-04X	10/23/2019	1.0 U	8.5	1.0 U	1.0 U	0.61 J	**4.5**	**440**	**81,000**	**13,000**	3.2	16	13,000	0.042 J	310	4.1	55	0.86 U	6.60	2.000	11.0	1.80	12.0	-95.0
Area 5	G6M-13-04X	05/11/2020	1.0 U	0.68 J	1.0 U	1.0 U	1.0 U	0.52 J	**430**	**44,000**	**9,000**	1.5	2.5	21,000	0.10 U	240	5.5	6.3	0.81 U	6.83	1.700	0.86	0.87	11.4	-83.4
Area 5	G6M-13-04X	10/16/2020	1.0 U	1.2	1.0 U	1.0 U	1.0 U	1.3	**550**	**100,000**	**10,000**	3.3	3.6	25,000	0.055 J	250	4.4 J	10	0.96 U	6.54	1.450	94.8	0.61	12.2	-117.0
Area 5	G6M-13-04X	10/12/2021	1.0 U	0.91 J	2.0 U	1.0 U	0.88 J	1.0 U	**450**	**41,000**	**8,300**	-	-	-	-	-	-	-	-	6.98	1.140	32.4	0.65	13.2	-135.0

		Analytical Method	VOCs						Dissolved Metals			Dissolved Gases			General Chemistry					Field Parameters					
		Analyte	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Nitrate/ Nitrite	Alkalinity	Sulfate	TOC	Sulfide	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mS/cm)	(NTU)	(mg/L)	°C	(mV)
		Cleanup Level[1]	7	70	5	70	5	2	10	3,129	1,460				10,000										
Area	Well ID	Date Sampled																							
Area 5	G6M-13-04X	10/12/2022	1.0 U	1.2 J	1.0 U	1.0 U	0.5 U	0.83 J	**580**	**68,000**	**8,100**	-	-	-	-	-	-	-	-	6.86	1.204	1.24	0.76	16.8	-124.7
Area 5	G6M-13-04X	11/2/2023	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	0.77 J	**480**	**58,000**	**6,600**	-	-	-	-	-	-	-	-	6.58	1.520	5.40	1.58	9.7	-119.0
Area 5	G6M-18-01	1/14/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	8.58	0.166	3.09	7.00	11.6	69.0
Area 5	G6M-18-01	10/14/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	54	14	1.1 U	1.0 U	0.33 J	0.50	26	7.1	0.57 J	0.93 U	6.00	0.140	5.50	6.80	13.0	130.0
Area 5	G6M-18-01	11/05/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	50 U	4.7 J	1.1 U	1.0 U	0.40	0.51	22	6.1	1.0 U	0.81 U	8.23	0.149	2.01	7.42	13.0	119.0
Area 5	G6M-18-02	1/14/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	6.22	0.722	3.69	3.85	10.7	137.1
Area 5	G6M-18-02	10/18/2019	1.0 U	1.0 U	0.80 J	1.0 U	1.0 U	1.0 U	3.0 U	17 J	90	1.1 U	1.0 U	2.6	1.9	18	11	1.0 U	0.88 U	5.80	0.840	1.30	2.50	12.0	210.0
Area 5	G6M-18-02	10/14/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	50 U	23	1.1 U	1.0 U	0.51 J	1.9	22	14	1.4	0.81 U	6.08	0.645	1,060	4.28	17.0	201.0
Area 5	G6M-97-05B	10/3/2011	0.5 U	0.5 U	**5.7**	0.5 U	0.58	0.5 U	5.0 U	100 U	25 U	-	-	-	-	-	-	-	-	6.21	0.357	1.48	3.91	12.4	166.4
Area 5	G6M-97-05B	10/12/2012	0.5 U	0.5 U	**13**	0.5 U	0.73	0.5 U	5.0 U	17 J	25 U	-	-	-	-	-	-	-	-	6.19	0.649	0.41	4.13	14.6	132.0
Area 5	G6M-97-05B	10/16/2013	0.5 U	0.63	**26**	0.5 U	0.70	0.5 U	5.0 U	100 U	25 U	-	-	-	-	-	-	-	-	6.15	0.513	3.86	3.88	13.8	123.8
Area 5	G6M-97-05B	10/28/2014	0.5 U	1.7	**83**	0.5 U	1.8	0.5 U	2.5 U	29 J	25 U	-	-	-	-	-	-	-	-	6.21	0.499	2.78	3.38	11.1	112.1
Area 5	G6M-97-05B	6/19/2015	0.5 U	2.3	**89**	0.5 U	4.8	0.5 U	3.1 J	50 U	7.5 U	5.0 U	5.0 U	5.0 U	1.0	27	7.8 J	-	1.0 U	6.26	0.630	1.72	2.73	17.2	106.3
Area 5	G6M-97-05B	10/15/2015	1.0 U	3.4	**117**	1.0 U	**6.9**	1.0 U	4.0 U	61 J	19	-	-	-	-	-	-	-	-	5.43	0.687	1.05	3.41	18.9	86.9
Area 5	G6M-97-05B	2/11/2016	1.0 U	3.8	**97**	1.0 U	**11**	1.0 U	4.0 U	100 U	15 U	10 U	10 U	10 U	1.0	29	7.8 J	1.0 U	2.0 U	6.33	0.430	16.7	4.72	7.3	131.7
Area 5	G6M-97-05B	6/15/2016	1.0 U	4.2	**87**	1.0 U	**13**	1.0 U	3.0 U	50 U	3.0 U	-	-	-	-	-	-	-	-	6.26	0.669	1.15	2.75	15.9	81.7
Area 5	G6M-97-05B	11/15/2016	1.0 U	4.2	**140**	1.0 U	**13**	1.0 U	3.0 U	21 J	2.4 J	-	-	-	-	-	-	-	-	6.39	0.469	0.87	3.37	11.7	129.4
Area 5	G6M-97-05B	5/17/2017	1.0 U	8.6	**190**	1.0 U	**15**	1.0 U	3.0 U	50 U	3.0 U	1.1 U	1.0 U	0.84	0.94	31	7.0	1.0 U	1.0 U	6.20	0.547	9.59	2.00	15.2	120.8
Area 5	G6M-97-05B	10/11/2017	1.0 U	4.4	**140**	1.0 U	**16**	1.0 U	3.0 U	100 U	3.3 J	1.1 U	1.0 U	0.58 U	0.89	32	7.4	1.0 U	1.0 U	6.20	0.710	5.27	1.65	14.0	100.1
Area 5	G6M-97-05B	4/3/2018	1.0 U	9.0	**240**	1.0 U	**19**	1.0 U	3.0 U	50 U	1.4 J	1.1 U	1.0 U	34	0.79	33	7.4	1.5	1.0 U	6.60	0.671	1.13	1.85	10.9	47.4
Area 5	G6M-97-05B	10/30/2018	2.0 U	9.6	**190**	2.0 U	**16**	2.0 U	3.0 U	50 U	1.5 J	1.1 U	1.0 U	530 J	0.59	35	8.6	0.5 U	1.0 U	5.74	0.758	9.85	1.29	9.1	105.0
Area 5	G6M-97-05B	4/3/2019	1.0 U	9.8	**180**	1.0 U	**22**	1.0 U	3.0 U	50 U	4.3 J	1.1 U	1.0 U	1,100	0.58	-	7.6	0.5 U	1.0 U	6.20	0.760	0.69	1.50	13.0	45.0
Area 5	G6M-97-05B	10/21/2019	1.0 U	17	**26**	1.0 U	**7.8**	1.0 U	**56**	**22,000**	**5,800**	4.7	1.4	820	0.05 U	110	2.0	270	0.83 U	6.00	0.980	140	0.11	12.0	5.8
Area 5	G6M-97-05B	05/11/2020	1.0 U	**77**	**6.4**	1.0 U	0.97 J	0.56 J	**220**	**100,000**	**16,000**	6.5	1.6	13,000	0.10 U	250	0.48 J	260	0.81 U	5.86	1.230	23.1	1.04	13.4	-61.2
Area 5	G6M-97-05B	10/13/2020	1.0 U	**73**	**13**	1.0 U	3.1	**2.4**	**130**	**61,000**	**5,800**	25	22	10,000	0.10 U	150	1.0 U	210	0.81 U	5.32	0.655	2,600	0.42	11.8	181.0
Area 5	G6M-97-05B	5/11/2021	1.0 U	32	1.9 J	1.0 U	3.4	**10**	**250**	**74,000**	**13,000**	5.7	24	27,000	0.046 J	170	1.0 U	67	0.81 U	6.40	0.806	330	0.56	14.0	-83.9
Area 5	G6M-97-05B	10/13/2021	1.0 U	21	2.0 U	1.0 U	3.1	**8.0**	**170**	**52,000**	**6,600**	6.3	23	28,000	0.05 U	110	0.67 J	34	0.81 U	6.49	1.625	11.96	0.7	89.0	-105.1
Area 5	G6M-97-05B	10/10/2022	1.0 U	1.1 J	1.0 U	1.0 U	0.5 U	0.62 J	**270**	**62,000**	**11,000**	19	9.0	26,000	0.025 U	170	1.0 U	20	1.9 U	6.69	1.131	6.94	0.59	12.5	-149.1
Area 5	G6M-97-05B	6/6/2023	1.0 U	0.58 J	1.0 U	1.0 U	0.5 U	1.0 U	**320**	**77,000**	**7,600**	27	7.0	34,000	0.055 J	160	1.0	18	1.5 U	6.86	1.020	6.41	0.56	13.7	-154.0
Area 5	G6M-97-05B	10/17/2023	1.0 U	3.9	1.0 U	1.0 U	0.98 J	1.1 J	**140**	**41,000**	**3,600**	16	4.5	31,000	0.074 J	120	2.0 U	4.1	-	6.75	0.869	7.5	0.06	15.6	-121.4
Area 5	MW-3	10/17/2001	10 U	**540**	**4,300**	20 U	**1,500**	20 U	-	-	-	-	-	-	-	-	-	-	-	5.70	1.400	3.10	0.90	13.7	-127.0
Area 5	MW-3	12/19/2001	6.5 J	**2,200**	**26**	20 U	**4,000**	20 U	-	-	-	-	-	-	-	-	0.43 J	92	-	6.28	0.912	7.28	0.43	13.0	-46.0
Area 5	MW-3	1/3/2002	-	-	-	-	-	-	**180**	**30,000**	-	0.063	0.21	18	-	-	-	44	-	4.77	2.795	4.40	1.33	11.2	-48.0
Area 5	MW-3	1/31/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38	-	6.64	0.999	-	0.00	12.2	-293.0
Area 5	MW-3	2/13/2002	3.7	**1,600**	**4,400**	1.6 J	**1,700**	2.0 U	**190**	**20,000**	**8,300**	0.079	0.29	53	0.10 U	-	14	15	1.0 J	6.65	0.893	1.30	0.75	13.5	-71.0
Area 5	MW-3	3/13/2002	2.8	**1,400**	**5,200**	1.4 J	**640**	2.0 U	**180**	**16,000**	**8,400**	0.093	0.37	66	0.10 U	-	15	7.3	2.0 U	6.72	0.795	1.04	0.25	12.2	-75.0
Area 5	MW-3	4/2/2002	4.0	**1,700**	**3,100**	2.2	**1,000**	2.0 U	-	-	-	-	-	-	-	-	-	3.3 J	-	6.74	0.634	2.08	4.28	13.2	-120.0
Area 5	MW-3	4/17/2002	3.4	**1,600**	**1,200**	1.2 J	**1,300**	2.0 U	**240**	**37,000**	**17,000**	0.025	0.087	54	3.0	-	7.9 J	6.1	1.6 J	6.60	0.771	0.81	4.39	12.7	-102.0
Area 5	MW-3	5/15/2002	6.7	**2,600**	**31**	3.5	**23**	2.0 U	**260**	**42,000**	**19,000**	0.052	0.24	560	0.10 U	-	3.9	96	1.6 J	6.66	1.460	1.68	0.31	14.2	-124.0
Area 5	MW-3	6/27/2002	100 U	**1,800**	200 U	200 U	200 U	200 U	**490 J**	**140,000**	**37,000 J**	0.021	0.082	3,900	14	-	4.4 J	270	2.0 U	6.70	3.804	2.90	1.64	13.8	-107.0
Area 5	MW-3	7/31/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31	-	6.76	1.606	-	0.15	13.9	-225.0
Area 5	MW-3	8/26/2002	4.4	**580**	**990**	2.1	**640**	2.0 U	**270**	-	-	0.053	0.16	14,000	-	320	-	30	-	6.83	1.285	6.50	0.15	18.8	-138.0
Area 5	MW-3	10/28/2002	4.2	**1,700**	**1,900**	3.9	**820**	2.0 U	**330**	**39,000**	**9,700**	0.30	0.23	6,300	0.10 U	190	10	6.3	2.0 U	6.70	1.129	5.01	0.40	15.7	-129.0
Area 5	MW-3	2/3/2003	**7.1**	**2,900**	3.0	2.0 U	2.0 U	2.0 U	**330**	**120,000**	-	0.005 U	0.26	28,000	-	580	1.0 U	180	-	6.84	1.322	6.70	0.30	18.2	-159.0
Area 5	MW-3	7/16/2003	**7.5**	**2,700**	2.4	2.0 U	2.0 U	**2.5**	**520**	**170,000**	-	0.005 U	0.10	23,000	-	450	4.0 U	17	2.0 U	7.02	1.464	39.2	1.09	16.1	-138.0
Area 5	MW-3	9/24/2003	6.9	**1,900**	**670**	2.4	**1,100**	2.0 U	**460**	**89,000**	**7,900**	0.005 U	0.012	22,000	-	-	-	5.9	-	6.10	1.222	18.9	9.17	15.3	-138.0
Area 5	MW-3	1/9/2004	5.6	**2,000**	**9.7**	2.0 U	**64**	2.0 U	**530**	**200,000 J**	**15,000**	0.005 U	0.005 U	45,000	-	500 J	1.0 U	130	2.0 U	6.73	1.347	14.6	0.40	-	-195.0
Area 5	MW-3	3/11/2004	**7.6**	**4,700**	**680**	2.0 U	**620**	2.0 U	**420**	**11,000**	**8,400**	0.005 U	0.005 U	27,000	-	200	4.4	6.1	2.0 U	6.58	0.972	4.30	0.62	13.9	-161.0
Area 5	MW-3	6/2/2004	4.5	**1,800**	2.0 U	2.0 U	2.0 U	2.0 U	**670**	**150,000**	**23,000**	0.005 U	0.014	31,000	-	810	0.98 J	290	2.0 U	6.95	1.905	38.7	0.10	15.7	-149.0
Area 5	MW-3	9/21/2004	5.2	**1,900**	**210**	2.0 U	**250**	**3.5**	**660**	**200,000 J**	**7,200**	0.086	0.005 U	28,000	1.0 J	310	4.3 J	17	2.0 U	6.66	0.725	2.27	0.95	11.1	-153.6
Area 5	MW-3	12/13/2004	1.0 U	**750**	2.0 U	2.0 U	2.0 U	**610**	**510**	**160,000**	**5,400**	0.092	3.5	17,000	1.1	210	1.4 J	8.0	2.0 U	6.62	1.009	15.1	1.60	13.9	-103.3
Area 5	MW-3	3/28/2005	50 U	**1,000**	**23 J**	50 U	**16 J**	**280**	**670**	**150,000**	**7,300**	0.005 U	5.1	25,000	0.2 U	405	1.0 U	21	7.5 J	6.49	1.260	2.37	0.34	14.4	-134.9
Area 5	MW-3	8/10/2005	5.1	**120**	**440**	2.0 U	**80**	**760**	**680**	**180,000**	**4,400**	0.061 J	13	22,000	0.05 U	338	2.0 U	43	8.0	11.13	1.401	28.9	0.71	15.7	-118.5
Area 5	MW-3	9/27/2005	**9.1**	**180**	**1,100**	1.8	**240**	**360**	**480**	**71,000 J**	**2,500**	0.020 J	40	22,000	0.05 U	97	9.9J	5.6	3.4	6.36	0.660	2.80	0.21	14.5	-91.2
Area 5	MW-3	12/12/2005	10 U	52	**37**	20 U	**67**	**480**	**566**	**100,000**	-	0.055	100	26,000	0.083 J	180	2.0 U	18	5.6	6.66	1.087	8.00	0.11	15.7	-152.7
Area 5	MW-3	3/20/2006	3.9	**120**	**620**	3.1	**350**	**220**	**440**	**85,000**	**3,600**	0.025 U	130	25,000	0.2 U	110	6.3	13	1.0 U	6.95	0.871	3.71	0.77	14.9	-106.2
Area 5	MW-3	6/22/2006	1.0 U	4.0	2.0 U	7.6	2.0 U	**6.1**	**520**	**87,000**	**3,300**	0.023 J	180	20,000	0.2 U	98	1.0 U	4.0 J	1.0 U	6.40	1.012	4.18	0.22	13.0	-127.0
Area 5	MW-3	9/20/2006	5.6	**130**	**360**	12	**420**	**200**	**580**	**70,000**	**3,300**	0.015 J	95	17,000	0.2 U	70	7.9	9.6	1.4	6.52	0.729	3.56	0.28	13.3	-108.5
Area 5	MW-3	3/27/2007	1.0 U	19	2.0 U	12	**31**	**27**	**560**	**110,000**	**3,300 J**	0.025 U	130	18,000	-	-	3.2	5.2	1.0 U	6.28	0.944	2.64	0.19	13.6	21.0
Area 5	MW-3	6/11/2007	1.0 U	5.4	2.0 U	15	5.0	**8.0**	**570**	**190,000**	**5,000**	0.038	150	32,000	-	-	12	67	2.2	6.56	1.405	17.3	0.58	12.3	-124.7
Area 5	MW-3	9/11/2007	2.6	**100**	**610**	6.4	**470**	**97**	**530**	**100,000**	**3,600**	-	-	-	0.2 U	150	400	-	1.0 U	6.76	1.016	6.80	0.23	13.5	-130.0
Area 5	MW-3	10/12/2007	-	-	-	-	-	-	-	-	-	0.025 U	120	34,000	-	-	-	3.8 J	-	-	-	-	-	12.5	-
Area 5	MW-3	12/13/2007	2.4	59	**250**	8.8	**180**	**78**	**420**	**91,000**	**4,400**	0.016 J	130	30,000	-	-	10	4.1 J	1.0 U	6.60	1.040	15.7	0.27	19.2	-159.8
Area 5	MW-3	3/10/2008	1.0 U	2.0 U	2.0 U	8.3	2.0 U	2.0 U	**530**	**140,000**	**3,300**	18	35	29,000	-	-	5.0 U	16	2.4	6.46	1.402	5.50	0.12	14.3	-113.0
Area 5	MW-3	10/6/2008	5.0 U	5.0 U	5.0 U	11	5.0 U	5.0 U	**482**	**112,000**	**3,720**	1.3 U	72	28,000	0.13 U	210	7.0 U	10 U	0.03 U	6.49	1.070	9.30	0.24	21.5	-158.6
Area 5	MW-3	1/21/2009	1.2 U	1.6 J	1.4 U	9.2	2.3 U	1.9	**556**	**114,000 J**	**3,350**	3.2	58	40,000	0.13 U	160	7.0 U	10 U	0.03 U	6.69	1.044	4.01	0.50	15.5	-79.9

Appendix D
Historical Groundwater Analytical Results
2023 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

