United States Army Corps of Engineers
New England District

2022 Annual Operations, Maintenance, and Monitoring Report

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

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August 2023

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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

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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 5.3
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 2022 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 2022.

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 (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 primary area of groundwater contamination at the site is a chlorinated volatile organic compound (CVOC) plume that formerly extended from the source area (Area 1) approximately 3,000 feet downgradient 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, 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 (ERD [enhanced reductive dechlorination]), 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 2022, the average depth to groundwater ranged from approximately 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 2022) and Figure 5 (Fall 2022), 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), Enhanced Reductive Dechlorination (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 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 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 injection 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 2004 (Figure 6) to approximately 1.5 acres in Fall 2022 (Figure 7).
- The maximum observed PCE concentration has decreased by 2.5 orders-of-magnitude, from 14,000 µg/L in 2004 to 43 µg/L in Fall 2022.

- The number of monitoring wells exceeding the CL for PCE has decreased from 35 of 41 wells (85%) in 2004 to 4 of 44 wells (9.1%) in Fall 2022.

2 Long-Term Monitoring Event Methodology

The LTM program at the site was conducted by the S-A JV in Spring 2022 (May) and Fall 2022 (October) 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 both the Spring and Fall 2022 monitoring events and were 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. Water level elevation measurements for Spring and Fall 2022 are presented in Tables 2 and 3, respectively, while potentiometric surface maps are presented on Figures 4 and 5, respectively.

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 2022 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 2022 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 2022 (May) and Fall 2022 (October) 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 Spring 2022 monitoring event, several wells were identified as needing surface repairs. On May 17-18, 2022, new flush-mount roadboxes and concrete pads were installed at a total of seven locations (G6M-02-01X, G6M-02-03X, G6M-04-01X, G6M-04-03X, G6M-07-01X, G6M-18-01, and IW-26) by Drilex Environmental of Auburn, Massachusetts.

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 2022 monitoring events, respectively. Groundwater elevation contours for Spring and Fall 2022 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 lower in the Fall 2022 compared to the Spring 2022. The groundwater hydraulic gradient between Area 1 well G6M 07-02X and downgradient well XSA-12-96X (southwest edge of the CVOC plume) was calculated to be 0.0032 feet per foot in Spring 2022 and 0.0025 feet per foot in Fall 2022. In general, the horizontal hydraulic gradient is steeper between Area 1 and Area 3, and the hydraulic gradient decreases downgradient of Area 3.

3.3 Groundwater Chemistry

The Spring and Fall 2022 monitoring events consisted of sampling 9 wells and 45 wells, respectively. This differs from the 14 wells and 38 wells in Spring and Fall 2021, respectively, for the following reasons:

- Five monitoring wells that are periodically sampled on a semiannual basis (G6M-02-01X, G6M-03-07X, G6M-04-03X, G6M-04-09X, and G6M-07-01X) were not sampled in Spring 2022, as it was determined that annual sampling was sufficient based on data trends (detailed further in Section 3.3.2). Sampling was conducted in accordance with the LTMMP (KGS 2017).

- 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 sampled in Fall 2022 in accordance with the LTMMP (KGS 2017).

The frequency, sampling locations, and analytical parameters for LTM sampling conducted in 2022 are summarized in Table 4. The Spring and Fall 2022 LTM analytical results and field parameters are presented in Tables 6 and 7, respectively. The laboratory analytical reports for the 2022 monitoring events are included as Appendix B. The data validation reports for the 2022 data are presented in Appendix C. Historical analytical results and groundwater field parameters, including the 2022 sampling results, are presented in Appendix D.

3.3.1 Field Parameters

Field parameter measurements collected during the Fall 2022 monitoring event are summarized below. A greater number of wells were sampled during Fall 2022 (45 wells) than Spring 2022 (9 wells) and, at wells sampled during both events, the Spring 2022 field parameters were generally consistent with conditions in Fall 2022.

- pH levels in groundwater were within the optimal pH range for bioremediation (pH of 6 to 8 standard units [SU]) (Interstate Technology and Regulatory Council 2008) in all but three locations (Table 7): G6M-95-19X (5.69 SU) in Area 1, G6M-13-03X (5.63 SU) in Area 5, and G6M-04-14X (8.37 SU) to the west of the Nashua River. 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 anoxic/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 seven of the 14 wells sampled, with DO ranging from 0.48 to 0.75 mg/L in those seven wells. Negative ORP was recorded at 10 of the 14 wells sampled, with ORP ranging from -145 to -50.7 millivolts (mV) in those 10 wells.
  - In Area 2, anoxic conditions were observed at all four wells sampled, with DO ranging from 0.63 to 0.99 mg/L. Negative ORP was recorded at three of the four wells sampled, with ORP ranging from -142 to -80.4 mV in those three wells.
  - In Area 3, anoxic and reducing conditions were observed at three of four wells sampled, with DO ranging from 0.67 to 0.74 mg/L and ORP ranging from -104 to -71.2 mV in those three wells.
  - In Area 4, anoxic conditions were observed in three of the four wells sampled, with DO ranging from 0.68 to 0.76 mg/L in those three wells. Negative ORP was recorded at three of the four wells sampled, with ORP ranging from -165 to -64.4 mV in those three wells.
  - In Area 5, anoxic conditions were observed in 10 of the 18 wells sampled, with DO ranging from 0.58 to 0.97 mg/L at those 10 wells. Negative ORP was recorded at 12 of the 18 wells sampled, with ORP ranging from -149 to -40.4 mV in those 12 wells.
  - Adjacent to the Nashua River, the one monitoring well sampled (G6M-04-14X) had slightly oxic conditions (1.37 mg/L DO) but also had somewhat reducing conditions (ORP value of -61.5 mV).

3.3.2 Volatile Organic Compounds

Groundwater samples were collected from 9 wells during the Spring 2022 monitoring event and 44 wells during the Fall 2022 monitoring event for VOC analysis; one additional well (G6M-97-28X) was sampled for dissolved metals only in Fall 2022. PCE, TCE, cis-1,2-DCE, and VC were the only VOCs detected above the established AOC 50 CLs during the Spring and Fall 2022 monitoring events. Concentrations of these CVOCs in Spring and Fall 2022 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 2022 monitoring event and the associated PCE plume are shown on Figures 7 (plan view) and 8 (cross-section view). VOC results from the Spring and Fall 2022 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 (44 wells) than Spring (9 wells).

3.3.2.1 Spring 2022

Results of the Spring 2022 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; a maximum concentration of 38 µg/L was detected in monitoring well G6M-04-02X in Area 3.

3.3.2.2 Fall 2022

Similar to Spring 2022, the Fall 2022 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 2022 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 four of 44 sampled locations, compared to four of the 37 sampled locations during the Fall 2021 monitoring event. PCE was detected above the CL at three sampled locations in both Fall 2021 and Fall 2022 (wells G6M-04-02X, G6M-07-01X, and G6M-13-05X). The maximum detection of PCE in Fall 2022 was 43 µg/L at well G6M-04-02X (Area 3).
- TCE was detected above the CL of 5 µg/L at four of 44 sampled locations, compared to four of 37 locations during the Fall 2021 monitoring event. TCE was detected above the CL at two sampled locations in both Fall 2021 and Fall 2022 (wells G6M-04-02X and G6M-04-07X). The maximum detection of TCE in Fall 2022 was 44 µg/L at well G6M-04-02X (Area 3).
- cis-1,2-DCE was detected above the CL of 70 µg/L at two of 44 sampled locations (compared to two of 37 locations in the Fall 2021 monitoring event). cis-1,2-DCE was detected above the CL in wells G6M-04-02X and G6M-04-07X in both the Fall 2021 and Fall 2022 events. The maximum detection of cis-1,2-DCE in Fall 2022 was 150 µg/L at well G6M-04-07X (Area 5).

- VC was detected above the CL of 2 µg/L at 7 of 44 sampled locations, compared to 8 of 37 locations in the Fall 2021 monitoring event. VC was detected above the CL at five sampling locations in both Fall 2021 and Fall 2022 (G6M-04-02X, G6M-04-07X, G6M-13-05X, and XSA-12-96X). The maximum detection of VC in Fall 2022 was 28 µg/L at well G6M-04-07X (Area 5).