		Analytical Method	VOCs						Dissolved Metals			Dissolved Gases			General Chemistry					Field Parameters					
		Analyte	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Nitrate/ Nitrite	Alkalinity	Sulfate	TOC	Sulfide	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mS/cm)	(NTU)	(mg/L)	°C	(mV)
		Cleanup Level[1]	7	70	5	70	5	2	10	3,129	1,460				10,000										
Area	Well ID	Date Sampled																							
Area 5	MW-3	5/7/2009	2.0 U	48	2.0 U	17	**59**	**66**	**519**	**115,000**	**3,630**	1.3	70	47,000	0.13 U	360 J	22	7.0 J	0.03 U	6.26	1.205	4.54	1.03	18.9	-89.9
Area 5	MW-3	10/19/2009	2.0 U	25	2.0 U	9.4	**35**	**40**	**551**	**120,000**	**5,330**	1.2 U	36	25,000	0.13 U	490	28	6.7 J	0.03 U	6.24	1.494	25.6	0.60	15.5	-62.6
Area 5	MW-3	4/20/2010	0.5 U	0.47 J	0.5 U	4.7 J	0.48 J	**2.5 J**	**526**	**136,000 J**	**3,200**	10	19	47,000	0.13 U	440	3.4 J	9.0 J	0.03 U	6.33	1.445	0.09	0.16	11.1	5.4
Area 5	MW-3	10/5/2010	0.5 U	3.4	0.5 U	7.5	4.8	**20**	**444**	**76,000**	**3,560**	1.2 U	69	32,000	0.13 U	750	4.5 J	10 U	0.03 U	6.20	1.799	0.58	0.20	11.9	-85.9
Area 5	MW-3	6/8/2011	0.5 U	0.93	0.5 U	4.4	0.66	**17**	**374**	**53,600**	**2,570**	4.5	18	100,000	0.13 U	690	1.7 J	12	0.03 U	6.34	1.232	3.56	0.30	12.0	-91.1
Area 5	MW-3	10/3/2011	0.5 U	0.52	0.5 U	1.7	0.5 U	1.0	**385**	**45,800**	**2,760**	1.2 U	1.5 U	40,000	0.13 U	730	0.74 J	10	0.03 U	6.47	1.544	0.90	0.13	12.1	-88.1
Area 5	MW-3	5/8/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**276**	**27,000**	**3,140**	51	110	66,000	0.13 U	600	0.82 J	7.5 J	0.03 U	6.77	1.856	4.60	0.08	12.2	-107.2
Area 5	MW-3	10/10/2012	0.5 U	0.5 U	0.5 U	0.54	0.5 U	1.2	**267**	**25,700**	**4,810**	61	100	36,000	0.13 U	520	1.4 J	5.6 J	0.03 U	6.45	1.738	0.92	0.51	12.1	-87.6
Area 5	MW-3	5/21/2013	0.5 U	0.30 J	0.5 U	0.39 J	0.5 U	0.75	**281**	**24,700**	**6,460**	1.2 U	1.5 U	10,000	0.13 U	530 J	0.64 J	4.3 J	0.03 U	6.76	1.277	2.75	0.12	11.5	-105.2
Area 5	MW-3	10/16/2013	0.5 U	0.36 J	0.5 U	0.32 J	0.21 J	0.94	**298**	**26,600**	**7,970**	12	11	38,000	0.13 U	510	1.9 J	5.2 J	0.03 U	6.75	1.437	< 0.01	0.40	12.0	-87.4
Area 5	MW-3	6/11/2014	0.5 U	0.5 U	0.5 U	0.37 J	0.5 U	0.83	**354**	**34,000 J**	**11,100**	2.9 J	1.6 U	5,100 J	0.13 U	330 J	1.2 U	8.3 J	0.03 U	6.70	1.062	6.18	0.51	11.8	-67.6
Area 5	MW-3	10/29/2014	0.5 U	0.68	0.5 U	0.38 J	0.27 J	0.53	**334**	**30,000 J**	**10,500 J**	3.8	1.5 U	13,000	0.13 U	370	2.4 J	5.2 J	0.03 U	6.80	0.756	3.79	0.34	12.0	-110.1
Area 5	MW-3	6/23/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**409**	**37,100**	**11,000**	5.0 U	5.0 U	4,830	0.11 U	366	5.1 J	5.0	1.0 U	6.34	1.262	5.85	1.07	14.2	-89.4
Area 5	MW-3	10/15/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.54 J	**420**	**41,900**	**12,600**	10 U	10 U	4,570	0.071	349	10 U	4.9	2.0 U	6.97	1.215	1.38	0.48	13.9	-112.1
Area 5	MW-3	2/10/2016	1.0 U	1.0	1.0 U	1.0 U	1.0 U	0.88 J	**423**	**49,000**	**12,000**	10 U	10 U	7,260	0.094 J	341	10 U	5.4	2.0 U	6.72	0.851	10.5	1.12	9.1	-109.7
Area 5	MW-3	6/16/2016	1.0 U	1.5	1.0 U	1.0 U	1.0 U	0.89 J	**410**	**45,000**	**9,800**	3.0	1.0 U	20,000	0.05 U	350	1.3	6.1	1.0 U	6.81	1.360	4.93	0.66	14.3	-77.4
Area 5	MW-3	11/11/2016	1.0 U	1.7	1.0 U	1.0 U	0.96 J	1.6	**410**	**47,000**	**9,500**	2.9	1.0 U	7,000	0.05 U	370	1.4	6.4	1.0 U	7.22	0.871	7.77	0.83	12.7	-97.8
Area 5	MW-3	5/17/2017	1.0 U	0.75 J	1.0 U	1.0 U	1.0 U	1.0 U	**500**	**56,000**	**9,400**	1.8	1.0 U	10,000	0.073 J	310	2.2	5.2	1.0 U	6.78	0.909	6.29	0.63	12.7	-112.4
Area 5	MW-3	10/11/2017	1.0 U	1.0	1.0 U	1.0 U	1.0 U	0.60 J	**440**	**56,000**	**9,200**	1.9	1.0 U	5,500	0.06 J	280	0.62 J	5.0	1.0 U	6.60	1.200	4.33	0.69	13.4	-102.3
Area 5	MW-3	10/29/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**470**	**51,000**	**8,300**	-	-	-	-	-	-	-	-	6.80	1.211	4.13	1.05	11.6	-102.0
Area 5	MW-3	10/17/2019	1.0 U	0.71 J	1.0 U	1.0 U	1.0 U	1.0 U	**510**	**42,000**	**7,000**	-	-	-	-	-	-	-	-	6.70	1.100	7.60	1.10	12.0	-100.0
Area 5	MW-3	10/15/2020	1.0 U	0.49 J	1.0 U	1.0 U	1.0 U	1.0 U	**610**	**43,000**	**7,300**	-	-	-	-	-	-	-	-	6.91	0.716	1.89	0.23	13.9	-120.0
Area 5	MW-3	10/12/2021	1.0 U	0.51 J	2.0 U	1.0 U	1.0 U	1.0 U	**530**	**41,000**	**8,900**	-	-	-	-	-	-	-	-	6.82	1.641	13.87	1.12	12.6	-108.0
Area 5	MW-3	10/6/2022	1.0 U	0.31 J	1.0 U	1.0 U	0.5 U	0.40 J	**650**	**42,000**	**8,200**	-	-	-	-	-	-	-	-	6.90	0.804	2.81	0.81	19.3	-129.3
Area 5	MW-3	10/18/2023	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	**650 J**	**52,000 J**	**11,000 J**	-	-	-	-	-	-	-	-	6.58	1.040	17.90	0.29	12.8	-115.0
Area 5	MW-7	2/14/2002	1.0 U	2.0 U	**5,900**	2.0 U	4.5	2.0 U	5.0 U	1,000 U	170 J	0.12	0.080	8.4	-	-	20	-	0.6 J	6.12	0.787	90.0	1.58	18.8	104.0
Area 5	MW-7	4/17/2002	1.0 U	2.0 U	**4,200**	2.0 U	2.9	2.0 U	2.3 J	1,000 U	1,000 U	0.072	0.20	6.0	4.2	-	18 J	5.0 U	1.6 J	6.11	0.656	19.5	0.50	-	145.0
Area 5	MW-7	5/16/2002	1.0 U	2.0 U	**5,700**	2.0 U	4.3	2.0 U	5.0 U	1,000 U	1,000 U	0.097	0.20	9.0	4.3	-	18 J	5.0 U	2.0 U	6.05	0.759	23.9	0.21	10.9	185.0
Area 5	MW-7	6/27/2002	10 U	2.0 U	**5,300**	2.0 U	3.8 J	2.0 U	5.0 U	1,000 U	170 J	-	-	-	4.2	-	19 J	5.0 U	2.0 U	6.13	1.198	100	0.73	11.1	163.0
Area 5	MW-7	8/27/2002	1.0 U	2.0 U	**4,700**	2.0 U	3.5	2.0 U	5.0 U	-	-	-	-	-	-	29	-	5.0 U	-	6.13	0.632	1.86	0.29	12.0	136.0
Area 5	MW-7	10/30/2002	1.0 U	2.0 U	**5,400**	2.0 U	2.7	2.0 U	5.0 U	1,000 U	200 J	0.047	0.18	20	4.9	23	16	5.0 U	2.0 U	6.05	0.779	3.63	0.37	11.9	66.0
Area 5	MW-7	12/14/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.0 U	-	-	-	-	-	12.0	-
Area 5	MW-7	1/30/2003	1.0 U	2.0 U	**4,700**	2.0 U	3.1	2.0 U	5.0 U	1,000 U	-	0.044	0.075	23	-	19	16	5.0 U	-	5.80	0.773	1.08	2.20	13.4	171.0
Area 5	MW-7	9/24/2003	1.0 U	2.0 U	**4,200**	2.0 U	3.3	2.0 U	5.0 U	1,000 U	140	0.015	0.027	58	-	-	-	5.0 U	-	3.40	0.691	0.30	1.43	-	522.0
Area 5	MW-7	1/8/2004	1.0 U	2.0 U	**4,300**	2.0 U	2.8	2.0 U	5.0 U	1,000 U	130	0.011	0.026	25	-	27	14 J	5.0 U	2.0 U	6.02	0.481	15.0	0.00	11.6	198.0
Area 5	MW-7	3/12/2004	1.0 U	2.0 U	**3,100**	2.0 U	2.7	2.0 U	5.0 U	1,000 U	120	0.020	0.28	6.3	-	24	15 J	1.0 U	2.0 U	6.04	0.556	1.00	0.47	14.0	162.0
Area 5	MW-7	6/3/2004	1.0 U	2.0 U	**2,900**	2.0 U	2.6	2.0 U	5.0 U	1,000 U	110	0.012	0.034	34	-	24	15 J	1.5 J	2.0 U	5.96	0.580	1.92	0.31	-	205.2
Area 5	MW-7	9/21/2004	1.0 U	3.1	**2,900**	2.0 U	3.4	2.0 U	5.0 U	1,000 U	110	-	-	-	-	-	-	-	-	5.98	0.580	< 0.01	0.21	11.1	240.4
Area 5	MW-7	9/27/2005	2.5 U	5.8	**1,600**	2.5 U	3.7	2.5 U	5.0 U	200 J	110	-	-	-	-	-	-	-	-	4.49	0.593	3.39	0.93	11.9	304.1
Area 5	MW-7	9/22/2006	1.0 U	7.7	**4,400**	2.0 U	**9.8**	2.0 U	5.0 U	100 U	100	-	-	-	-	-	-	-	-	5.99	0.503	3.01	1.19	12.7	140.9
Area 5	MW-7	9/11/2007	1.0 U	22	**1,200**	2.0 U	**11**	2.0 U	6.0 U	100 U	110	-	-	-	-	-	-	-	-	5.98	0.691	5.90	0.32	-	139.9
Area 5	MW-7	10/20/2008	20 U	**150**	**600**	20 U	**40**	20 U	8.0 U	200 U	166	-	-	-	-	-	-	-	-	5.97	0.804	2.00	1.39	14.7	71.9
Area 5	MW-7	10/19/2009	10 U	**270**	**97**	10 U	**33**	10 U	4.2 J	1,700	**2,170**	-	-	-	-	-	-	-	-	6.03	1.686	1.91	0.47	14.6	76.7
Area 5	MW-7	10/6/2010	2.5 U	**120**	**45**	2.5 U	**9.5**	**3.1**	5.7	1,460	**2,090**	-	-	-	-	-	-	-	-	6.53	2.072	4.81	0.21	11.5	-21.6
Area 5	MW-7	10/6/2011	0.5 U	20	1.6	0.5 U	3.7	**6.8**	**53**	**5,440**	**5,070**	-	-	-	-	-	-	-	-	6.60	1.717	3.00	0.49	-	-48.8
Area 5	MW-7	10/12/2012	0.5 U	9.9	2.3	0.70	2.3	**11**	**140**	**20,500**	**9,900**	-	-	-	-	-	-	-	-	6.38	1.253	< 0.01	0.65	-	-65.0
Area 5	MW-7	10/17/2013	0.5 U	13	1.5	0.24 J	**6.9**	**2.2**	**156**	**20,900**	**9,360**	-	-	-	-	-	-	-	-	6.72	1.152	< 0.01	0.58	10.5	-68.2
Area 5	MW-7	11/3/2014	0.5 U	13	1.7	0.27 J	**8.4**	1.5	**205**	**29,900**	**15,300**	-	-	-	-	-	-	-	-	6.62	0.878	1.94	0.41	10.3	-74.2
Area 5	MW-7	10/15/2015	1.0 U	12	1.0 U	1.0 U	1.7	1.1	**198**	**30,200**	**15,100**	-	-	-	-	-	-	-	-	6.83	0.926	1.50	0.84	11.3	-68.2
Area 5	MW-7	11/14/2016	1.0 U	22	1.0 U	1.0 U	1.4	**37**	**110**	**19,000**	**13,000**	-	-	-	-	-	-	-	-	6.01	0.770	7.42	1.24	13.2	-63.5
Area 5	MW-7	10/11/2017	1.0 U	1.4	1.0 U	1.0 U	0.53 J	**15**	**160**	**20,000**	**19,000**	-	-	-	-	-	-	-	-	6.37	0.730	2.75	0.67	12.7	-30.1
Area 5	MW-7	10/29/2018	1.0 U	0.95 J	1.0 U	1.0 U	1.0 U	1.0 U	**250**	**20,000**	**14,000**	-	-	-	-	-	-	-	-	6.17	1.018	19.6	0.46	12.8	-56.8
Area 5	MW-7	10/30/2019	-	-	-	-	-	-	**400**	**23,000**	**12,000**	-	-	-	-	-	-	-	-	6.40	0.980	96.0	0.41	13.0	-52.0
Area 5	MW-7	12/20/2019	1.0 U	1.3	1.0 U	1.0 U	0.79 J	1.0 U	-	-	-	-	-	-	-	-	-	-	-	6.79	0.626	15.2	2.43	9.9	-110.7
Area 5	MW-7	10/15/2020	1.0 U	2.2 J	1.0 U	1.0 U	1.0 U	2.0 J	**470**	**22,000**	**10,000**	-	-	-	-	-	-	-	-	6.80	0.602	2.59	0.27	14.1	-94.9
Area 5	MW-7	10/12/2021	1.0 U	3.0	2.0 U	1.0 U	0.65 J	1.6	**490**	**26,000**	**11,000**	-	-	-	-	-	-	-	-	6.61	1.398	30.98	0.72	11.1	-93.5
Area 5	MW-7	10/6/2022	1.0 U	3.1	1.0 U	1.0 U	0.63 J	**2.7**	**130**	**8,600**	**13,000**	-	-	-	-	-	-	-	-	6.68	0.711	4.12	0.84	21.9	-89.9
Area 5	MW-7	10/18/2023	1.0 U	0.56 J	1.0 U	1.0 U	0.5 U	1.0 U	**570**	**33,000**	**15,000**	-	-	-	-	-	-	-	-	6.14	1.065	8.40	0.16	12.6	-54.8
Area 5	XSA-12-95X	10/12/2012	5.0 U	66	**290**	5.0 U	**36**	**10**	4.6 J	**9,530**	**11,800**	-	-	-	-	-	-	-	-	6.53	1.247	45.0	2.04	12.8	-63.9
Area 5	XSA-12-95X	10/15/2013	5.0 U	**100**	**160**	4.7 J	**51**	**6.5**	**13**	**5,170**	**9,890**	-	-	-	-	-	-	-	-	6.59	1.411	24.4	0.30	13.1	-254.4
Area 5	XSA-12-95X	10/28/2014	0.47 J	**94**	**110**	5.0	**39**	**9.0**	8.3	**4,500 J**	**9,310 J**	-	-	-	-	-	-	-	-	6.90	0.906	20.2	0.18	14.2	-315.7
Area 5	XSA-12-95X	10/19/2015	6.7	1.0 U	**27**	1.0 U	**20**	**7.2**	4.0 U	**4,770**	**10,600**	-	-	-	-	-	-	-	-	7.97	1.385	15.3	1.77	-	-103.6
Area 5	XSA-12-95X	11/14/2016	1.0 U	**78**	**23**	4.3	**9.8**	**7.4**	3.0 U	1,900	**8,400**	-	-	-	-	-	-	-	-	6.58	1.048	28.1	1.21	12.7	-59.7
Area 5	XSA-12-95X	10/10/2017	1.0 U	26	**36**	3.1	**11**	**5.6**	3.2	**7,800**	**9,700**	-	-	-	-	-	-	-	-	6.65	1.410	19.5	0.35	14.7	-85.3
Area 5	XSA-12-95X	10/23/2018	1.0 U	11	**13**	2.2	5.0	1.9	3.2	**3,300**	**11,000**	-	-	-	-	-	-	-	-	6.58	1.198	29.4	0.21	9.6	-2.1
Area 5	XSA-12-95X	10/15/2020	1.0 U	6.1	**6.9**	2.2	3.9	1.0 U	3.0	1,900	**11,000**	-	-	-	-	-	-	-	-	6.79	1.230	202.0	0.61	15.7	-89.7
Area 5	XSA-12-95X	10/13/2021	1.0 U	4.3	2.8	1.7	2.7	0.86 J	2.2 J	**3,500**	**11,000**	-	-	-	-	-	-	-	-	6.83	1.179	30.7	0.02	13.6	-99.5

Appendix D
Historical Groundwater Analytical Results
2023 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

		Analytical Method	VOCs						Dissolved Metals			Dissolved Gases			General Chemistry					Field Parameters					
		Analyte	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Nitrate/ Nitrite	Alkalinity	Sulfate	TOC	Sulfide	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mS/cm)	(NTU)	(mg/L)	°C	(mV)
		Cleanup Level[1]	7	70	5	70	5	2	10	3,129	1,460				10,000										
Area	Well ID	Date Sampled																							
Area 5	XSA-12-95X	10/6/2022	1.0 U	1.5 J	0.63 J	0.65 J	0.77 J	1.0 U	1.9 J	1,600	**12,000**	-	-	-	-	-	-	-	-	6.95	1.383	107.1	1.15	12.7	-45.4
Area 5	XSA-12-95X	10/18/2023	1.0 U	2.2	1.5 J	0.61 J	0.74 J	1.0 U	3.1 J	1,500	**15,000**	-	-	-	-	-	-	-	-	6.53	1.130	13.9	0.04	11.9	-30.9
Area 5	XSA-12-96X	10/10/2012	2.0 U	14	**120**	2.0 U	4.4	2.0 U	5.0 U	**3,130**	97	-	-	-	-	-	-	-	-	6.52	0.782	3.90	0.72	12.3	-87.1
Area 5	XSA-12-96X	10/15/2013	2.5 U	17	**100**	2.5 U	**11**	**3.7**	3.7 J	940	**2,840**	-	-	-	-	-	-	-	-	6.46	0.824	0.90	0.27	15.9	-271.6
Area 5	XSA-12-96X	10/28/2014	0.36 J	22	**84**	2.3	**14**	**6.0**	3.2 J	925 J	**5,720 J**	-	-	-	-	-	-	-	-	6.73	0.625	4.83	0.14	12.1	-300.6
Area 5	XSA-12-96X	10/26/2015	3.4	1.0 U	**30**	1.0 U	**14**	**10**	4.0 U	2,190	**7,340**	-	-	-	-	-	-	-	-	6.34	0.787	9.41	0.66	13.0	-77.9
Area 5	XSA-12-96X	11/14/2016	0.59 J	20	**29**	4.9	**19**	**11**	3.0 U	1,200	**6,300**	-	-	-	-	-	-	-	-	5.63	0.733	9.26	0.66	11.7	-25.5
Area 5	XSA-12-96X	10/10/2017	0.64 J	20	**26**	5.0	**20**	**16**	3.0 U	**8,200**	**6,200**	-	-	-	-	-	-	-	-	6.48	1.120	9.27	0.69	14.2	-38.6
Area 5	XSA-12-96X	4/3/2018	0.69 J	23	**27**	5.7	**22**	**16**	3.0 U	**3,200**	**4,400**	-	-	-	-	-	-	-	-	7.15	0.988	14.2	1.31	9.1	-187.3
Area 5	XSA-12-96X	10/31/2018	1.0 U	21	**24**	3.2	**9.1**	**4.7**	2.9 J	**5,100**	**10,000**	-	-	-	-	-	-	-	-	6.53	1.221	20.8	0.38	10.5	-54.7
Area 5	XSA-12-96X	4/19/2019	0.48 J	9.9	**10**	2.9	**13**	**8.0**	3.0 U	**3,300**	**3,900**	2.9	1.0 U	270	-	-	-	4.8	-	6.90	1.000	10.0	1.20	17.0	-100.0
Area 5	XSA-12-96X	10/30/2019	-	-	-	-	-	-	5.5	**3,500**	**9,900**	-	-	-	-	-	-	-	-	6.70	1.500	11.0	0.43	12.0	-56.0
Area 5	XSA-12-96X	11/6/2019	0.90 J	20	**13 J**	6.7	**24**	**23**	3.0 U	2,200	**5,300**	-	-	-	-	-	-	-	-	6.92	1.032	10.1	1.15	17.1	-100.9
Area 5	XSA-12-96X	12/26/2019	1.0 U	11	**11**	2.7	4.9	1.8	-	-	-	-	-	-	-	-	-	-	-	6.61	1.298	3.80	0.86	9.2	-55.9
Area 5	XSA-12-96X	05/12/2020	0.88 J	25	4.2	7.0	**20 J**	**21**	3.0 U	**4,200**	**5,800**	11	1.1	780	0.10 U	240	6.2	1.5	1.0 U	6.76	1.240	8.94	9.89	11.5	-64.3
Area 5	XSA-12-96X	10/15/2020	1.0 U	12	**7.4**	5.4	**16**	**15**	3.0 U	**3,200**	**5,900**	18	1.3	1,800	0.05 U	220	9.2	1.5	0.81 U	6.56	1.080	24.8	0.63	15.3	-75.8
Area 5	XSA-12-96X	5/14/2021	1.0 U	10	2.9	4.6	**10**	**9.5**	1.8 J	2,300	**5,400**	-	-	-	-	-	-	-	-	6.71	1.183	90.5	0.11	13.2	-49.1
Area 5	XSA-12-96X	10/13/2021	1.0 U	8.6	2.1	3.1	**8.3**	**4.4**	1.6 J	2,200	**5,600**	0.66 J	0.71 U	25	0.05 U	250	5.7	0.8 U	0.81 U	7.43	1.212	330.0	0.01	14.8	-131.2
Area 5	XSA-12-96X	5/2/2022	1.0 U	9.4	**5.9**	3.9	**9.3**	**8.0**	1.4 J	2,100	**5,400**	-	-	-	-	-	-	-	-	6.43	1.120	170.0	0.53	10.7	-43.8
Area 5	XSA-12-96X	10/7/2022	1.0 U	4.5	1.4 J	2.8	4.2	**4.0**	1.7 J	1,900	**5,200**	-	-	-	-	-	-	-	-	6.87	1.400	59.9	0.97	12.8	-63.6
Area 5	XSA-12-96X	6/6/2023	1.0 U	5.3	1.7 J	3.3	4.4	**4.2**	1.8 J	2,300	**5,700**	-	-	-	-	-	-	-	-	6.54	1.270	138.0	0.37	12.8	-91.3
Area 5	XSA-12-96X	11/13/2023	1.0 U	7.5	4.8	3.7	**7.7**	**7.9**	1.8 J	2,000	**5,100**	-	-	-	-	-	-	-	-	6.48	1.400	8.7	1.17	9.7	-31.7
Area 5	XSA-12-97X	10/9/2012	0.5 U	0.5 U	2.1	0.5 U	0.5 U	0.5 U	5.0 U	1,400 J	44	-	-	-	-	-	-	-	-	6.66	0.673	33.8	1.30	11.7	-11.9
Area 5	XSA-12-97X	10/16/2013	0.5 U	0.5 U	2.9	0.5 U	0.5 U	0.5 U	5.0 U	2,250	29	-	-	-	-	-	-	-	-	6.74	0.721	19.6	1.74	12.1	-21.9
Area 5	XSA-12-97X	10/30/2014	0.5 U	0.5 U	**5.6**	0.5 U	0.5 U	0.5 U	2.5 U	435	9.1 J	-	-	-	-	-	-	-	-	6.51	0.522	17.5	1.52	17.2	51.8
Area 5	XSA-12-97X	10/19/2015	1.0 U	1.0 U	**7.4**	1.0 U	1.0 U	1.0 U	4.0 U	771	15	-	-	-	-	-	-	-	-	6.62	0.614	13.9	1.39	10.0	31.9
Area 5	XSA-12-97X	11/14/2016	1.0 U	1.0 U	**10**	1.0 U	1.0 U	1.0 U	3.0 U	770	12	-	-	-	-	-	-	-	-	7.62	0.526	18.4	1.68	11.6	-57.9
Area 5	XSA-12-97X	10/10/2017	1.0 U	1.0 U	**8.0**	1.0 U	1.0 U	1.0 U	3.0 U	1,500	78	-	-	-	-	-	-	-	-	7.88	0.813	9.83	0.28	16.8	-130.3
Area 5	XSA-12-97X	10/29/2018	1.0 U	1.0 U	**6.1**	1.0 U	1.0 U	1.0 U	3.0 U	2,300	49	-	-	-	-	-	-	-	-	9.82	0.682	27.2	0.34	7.9	-283.0
Area 5	XSA-12-97X	10/15/2019	1.0 U	2.9	**9.2**	1.0 U	0.98 J	1.0 U	2.2 J	2,400	200	-	-	-	-	-	-	-	-	6.90	0.980	19.0	0.72	12.0	-47.0
Area 5	XSA-12-97X	11/22/2020	1.0 U	6.2	2.0 U	1.0 U	1.0 U	1.0 U	**51**	2,700	**2,700**	-	-	-	-	-	-	-	-	7.13	0.561	4.73	0.69	10.0	-401.0
Area 5	XSA-12-97X	10/14/2021	1.0 U	11	2.0 U	1.0 U	1.0 U	**3.3**	**21**	**4,800**	**7,400**	-	-	-	-	-	-	-	-	7.07	0.902	124.7	0.01	14.0	-81.2
Area 5	XSA-12-97X	10/7/2022	1.0 U	0.39 J	1.0 U	1.0 U	0.5 U	**1.0 U**	**200**	**7,600**	**10,000**	-	-	-	-	-	-	-	-	7.07	0.985	102.5	0.81	15.6	-120.0
Area 5	XSA-12-97X	6/15/2023	1.0 U	1.0 U	1.0 U	1.0 U	0.28 J	1.0 U	**83**	**4,100**	**4,400**	-	-	-	-	-	-	-	-	7.23	0.760	147.0	1.30	17.7	-179.0
Area 5	XSA-12-98X	10/11/2012	0.5 U	0.50	**10**	0.5 U	0.59	0.5 U	5.0 U	1,420	18 J	-	-	-	-	-	-	-	-	7.75	0.308	8.89	0.76	13.1	-60.1
Area 5	XSA-12-98X	10/16/2013	0.5 U	0.47 J	**5.2**	0.5 U	0.34 J	0.5 U	3.1 J	100 U	6.6 J	-	-	-	-	-	-	-	-	7.89	0.413	51.0	0.51	10.5	-39.8
Area 5	XSA-12-98X	10/29/2014	0.5 U	0.76	**5.5**	0.5 U	0.37 J	0.5 U	2.5 U	313	5.6 J	-	-	-	-	-	-	-	-	8.00	0.258	44.8	0.46	10.6	-293.1
Area 5	XSA-12-98X	10/19/2015	1.0 U	1.0 U	**6.3**	1.0 U	0.66 J	1.0 U	4.0 U	174	15 U	-	-	-	-	-	-	-	-	8.04	0.310	3.62	0.42	10.7	-194.4
Area 5	XSA-12-98X	11/11/2016	1.0 U	0.81 J	**5.6**	1.0 U	0.69 J	1.0 U	3.0 U	95	3.1 J	-	-	-	-	-	-	-	-	7.98	0.233	16.1	0.52	9.7	-140.7
Area 5	XSA-12-98X	10/23/2017	1.0 U	0.70 J	5.0	1.0 U	0.60 J	1.0 U	3.0 U	88 J	2.8 J	-	-	-	-	-	-	-	-	7.35	0.387	5.42	0.26	11.5	-55.5
Area 5	XSA-12-98X	10/23/2018	1.0 U	1.0 U	2.8	1.0 U	1.0 U	1.0 U	3.0 U	50 U	3.0 U	-	-	-	-	-	-	-	-	7.71	0.948	4.99	0.25	12.0	-141.6
Area 5	XSA-12-98X	10/9/2019	1.0 U	0.47 J	**5.5**	1.0 U	0.52 J	1.0 U	3.0 U	88	1.7 J	-	-	-	-	-	-	-	-	7.70	0.380	3.50	0.62	11.0	-65.0
Area 5	XSA-12-98X	10/16/2020	1.0 U	0.61 J	4.1	1.0 U	1.0 U	1.0 U	3.0 U	150	4.9 J	-	-	-	-	-	-	-	-	7.72	0.360	4.10	0.86	12.3	-129.0
Area 5	XSA-12-98X	10/14/2021	1.0 U	1.0 U	0.83 J	1.0 U	1.0 U	1.0 U	3.0 U	410	30	-	-	-	-	-	-	-	-	8.20	1.200	69.90	0.01	15.9	-147.0
Area 5	XSA-12-98X	10/7/2022	1.0 U	1.0 U	3.4	1.0 U	0.5 U	1.0 U	3.0 U	71 J	4.1 J	-	-	-	-	-	-	-	-	7.85	0.347	2.80	0.70	13.1	423.4
Area 5	XSA-12-98X	10/18/2023	1.0 U	1.0 U	1.0 J	1.0 U	0.5 U	1.0 U	1.4 J	160	14	-	-	-	-	-	-	-	-	7.48	1.310	7.90	0.96	12.6	-217.0
Nashua River	G6M-04-08X	9/24/2004	1.0 U	2.0 U	4.2	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	7.29	0.632	52.8	0.81	15.7	-75.5
Nashua River	G6M-04-14X	11/16/2004	1.0 U	2.0 U	**12**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14.3	-
Nashua River	G6M-04-14X	9/27/2005	1.0 U	2.0 U	**6.9**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	7.88	0.263	18.0	1.60	13.2	333.0
Nashua River	G6M-04-14X	9/21/2006	1.0 U	2.0 U	**9.4**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	7.98	0.211	15.7	3.00	11.1	26.1
Nashua River	G6M-04-14X	10/1/2007	1.0 U	2.0 U	**7.1**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	7.69	0.363	13.9	2.56	10.7	80.4
Nashua River	G6M-04-14X	10/21/2008	0.5 U	0.5 U	**7.1 J**	0.5 U	0.21 J	0.5 U	-	-	-	-	-	-	-	-	-	-	-	7.78	0.237	45.0	2.51	13.0	138.8
Nashua River	G6M-04-14X	10/15/2009	10 U	10 U	4.5 J	10 U	**250**	10 U	-	-	-	-	-	-	-	-	-	-	-	7.56	0.250	4.58	3.60	11.5	-69.7
Nashua River	G6M-04-14X	1/15/2010	0.75 U	0.5 U	4.5	0.75 U	0.22 J	1.0 U	-	-	-	-	-	-	-	-	-	-	-	7.73	0.293	12.5	25.3	11.6	166.2
Nashua River	G6M-04-14X	10/8/2010	0.5 U	0.5 U	2.4	0.5 U	0.25 J	0.5 U	-	-	-	-	-	-	-	-	-	-	-	7.55	0.307	100	1.92	12.5	72.7
Nashua River	G6M-04-14X	10/5/2011	0.5 U	0.5 U	2.2	0.5 U	0.5 U	0.5 U	6.8	100 U	25 U	-	-	-	-	-	-	-	-	7.68	0.172	20.4	2.62	11.1	99.9
Nashua River	G6M-04-14X	10/15/2012	0.5 U	0.5 U	3.3	0.5 U	0.5 U	0.5 U	9.6	194	7.7 J	-	-	-	-	-	-	-	-	7.71	0.297	21.7	2.58	16.3	-10.9
Nashua River	G6M-04-14X	10/18/2013	0.5 U	0.5 U	1.7	0.5 U	0.34 J	0.5 U	8.2	100 U	7.5 U	-	-	-	-	-	-	-	-	7.89	0.479	27.1	1.25	15.0	94.0
Nashua River	G6M-04-14X	10/31/2014	0.5 U	0.5 U	1.8	0.5 U	0.40 J	0.5 U	2.5 U	50 U	7.5 U	-	-	-	-	-	-	-	-	7.93	0.423	8.26	0.40	15.6	54.4
Nashua River	G6M-04-14X	10/26/2015	1.0 U	1.0 U	1.7	1.0 U	1.0 U	1.0 U	9.8	73 J	15 U	-	-	-	-	-	-	-	-	7.89	0.482	18.9	1.44	13.1	79.2
Nashua River	G6M-04-14X	11/11/2016	1.0 U	1.2	2.5	1.0 U	1.4	1.0 U	8.3	50 U	2.1 J	-	-	-	-	-	-	-	-	7.48	0.350	10.1	0.84	10.5	-106.7
Nashua River	G6M-04-14X	10/6/2017	1.0 U	1.0 U	1.0	1.0 U	1.0 U	1.0 U	7.1	17 J	3.2 J	-	-	-	-	-	-	-	-	7.50	0.997	5.26	0.46	12.9	69.9
Nashua River	G6M-04-14X	10/25/2018	1.0 U	1.0 U	1.1	1.0 U	1.0 U	1.0 U	8.1	50 U	1.7 J	-	-	-	-	-	-	-	-	7.65	0.767	1.56	0.36	12.7	102.7
Nashua River	G6M-04-14X	10/15/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.4	21 J	7.1 J	-	-	-	-	-	-	-	-	7.70	0.600	13.0	0.74	12.0	-59.0
Nashua River	G6M-04-14X	10/19/2020	1.0 U	1.0 U	0.80 J	1.0 U	1.0 U	1.0 U	7.1	50 U	3.0 J	-	-	-	-	-	-	-	-	7.55	0.752	1.42	0.67	13.0	14.4
Nashua River	G6M-04-14X	10/15/2021	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	6.3	54	6.4 J	-	-	-	-	-	-	-	-	7.55	0.752	1.42	0.67	13.0	14.4
Nashua River	G6M-04-14X	10/4/2022	1.0 U	1.0 U	0.54 J	1.0 U	0.29 J	1.0 U	9.7	26 J	6.8 J	-	-	-	-	-	-	-	-	8.37	0.572	5.60	1.37	13.4	-61.5
Nashua River	G6M-04-14X	10/18/2023	1.0 U	1.0 U	0.35 J	1.0 U	0.5 U	1.0 U	8.7	50 U	4.9 J	-	-	-	-	-	-	-	-	7.54	0.870	1.78	0.26	13.4	-25.3

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Devens, Massachusetts

		Analytical Method	VOCs						Dissolved Metals			Dissolved Gases			General Chemistry					Field Parameters					
		Analyte	1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Nitrate/ Nitrite	Alkalinity	Sulfate	TOC	Sulfide	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mS/cm)	(NTU)	(mg/L)	°C	(mV)
		Cleanup Level[1]	7	70	5	70	5	2	10	3,129	1,460				10,000										
Area	Well ID	Date Sampled																							
North Plume	G6M-04-14X	12/14/2006	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.54	0.560	0.20	0.17	16.2	74.8
North Plume	G6M-96-22A	10/16/2001	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.50	2.000	< 0.01	5.10	16.0	210.0
North Plume	G6M-96-22A	2/28/2002	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	0.10 U	-	-	-	-	5.70	1.780	0.50	8.37	12.4	183.5
North Plume	G6M-96-22A	9/21/2004	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	54	-	-	-	-	-	-	-	-	5.75	1.885	1.59	6.73	11.6	187.9
North Plume	G6M-96-22A	9/29/2005	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	52	-	-	-	-	-	-	-	-	5.95	3.180	0.38	4.90	10.8	223.1
North Plume	G6M-96-22A	9/20/2006	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	100 U	42	-	-	-	-	-	-	-	-	5.68	1.814	1.85	4.78	11.0	176.3
North Plume	G6M-96-22A	9/12/2007	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	6.0 U	100 U	78	-	-	-	-	-	-	-	-	5.50	1.404	5.00	6.95	12.4	-101.1
North Plume	G6M-96-22A	10/17/2008	0.5 U	0.5 U	0.55	0.5 U	0.5 U	0.5 U	8.0 U	200 U	**2,240**	-	-	-	-	-	-	-	-	5.57	1.378	1.80	1.41	10.1	123.8
North Plume	G6M-96-22A	10/16/2009	0.5 U	0.27 J	0.25 J	0.5 U	**29**	0.5 U	8.0 U	200 U	**7,120**	-	-	-	-	-	-	-	-	5.91	2.288	< 0.01	0.25	11.3	228.5
North Plume	G6M-96-22A	10/7/2010	0.5 U	0.5 U	0.22 J	0.5 U	0.5 U	0.5 U	5.0 U	100 U	**7,670**	-	-	-	-	-	-	-	-	5.72	3.623	< 0.01	0.21	9.3	141.2
North Plume	G6M-96-22A	10/7/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	100 U	**6,860**	-	-	-	-	-	-	-	-	5.60	2.144	< 0.01	0.18	10.1	59.9
North Plume	G6M-96-22A	10/15/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	100 U	**12,400**	-	-	-	-	-	-	-	-	5.82	2.915	< 0.01	0.36	14.6	110.5
North Plume	G6M-96-22A	10/18/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	100 U	**6,010**	-	-	-	-	-	-	-	-	6.05	1.524	< 0.01	0.58	11.1	177.1
North Plume	G6M-96-22A	11/4/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	17 J	**3,160**	-	-	-	-	-	-	-	-	6.12	0.774	0.86	3.75	-	203.7
North Plume	G6M-96-22A	10/14/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	100 U	**3,810**	-	-	-	-	-	-	-	-	6.11	1.333	0.21	2.77	-	122.9
North Plume	G6M-96-22A	11/8/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	50 U	**2,300**	-	-	-	-	-	-	-	-	4.64	0.983	0.75	3.73	11.9	129.4
North Plume	G6M-96-22B	10/19/2001	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.76	2.090	0.60	6.95	13.1	176.0
North Plume	G6M-96-22B	2/28/2002	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	0.10 U	-	-	-	-	6.35	2.002	1.50	7.83	12.9	198.5
North Plume	G6M-96-22B	1/31/2003	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.5	-
North Plume	G6M-96-22B	9/21/2004	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	44	-	-	-	-	-	-	-	-	5.83	1.941	2.76	6.15	13.9	193.9
North Plume	G6M-96-22B	9/29/2005	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1,000 U	48	-	-	-	-	-	-	-	-	6.12	3.020	1.43	5.57	11.2	187.7
North Plume	G6M-96-22B	9/20/2006	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	100 U	44	-	-	-	-	-	-	-	-	5.53	2.183	0.67	6.51	10.2	179.0
North Plume	G6M-96-22B	9/12/2007	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	6.0 U	100 U	40	-	-	-	-	-	-	-	-	5.73	2.618	13.9	16.1	11.9	-112.1
North Plume	G6M-96-22B	10/17/2008	0.5 U	0.24 J	0.91	0.5 U	0.5 U	0.5 U	8.0 U	200 U	67	-	-	-	-	-	-	-	-	5.40	1.020	0.85	1.77	11.6	121.3
North Plume	G6M-96-22B	10/16/2009	0.5 U	0.32 J	0.39 J	0.5 U	**23**	0.5 U	8.0 U	135 U	**25,500**	-	-	-	-	-	-	-	-	6.08	1.683	0.04	0.31	11.5	209.1
North Plume	G6M-96-22B	10/7/2010	0.5 U	0.5 U	0.25 J	0.5 U	0.5 U	0.5 U	3.3 J	100 U	**14,600**	-	-	-	-	-	-	-	-	6.00	2.295	0.49	0.48	12.9	115.1
North Plume	G6M-96-22B	10/7/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	100 U	**9,320**	-	-	-	-	-	-	-	-	5.98	1.899	< 0.01	0.16	11.3	30.7
North Plume	G6M-96-22B	10/15/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	120 U	**9,980**	-	-	-	-	-	-	-	-	6.14	2.358	1.17	0.25	12.4	16.4
North Plume	G6M-96-22B	10/18/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.2 J	100 U	**14,100**	-	-	-	-	-	-	-	-	6.17	2.288	0.31	0.81	13.8	142.0
North Plume	G6M-96-22B	11/4/2014	0.5 U	0.5 U	0.21 J	0.5 U	0.5 U	0.5 U	4.6 J	17 J	**7,180**	-	-	-	-	-	-	-	-	6.58	1.087	3.55	0.45	17.2	137.4
North Plume	G6M-96-22B	10/14/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	100 U	**5,610**	-	-	-	-	-	-	-	-	6.53	1.457	2.18	1.34	15.0	93.5
North Plume	G6M-96-22B	11/8/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	50 U	**6,500**	-	-	-	-	-	-	-	-	5.96	1.362	2.49	2.66	11.2	174.0
North Plume	G6M-96-24B	10/16/2001	1.0 U	2.0 U	**18**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.37	0.420	19.0	0.00	14.4	81.0
North Plume	G6M-96-24B	3/1/2002	1.0 U	2.0 U	**11**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.35	0.430	2.80	0.00	17.0	106.7
North Plume	G6M-96-24B	1/31/2003	1.0 U	2.0 U	**7.5**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.6	-
North Plume	G6M-96-24B	1/12/2004	1.0 U	2.0 U	**11**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14.4	-
North Plume	G6M-96-24B	9/24/2004	1.0 U	2.0 U	**13**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.17	0.422	0.44	0.20	19.3	152.2
North Plume	G6M-96-24B	12/17/2004	1.0 U	2.0 U	**8.1**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.05	0.384	2.43	0.46	15.1	259.6
North Plume	G6M-96-24B	4/13/2005	1.0 U	2.8	**8.2**	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	5.32	0.429	2.49	0.20	10.8	216.6
North Plume	G6M-96-24B	7/6/2005	1.0 U	3.0	**7.6**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.69	0.770	0.02	1.34	14.1	242.8
North Plume	G6M-96-24B	9/30/2005	1.0 U	3.6	**7.2**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.77	1.022	7.70	0.29	16.3	198.3
North Plume	G6M-96-24B	12/15/2005	1.0 U	3.1	**7.4**	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.97	0.900	2.10	0.14	19.1	242.8
North Plume	G6M-96-24B	3/23/2006	1.0 U	2.0 U	4.2	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.99	0.458	1.31	0.23	12.8	404.5
North Plume	G6M-96-24B	6/23/2006	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	4.62	0.443	0.88	0.85	15.2	526.9
North Plume	G6M-96-24B	9/22/2006	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.93	0.407	4.23	0.30	16.9	141.0
North Plume	G6M-96-24B	3/30/2007	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.90	0.620	0.15	0.50	12.6	-43.6
North Plume	G6M-96-24B	6/13/2007	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.10	0.727	220	0.16	12.5	138.9
North Plume	G6M-96-24B	9/13/2007	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.05	0.689	9.90	3.93	11.3	-95.7
North Plume	G6M-96-24B	12/12/2007	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.33	0.802	0.80	0.30	14.0	106.2
North Plume	G6M-96-24B	10/7/2008	0.5 U	0.5 U	0.40 J	0.5 U	0.5 U	0.5 U	8.0 U	352 U	448	1.3 U	1.6 U	15	0.13 U	46	10	10 U	0.03 U	6.04	0.510	30.0	0.54	14.4	92.4
North Plume	G6M-96-24B	1/22/2009	1.2 U	1.8 U	1.4 U	1.3 U	2.3 U	1.3 U	8.0 U	**226,000 J**	315	1.2 U	1.5 U	4.2	0.13 U	32	9.3	10 U	0.03 U	6.16	0.479	65.0	0.45	13.4	149.6
North Plume	G6M-96-24B	5/11/2009	0.5 U	0.5 U	0.29 J	0.5 U	0.5 U	0.5 U	-	-	-	-	-	-	-	-	-	-	-	5.87	0.304	23.1	0.20	12.0	90.8

Appendix D
Historical Groundwater Analytical Results
2023 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

Analytical Method			VOCs						Dissolved Metals			Dissolved Gases			General Chemistry					Field Parameters					
Analyte			1,1-DCE	cis-1,2-DCE	PCE	trans-1,2-DCE	TCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Nitrate/ Nitrite	Alkalinity	Sulfate	TOC	Sulfide	pH	SpC	Turbidity	DO	Temp	ORP
Unit			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mS/cm)	(NTU)	(mg/L)	°C	(mV)
Cleanup Level[1]			7	70	5	70	5	2	10	3,129	1,460				10,000										
Area	Well ID	Date Sampled																							

Notes:

1. [1]Area of Contamination (AOC) 50 cleanup levels are from the Record of Decision (United States Environmental Protection Agency 2004).
2. '- = not sampled