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	14	1	G6M-13-05X: PCE, TCE, VC
2	4	2	G6M-02-01X: PCE, TCE, VC G6M-07-01X: PCE
3	4	1	G6M-04-02X: cis-1,2-DCE, PCE, TCE, VC
4	3	0	None
5	18	4	G6M-04-07X: cis-1,2-DCE, TCE, VC G6M-13-01X: VC MW-7: VC XSA-12-96X: 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 in Fall 2022. 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 2022. PCE and TCE

concentrations have occasionally exceeded CLs during recent monitoring events (Spring 2019, Fall 2019, and Fall 2020), but all CVOC constituents have been below CLs since Spring 2021 (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 2022. 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 24 µg/L in Fall 2022. At this well, PCE and TCE concentrations have fluctuated recently, albeit at relatively low levels. From Fall 2020 to Fall 2022, PCE concentrations have ranged from non-detect to 50 µg/L, while TCE concentrations have ranged from non-detect to 18 µg/L (Appendix E, Figure E-4). PCE exceedances shown on Figure 7 at this monitoring well are bounded by groundwater results at:
  - Monitoring well G6M-96-25B, sampled most recently in October 2012, located approximately 155 feet west of G6M-13-05X;
  - Monitoring well G6M-04-11X, sampled most recently in October 2020, located approximately 120 feet southwest of G6M-13-05X; and
  - Monitoring well G6M-04-22X, sampled in Fall 2022, 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 7.7 µg/L in Fall 2022. 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 and Fall 2022 (Appendix E, Figure E-5).
- At monitoring well G6M-07-01X, PCE concentrations have declined from 50 µg/L in Fall 2010 to 14 µg/L in Fall 2022. 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 43 and 44 µg/L in Fall 2022, respectively. However, PCE and TCE concentrations have increased since 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).
- At monitoring well G6M-03-07X, located downgradient of the area influenced by 2019 injections, CVOC concentrations have remained below applicable CLs in 22 of 25 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 1.5 µg/L and 3.1 µg/L, respectively, in Fall 2022. All CVOCs were below their applicable CLs in Fall 2022 (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 non-detect in Fall 2022, while cis-DCE and VC concentrations initially increased due to reductive dechlorination but were below their respective CLs in Fall 2022 (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 1.4 µg/L in Fall 2022. TCE, cis-1,2-DCE, and VC have been declining since Fall 2019. VC was the only CVOC detected at concentrations greater than CLs in Fall 2022 (Appendix E, Figure E-12).
- At downgradient monitoring well XSA-12-97X, PCE and TCE concentrations have been below laboratory reporting limits during the last three 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 over three orders of magnitude, from 1,100 µg/L in Winter 2004 to 0.42 µg/L in Fall 2022. While injections are not 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).

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 2022 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. 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 PCE is 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 during performance monitoring.

A total of 15 monitoring wells were sampled for all general chemistry parameters during the Fall 2022 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 14 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 highest in wells within or adjacent to the 2019 injections (e.g., G6M-02-01X, G6M-03-07X, G6M-04-10A, 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 12 of 15 monitoring wells and ethane concentrations were above detection limits at 14 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 continues to exhibit highly elevated TOC concentrations (greater than 100 mg/L) in Fall 2022.
- Five monitoring wells contained moderately elevated TOC concentrations (between 10 and 69 mg/L), including three wells located within or adjacent/downgradient of the 2019 injection areas (G6M-04-10A in Area 1, G6M-03-07X in Area 3, and G6M-97-05B in Area 5) and two wells located in Area 1 to the west of where injections were most recently performed in 2017 (G6M-02-08X) and 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 2022 monitoring events were submitted for dissolved metals (arsenic, iron, and manganese) analysis (Table 5). Results for Spring 2022 and Fall 2022 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, 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 2022 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 29 of 40 wells sampled for metals in Fall 2022. 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 2022 was 720 µg/L at monitoring well G6M-04-22X (Area 1). 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 2022 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 and 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 2022 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 5.3 (Quality Systems Manual; DoD and DOE 2019) 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 2022 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 2022 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 5.3 (DoD and DOE 2019) 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 2022 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 2022 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 data from the Spring and Fall 2022 monitoring events are acceptable for use with no data being 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 2022. 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 100% of samples from the 2022 monitoring events.

4 Remedial System Update

CVOC trends in monitoring wells sampled in Spring and Fall 2022 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 2022 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 2023. 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 2022 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 December 7, 2022 (Appendix G). There were no issues encountered related to site access for monitoring and remediation activities during the 2022 physical site inspection.

5.2 LUC Interview

Interviews were conducted in January and February 2023 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 2022.

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 2022 in accordance with the LTMMP (KGS 2017) and QAPP (S-A JV 2020a). LTM activities included semi-annual groundwater sampling, with 9 monitoring wells sampled in Spring 2022 and 45 monitoring wells sampled in Fall 2022. Locks and missing bolts were replaced at wells where they were missing, and new flush-mount roadboxes were installed at a total of seven locations (G6M-02-01X, G6M-02-03X, G6M-04-01X, G6M-04-03X, G6M-07-01X, G6M-18-01, and IW-26). No additional maintenance activities were performed in 2022. 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 2022 (Figure 7).
- The maximum observed PCE concentration observed at source area well G6M-07-02X has decreased by 2.5 orders of magnitude, from 14,000 µg/L in 2004 to 43 µg/L in Fall 2022.
- The number of wells exceeding the CL for PCE has decreased from 35 out of 41 wells (85%) in 2004 to 4 out of 44 wells (9.1%) in 2022.

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 2022 (estimated 1.5 acres of exceedances of the CL for PCE). The generation of advanced daughter products, including ethene/ethane, provide evidence that complete reductive dechlorination and an overall reduction in CVOC contaminant mass is occurring 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 2022 remained suitable to support the transformation of CVOCs into harmless by-products.

Arsenic concentrations in groundwater exceeded the CL of 10 µg/L at 29 of 40 wells sampled for metals in Fall 2022. 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 to eventually return to conditions that will allow for natural re-attenuation of arsenic.

The following activities will be performed in 2023 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.
- The need for additional injection activities will be reevaluated following analysis of data from the 2023 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 2022
2022 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