= Above Cleanup Level
= Spring 2023 sampling result
= Fall 2023 sampling result

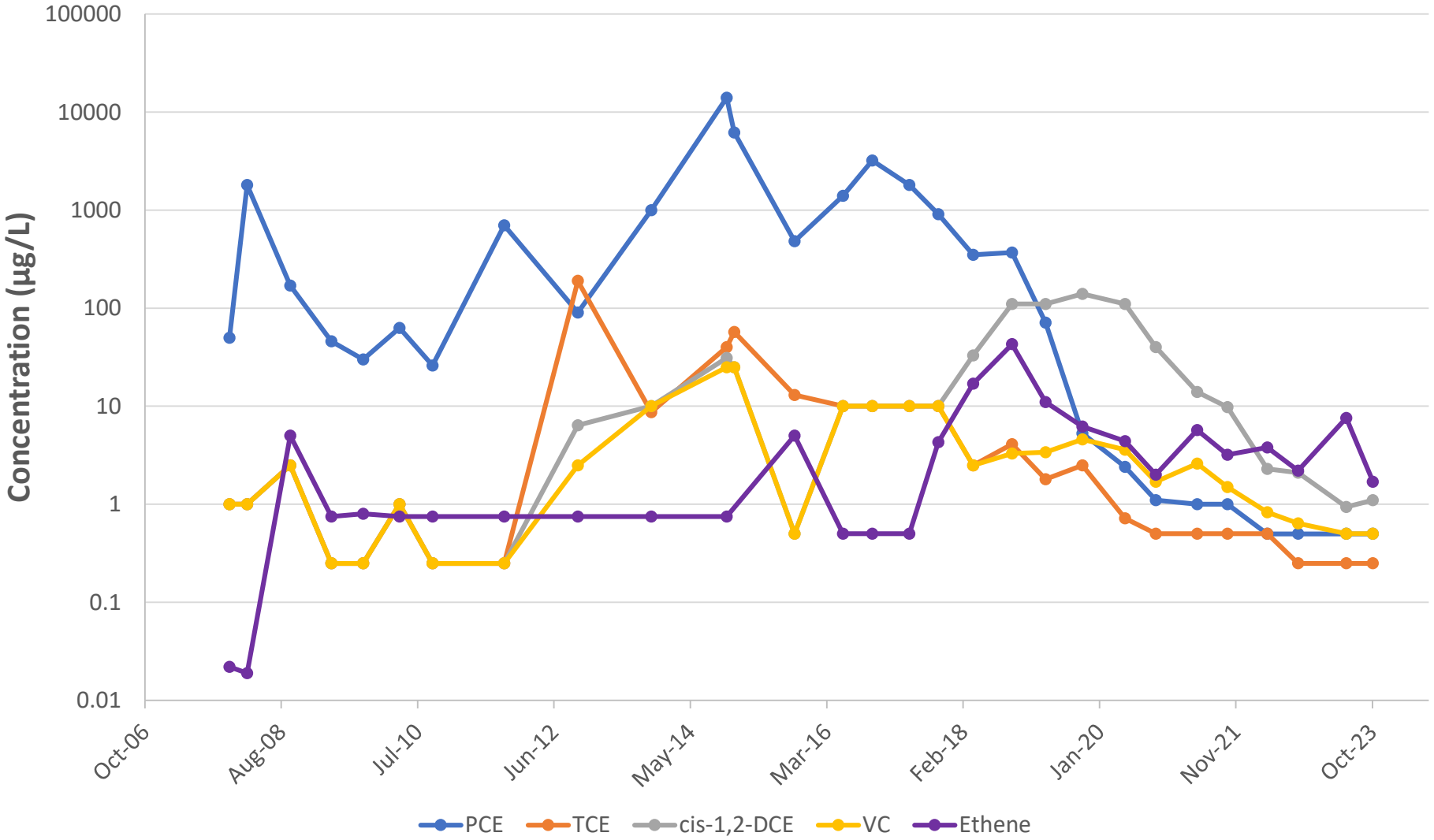
Acronyms and Abbreviations:

°C = degree Celsius
µg/L = microgram per liter
1,1-DCE = 1,1-dichloroethene
cis-1,2-DCE = cis-1,2-dichloroethene
DO = dissolved oxygen
J = The analyte was positively identified, the quantitation is an estimation.
mg/L = milligram per liter
mS/cm = milliSiemen per centimeter
NTU = Nephelometric Turbidity Unit
ORP = oxidation-reduction potential
PCE = tetrachloroethene
SpC = specific conductivity
SU = standard unit
TCE = trichloroethene
TOC = total organic carbon
trans-1,2-DCE = trans-1,2-dichloroethene
U =The analyte was analyzed for, but not detected. The associated numerical value is at or below the limit of detection.
VC = vinyl chloride

Appendix E

CVOC Trend Graphs

G6M-07-02X



Notes:

1. Data for compounds not detected are shown at half the reporting limit.
2. µg/L = microgram per liter
3. cis-1,2-DCE = cis-1,2-dichloroethene
4. COC = contaminant of concern
5. CVOC = chlorinated volatile organic compound
6. PCE = tetrachloroethene
7. TCE = trichloroethene
8. VC = vinyl chloride

COC	AOC 50 Cleanup Level (µg/L)
PCE	5
TCE	5
cis-1-2-DCE	70
VC	2

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AREA OF CONTAMINATION 50
FORMER FORT DEVENS ARMY INSTALLATION
DEVENS, MASSACHUSETTS

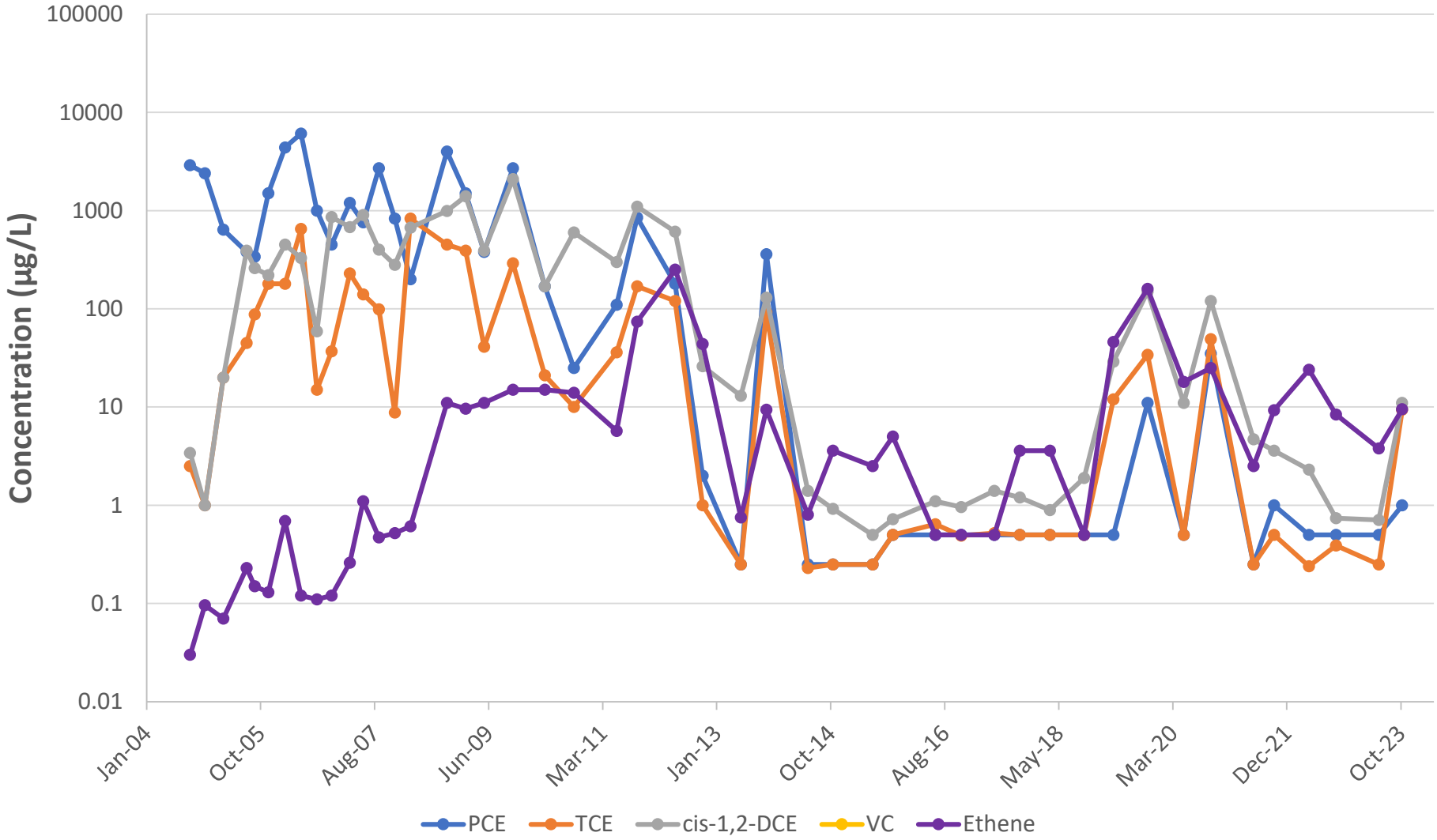
CVOC TREND GRAPH
G6M-07-02X (AREA 1)

SERES Engineering & Services, LLC
ARCADIS a joint venture

FIGURE
E-1

\ARCADIS\SERES-Arcadis JV - _NE Dist Devens Task Orders\TO 1 - Seed Task\AOC 50\Reports\2. Fall 2020 Memo\Attachments

G6M-04-10A



Notes:

1. Data for compounds not detected are shown at half the reporting limit.
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COC	AOC 50 Cleanup Level (µg/L)
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TCE	5
cis-1-2-DCE	70
VC	2

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CVOC TREND GRAPH
G6M-04-10A (AREA 1)

SERES Engineering & Services, LLC
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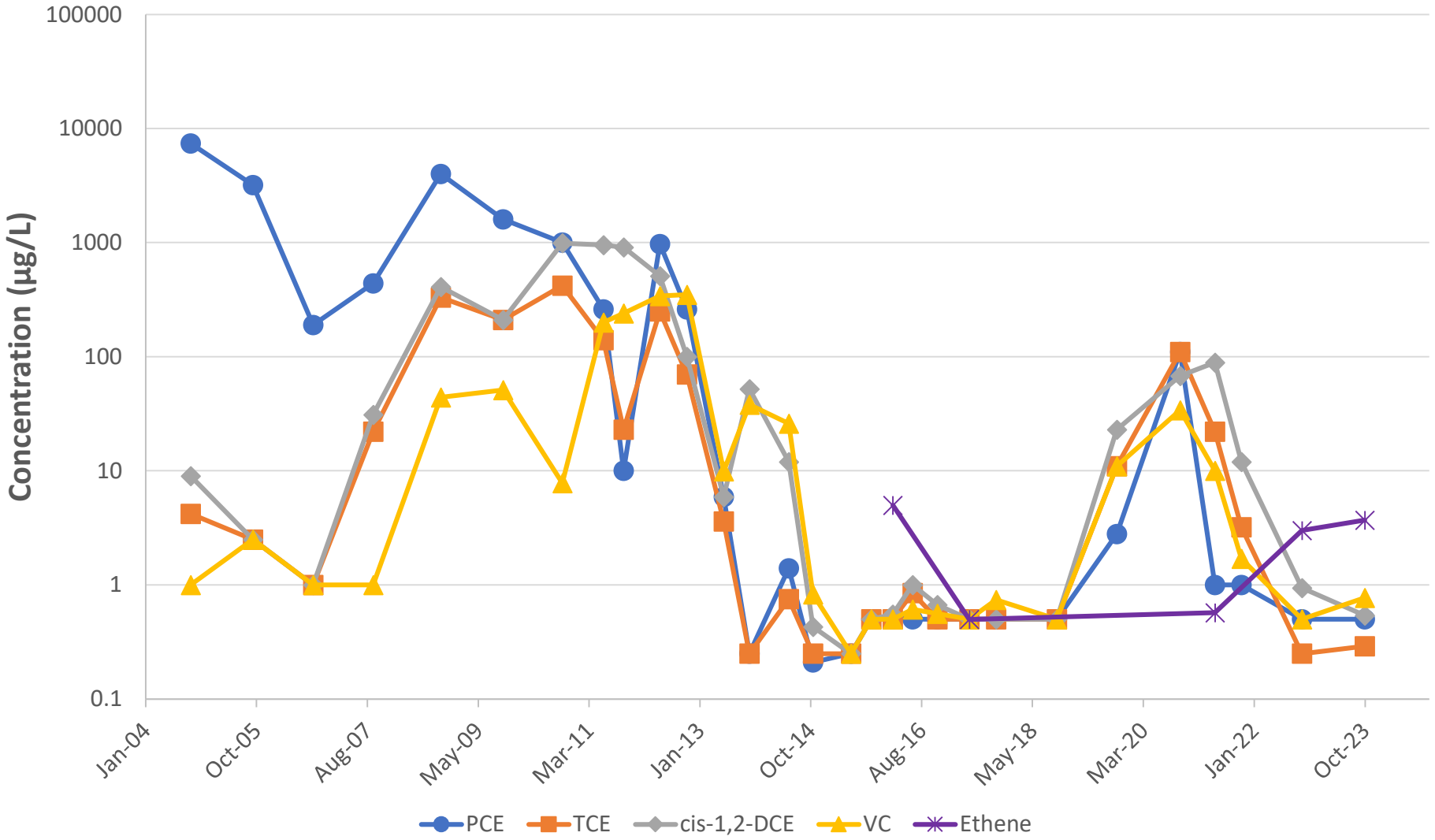
FIGURE
E-2

\ARCADIS\SERES-Arcadis JV - _NE Dist Devens Task Orders\TO 1 - Seed Task\AOC 50\Reports\2. Fall 2020 Memo\Attachments

G6M-04-09X



Notes:

1. Data for compounds not detected are shown at half the reporting limit.
2. µg/L = microgram per liter
3. cis-1,2-DCE = cis-1,2-dichloroethene
4. COC = contaminant of concern
5. CVOC = chlorinated volatile organic compound
6. PCE = tetrachloroethene
7. TCE = trichloroethene
8. VC = vinyl chloride

COC	AOC 50 Cleanup Level (µg/L)
PCE	5
TCE	5
cis-1-2-DCE	70
VC	2

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DEVENS, MASSACHUSETTS

CVOC TREND GRAPH
G6M-04-09X (AREA 1)

SERES Engineering & Services, LLC
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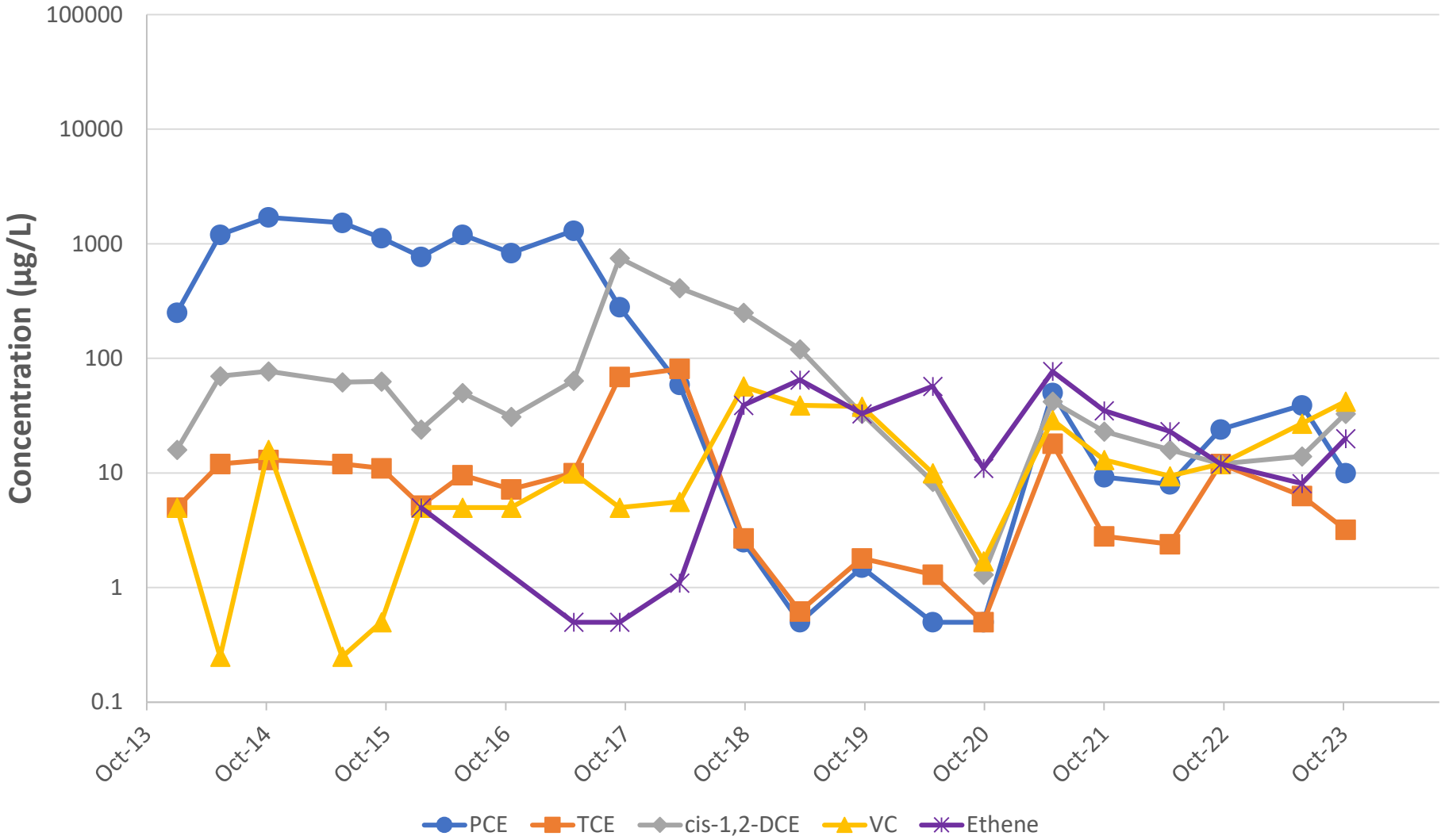
FIGURE
E-3

\ARCADIS\SERES-Arcadis JV - _NE Dist Devens Task Orders\TO 1 - Seed Task\AOC 50\Reports\2. Fall 2020 Memo\Attachments

G6M-13-05X



Notes:

1. Data for compounds not detected are shown at half the reporting limit.
2. µg/L = microgram per liter
3. cis-1,2-DCE = cis-1,2-dichloroethene
4. COC = contaminant of concern
5. CVOC = chlorinated volatile organic compound
6. PCE = tetrachloroethene
7. TCE = trichloroethene
8. VC = vinyl chloride

COC	AOC 50 Cleanup Level (µg/L)
PCE	5
TCE	5
cis-1-2-DCE	70
VC	2

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DEVENS, MASSACHUSETTS

CVOC TREND GRAPH
G6M-13-05X (AREA 1)

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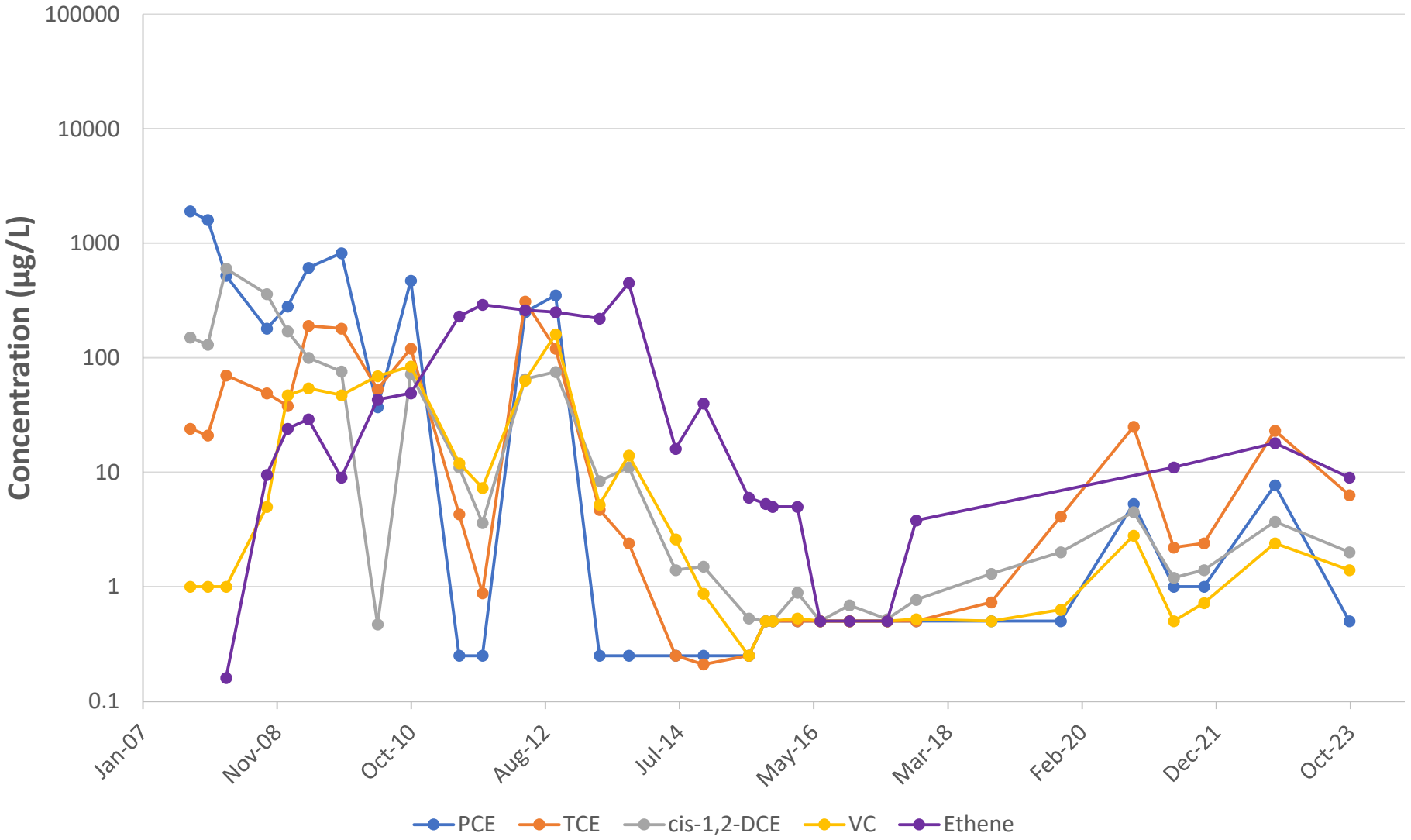
FIGURE
E-4

\ARCADIS\SERES-Arcadis JV - _NE Dist Devens Task Orders\TO 1 - Seed Task\AOC 50\Reports\2. Fall 2020 Memo\Attachments

G6M-02-01X



Notes:

1. Data for compounds not detected are shown at half the reporting limit.
2. µg/L = microgram per liter
3. cis-1,2-DCE = cis-1,2-dichloroethene
4. COC = contaminant of concern
5. CVOC = chlorinated volatile organic compound
6. PCE = tetrachloroethene
7. TCE = trichloroethene
8. VC = vinyl chloride