Well ID	Area	Date	MPE (NAVD88)	DTW (ft below MPE)	GW Elevation (NAVD88)
G6M-02-01X	Area 2	4/27/2022	262.44	52.59	209.85
G6M-02-03X	Area 4	4/27/2022	263.03	NM	NM
G6M-02-04X	Area 4	4/27/2022	264.92	58.67	206.25
G6M-02-06X	Area 5	4/27/2022	209.73	5.89	203.84
G6M-02-07X	Area 5	4/27/2022	210.72	7.09	203.63
G6M-02-08X	Area 1	4/27/2022	224.23	11.20	213.03
G6M-02-11X	Area 5	4/27/2022	263.93	58.75	205.18
G6M-02-12X	Area 5	4/27/2022	262.46	57.43	205.03
G6M-02-13X	Area 4	4/27/2022	263.61	57.70	205.91
G6M-03-07X	Area 3	4/27/2022	262.66	54.87	207.79
G6M-03-08X	Area 5	4/27/2022	258.60	53.75	204.85
G6M-03-09X	Area 5	4/27/2022	258.89	54.82	204.07
G6M-03-10X	Area 5	4/27/2022	265.81	60.89	204.92
G6M-04-01X	Area 2	4/27/2022	261.15	51.68	209.47
G6M-04-02X	Area 3	4/27/2022	266.55	57.95	208.60
G6M-04-03X	Area 2	4/27/2022	264.29	55.21	209.08
G6M-04-04X	Area 3	4/27/2022	262.66	56.11	206.55
G6M-04-05X	Area 5	4/27/2022	258.13	53.27	204.86
G6M-04-06X	Area 5	4/27/2022	263.97	60.08	203.89
G6M-04-07X	Area 5	4/27/2022	263.82	59.69	204.13
G6M-04-08X	Nashua River	4/27/2022	209.55	5.68	203.87**
G6M-04-09X	Area 1	4/27/2022	242.66	30.07	212.59
G6M-04-10A	Area 1/FDSA	4/27/2022	224.02	11.01	213.01
G6M-04-10X	Area 1/FDSA	4/27/2022	224.22	11.85	212.37
G6M-04-11X	Area 1	4/27/2022	229.47	17.75	211.72
G6M-04-13X	Area 1/FDSA	4/27/2022	225.88	12.81	213.07
G6M-04-14X	Nashua River	4/27/2022	210.61	7.01	203.60**
G6M-04-15X	Area 1	4/27/2022	253.23	40.70	212.53
G6M-04-22X	Area 1	4/27/2022	255.89	44.38	211.51
G6M-04-31X	Area 1	4/27/2022	255.91	44.22	211.69
G6M-07-01X	Area 2	4/27/2022	262.10	52.03	210.07
G6M-07-02X	Area 1/FDSA	4/27/2022	225.10	11.90	213.20
G6M-13-01X	Area 5	4/27/2022	266.82	61.91	204.91
G6M-13-02X	Area 4	4/27/2022	263.82	58.03	205.79
G6M-13-03X	Area 3	4/27/2022	264.37	56.24	208.13
G6M-13-04X	Area 5	4/27/2022	266.31	61.03	205.28
G6M-13-05X	Area 1	4/27/2022	225.00	12.54	212.46
G6M-13-06X	Area 1	4/27/2022	224.37	12.17	212.20
G6M-18-01	Area 5	4/27/2022	264.24	58.90	205.34
G6M-18-02	Area 5	4/27/2022	268.33	64.24	204.09
G6M-95-19X	Area 1	4/27/2022	223.89	10.80	213.09
G6M-95-20X	Area 1	4/27/2022	224.61	11.15	213.46
G6M-96-22A	Area 1	4/27/2022	217.59	3.32	214.27

Table 2
Groundwater Level Data, Spring 2022
2022 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

Well ID	Area	Date	MPE (NAVD88)	DTW (ft below MPE)	GW Elevation (NAVD88)
G6M-96-22B	Area 1	4/27/2022	217.56	3.95	213.61
G6M-97-05B	Area 5	4/27/2022	268.12	63.55	204.57
G6M-97-28X	Area 4	4/27/2022	265.69	59.51	206.18
G6P-97-05X	Area 2	4/27/2022	236.72	24.74	211.98
MW-3	Area 5	4/27/2022	265.75	60.44	205.31
MW-7	Area 5	4/27/2022	264.97	59.55	205.42
XSA-12-95X	Area 5	4/27/2022	269.63	67.04	202.59
XSA-12-96X	Area 5	4/27/2022	269.99	65.76	204.23
XSA-12-97X	Area 5	4/27/2022	270.78	65.08	205.70*
XSA-12-98X	Area 5	4/27/2022	209.61	5.88	203.73

Notes:

1. Well G6M-02-03X was damaged/inaccessible during the synoptic gauging; the roadbox was later replaced.

2. * Well not used in contouring due to different vertical head compared to surrounding wells with a similar screen interval.

3. ** Well not used for contouring; wells located on the opposite side of the Nashua River.

Acronyms and Abbreviations:

DTW = depth to water
FDSA = former drum storage area
ft = foot
GW = groundwater
ID = identification
MPE = measuring point elevation
NAVD88 = North American Vertical Datum of 1988
NM - not measured

Table 3
Groundwater Level Data, Fall 2022
2022 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

Well ID	Area	Date	MPE (NAVD88)	DTW (ft below MPE)	GW Elevation (NAVD88)
G6M-02-08X	Area 1	10/3/2022	224.23	14.69	209.54
G6M-04-09X	Area 1	10/3/2022	242.66	33.33	209.33
G6M-04-11X	Area 1	10/3/2022	229.47	20.98	208.49
G6M-04-15X	Area 1	10/3/2022	253.23	44.00	209.23
G6M-04-22X	Area 1	10/3/2022	255.89	47.52	208.37
G6M-04-31X	Area 1	10/3/2022	255.91	47.41	208.50
G6M-13-05X	Area 1	10/3/2022	225.00	15.88	209.12
G6M-13-06X	Area 1	10/3/2022	224.37	15.44	208.93
G6M-95-19X	Area 1	10/3/2022	223.89	14.12	209.77
G6M-95-20X	Area 1	10/3/2022	224.61	14.64	209.97
G6M-96-22A	Area 1	10/3/2022	217.59	6.71	210.88
G6M-96-22B	Area 1	10/3/2022	217.56	7.11	210.45
G6M-04-10A	Area 1/FDSA	10/3/2022	224.02	14.40	209.62
G6M-04-10X	Area 1/FDSA	10/3/2022	224.22	14.96	209.26
G6M-04-13X	Area 1/FDSA	10/3/2022	225.88	16.15	209.73
G6M-07-02X	Area 1/FDSA	10/3/2022	225.10	15.37	209.73
G6M-02-01X	Area 2	10/3/2022	262.44	55.65	206.79
G6M-04-01X	Area 2	10/3/2022	261.15	53.80	207.35
G6M-04-03X	Area 2	10/3/2022	264.29	58.16	206.13
G6M-07-01X	Area 2	10/3/2022	262.10	55.05	207.05
G6P-97-05X	Area 2	10/3/2022	236.72	28.66	208.06
G6M-03-07X	Area 3	10/3/2022	262.66	57.95	204.71
G6M-04-02X	Area 3	10/3/2022	266.55	61.25	205.30
G6M-04-04X	Area 3	10/3/2022	262.66	59.16	203.50
G6M-13-03X	Area 3	10/3/2022	264.37	59.27	205.10
G6M-02-03X	Area 4	10/3/2022	263.03	59.71	203.32
G6M-02-04X	Area 4	10/3/2022	264.92	61.66	203.26
G6M-02-13X	Area 4	10/3/2022	263.61	60.64	202.97
G6M-13-02X	Area 4	10/3/2022	263.82	60.87	202.95
G6M-97-28X	Area 4	10/3/2022	265.69	62.50	203.19
G6M-02-06X	Area 5	10/3/2022	209.73	8.07	201.66
G6M-02-07X	Area 5	10/3/2022	210.72	7.17	203.55*
G6M-02-11X	Area 5	10/3/2022	263.93	61.56	202.37
G6M-02-12X	Area 5	10/3/2022	262.46	60.17	202.29
G6M-03-08X	Area 5	10/3/2022	258.60	56.41	202.19
G6M-03-09X	Area 5	10/3/2022	258.89	56.70	202.19
G6M-03-10X	Area 5	10/3/2022	265.81	63.54	202.27
G6M-04-05X	Area 5	10/3/2022	258.13	55.93	202.20
G6M-04-06X	Area 5	10/3/2022	263.97	63.34	200.63
G6M-04-07X	Area 5	10/3/2022	263.82	61.57	202.25*
G6M-13-01X	Area 5	10/3/2022	266.82	64.52	202.30
G6M-13-04X	Area 5	10/3/2022	266.31	63.83	202.48
G6M-18-01	Area 5	10/3/2022	264.24	61.71	202.53
G6M-18-02	Area 5	10/3/2022	268.33	66.56	201.77*

Table 3
Groundwater Level Data, Fall 2022
2022 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

Well ID	Area	Date	MPE (NAVD88)	DTW (ft below MPE)	GW Elevation (NAVD88)
G6M-97-05B	Area 5	10/3/2022	268.12	66.01	202.11
MW-3	Area 5	10/3/2022	265.75	63.69	202.06
MW-7	Area 5	10/3/2022	264.97	62.33	202.64
XSA-12-95X	Area 5	10/3/2022	269.63	67.99	201.64
XSA-12-96X	Area 5	10/3/2022	269.99	67.09	202.90
XSA-12-97X	Area 5	10/3/2022	270.78	70.97	199.81*
XSA-12-98X	Area 5	10/3/2022	209.61	8.12	201.49
G6M-04-08X	Nashua River	10/3/2022	209.55	7.99	201.56**
G6M-04-14X	Nashua River	10/3/2022	210.61	9.04	201.57**

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; wells located on the opposite side of the Nashua River.

Acronyms and Abbreviations:
DTW = depth to water
FDSA = former drum storage area
ft = foot
GW = groundwater
ID = identification
MPE = measuring point elevation
NAVD88 = North American Vertical Datum of 1988

Table 4
Monitoring Wells Sampled in 2022
2022 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)
Area1 / 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 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	Semiannual	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 2	G6M-02-01X	Monitor VOC and metal trends downgradient of ERD injections.	80-95	183-168	VOCs and Metals	Semiannual	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	Semiannual	VOCs and metals only, annual
	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	Semiannual	Well not included in LTMMP, USEPA requested sampling of this injection well in 2020 and additional samples were collected in 2021
Area 3	G6M-03-07X	Monitor VOCs, metals, and geochemistry downgradient of ERD injections.	80-90	182.8-172.8	Full Suite	Semiannual	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 and metals.	80-90	183.57-173.57	VOCs and Metals	Biennial	VOCs only
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
	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		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	--

Table 4
Monitoring Wells Sampled in 2022
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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-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 and metal 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	--
Area 5 (cont.)	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	--

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

Table 4
Monitoring Wells Sampled in 2022
2022 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)

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
2022 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 2022
2022 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

Analyte	Units	Location	G6M-04-02X		G6M-04-07X		G6M-04-10A		G6M-07-02X		G6M-07-02X		G6M-13-01X		G6M-13-02X		G6M-13-05X	
		Sample ID	G6M-04-02X-SPR22		G6M-04-07X-SPR22		G6M-04-10A-SPR22		AOC50-DUP01-SPR22		G6M-07-02X-SPR22		G6M-13-01X-SPR22		G6M-13-02X-SPR22		G6M-13-05X-SPR22	
		Area	Area 3		Area 5		Area 1 / FDSA		Area 1 / FDSA				Area 5		Area 4		Area 1	
		Cleanup Goal[1]	05/02/2022		05/02/2022		05/02/2022		05/02/2022		05/02/2022		05/02/2022		05/03/2022		05/02/2022	
Dissolved Gases																		
Ethane	µg/L	--	1.9		0.42	J	10		4		3.6		0.76	U	0.68	J	55	
Ethene	µg/L	--	36		0.48	J	24		3.9		3.8		0.71	U	0.71	U	23	
Methane	µg/L	--	26,000	J	280	J	19,000	J	18,000	J	16,000	J	1,400	J	11,000	J	21,000	J
General Chemistry																		
Alkalinity, Total (as CaCO3)	mg/L	--	110		230		130		110		110		68		48		65	
Nitrate-Nitrite (as N)	mg/L	10,000	0.05	U	0.05	U	0.05	UJ	0.13		0.15		0.05	U	0.053	J	0.049	J
Sulfate	mg/L	--	4.2		6.3		1	U	1	U	1	U	14		7.6		1	U
Sulfide	mg/L	--	1.2	U	1.2	U	1.3	UJ	1.5	U	1.5	U	1.2	U	1.2	U	1.5	U
Total Organic Carbon	mg/L	--	8.4		1.4		14		150		160		1.4		1.1		6.9	
Metals																		
Arsenic	µg/L	10	**61**		7.2		**290**	**J**	**48**		**47**		**180**		3.2	J	**150**	
Iron	µg/L	3,129	**22,000**		950		**80,000**		**150,000**		**120,000**		2,900		290		**78,000**	
Manganese	µg/L	1,460	**7,800**		**3,800**		900		**3,600**		**3,000**		**4,500**		**1,500**		**8,300**	
Volatile Organic Compounds																		
1,1,1,2-Tetrachloroethane	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U
1,1,1-Trichloroethane	µg/L	--	0.5	U	0.5	U	0.5	UJ	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2,2-Tetrachloroethane	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U
1,1,2-Trichloroethane	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U
1,1-Dichloroethane	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U
1,1-Dichloroethene	µg/L	7	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U
1,1-Dichloropropene	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U
1,2,3-Trichlorobenzene	µg/L	--	2	U	2	U	2	UJ	2	U	2	U	2	U	2	U	2	U
1,2,3-Trichloropropane	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U
1,2,4-Trichlorobenzene	µg/L	--	2	U	2	U	2	UJ	2	U	2	U	2	U	2	U	2	U
1,2,4-Trimethylbenzene	µg/L	--	1	U	1	U	1.7	J	1.1	J	1	J	1	U	1	U	1	U
1,2-Dibromo-3-chloropropane	µg/L	--	5	U	5	U	5	UJ	5	U	5	U	5	U	5	U	5	U
1,2-Dibromoethane (EDB)	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U
1,2-Dichlorobenzene	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	2.6		1	U
1,2-Dichloroethane	µg/L	5	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U
1,2-Dichloroethene	µg/L	--	98		80		3.4	J	2		2.3		0.73	J	7.4		16	
1,2-Dichloropropane	µg/L	5	0.5	U	0.5	U	0.5	UJ	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,3,5-Trimethylbenzene	µg/L	--	1	U	1	U	0.96	J	0.29	J	0.29	J	1	U	1	U	1	U
1,3-Dichlorobenzene	µg/L	--	1	U	1	U	1	UJ	0.36	J	0.44	J	1	U	0.36	J	1	U
1,3-Dichloropropane	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U
1,4-Dichlorobenzene	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U
2,2-Dichloropropane	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	UJ	1	U
2-Butanone (MEK)	µg/L	--	20	U	20	U	20	UJ	20	U	20	U	20	U	20	U	20	U
2-Chlorotoluene	µg/L	--	0.5	U	0.5	U	0.5	UJ	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
2-Hexanone	µg/L	--	10	U	10	U	10	UJ	10	U	10	U	10	U	10	U	10	U
4-Chlorotoluene	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U
4-Methyl-2-pentanone (MIBK)	µg/L	--	10	U	10	U	10	UJ	10	U	10	U	10	U	10	U	10	U
Acetone	µg/L	--	5.7	J	10	U	10	UJ	10	U	10	U	10	U	10	U	10	U
Benzene	µg/L	5	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U
Bromobenzene	µg/L	--	0.5	U	0.5	U	0.5	UJ	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Bromochloromethane	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U
Bromodichloromethane	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U
Bromoform	µg/L	--	2	U	2	U	2	UJ	2	U	2	U	2	U	2	U	2	U
Bromomethane	µg/L	--	10	U	10	U	10	UJ	10	U	10	U	10	U	10	U	10	U
Carbon disulfide	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U
Carbon tetrachloride	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U
Chlorobenzene	µg/L	--	0.5	U	0.5	U	0.5	UJ	0.5	U	0.5	U	0.5	U	1.4		0.5	U
Chloroethane	µg/L	--	10	U	10	U	10	UJ	10	U	10	U	10	U	10	U	10	U
Chloroform	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U
Chloromethane	µg/L	--	2	UJ	2	UJ	2	UJ	2	UJ	2	UJ	2	U	2	UJ	2	U
cis-1,2-Dichloroethene	µg/L	70	**98**		**79**		2.3	J	2		2.3		0.73	J	6.8		16	
cis-1,3-Dichloropropene	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U
Dibromochloromethane	µg/L	--	1	U	1	U	0.26	J	1	U	1	U	1	U	1	U	1	U
Dibromomethane	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U
Dichlorodifluoromethane	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U
Ethylbenzene	µg/L	--	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ	1	UJ	1	U	1	U
Hexachlorobutadiene	µg/L	--	0.5	U	0.5	U	0.5	UJ	0.25	J	0.26	J	0.5	U	0.5	U	0.5	U
Isopropylbenzene (Cumene)	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U
m,p-Xylene	µg/L	--	1	U	1	U	1	UJ	0.55	J	0.61	J	1	U	1	U	1	U
Methyl tert-butyl ether (MTBE)	µg/L	--	2	U	2	U	2	UJ	2	U	2	U	2	U	2	U	2	U
Methylene chloride	µg/L	5	10	U	10	U	10	UJ	10	U	10	U	10	U	10	U	10	U
n-Butylbenzene	µg/L	--	2	U	2	U	2	UJ	0.66	J	0.55	J	2	U	2	U	2	U
n-Propylbenzene	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U
Naphthalene	µg/L	--	5	U	5	U	5	UJ	4.2	J	3.4	J	5	U	5	U	5	U
o-Xylene	µg/L	--	1	U	1	U	1	UJ	0.37	J	0.37	J	1	U	1	U	1	U
p-Cymene (p-Isopropyltoluene)	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U
sec-Butylbenzene	µg/L	--	2	U	2	U	2	UJ	2	U	2	U	2	U	2	U	2	U
Styrene	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U
tert-Butylbenzene	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U
Tetrachloroethene (PCE)	µg/L	5	**38**		4.1		1	UJ	1	U	1	U	1	U	3.4		**8**	
Toluene	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U	0.4	J
trans-1,2-Dichloroethene	µg/L	--	0.71	J	0.82	J	1	J	1	U	1	U	1	U	0.67	J	0.54	J
trans-1,3-Dichloropropene	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U
Trichloroethene (TCE)	µg/L	5	**35**		**31**		0.24	J	0.3	J	0.5	U	0.5	J	**8.4**		2.4	
Trichlorofluoromethane	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U	1	U
Vinyl acetate	µg/L	--	2	UJ	2	UJ	2	UJ	2	UJ	2	UJ	2	U	2	UJ	2	U
Vinyl chloride	µg/L	2	**16**		**12**		1	UJ	0.67	J	0.83	J	1	U	1	U	**9.4**	
Xylenes, Total	µg/L	--	1	U	1	U	1	UJ	0.92	J	0.98	J	1	U	1	U	1	U
Field Parameters																		
pH	SU	--	5.88		6.34		6.55		--		6.48		6.47		5.87		6.64	
Specific Conductivity	mS/cm	--	1.34		0.56		0.381		--		0.433		0.987		97.8		0.728	
Turbidity	NTU	--	77.8		4.4		4.13		--		5.75		3.11		53		4.89	
Dissolved Oxygen	mg/L	--	0.25		0.72		0.79		--		0.88		0.37		0.52		0.73	
Temperature	°C	--	12.3		11.2		10		--		10.2		12		11.7		12	
Oxidation Reduction Potential	Mv	--	-78.3		23.3		-115		--		-113		-29.3		47.3		-143	