COC	AOC 50 Cleanup Level (µg/L)
PCE	5
TCE	5
cis-1-2-DCE	70
VC	2

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AREA OF CONTAMINATION 50
FORMER FORT DEVENS ARMY INSTALLATION
DEVENS, MASSACHUSETTS

CVOC TREND GRAPH
G6M-02-01X (AREA 2)

SERES Engineering & Services, LLC
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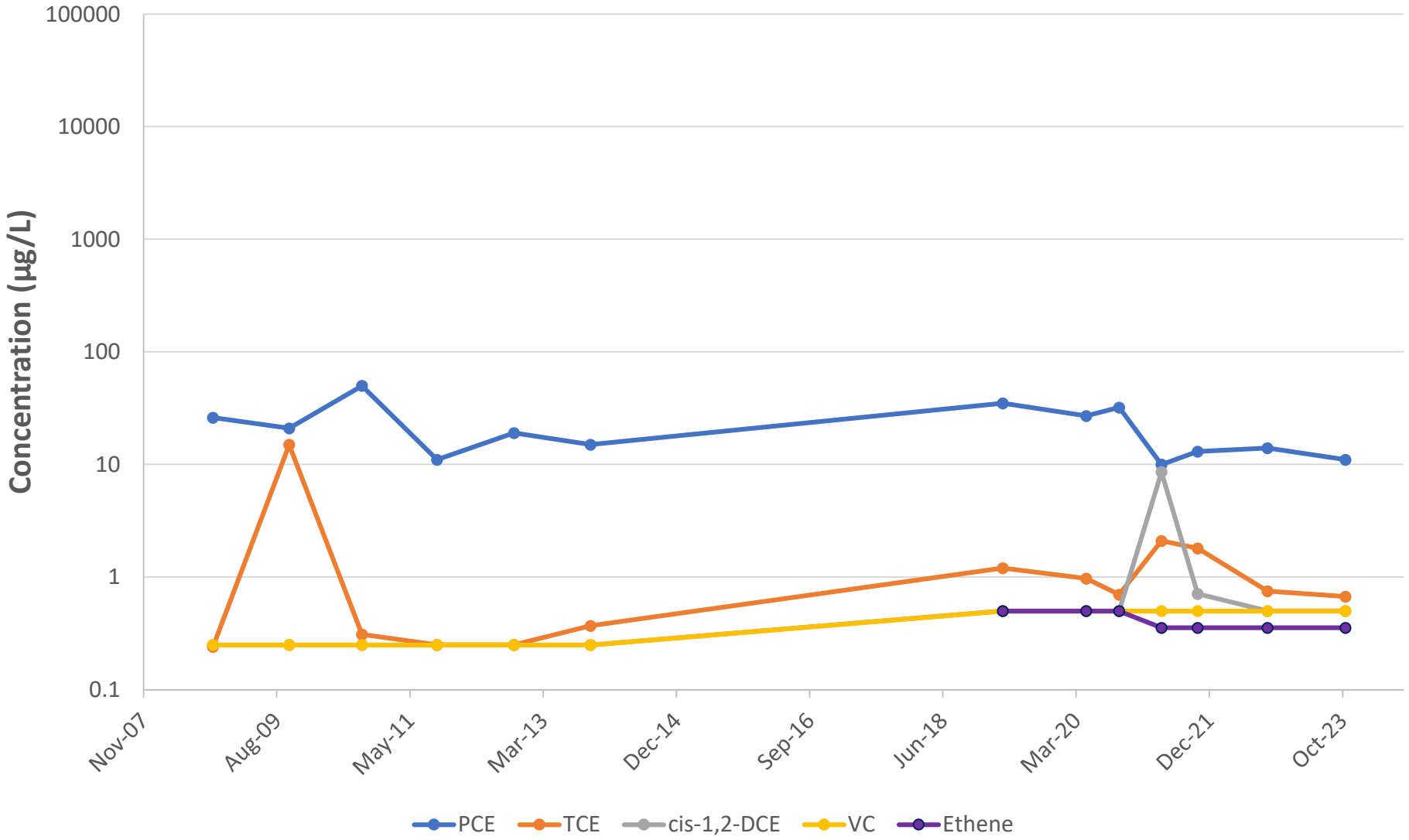
FIGURE
E-5

\ARCADIS\SERES-Arcadis JV - _NE Dist Devens Task Orders\TO 1 - Seed Task\AOC 50\Reports\2. Fall 2020 Memo\Attachments

G6M-07-01X



Notes:

1. Data for compounds not detected are shown at half the reporting limit.
2. µg/L = microgram per liter
3. cis-1,2-DCE = cis-1,2-dichloroethene
4. COC = contaminant of concern
5. CVOC = chlorinated volatile organic compound
6. PCE = tetrachloroethene
7. TCE = trichloroethene
8. VC = vinyl chloride

COC	AOC 50 Cleanup Level (µg/L)
PCE	5
TCE	5
cis-1-2-DCE	70
VC	2

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AREA OF CONTAMINATION 50
FORMER FORT DEVENS ARMY INSTALLATION
DEVENS, MASSACHUSETTS

CVOC TREND GRAPH
G6M-07-01X (AREA 2)

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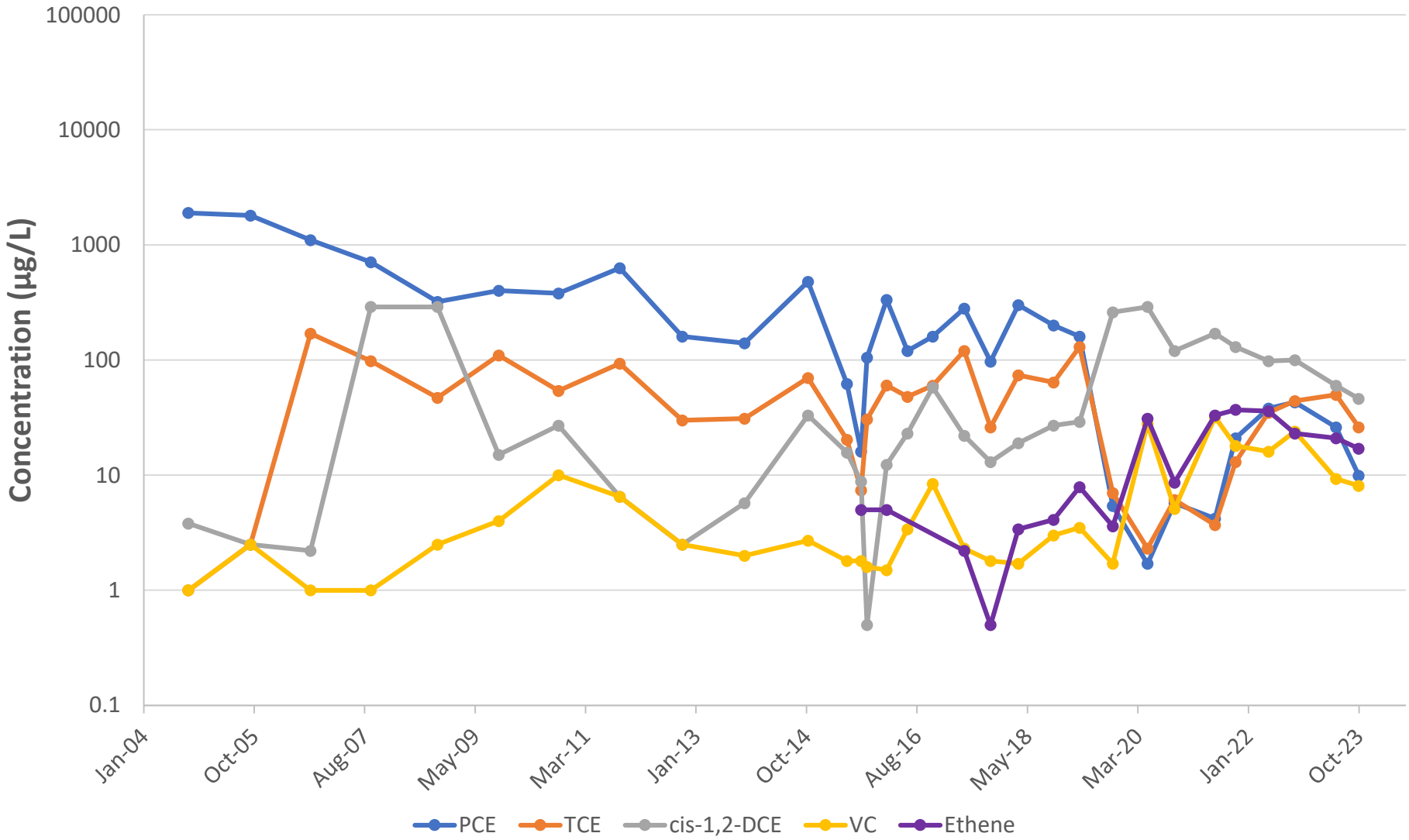
FIGURE
E-6

\ARCADIS\SERES-Arcadis JV - _NE Dist Devens Task Orders\TO 1 - Seed Task\AOC 50\Reports\2. Fall 2020 Memo\Attachments

G6M-04-02X



Notes:

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2. µg/L = microgram per liter
3. cis-1,2-DCE = cis-1,2-dichloroethene
4. COC = contaminant of concern
5. CVOC = chlorinated volatile organic compound
6. PCE = tetrachloroethene
7. TCE = trichloroethene
8. VC = vinyl chloride

COC	AOC 50 Cleanup Level (µg/L)
PCE	5
TCE	5
cis-1-2-DCE	70
VC	2

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DEVENS, MASSACHUSETTS

CVOC TREND GRAPH
G6M-04-02X (AREA 3)

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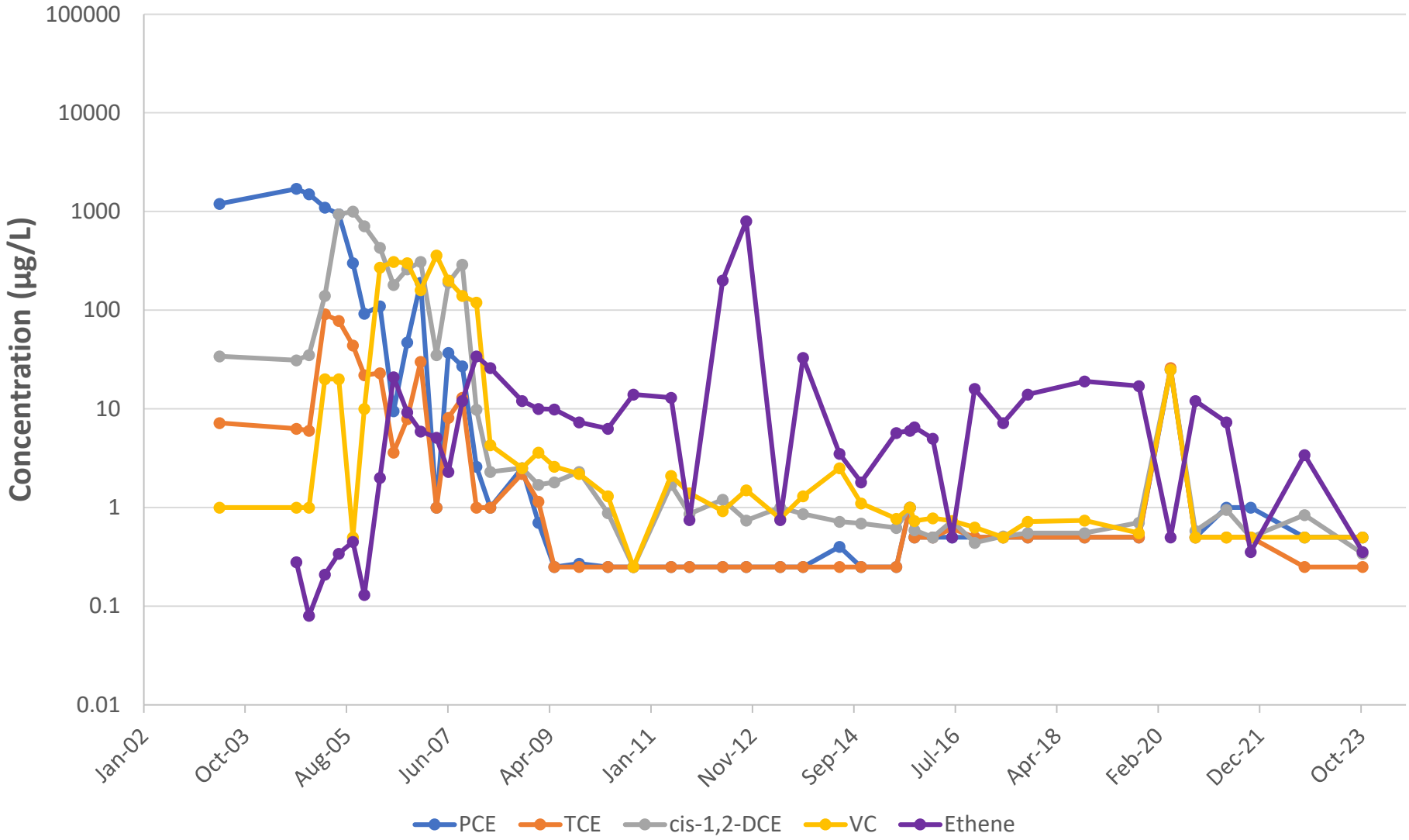
FIGURE
E-7

\ARCADIS\SERES-Arcadis JV - _NE Dist Devens Task Orders\TO 1 - Seed Task\AOC 50\Reports\2. Fall 2020 Memo\Attachments

G6M-03-07X



Notes:

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2. µg/L = microgram per liter
3. cis-1,2-DCE = cis-1,2-dichloroethene
4. COC = contaminant of concern
5. CVOC = chlorinated volatile organic compound
6. PCE = tetrachloroethene
7. TCE = trichloroethene
8. VC = vinyl chloride

COC	AOC 50 Cleanup Level (µg/L)
PCE	5
TCE	5
cis-1-2-DCE	70
VC	2

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DEVENS, MASSACHUSETTS

CVOC TREND GRAPH
G6M-03-07X (AREA 3)

SERES Engineering & Services, LLC
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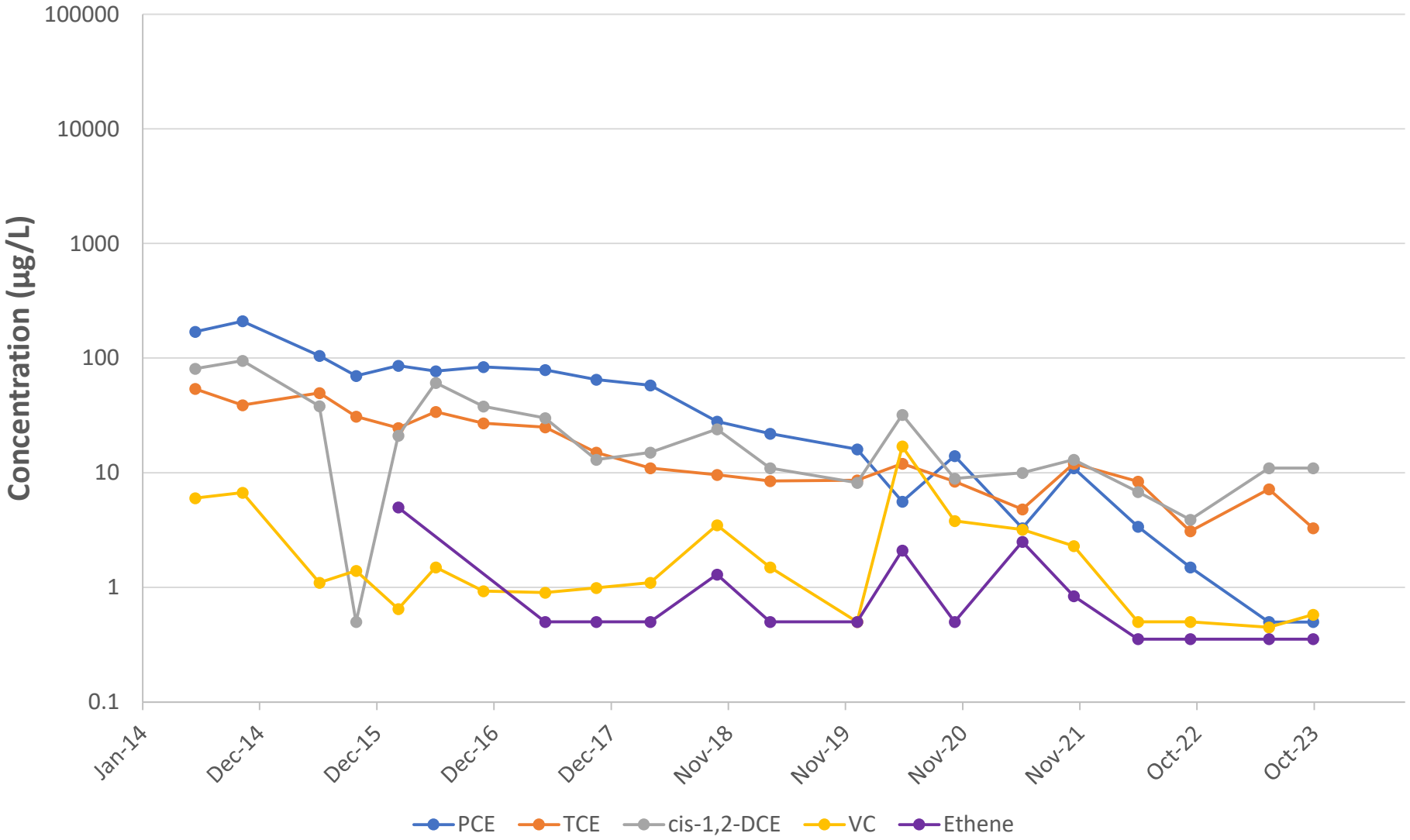
FIGURE
E-8

\ARCADIS\SERES-Arcadis JV - _NE Dist Devens Task Orders\TO 1 - Seed Task\AOC 50\Reports\2. Fall 2020 Memo\Attachments

G6M-13-02X



Notes:

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4. COC = contaminant of concern
5. CVOC = chlorinated volatile organic compound
6. PCE = tetrachloroethene
7. TCE = trichloroethene
8. VC = vinyl chloride

COC	AOC 50 Cleanup Level (µg/L)
PCE	5
TCE	5
cis-1-2-DCE	70
VC	2

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DEVENS, MASSACHUSETTS

CVOC TREND GRAPH
G6M-13-02X (AREA 4)

SERES Engineering & Services, LLC
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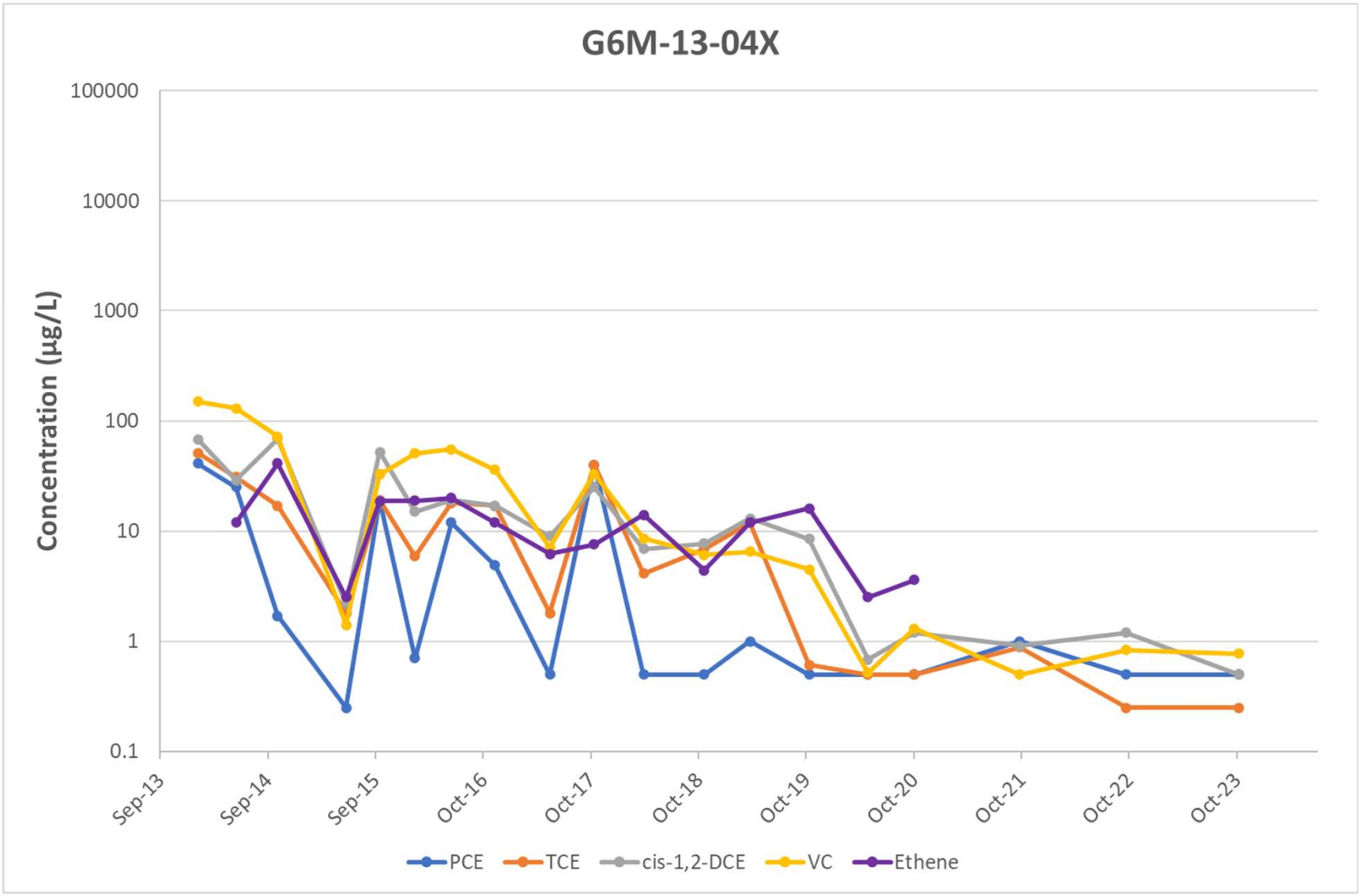
FIGURE
E-9