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 6
Groundwater Analytical Results, Spring 2022
2022 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

		Location	G6M-97-05B		XSA-12-96X	
		Sample ID	G6M-97-05B-SPR22		XSA-12-96X-SPR22	
		Area	Area 5		Area 5	
Analyte	Units	Cleanup Goal[1]	05/02/2022		05/02/2022	
Dissolved Gases						
Ethane	µg/L	--	14		---	
Ethene	µg/L	--	23		---	
Methane	µg/L	--	27,000	J	---	
General Chemistry						
Alkalinity, Total (as CaCO3)	mg/L	--	170		---	
Nitrate-Nitrite (as N)	mg/L	10,000	0.05	U	---	
Sulfate	mg/L	--	0.85	J	---	
Sulfide	mg/L	--	1.2	U	---	
Total Organic Carbon	mg/L	--	36		---	
Metals						
Arsenic	µg/L	10	**300**		1.4	J
Iron	µg/L	3,129	**62,000**		2,100	
Manganese	µg/L	1,460	**7,500**		**5,400**	
Volatile Organic Compounds						
1,1,1,2-Tetrachloroethane	µg/L	--	1	U	1	U
1,1,1-Trichloroethane	µg/L	--	0.5	U	0.5	U
1,1,2,2-Tetrachloroethane	µg/L	--	1	U	1	U
1,1,2-Trichloroethane	µg/L	--	1	U	1	U
1,1-Dichloroethane	µg/L	--	1	U	1	U
1,1-Dichloroethene	µg/L	7	1	U	1	U
1,1-Dichloropropene	µg/L	--	1	U	1	U
1,2,3-Trichlorobenzene	µg/L	--	2	U	2	U
1,2,3-Trichloropropane	µg/L	--	1	U	1	U
1,2,4-Trichlorobenzene	µg/L	--	2	U	2	U
1,2,4-Trimethylbenzene	µg/L	--	1	U	1	U
1,2-Dibromo-3-chloropropane	µg/L	--	5	U	5	U
1,2-Dibromoethane (EDB)	µg/L	--	1	U	1	U
1,2-Dichlorobenzene	µg/L	--	1	U	1	U
1,2-Dichloroethane	µg/L	5	1	U	1	U
1,2-Dichloroethene	µg/L	--	6.1		13	
1,2-Dichloropropane	µg/L	5	0.5	U	0.5	U
1,3,5-Trimethylbenzene	µg/L	--	1	U	1	U
1,3-Dichlorobenzene	µg/L	--	1	U	1	U
1,3-Dichloropropane	µg/L	--	1	U	1	U
1,4-Dichlorobenzene	µg/L	--	1	U	1	U
2,2-Dichloropropane	µg/L	--	1	U	1	U
2-Butanone (MEK)	µg/L	--	20	U	20	U
2-Chlorotoluene	µg/L	--	0.5	U	0.5	U
2-Hexanone	µg/L	--	10	U	10	U
4-Chlorotoluene	µg/L	--	1	U	1	U
4-Methyl-2-pentanone (MIBK)	µg/L	--	10	U	10	U
Acetone	µg/L	--	10	U	10	U
Benzene	µg/L	5	1	U	0.33	J
Bromobenzene	µg/L	--	0.5	U	0.5	U
Bromochloromethane	µg/L	--	1	U	1	U
Bromodichloromethane	µg/L	--	1	U	1	U
Bromoform	µg/L	--	2	U	2	U
Bromomethane	µg/L	--	10	U	10	U
Carbon disulfide	µg/L	--	1	U	1	U
Carbon tetrachloride	µg/L	--	1	U	1	U
Chlorobenzene	µg/L	--	0.5	U	0.5	U
Chloroethane	µg/L	--	10	U	10	U
Chloroform	µg/L	--	1	U	1	U
Chloromethane	µg/L	--	2	UJ	2	UJ
cis-1,2-Dichloroethene	µg/L	70	5.8		9.4	
cis-1,3-Dichloropropene	µg/L	--	1	U	1	U
Dibromochloromethane	µg/L	--	1	U	1	U
Dibromomethane	µg/L	--	1	U	1	U
Dichlorodifluoromethane	µg/L	--	1	U	1	U
Ethylbenzene	µg/L	--	1	UJ	1	UJ
Hexachlorobutadiene	µg/L	--	0.5	U	0.5	U
Isopropylbenzene (Cumene)	µg/L	--	1	U	1	U
m,p-Xylene	µg/L	--	1	U	1	U
Methyl tert-butyl ether (MTBE)	µg/L	--	2	U	2	U
Methylene chloride	µg/L	5	10	U	10	U
n-Butylbenzene	µg/L	--	2	U	2	U
n-Propylbenzene	µg/L	--	1	U	1	U
Naphthalene	µg/L	--	5	U	5	U
o-Xylene	µg/L	--	1	U	1	U
p-Cymene (p-Isopropyltoluene)	µg/L	--	1	U	1	U
sec-Butylbenzene	µg/L	--	2	U	2	U
Styrene	µg/L	--	1	U	1	U
tert-Butylbenzene	µg/L	--	1	U	1	U
Tetrachloroethene (PCE)	µg/L	5	1	U	**5.9**	
Toluene	µg/L	--	1	U	1	U
trans-1,2-Dichloroethene	µg/L	--	1	U	3.9	
trans-1,3-Dichloropropene	µg/L	--	1	U	1	U
Trichloroethene (TCE)	µg/L	5	0.52	J	**9.3**	
Trichlorofluoromethane	µg/L	--	1	U	1	U
Vinyl acetate	µg/L	--	2	UJ	2	UJ
Vinyl chloride	µg/L	2	**3.5**		**8**	
Xylenes, Total	µg/L	--	1	U	1	U
Field Parameters						
pH	SU	--	6.84		6.43	
Specific Conductivity	mS/cm	--	0.974		1.12	
Turbidity	NTU	--	118		170	
Dissolved Oxygen	mg/L	--	0.27		0.53	
Temperature	°C	--	11.9		10.7	
Oxidation Reduction Potential	Mv	--	-154		-43.8	