\ARCADIS\SERES-Arcadis JV - _NE Dist Devens Task Orders\TO 1 - Seed Task\AOC 50\Reports\2. Fall 2020 Memo\Attachments



Notes:

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3. cis-1,2-DCE = cis-1,2-dichloroethene
4. COC = contaminant of concern
5. CVOC = chlorinated volatile organic compound
6. PCE = tetrachloroethene
7. TCE = trichloroethene
8. VC = vinyl chloride

COC	AOC 50 Cleanup Level (µg/L)
PCE	5
TCE	5
cis-1-2-DCE	70
VC	2

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DEVENS, MASSACHUSETTS

CVOC TREND GRAPH
G6M-13-04X (AREA 5)

SERES Engineering & Services, LLC
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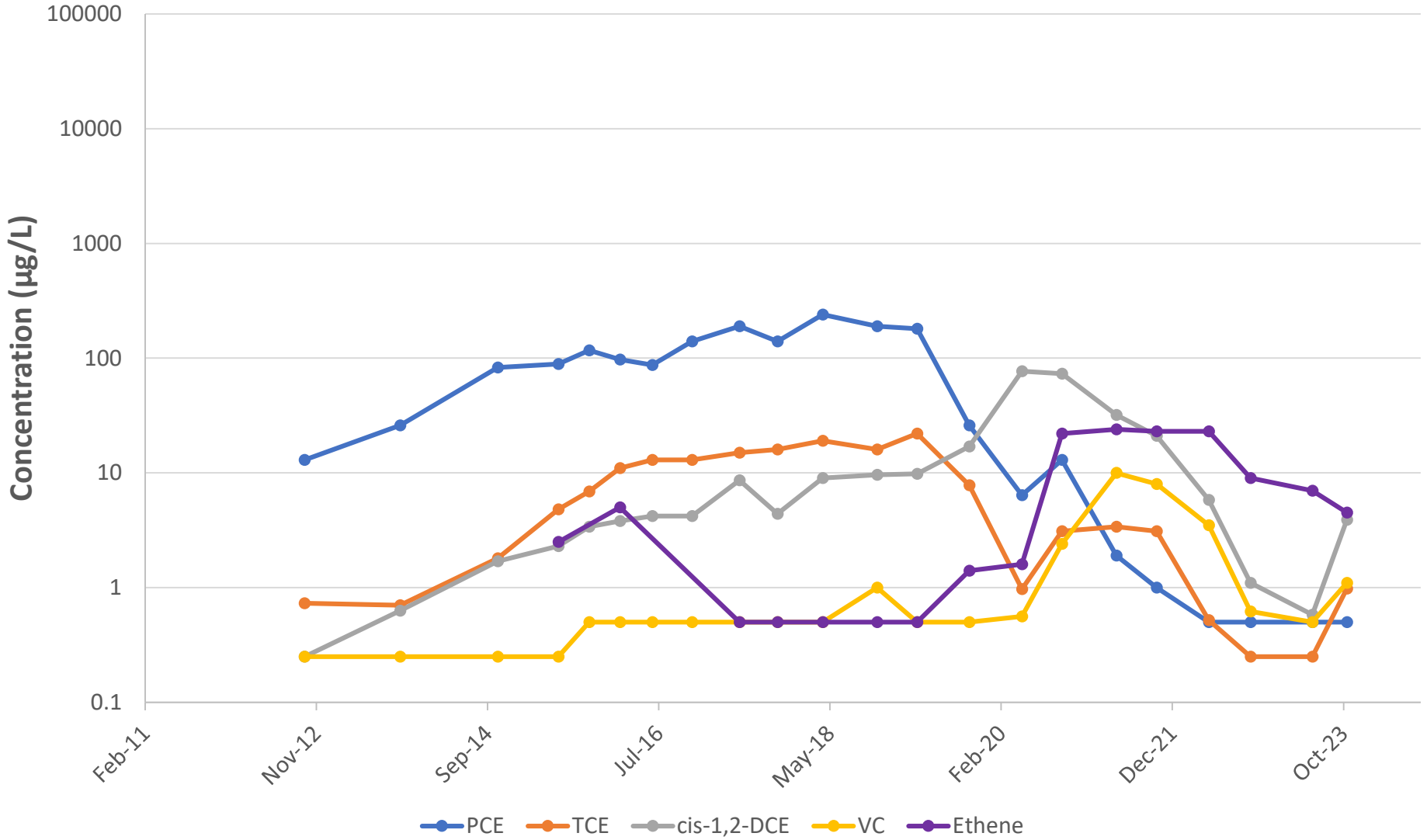
FIGURE
E-10

\ARCADIS\SERES-Arcadis JV - _NE Dist Devens Task Orders\TO 1 - Seed Task\AOC 50\Reports\2. Fall 2020 Memo\Attachments

G6M-97-05B



Notes:

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2. µg/L = microgram per liter
3. cis-1,2-DCE = cis-1,2-dichloroethene
4. COC = contaminant of concern
5. CVOC = chlorinated volatile organic compound
6. PCE = tetrachloroethene
7. TCE = trichloroethene
8. VC = vinyl chloride

COC	AOC 50 Cleanup Level (µg/L)
PCE	5
TCE	5
cis-1-2-DCE	70
VC	2

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CVOC TREND GRAPH
G6M-97-05B (AREA 5)

SERES Engineering & Services, LLC
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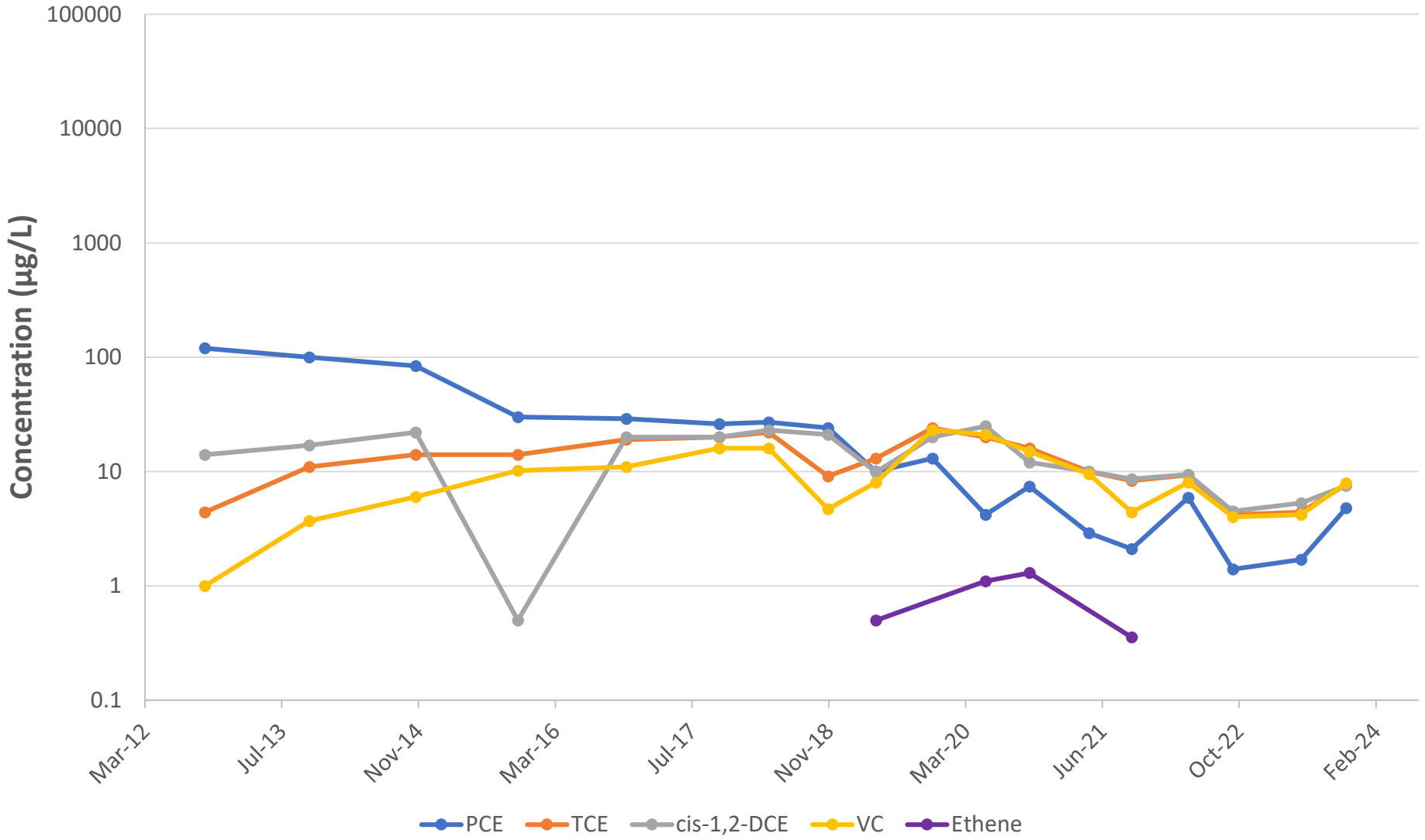
FIGURE
E-11

\ARCADIS\SERES-Arcadis JV - _NE Dist Devens Task Orders\TO 1 - Seed Task\AOC 50\Reports\2. Fall 2020 Memo\Attachments

XSA-12-96X



Notes:

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2. µg/L = microgram per liter
3. cis-1,2-DCE = cis-1,2-dichloroethene
4. COC = contaminant of concern
5. CVOC = chlorinated volatile organic compound
6. PCE = tetrachloroethene
7. TCE = trichloroethene
8. VC = vinyl chloride

COC	AOC 50 Cleanup Level (µg/L)
PCE	5
TCE	5
cis-1-2-DCE	70
VC	2

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CVOC TREND GRAPH
XSA-12-96X (AREA 5)

SERES Engineering & Services, LLC
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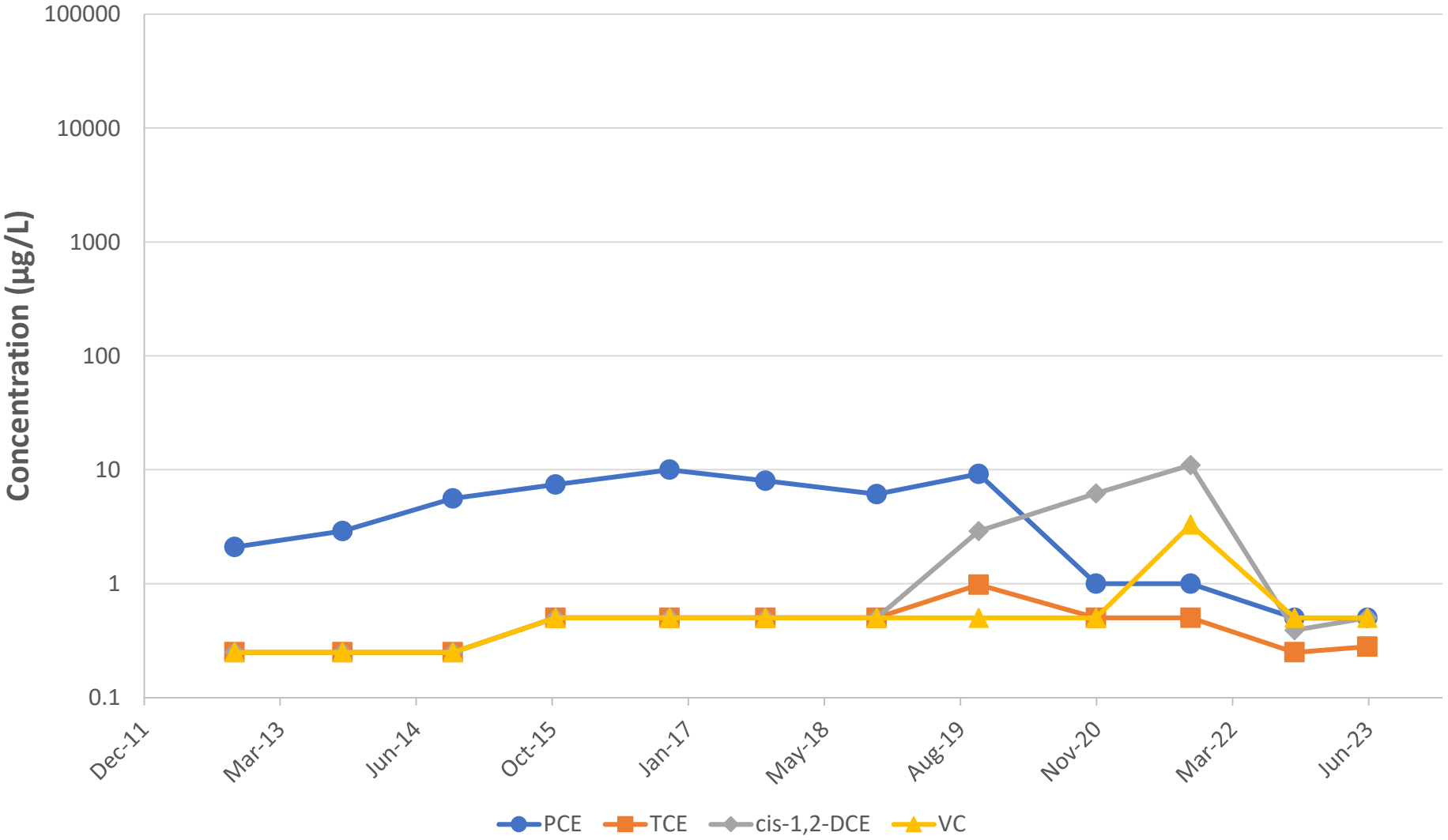
FIGURE
E-12

\\ARCADIS\SERES-Arcadis JV - _NE Dist Devens Task Orders\TO 1 - Seed Task\AOC 50\Reports\2. Fall 2020 Memo\Attachments

XSA-12-97X



Notes:

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3. cis-1,2-DCE = cis-1,2-dichloroethene
4. COC = contaminant of concern
5. CVOC = chlorinated volatile organic compound
6. PCE = tetrachloroethene
7. TCE = trichloroethene
8. VC = vinyl chloride

COC	AOC 50 Cleanup Level (µg/L)
PCE	5
TCE	5
cis-1-2-DCE	70
VC	2

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CVOC TREND GRAPH
XSA-12-97X (AREA 5)

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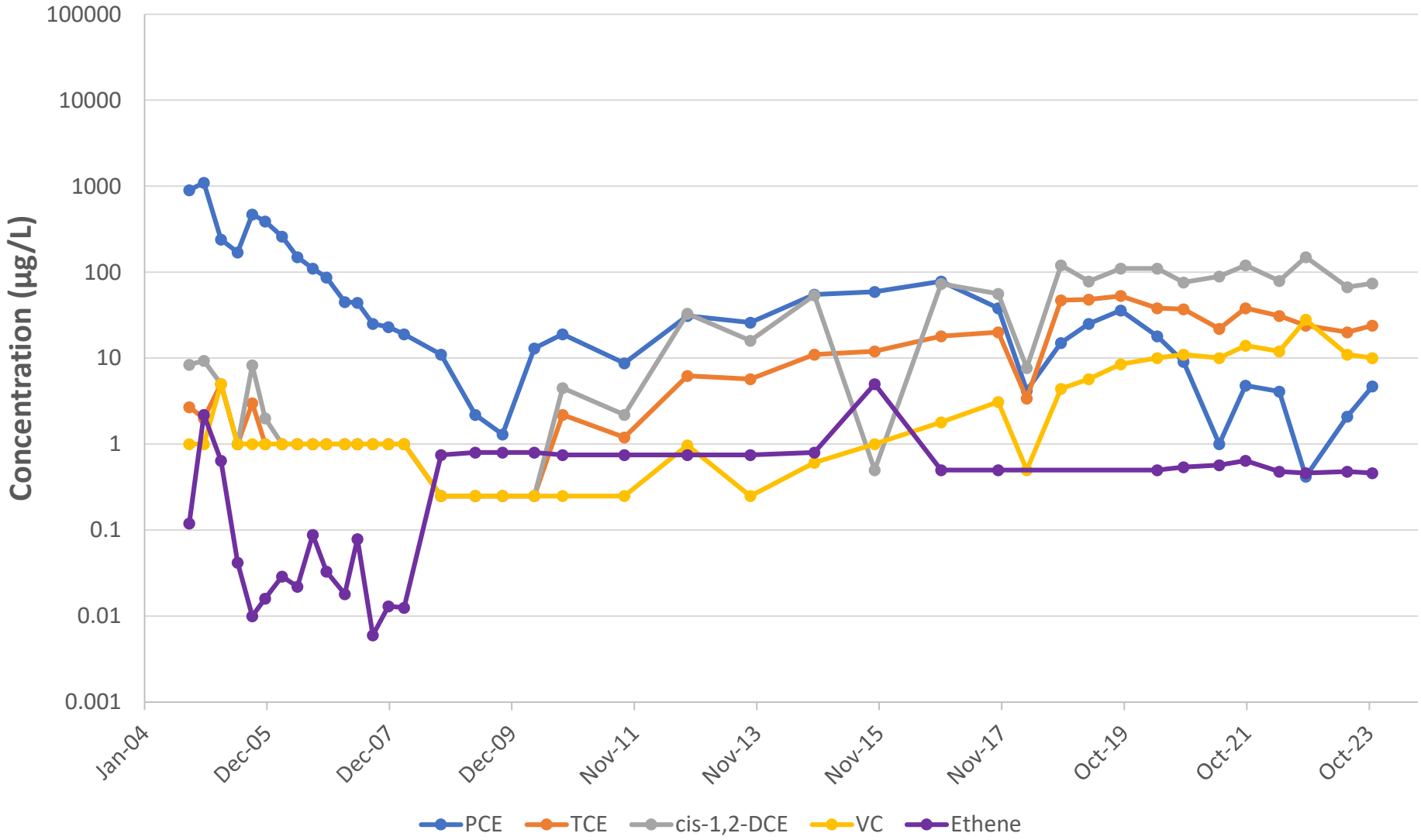
FIGURE
E-13

\ARCADIS\SERES-Arcadis JV - _NE Dist Devens Task Orders\TO 1 - Seed Task\AOC 50\Reports\2. Fall 2020 Memo\Attachments

G6M-04-07X



Notes:

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4. COC = contaminant of concern
5. CVOC = chlorinated volatile organic compound
6. PCE = tetrachloroethene
7. TCE = trichloroethene
8. VC = vinyl chloride

COC	AOC 50 Cleanup Level (µg/L)
PCE	5
TCE	5
cis-1-2-DCE	70
VC	2

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DEVENS, MASSACHUSETTS

CVOC TREND GRAPH
G6M-04-07X (AREA 5)

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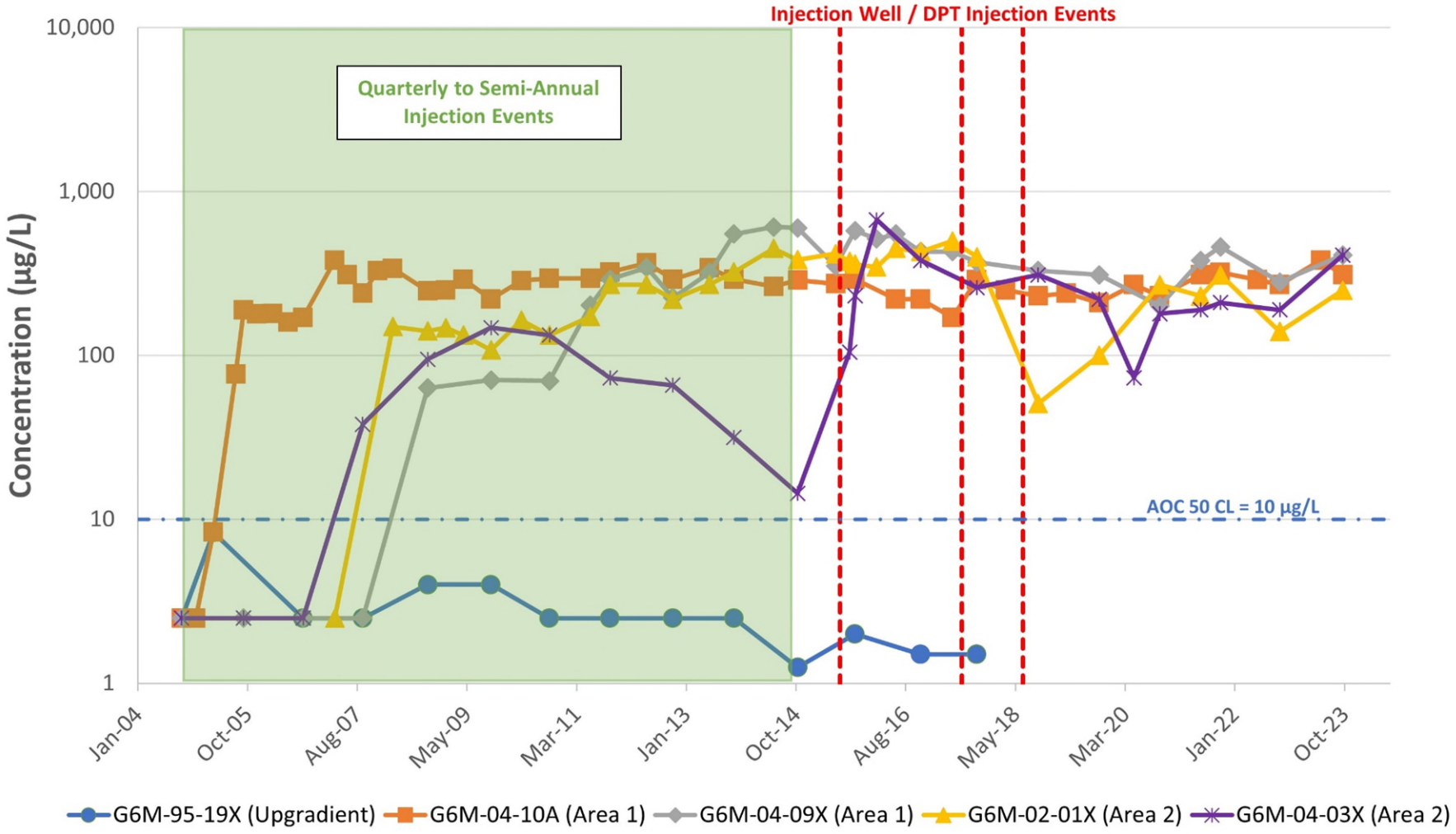
FIGURE
E-14