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 2022
2022 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

		Location	G6M-02-01X		G6M-02-08X		G6M-03-07X		G6M-04-02X		G6M-04-03X		G6M-04-07X		G6M-04-09X	
		Sample ID	G6M-02-01X-FAL22		G6M-02-08X-FAL22		G6M-03-07X-FAL22		G6M-04-02X-FAL22		G6M-04-03X-FAL22		G6M-04-07X-FAL22		G6M-04-09X-FAL22	
		Area	Area 2		Area 1		Area 3		Area 3		Area 2		Area 5		Area 1	
Analyte	**Units**	**Cleanup Goal[1]**	**10/07/2022**		**10/04/2022**		**10/05/2022**		**10/05/2022**		**10/12/2022**		**10/05/2022**		**10/12/2022**	
Dissolved Gases																
Ethane	µg/L	--	1.1		3.4		10		2.4		2		0.54	J	3.3	
Ethene	µg/L	--	18		0.71	U	3.4		23		0.71	U	0.46	J	3	
Methane	µg/L	--	29,000		28,000		22,000		20,000		20,000		270		15,000	
General Chemistry																
Alkalinity, Total (as CaCO3)	mg/L	--	110		52		200		140		240		260		98	
Nitrate-Nitrite (as N)	mg/L	10	0.025	U	0.025	U	0.025	U	0.025	U	0.025	U	0.025	U	0.029	J
Sulfate	mg/L	--	8.3		1.1		0.7	J	5		0.44	J	5.6		5	U
Sulfide	mg/L	--	1.7	U	1.7	U	1.7	UJ	1.7	U	1.6	U	3.7		1.9	U
Total Organic Carbon	mg/L	--	2.4		15		16		7.5		6.5		1.4		7.1	
Metals																
Arsenic	µg/L	10	**140**		**210**		**490**		**62**		**190**		7.4		**280**	
Iron	µg/L	3,129	**18,000**		**19,000**		**86,000**		**23,000**		**9,900**		1,100		**43,000**	
Manganese	µg/L	1,460	**1,600**		240		**2,000**		**8,900**		1,200		**4,200**		**1,900**	
Volatile Organic Compounds																
1,1,1,2-Tetrachloroethane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
1,1,1-Trichloroethane	µg/L	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	UJ
1,1,2,2-Tetrachloroethane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
1,1,2-Trichloroethane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
1,1-Dichloroethane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
1,1-Dichloroethene	µg/L	7	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
1,1-Dichloropropene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
1,2,3-Trichlorobenzene	µg/L	--	2	U	2	U	2	U	2	U	2	U	2	U	2	UJ
1,2,3-Trichloropropane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
1,2,4-Trichlorobenzene	µg/L	--	2	U	2	U	2	U	2	U	2	U	2	U	2	UJ
1,2,4-Trimethylbenzene	µg/L	--	1	U	0.77	J	1	U	1	U	1	U	1	U	0.54	J
1,2-Dibromo-3-chloropropane	µg/L	--	5	U	5	U	5	U	5	U	5	U	5	U	5	UJ
1,2-Dibromoethane (EDB)	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
1,2-Dichlorobenzene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
1,2-Dichloroethane	µg/L	5	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
1,2-Dichloroethene	µg/L	--	3.7		0.91	J	1.1	J	100	J	0.65	J	150	J	1.9	J
1,2-Dichloropropane	µg/L	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	UJ
1,3,5-Trimethylbenzene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
1,3-Dichlorobenzene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
1,3-Dichloropropane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
1,4-Dichlorobenzene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
2,2-Dichloropropane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
2-Butanone (MEK)	µg/L	--	20	U	20	U	20	U	20	U	20	U	20	U	20	UJ
2-Chlorotoluene	µg/L	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	UJ
2-Hexanone	µg/L	--	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ
4-Chlorotoluene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
4-Methyl-2-pentanone (MIBK)	µg/L	--	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ
Acetone	µg/L	--	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ
Benzene	µg/L	5	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
Bromobenzene	µg/L	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	UJ
Bromochloromethane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
Bromodichloromethane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
Bromoform	µg/L	--	2	U	2	U	2	U	2	U	2	U	2	U	2	UJ
Bromomethane	µg/L	--	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ
Carbon disulfide	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
Carbon Tetrachloride	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
Chlorobenzene	µg/L	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	UJ
Chloroethane	µg/L	--	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ
Chloroform	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
Chloromethane	µg/L	--	2	UJ	2	U	2	U	2	U	2	U	2	U	2	UJ
cis-1,2-Dichloroethene	µg/L	70	3.7		0.91	J	0.84	J	**100**	**J**	0.65	J	**150**	**J**	0.94	J
cis-1,3-Dichloropropene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
Cumene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
Dibromochloromethane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
Dibromomethane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
Dichlorodifluoromethane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
Ethylbenzene	µg/L	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	UJ
Hexachlorobutadiene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
m,p-Xylene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
Methyl tert-butyl ether (MTBE)	µg/L	--	2	U	2	U	2	U	2	U	2	U	2	U	2	UJ
Methylene chloride	µg/L	5	10	U	10	U	10	U	10	U	10	U	10	U	10	UJ
n-Butylbenzene	µg/L	--	2	U	2	U	2	U	2	U	2	U	2	U	2	UJ
n-Propylbenzene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
Naphthalene	µg/L	--	5	U	5	U	5	U	5	U	5	U	5	U	5	UJ
o-Xylene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
p-Cymene (p-Isopropyltoluene)	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
sec-Butylbenzene	µg/L	--	2	U	2	U	2	U	2	U	2	U	2	U	2	UJ
Styrene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
tert-Butylbenzene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
Tetrachloroethene (PCE)	µg/L	5	**7.7**		1	U	1	U	**43**	**J**	1	U	0.42	J	1	UJ
Toluene	µg/L	--	1	U	3.8		0.65	J	1	U	1	U	1	U	1	UJ
trans-1,2-Dichloroethene	µg/L	--	1	U	1	U	1	U	0.96	J	1	U	1.3	J	0.98	J
trans-1,3-Dichloropropene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
Trichloroethene (TCE)	µg/L	5	**23**		0.5	U	0.5	U	**44**	**J**	1.7		**24**	**J**	0.5	UJ
Trichlorofluoromethane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
Vinyl acetate	µg/L	--	2	UJ	2	U	2	U	2	U	2	U	2	U	2	UJ
Vinyl chloride	µg/L	2	**2.4**		1	U	1	U	**24**	**J**	1	U	**28**	**J**	1	UJ
Xylenes, Total	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	UJ
Field Parameters																
pH	pH Units	--	7.05		6.88		6.7		6.2		7.07		6.56		6.79	
Specific Conductivity	mS/cm	--	1.5		0.109		0.594		1		0.638		0.754		0.329	
Turbidity	NTU	--	1.67		7.61		16.1		8.87		4.49		2.49		35.1	
Dissolved Oxygen	mg/L	--	0.63		1.01		0.67		0.71		0.75		2.85		0.48	
Temperature	°C	--	15.9		12.4		14.7		13.7		16		12.5		16	
Oxidation Reduction Potential	mV	--	-142		-102		-102		-71.2		-130		71.9		-145	

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:
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µg/L = microgram per liter
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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.

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Table 7
Groundwater Analytical Results, Fall 2022
2022 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

		Location	G6M-04-10A		G6M-07-01X		G6M-07-02X		G6M-07-02X		G6M-13-01X		G6M-13-02X		G6M-13-02X	
		Sample ID	G6M-04-10A-FAL22		G6M-07-01X-FAL22		AOC50-DUP02-FAL22		G6M-07-02X-FAL22		G6M-13-01X-FAL22		AOC50-DUP03-FAL22		G6M-13-02X-FAL22	
		Area	Area 1 / FDSA		Area 2		Area 1 / FDSA				Area 5		Area 4			
Analyte	Units	Cleanup Goal[1]	10/04/2022		10/07/2022		10/05/2022		10/05/2022		10/12/2022		10/10/2022		10/10/2022	
Dissolved Gases																
Ethane	µg/L	--	16		0.76	U	1.9		1.9		0.57	J	0.33	J	0.76	U
Ethene	µg/L	--	8.4		0.71	U	1.7		2.2		2.7		0.71	U	0.71	U
Methane	µg/L	--	20,000		730		15,000		14,000		910		5,400		5,200	
General Chemistry																
Alkalinity, Total (as CaCO3)	mg/L	--	180		34		120		120		180		110		100	
Nitrate-Nitrite (as N)	mg/L	10	0.025	U	1.3	J	0.025	U	0.025	U	0.025	U	0.025	U	0.028	J
Sulfate	mg/L	--	1.2	J	11		1	U	1	U	7.1		6.3		6.3	
Sulfide	mg/L	--	1.7	U	1.6	U	1.8	U	1.7	U	1.8	U	1.7	U	1.7	UJ
Total Organic Carbon	mg/L	--	13		1.1		140		160		1.9		2.1		2.1	
Metals																
Arsenic	µg/L	10	**270**	**J**	1.3	J	**39**		**35**		**160**		8.8		9.3	
Iron	µg/L	3,129	**80,000**		44	J	**130,000**		**120,000**		**8,000**		700		720	
Manganese	µg/L	1,460	770	J	50		**3,600**		**3,400**		**8,500**		**11,000**		**11,000**	
Volatile Organic Compounds																
1,1,1,2-Tetrachloroethane	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
1,1,1-Trichloroethane	µg/L	--	0.5	U	0.5	U	0.5	UJ	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2,2-Tetrachloroethane	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
1,1,2-Trichloroethane	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
1,1-Dichloroethane	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
1,1-Dichloroethene	µg/L	7	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
1,1-Dichloropropene	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
1,2,3-Trichlorobenzene	µg/L	--	2	U	2	U	2	UJ	2	U	2	U	2	U	2	U
1,2,3-Trichloropropane	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
1,2,4-Trichlorobenzene	µg/L	--	2	U	2	U	2	UJ	2	U	2	U	2	U	2	U
1,2,4-Trimethylbenzene	µg/L	--	2.1		1	U	1.5	J	1.3	J	1	U	1	U	1	U
1,2-Dibromo-3-chloropropane	µg/L	--	5	U	5	UJ	5	UJ	5	U	5	U	5	UJ	5	UJ
1,2-Dibromoethane (EDB)	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
1,2-Dichlorobenzene	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
1,2-Dichloroethane	µg/L	5	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
1,2-Dichloroethene	µg/L	--	1.1	J	1	U	1.4	J	2.1	J	10		4.5		4.6	
1,2-Dichloropropane	µg/L	5	0.5	U	0.5	U	0.5	UJ	0.5	U	0.5	U	0.5	U	0.5	U
1,3,5-Trimethylbenzene	µg/L	--	0.79	J	1	U	0.39	J	0.38	J	1	U	1	U	1	U
1,3-Dichlorobenzene	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
1,3-Dichloropropane	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
1,4-Dichlorobenzene	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
2,2-Dichloropropane	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
2-Butanone (MEK)	µg/L	--	20	U	20	U	7.3	J	8.7	J	20	U	20	U	20	U
2-Chlorotoluene	µg/L	--	0.5	U	0.5	U	0.5	UJ	0.5	U	0.5	U	0.5	U	0.5	U
2-Hexanone	µg/L	--	10	U	10	UJ	10	UJ	10	U	10	U	10	UJ	10	UJ
4-Chlorotoluene	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
4-Methyl-2-pentanone (MIBK)	µg/L	--	10	U	10	UJ	10	UJ	10	U	10	U	10	UJ	10	UJ
Acetone	µg/L	--	10	U	10	UJ	10	UJ	10	U	10	U	10	U	10	U
Benzene	µg/L	5	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
Bromobenzene	µg/L	--	0.5	U	0.5	U	0.5	UJ	0.5	U	0.5	U	0.5	U	0.5	U
Bromochloromethane	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
Bromodichloromethane	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
Bromoform	µg/L	--	2	U	2	U	2	UJ	2	U	2	U	2	U	2	U
Bromomethane	µg/L	--	10	U	10	U	10	UJ	10	U	10	U	10	UJ	10	UJ
Carbon disulfide	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
Carbon Tetrachloride	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
Chlorobenzene	µg/L	--	0.5	U	0.5	U	0.5	UJ	0.5	U	0.5	U	0.5	U	0.5	U
Chloroethane	µg/L	--	10	U	10	U	10	UJ	10	U	10	U	10	U	10	U
Chloroform	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
Chloromethane	µg/L	--	2	U	2	U	2	UJ	2	U	2	U	2	U	2	U
cis-1,2-Dichloroethene	µg/L	70	0.74	J	1	U	1.4	J	2.1	J	10		3.8		3.9	
cis-1,3-Dichloropropene	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
Cumene	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
Dibromochloromethane	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
Dibromomethane	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
Dichlorodifluoromethane	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
Ethylbenzene	µg/L	--	0.5	U	0.5	U	0.3	J	0.27	J	0.5	U	0.5	U	0.5	U
Hexachlorobutadiene	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
m,p-Xylene	µg/L	--	1	U	1	U	0.75	J	0.78	J	1	U	1	U	1	U
Methyl tert-butyl ether (MTBE)	µg/L	--	2	U	2	U	2	UJ	2	U	2	U	2	U	2	U
Methylene chloride	µg/L	5	10	U	10	U	10	UJ	10	U	10	U	10	U	10	U
n-Butylbenzene	µg/L	--	2	U	2	U	1.1	J	0.89	J	2	U	2	U	2	U
n-Propylbenzene	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
Naphthalene	µg/L	--	5	U	5	U	5	J	4.8	J	5	U	5	U	5	U
o-Xylene	µg/L	--	1	U	1	U	0.43	J	0.4	J	1	U	1	U	1	U
p-Cymene (p-Isopropyltoluene)	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
sec-Butylbenzene	µg/L	--	2	U	2	U	2	UJ	2	U	2	U	2	U	2	U
Styrene	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
tert-Butylbenzene	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
Tetrachloroethene (PCE)	µg/L	5	1	U	**14**		1	UJ	1	U	1	U	1.4	J	1.5	J
Toluene	µg/L	--	1	U	1	U	0.58	J	0.61	J	1	U	1	U	1	U
trans-1,2-Dichloroethene	µg/L	--	0.35	J	1	U	1	UJ	1	U	1	U	0.68	J	0.7	J
trans-1,3-Dichloropropene	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
Trichloroethene (TCE)	µg/L	5	0.39	J	0.75	J	0.5	UJ	0.5	U	0.5	U	3		3.1	
Trichlorofluoromethane	µg/L	--	1	U	1	U	1	UJ	1	U	1	U	1	U	1	U
Vinyl acetate	µg/L	--	2	U	2	U	2	UJ	2	U	2	U	2	U	2	U
Vinyl chloride	µg/L	2	1	U	1	U	1	UJ	0.64	J	**3.8**		1	U	1	U
Xylenes, Total	µg/L	--	1	U	1	U	1.2	J	1.2	J	1	U	1	U	1	U
Field Parameters																
pH	pH Units	--	6.58		6.45		---		6.17		6.38		6.64		6.64	
Specific Conductivity	mS/cm	--	0.325		0.665		---		0.442		1.01		0.92		0.92	
Turbidity	NTU	--	7.65		18.8		---		2.45		30.2		4.66		4.66	
Dissolved Oxygen	mg/L	--	1.33		0.99		---		0.68		1.54		0.69		0.69	
Temperature	°C	--	10.8		16.6		---		10.9		17		14.4		14.4	
Oxidation Reduction Potential	mV	--	-86.3		98.8		---		-78.4		-40.4		3.6		3.6	

Notes:
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2022 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