\ARCADIS\SERES-Arcadis JV - _NE Dist Devens Task Orders\TO 1 - Seed Task\AOC 50\Reports\2. Fall 2020 Memo\Attachments

Appendix F

Arsenic Trend Graphs

Dissolved Arsenic (Areas 1 and 2)



Notes:

1. Not-detects are shown at half the reporting limit
2. µg/L = microgram per liter
3. CL = Cleanup Level
4. DPT = direct push technology

2023 ANNUAL OPERATIONS, MAINTENANCE, AND MONITORING REPORT
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DISSOLVED ARSENIC TREND GRAPH
AREAS 1 AND 2

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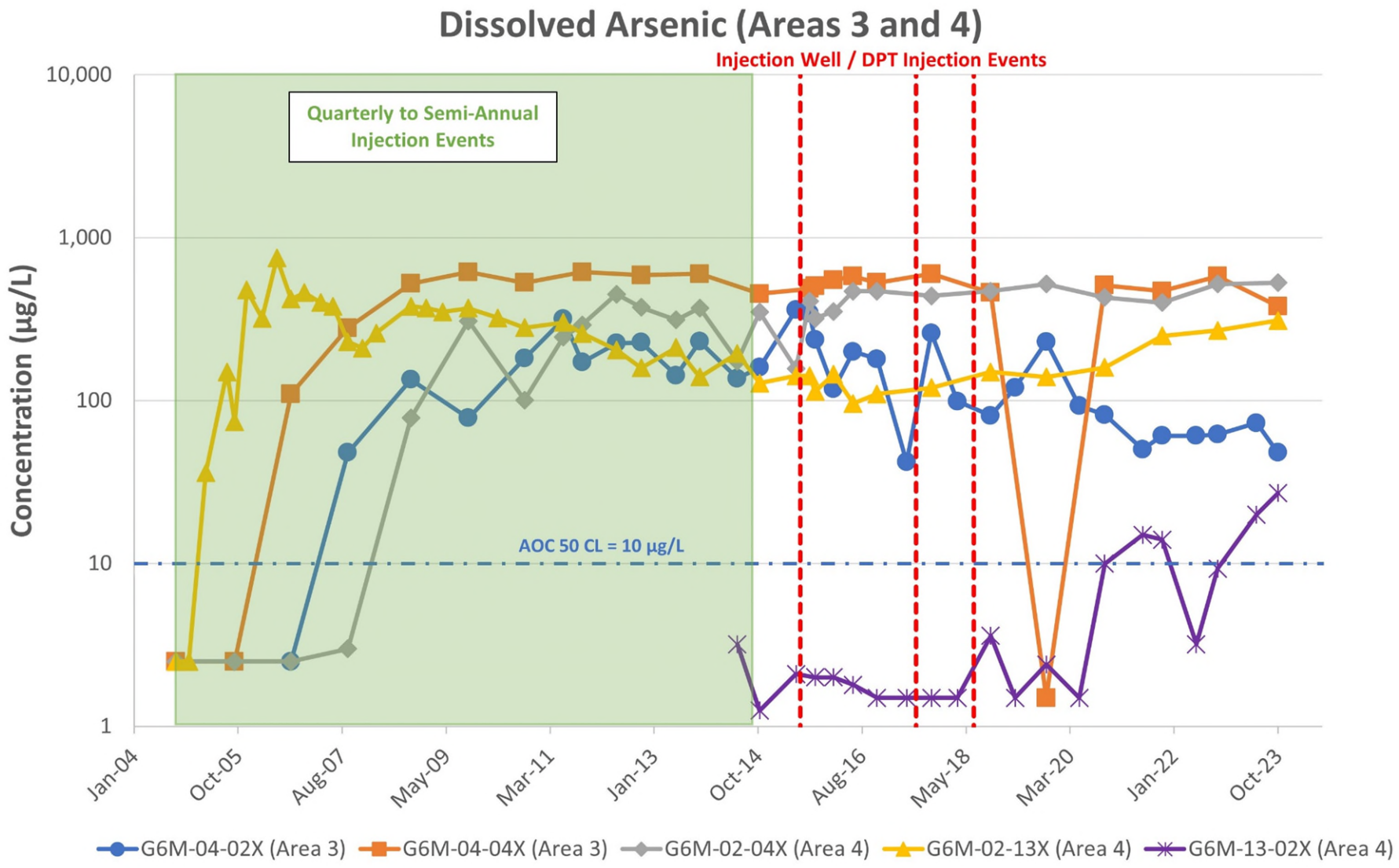
FIGURE
F-1

\ARCADIS\SERES-Arcadis JV - _NE Dist Devens Task Orders\TO 1 - Seed Task\AOC 50\Reports\2. 2023 Memo\Attachments



Notes:

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2. µg/L = microgram per liter
3. CL = Cleanup Level
4. DPT = direct push technology

2023 ANNUAL OPERATIONS, MAINTENANCE, AND MONITORING REPORT
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DEVENS, MASSACHUSETTS

DISSOLVED ARSENIC TREND GRAPH
AREAS 3 AND 4

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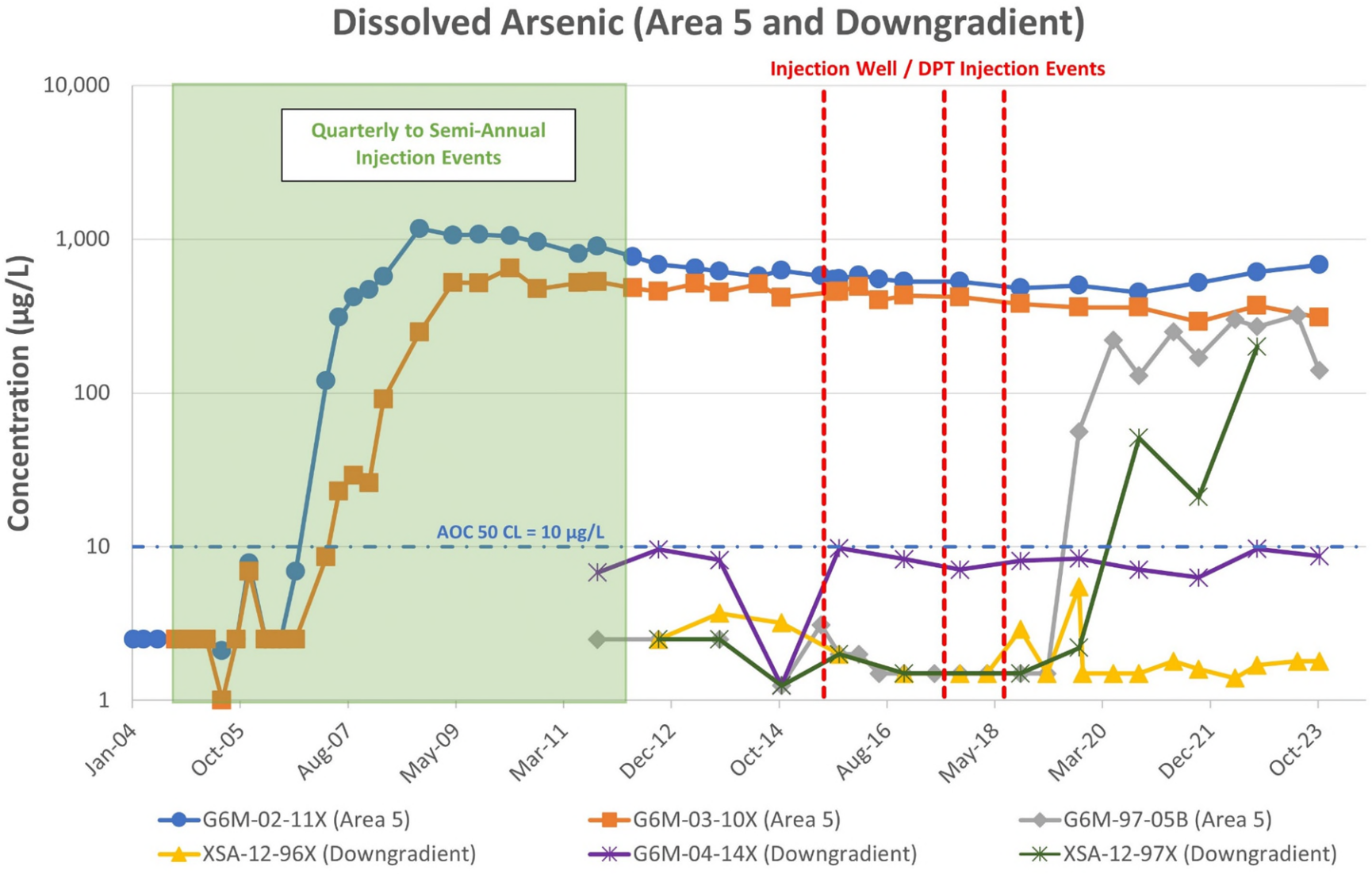
FIGURE
F-2

\ARCADIS\SERES-Arcadis JV - _NE Dist Devens Task Orders\TO 1 - Seed Task\AOC 50\Reports\2. 2023 Memo\Attachments



Notes:

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3. CL = Cleanup Level
4. DPT = direct push technology

2023 ANNUAL OPERATIONS, MAINTENANCE, AND MONITORING REPORT
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DEVENS, MASSACHUSETTS

DISSOLVED ARSENIC TREND GRAPH
AREA 5 AND DOWNGRADIENT

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FIGURE
F-3

\ARCADIS\SERES-Arcadis JV - _NE Dist Devens Task Orders\TO 1 - Seed Task\AOC 50\Reports\2. 2023 Memo\Attachments

Appendix G

Annual Land-Use Control Plan Checklist, Reinforcement Letters, and Real Property Master Plan

Annual Land Use Control Plan Checklist for AOC 50

This checklist has been developed from the USEPA guidance document Comprehensive Five Year Review Guidance dated June 2001 (OSWER No. 9355.7-03B-P) and from Section 4.6 of the Remedial Action Work Plan, AOC 50, Devens, Massachusetts Site (Arcadis, 2005). The Checklist was modified to site-specific conditions as recommended by the guidance document. The checklist will be completed annually and submitted with the AOC 50 annual operations, maintenance and monitoring report. The checklist will also be used to assist in compiling information for the five-year review.

I. Site Information	
Site Name/Location: AOC 50	**Name/Affiliation:** Ian Martz - Arcadis
Remedy Includes: Long Term Monitoring, Institutional Controls, ERD	
Inspection Date: November 28, 2023	
Participants: Ian Martz (Arcadis), Brent Smith (USACE)	

II. Documentation and Records			
Item	**Yes**	**No**	**Comments**
Any related notices filed with Town of Ayer, MassDEP or Nashoba BOH?		X	
Any related Devens Department of Public Works permits found?		X	No permitting activities besides the police driver training and existing Raytheon permit for paving. No intrusive work or soil excavation activities.
Any related zoning permits or variances found?		X	
Any related Conservation Commission findings, proposals or notices of intent found?		X	
Any related notices or permits filed with the Devens Enterprise Commission?		X	

III. Physical On-Site Inspection			
Item	**Yes**	**No**	**Comments**
Any construction activities or new buildings present in the area of the remedy?		X	New electric panel and transformer installed on utility pole north of Area 5 injection well transect.
Any damage to on-site monitoring wells?	X		All wells appear to be in generally good condition and are functional; minimal damage observed.
Is there evidence of damage to the remedy?		X	
Any groundwater supply wells present?		X	
Any construction detention ponds?		X	

Annual Land Use Control Plan Checklist for AOC 50

This checklist has been developed from the USEPA guidance document Comprehensive Five Year Review Guidance dated June 2001 (OSWER No. 9355.7-03B-P) and from Section 4.6 of the Remedial Action Work Plan, AOC 50, Devens, Massachusetts Site (Arcadis, 2005). The Checklist was modified to site-specific conditions as recommended by the guidance document. The checklist will be completed annually and submitted with the AOC 50 annual operations, maintenance and monitoring report. The checklist will also be used to assist in compiling information for the five-year review.

Is there sufficient access to the site for monitoring?	X		A vegetation removal event was completed from October 12-13, 2023 to improve access to monitoring wells in overgrown areas (Area 1 and Area 5). The work was coordinated with MassDevelopment and the site stakeholders. Gate located immediately west of well G6M-02-11X (Area 5) was observed to be in need of repair; the property owner (MassDevelopment) was notified via email on October 30, 2023 (Shane Melone) and the gate was subsequently repaired in November 2023.
IV. Interview #1			
Name of Interviewer: Ian Martz (Arcadis)			
Name of Interviewee: Neil Angus (Devens Enterprise Commission), Anne-Marie Dowd (MassDevelopment), Meg Delorier (MassDevelopment)			
Contact Information: neilangus@devensec.com, 978-772-8831 x3334; amdowd@massdevelopment.com, 857-345-2859; mdelorier@massdevelopment.com, 978-784-2929			
Interview Notes: Emailed final 2022 LUC forms for review on 1/17/2024. Performed phone interview on 1/29/2024.			
Site Update: The Army is currently investigating PFAS which have been detected at the Former Fort Devens. A record-of-decision has not been completed for PFAS.			
Item	**Yes**	**No**	**Comments**
Has the interviewee received/read the annual IC notification/reinforcement letter from the Army?	X		IC letters were sent to MassDEV on June 15, 2023 and to stakeholders on October 24, 2023 (see Interview #2 and #3). MassDev was provided with a copy of the stakeholders transmittals.
Is interviewee familiar with the land use controls imposed upon the property & documentation of these controls?	X		
Are there any pumping wells or other sources of water other than those supplied by the Town at the property?		X	
Are there any proposed plans for property sale, future development, construction or demolition activities at the property?		X	
Are there any issues with site access for monitoring and remediation?		X	Advance notice and sign-in requirements due to police training and US Air Force activities, but this has not significantly delayed any planned work.

Annual Land Use Control Plan Checklist for AOC 50

This checklist has been developed from the USEPA guidance document Comprehensive Five Year Review Guidance dated June 2001 (OSWER No. 9355.7-03B-P) and from Section 4.6 of the Remedial Action Work Plan, AOC 50, Devens, Massachusetts Site (Arcadis, 2005). The Checklist was modified to site-specific conditions as recommended by the guidance document. The checklist will be completed annually and submitted with the AOC 50 annual operations, maintenance and monitoring report. The checklist will also be used to assist in compiling information for the five-year review.

IV. Interview #2			
Name of Interviewer: Ian Martz (Arcadis)			
Name of Interviewee: Tom Eagle - Deputy Project Leader (USFWS)			
Contact Information: tom_eagle@fws.gov, 978-579-4027			
Interview Notes: Emailed interview checklist to Tom Eagle on 1/11/2024. Received responses on 1/12/2024, which are documented below.			
Item	**Yes**	**No**	**Comments**
Has the interviewee received/read the annual IC notification/reinforcement letter from the Army?	X		An IC letter was mailed to Mr. Eagle on October 24, 2023.
Is interviewee familiar with the land use controls imposed upon the property & documentation of these controls?	X		
Are there any pumping wells or other sources of water other than those supplied by the Town at the property?		X	
Are there any proposed plans for property sale, future development, construction or demolition activities at the property?		X	
Are there any issues with site access for monitoring and remediation?		X	

Annual Land Use Control Plan Checklist for AOC 50

This checklist has been developed from the USEPA guidance document Comprehensive Five Year Review Guidance dated June 2001 (OSWER No. 9355.7-03B-P) and from Section 4.6 of the Remedial Action Work Plan, AOC 50, Devens, Massachusetts Site (Arcadis, 2005). The Checklist was modified to site-specific conditions as recommended by the guidance document. The checklist will be completed annually and submitted with the AOC 50 annual operations, maintenance and monitoring report. The checklist will also be used to assist in compiling information for the five-year review.

IV. Interview #3			
Name of Interviewer: Ian Martz (Arcadis)			
Name of Interviewee: Jeffrey Woodle (Groton Ayer Realty Trust)			
Contact Information: jpwoodle@gmail.com, 978-877-2712			
Interview Notes: Emailed interview checklist to Tom Eagle on 1/11/2024. Received responses on 2/22/2024, which are documented below.			
Item	**Yes**	**No**	**Comments**
Has the interviewee received/read the annual IC notification/reinforcement letter from the Army?	X		An IC letter was mailed to Mr. Woodle on October 24, 2023.
Is interviewee familiar with the land use controls imposed upon the property & documentation of these controls?	X		
Are there any pumping wells or other sources of water other than those supplied by the Town at the property?		X	
Are there any proposed plans for property sale, future development, construction or demolition activities at the property?		X	
Are there any issues with site access for monitoring and remediation?		X	
V. Response Actions			
Item	**Yes**	**No**	**Comments**
Were violations of the LUCs present ?		X	
Are there Response Actions necessary based on the violations?		X	
Are modifications/ terminations of LUC's necessary?		X	
Have Enforcement Actions been taken during this reporting period?		X	

Meg Delorier
MassDevelopment
99 High Street
Boston, MA 02110

SERES-Arcadis 8(a) JV 2, LLC
669 Marina Drive, Suite B-7
Charleston, South Carolina 29492
www.arcadis.com

Subject:
Land Use Control (LUC) Reinforcement Letter
CERCLA Remedy - Area of Contamination (AOC) 50
Former Fort Devens Army Installation – Devens, MA

ENVIRONMENT

Date:
June 15, 2023

Contact:
Ian Martz

Phone:
978.322.4526

Email:
ian.martz@arcadis.com

Our ref:
30167457

Dear Ms. Delorier,

On behalf of the United States Department of the Army (the Army) the SERES-Arcadis Joint Venture (SERES-Arcadis 8(a) JV 2 LLC) is pleased to submit this LUC Reinforcement Letter for the AOC 50 portion of former Fort Devens.

Under the Devens Reuse Plan (November 14, 1994), the area is zoned for Special Use II and Innovation and Technology Business; which may include a broad range of industrial, light industrial, office, and research/development uses. The Army and MassDevelopment (MassDev) signed a quickclaim deed in 1996 for approximately 246 acres of the property, which was transferred to MassDev for reuse. The LUC agreement restricts property use as per the AOC 50 Record of Decision, which was approved by the Army and USEPA in 2004 pursuant to CERCLA.

The LUCs specific to this letter are identified below and the LUC area is shown on the attached map. The LUCs must remain in place in order to protect human health and the environment. This letter serves as a reminder to your organization of the property use restrictions associated with the AOC 50 environmental remedy so that you may consider them in making decisions about the property. The restrictions were initially described in the Remedial Action Work Plan for AOC 50 that was provided to your organization on July 7, 2005.

The following use restrictions apply to this property:

- No extraction of groundwater for any purpose;
- Building construction over plume subject to review/approval;

- Stormwater discharge or recharge are subject to review/approval of stormwater management plan; and
- Excavations subject to soil management plans and Health & Safety Plans;
- Provide access to the Army, USEPA, and Massachusetts Department of Environmental Protection (MassDEP) to monitor wells, maintain the remedy, and complete annual inspections of the property to confirm compliance with land use objectives.

If you have any further questions concerning this matter or if your contact information changes, please send the following information to the attention of Mr. Tom Lineer at the address listed below.

Organization Name
Mailing Address
Contact Number
Email Address

Mr. Tom Lineer
U.S. Army
2530 Crystal Drive
Taylor Building, Room 5104A
Arlington, VA 22202
703-545-2487

The Army will continue to send LUC reinforcement letters on an annual basis as a reminder of the property restrictions. When all actions to protect human health and the environment are deemed complete by the appropriate regulatory agencies, you will receive a letter notifying you that the restrictions have been removed. Additional information on the Former Fort Devens Environmental Cleanup Site is available at https://www.nae.usace.army.mil/missions/projects-topics/former-fort-devens-environmental-cleanup/.

Sincerely,

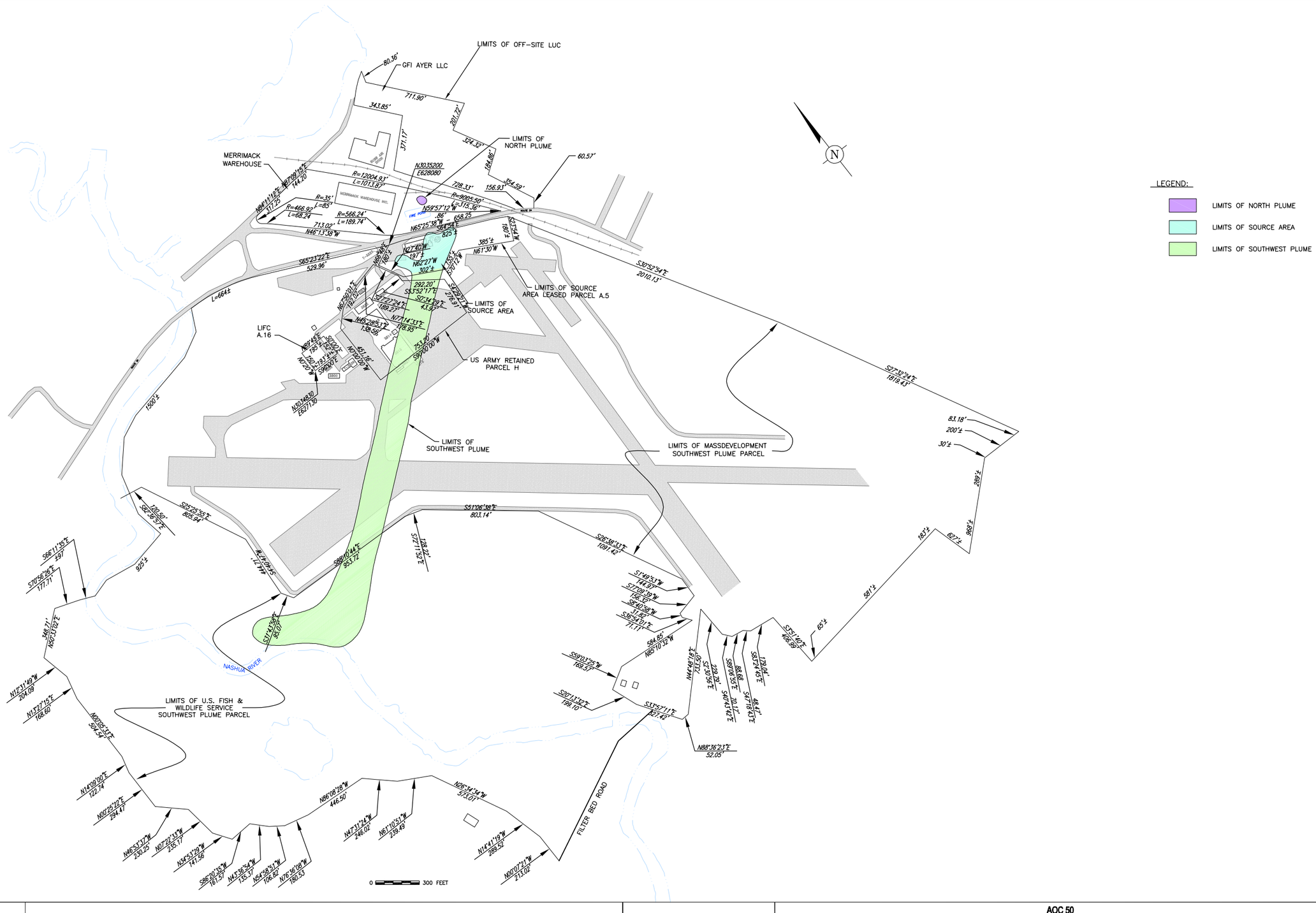
SERES-Arcadis



Ian A. Martz, P.G.
Senior Geologist

Attachments:
Limits of Land Use Controls Map

Copies:
Tom Lineer – U.S. Army
Penelope Reddy – USACE
Mike Daly – USEPA
Joanne Dearden – MassDEP
Anne-Marie Dowd - MassDev



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Area Manager	D. KNOX
Project Director	C. CASTELLUCCIO
Task Manager	C. CASTELLUCCIO
Technical Reviewer	

ARCADIS
SUITE 400
175 CABOT STREET
LOWELL, MASSACHUSETTS 01854

AOC 50
FORT DEVENS, MASSACHUSETTS

LIMITS OF LAND-USE CONTROL

Project Number	MA000664.0007
Date	02/28/05
Figure	2

Mr. Henry and Jeffrey Woodle
Merrimack Warehouse Realty Co., Inc.
PO Box 353
Ayer, MA 01432

SERES-Arcadis 8(a) JV 2, LLC
669 Marina Drive, Suite B-7
Charleston, South Carolina 29492
www.arcadis.com

Subject:
Land Use Control (LUC) Reinforcement Letter
CERCLA Remedy - Area of Contamination (AOC) 50
Former Fort Devens Army Installation – Devens, MA

ENVIRONMENT

Date:
October 24, 2023

Contact:
Ian Martz

Phone:
978.322.4526

Email:
ian.martz@arcadis.com

Our ref:
30167457

Dear Mr. Henry and Jeffrey Woodle,

On behalf of the United States Department of the Army (the Army) the SERES-Arcadis Joint Venture (SERES-Arcadis 8(a) JV 2 LLC) is pleased to submit this LUC Reinforcement Letter. The Merrimack Warehouse Nominee Trust (Merrimack Warehouse) and the Army signed a LUC Agreement which was executed on July 18, 2006, for groundwater contamination at the AOC 50 portion of the former Fort Devens located by Route 2A in Ayer, Massachusetts.

The LUC Agreement for the Merrimack Warehouse property restricts property use, as per the Record of Decision (ROD) which was approved by the Army and U.S. Environmental Protection Agency (USEPA) pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The LUCs specific to this letter are identified below and shown on the enclosed map. The LUCs must remain in place to protect human health and the environment.

This letter serves as a reminder to your organization of the property use restrictions associated with the AOC 50 environmental remedy so that you may consider them in making decisions about the property. The restrictions were initially described in the Remedial Action Work Plan for AOC 50 that was provided to your organization on July 7, 2005, and the restrictions were later updated on July 20, 2006, in a LUC Agreement between Merrimack Warehouse Nominee Trust and the Army.

The following use restrictions apply to this property:

- Merrimack Warehouse will not use or allow exposure to groundwater underlying the property until the land use restrictions are removed. The parties agree and acknowledge that the contaminated groundwater that is subject of this Agreement is currently confined to the well designated as G6M-96-24B. The parties further agree and acknowledge that Merrimack shall not be prohibited by the terms of this Agreement or

otherwise from using the water supplied to and stored in the Fire Pond for extinguishing fires in its building on its land, with the parties further agreeing and acknowledging that the water in the Fire Pond is automatically employed by the sprinkler systems in Merrimack's buildings in the event they are triggered as required by fire codes and Merrimack's insurer.

- Merrimack Warehouse will provide property access to the Army, USEPA, and the MassDEP to inspect monitor wells and make annual inspections of the property to confirm compliance with land use objectives.

If you have any further questions concerning this matter or if your contact information changes, please notify Mr. Tom Lineer at the address listed below.

Mr. Tom Lineer
U.S. Army
2530 Crystal Drive
Taylor Building, Room 5104A
Arlington, VA 22202
703-545-2487

The Army will continue to send LUC reinforcement letters on an annual basis as a reminder of the property restrictions. When all actions to protect human health and the environment are deemed complete by the appropriate regulatory agencies, you will receive a letter notifying you that the restrictions have been removed. Additional information on the Former Fort Devens Environmental Cleanup Site is available at https://www.nae.usace.army.mil/missions/projects-topics/former-fort-devens-environmental-cleanup/.

Sincerely,

SERES-Arcadis



Ian A. Martz, P.G.
Senior Geologist

Attachments:
Limits of Land Use Controls Map

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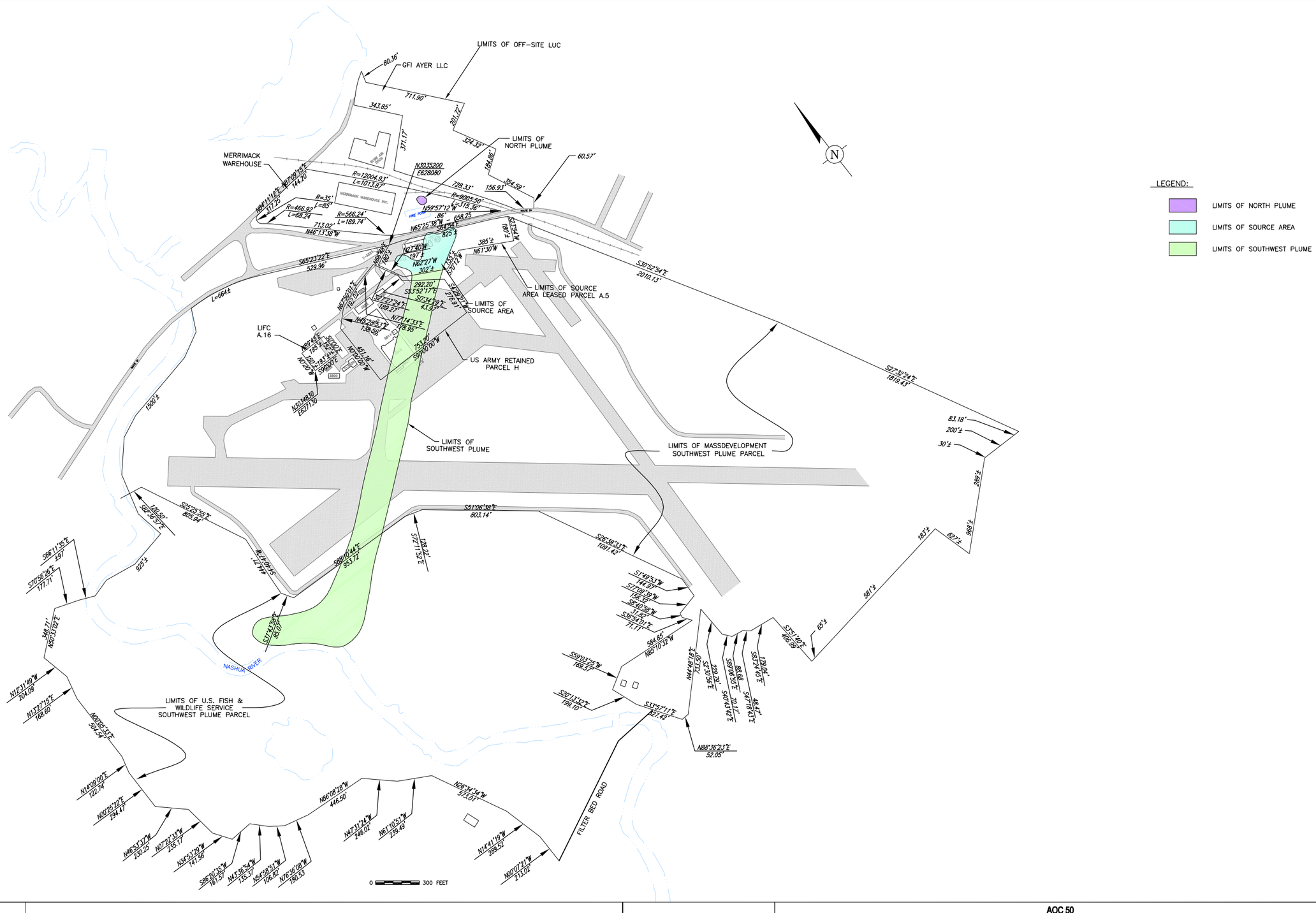
Tom Lineer – U.S. Army
Penelope Reddy – USACE
Michael Daly – USEPA
Joanne Dearden – MassDEP
Meg Delorier – MassDevelopment



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Project Director	C. CASTELLUCCIO
Task Manager	C. CASTELLUCCIO
Technical Reviewer	

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AOC 50
FORT DEVENS, MASSACHUSETTS

LIMITS OF LAND-USE CONTROL

Project Number	MA000664.0007
Date	02/28/05
Figure	2

Tom Eagle
Deputy Wildlife Refuge Manager
Eastern MA NWR Complex
73 Weir Hill Road
Sudbury, MA 01776

SERES-Arcadis 8(a) JV 2, LLC
669 Marina Drive, Suite B-7
Charleston, South Carolina 29492
www.arcadis.com

Subject:
Land Use Control (LUC) Reinforcement Letter
CERCLA Remedy - Area of Contamination (AOC) 50
Former Fort Devens Army Installation – Devens, MA

ENVIRONMENT

Date:
October 24, 2023

Contact:
Ian Martz

Phone:
978.322.4526

Email:
ian.martz@arcadis.com

Our ref:
30167457

Dear Mr. Eagle,

On behalf of the United States Department of the Army (the Army) the SERES-Arcadis Joint Venture (SERES-Arcadis 8(a) JV 2 LLC) is pleased to submit this LUC Reinforcement Letter. The U.S. Fish & Wildlife Service (USFWS) and the Army signed a Memorandum of Agreement (MOA) for the transfer of land which is now part of the Oxbow Refuge Area. Contamination associated with the AOC 50 portion of the former Fort Devens located near Route 2A in Ayer, Massachusetts is present in the groundwater underlying the transferred land.

The MOA for the USFWS property restricts property use as per the AOC 50 Record of Decision (ROD) which was approved by the Army and U.S. Environmental Protection Agency (USEPA), pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The LUCs specific to this letter are identified below and shown on the enclosed map. The LUCs must remain in place to protect human health and the environment.

This letter serves as a reminder to your organization of the property use restrictions associated with the AOC 50 remedy, so that you may consider them in making decisions about this property. The restrictions were initially described in the Remedial Action Work Plan for AOC 50 that was provided to your organization on July 7, 2005.

The following use restrictions apply to this property:

- No extraction of groundwater for any purpose;
- Storm water discharge or recharge are subject to approval;
- Building construction over plume subject to approval; and

- Provide access to the Army, USEPA, and Massachusetts Department of Environmental Protection (MassDEP) to monitor wells, maintain the remedy, and complete annual inspections of the property to confirm compliance with land use objectives.

If you have any further questions concerning this matter or if you contact information changes, please notify Mr. Tom Lineer at the address listed below.

Mr. Tom Lineer
U.S. Army
2530 Crystal Drive
Taylor Building, Room 5104A
Arlington, VA 22202
703-545-2487

The Army will continue to send LUC reinforcement letters on an annual basis as a reminder of the property restrictions. When all actions to protect human health and the environment are deemed complete by the appropriate regulatory agencies, you will receive a letter notifying you that the restrictions have been removed. Additional information on the Former Fort Devens Environmental Cleanup Site is available at https://www.nae.usace.army.mil/missions/projects-topics/former-fort-devens-environmental-cleanup/.

Sincerely,

Seres-Arcadis



Ian A. Martz, P.G.
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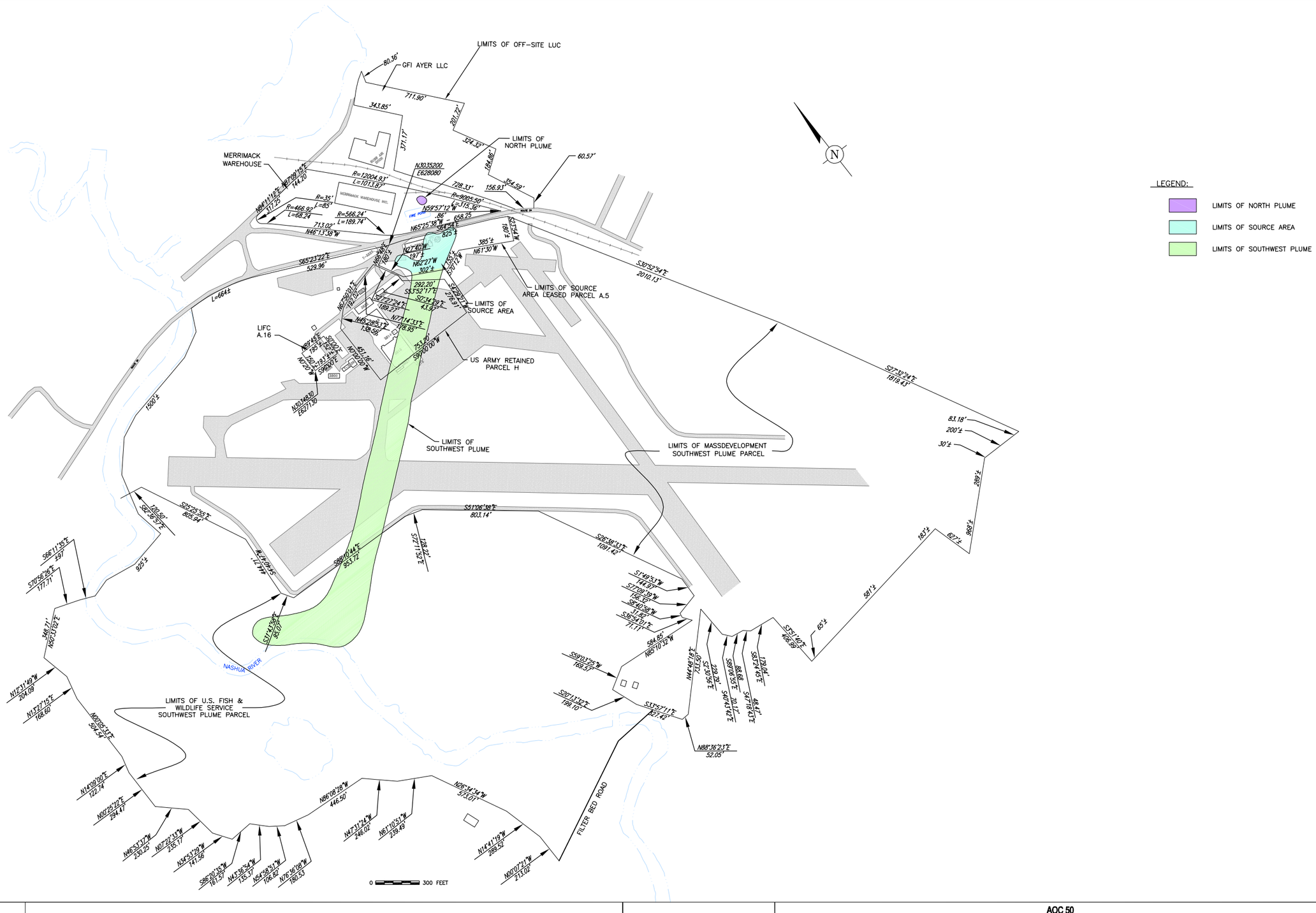

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FORT DEVENS, MASSACHUSETTS

LIMITS OF LAND-USE CONTROL

Project Number	MA000664.0007
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REAL PROPERTY MASTER PLAN
LONG RANGE COMPONENT
FOR
DEVENS RESERVE FORCES TRAINING AREA

ADDENDUM – SEPTEMBER 2007

This addendum applies to Chapter 4.C. (Land Use Policies and Constraints) and Chapter 5.E. (Environmental Concerns) of the *Real Property Master Plan, Long Range Component for Devens Reserves Forces Training Area, June 1999.* The addendum provides supplemental information on Land-Use Controls (LUCs) established under BRAC and CERCLA programs that are applicable to the following areas:

Area A (Main Cantonment)

The CERCLA remedy for the former AAFES Gas Station located on Queenstown Street is addressed in the Record of Decision (ROD) for Area of Contamination (AOC) 43G. The remedy is based on Army retention of this area and continued restricted access to ground water; however, any proposed actions that affect this property must consider the following ROD requirements and site environmental conditions:

- Assure that the Property is not used for residential purposes and prohibit the use of groundwater beneath the site. If the Army changes the land-use within the AOC, then additional assessment and/or possible remedial action may be needed based upon the possible resultant changed risk factors.

- If the Army transfers this property by lease or deed, an Environmental Baseline Assessment (EBS) will be conducted to ensure that the remedy remains protective by incorporating all necessary environmental protection provisions within the Finding of Suitability to Transfer (FOST) and the property transfer deed.

- Any intrusive construction work must consider that residual soil and groundwater contamination has been documented for AOC 43G and that such actions should be coordinated with the DPW, the BRAC Environmental Office and the BRAC Clean-up Team (BCT).

Area C (Range & Training Area)

The CERCLA remedy for the South Post range and training areas is addressed in the ROD for the South Post Impact Area (SPIA) and AOCs 25, 26, 27 and 41. The "no action" remedy is based on Army retention of the South Post; however, any proposed actions that affect this property must consider the following ROD requirements:

- If the Army should close or transfer or change the use of this property, an Environmental Baseline Survey (EBS) will be conducted, and the "no action" decision in the ROD will be re-examined in light of the changed use and risk factors resulting from this closure/transfer.

- The Army will not develop new drinking water sources within the SPIA monitored area.

Area F (3700 Area – Barnum Road Maintenance Yards)

The CERCLA remedy for the former Cannibalization Yard and TDA Maintenance Yard is addressed in the ROD for AOCs 44 and 52, respectively. The remedy is based on Army retention of this property; however, any proposed actions that affect this property must consider the following ROD requirements:

- Assure the Property is not used for residential purposes. If the Army transfers this property by lease or deed, an EBS will be conducted to ensure that the remedy remains protective by incorporating all necessary environmental protection provisions within the FOST and the property transfer deed.

- Maintain the existing paved areas and storm water collection systems to prevent long-term worker exposure to residual oil contaminated soils 2-5 feet BGS associated with AOC 44/52 remedy.

- Assure that Soil Management Plans and Health and Safety Plans are prepared and executed prior to subsurface excavations.

- Any intrusive construction work must consider that residual soil contamination has been documented for AOC 44/52 and that such actions should be coordinated with the DPW, the BRAC Environmental Office and the BCT.

Area G (3800 Area – RTS Maintenance)

The CERCLA remedy for the former Moore Army Airfield is addressed in the ROD for AOC 50. Active remediation and monitoring of the AOC 50 chlorinated solvent plume, which is under building 3813 is ongoing. Treatment transects and associated monitoring wells are located in the RTC vehicle storage area and on the Southwest Corner of Building 3813 former hanger, along the axis of the plume through Army retained Parcel H. Any proposed actions that affect this property must consider the following ROD requirements:

- Provide continued access to treatment transects and monitoring wells and access to install additional injection or monitoring wells, if necessary.

- Coordinate construction plans with the BCT to facilitate ongoing remediation and future access to plume areas

- No groundwater extraction or injection for any purpose

- Coordinate construction plans for modifications to storm water systems with the BCT including engineered storm water management plans and hydrologic/ mounding studies. (Continue use of existing storm water system to direct storm water away from the plume)

Appendix H

Response to Comments

US Army Corps of Engineers ®

New England District
696 Virginia Road
Concord, Massachusetts
01742-2751

Project Name:	Former Fort Devens Army Installation		
Location:	Devens, Massachusetts	Reviewers:	Shawn Lowry (USEPA) and Joanne Dearden (MassDEP)
Document Name: Draft 2023 Annual Operations, Maintenance, and Monitoring Report, Area of Contamination 50, Former Fort Devens Army Installation, Devens, Massachusetts, May 2024			

No.	Ref. Page / Para.	COMMENT	RESPONSE
		Shawn Lowry (24 June 2024)	
1.	PDF page 15	The text states, "A greater number of wells were sampled during Fall 2023 (37 wells) than Spring 2023 (10 wells)". For the benefit of the reader, please discuss in the text why the number of sampled wells differs between events.	The following text was added to Section 3.3.1 to address the comment: *The current well sampling program is detailed in the 2017 Long-Term Monitoring and Maintenance Plan prepared by KGS. The annual LTM sampling is conducted in the Fall to evaluate the extent of plume as part of the annual monitoring. Fewer wells are sampled in the Spring as this event is used to assess if injections are warranted.*
2.	PDF page 26	The text in Section 5.1 discusses on-site inspections and indicates that the inspection checklists and interview summaries are included via Appendix G. However, these items appear to be missing; please reconcile.	The Annual Land Use Control Plan Checklist that documents the inspection and interviews have been added to Appendix G. These items were inadvertently not included in the draft annual report.
		Joanne Dearden (9 July 2024)	
1.	N/A	MassDEP has reviewed the *2023 Annual Operations and Maintenance Report for Area of Contamination 50 at the Former Fort Devens Army Installation* dated May 2024. MassDEP does not have any comments on this submittal.	N/A
END OF COMMENTS			