		Location	G6M-13-05X		G6M-13-06X		G6M-97-05B		G6M-02-04X		G6M-02-06X		G6M-02-07X		G6M-02-11X	
		Sample ID	G6M-13-05X-FAL22		G6M-13-06X-FAL22		G6M-97-05B-FAL22		G6M-02-04X-FAL22		G6M-02-06X-FAL22		G6M-02-07X-FAL22		G6M-02-11X-FAL22	
		Area	Area 1		Area 1		Area 5		Area 4		Area 5		Area 5		Area 5	
Analyte	Units	Cleanup Goal[1]	10/03/2022		10/03/2022		10/10/2022		10/06/2022		10/06/2022		10/07/2022		10/06/2022	
Dissolved Gases																
Ethane	µg/L	--	47		11		19		---		---		---		---	
Ethene	µg/L	--	12		3.4		9		---		---		---		---	
Methane	µg/L	--	16,000		16,000		26,000		---		---		---		---	
General Chemistry																
Alkalinity, Total (as CaCO3)	mg/L	--	250		78		170		---		---		---		---	
Nitrate-Nitrite (as N)	mg/L	10	0.025	U	0.025	U	0.025	U	---		---		---		---	
Sulfate	mg/L	--	1	U	1	U	1	U	---		---		---		---	
Sulfide	mg/L	--	1.7	U	1.7	U	1.9	U	---		---		---		---	
Total Organic Carbon	mg/L	--	3.9		69		20		---		---		---		---	
Metals																
Arsenic	µg/L	10	**110**		**360**		**270**		**520**		1.5	J	1.1	J	**610**	
Iron	µg/L	3,129	**68,000**		**160,000**		**62,000**		**47,000**		50	U	**27,000**		**40,000**	
Manganese	µg/L	1,460	**7,100**		1,100		**11,000**		**2,000**		5	U	**1,600**		**9,200**	
Volatile Organic Compounds																
1,1,1,2-Tetrachloroethane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,1,1-Trichloroethane	µg/L	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2,2-Tetrachloroethane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,1,2-Trichloroethane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,1-Dichloroethane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,1-Dichloroethene	µg/L	7	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,1-Dichloropropene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,2,3-Trichlorobenzene	µg/L	--	2	U	2	U	2	U	2	U	2	U	2	U	2	U
1,2,3-Trichloropropane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,2,4-Trichlorobenzene	µg/L	--	2	U	2	U	2	U	2	U	2	U	2	U	2	U
1,2,4-Trimethylbenzene	µg/L	--	1	U	2		1	U	1	U	1	U	1	U	1	U
1,2-Dibromo-3-chloropropane	µg/L	--	5	U	5	U	5	UJ	5	UJ	5	UJ	5	U	5	UJ
1,2-Dibromoethane (EDB)	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,2-Dichlorobenzene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,2-Dichloroethane	µg/L	5	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,2-Dichloroethene	µg/L	--	12		1	U	1.1	J	1	U	1	U	1	U	1	U
1,2-Dichloropropane	µg/L	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,3,5-Trimethylbenzene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,3-Dichlorobenzene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,3-Dichloropropane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,4-Dichlorobenzene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
2,2-Dichloropropane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
2-Butanone (MEK)	µg/L	--	20	U	89		20	U	20	U	20	U	20	U	20	U
2-Chlorotoluene	µg/L	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
2-Hexanone	µg/L	--	10	U	10	U	10	UJ	10	UJ	10	UJ	10	U	10	UJ
4-Chlorotoluene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
4-Methyl-2-pentanone (MIBK)	µg/L	--	10	U	10	U	10	UJ	10	UJ	10	UJ	10	U	10	UJ
Acetone	µg/L	--	10	U	28		10	U	10	UJ	10	UJ	10	U	10	UJ
Benzene	µg/L	5	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Bromobenzene	µg/L	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Bromochloromethane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Bromodichloromethane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Bromoform	µg/L	--	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Bromomethane	µg/L	--	10	U	10	U	10	UJ	10	U	10	U	10	U	10	U
Carbon disulfide	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Carbon Tetrachloride	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Chlorobenzene	µg/L	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Chloroethane	µg/L	--	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Chloroform	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Chloromethane	µg/L	--	2	U	2	U	2	U	2	U	2	U	2	UJ	2	U
cis-1,2-Dichloroethene	µg/L	70	12		1	U	1.1	J	1	U	1	U	1	U	1	U
cis-1,3-Dichloropropene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Cumene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Dibromochloromethane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Dibromomethane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Dichlorodifluoromethane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Ethylbenzene	µg/L	--	0.5	U	0.97	J	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Hexachlorobutadiene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
m,p-Xylene	µg/L	--	1	U	0.56	J	1	U	1	U	1	U	1	U	1	U
Methyl tert-butyl ether (MTBE)	µg/L	--	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Methylene chloride	µg/L	5	10	U	10	U	10	U	10	U	10	U	10	U	10	U
n-Butylbenzene	µg/L	--	2	U	2	U	2	U	2	U	2	U	2	U	2	U
n-Propylbenzene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Naphthalene	µg/L	--	5	U	5	U	5	U	5	U	5	U	5	U	5	U
o-Xylene	µg/L	--	1	U	0.38	J	1	U	1	U	1	U	1	U	1	U
p-Cymene (p-Isopropyltoluene)	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
sec-Butylbenzene	µg/L	--	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Styrene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
tert-Butylbenzene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Tetrachloroethene (PCE)	µg/L	5	**24**		1	U	1	U	1	U	1	U	2		1	U
Toluene	µg/L	--	0.34	J	7.4		1	U	1	U	1	U	1	U	1	U
trans-1,2-Dichloroethene	µg/L	--	0.57	J	1	U	1	U	1	U	1	U	1	U	1	U
trans-1,3-Dichloropropene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Trichloroethene (TCE)	µg/L	5	**12**		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Trichlorofluoromethane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Vinyl acetate	µg/L	--	2	U	2	U	2	U	2	U	2	U	2	UJ	2	U
Vinyl chloride	µg/L	2	**12**		1	U	0.62	J	1	U	1	U	1	U	1	U
Xylenes, Total	µg/L	--	1	U	0.94	J	1	U	1	U	1	U	1	U	1	U
Field Parameters																
pH	pH Units	--	6.93		6.38		6.69		7.15		7.21		7.36		6.8	
Specific Conductivity	mS/cm	--	0.58		0.781		1.13		0.604		0.153		0.408		1.36	
Turbidity	NTU	--	27.8		8.94		6.94		7.58		2.69		2.78		3.9	
Dissolved Oxygen	mg/L	--	1.09		1.04		0.59		0.68		6.2		0.58		0.66	
Temperature	°C	--	13.5		11.5		12.5		18.6		13.1		12.8		12.1	
Oxidation Reduction Potential	mV	--	-110		-57.1		-149		-165		606		580		-141	

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

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ID = identification
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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.

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 2022
2022 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

		Location	G6M-02-12X		G6M-02-13X		G6M-03-08X		G6M-03-10X		G6M-04-01X		G6M-04-04X			
		Sample ID	G6M-02-12X-FAL22		G6M-02-13X-FAL22		G6M-03-08X-FAL22		G6M-03-10X-FAL22		G6M-04-01X-FAL22		AOC50-DUP01-FAL22		G6M-04-04X-FAL22	
		Area	Area 5		Area 4		Area 5		Area 5		Area 2		Area 3			
Analyte	**Units**	**Cleanup Goal[1]**	**10/12/2022**		**10/05/2022**		**10/10/2022**		**10/06/2022**		**10/07/2022**		**10/05/2022**		**10/05/2022**	
Dissolved Gases																
Ethane	µg/L	--	---		---		---		---		---		---		---	
Ethene	µg/L	--	---		---		---		---		---		---		---	
Methane	µg/L	--	---		---		---		---		---		---		---	
General Chemistry																
Alkalinity, Total (as CaCO3)	mg/L	--	---		---		---		---		---		---		---	
Nitrate-Nitrite (as N)	mg/L	10	---		---		---		---		---		---		---	
Sulfate	mg/L	--	---		---		---		---		---		---		---	
Sulfide	mg/L	--	---		---		---		---		---		---		---	
Total Organic Carbon	mg/L	--	---		---		---		---		---		---		---	
Metals																
Arsenic	µg/L	10	**660**		**270**		**270**		**370**		**650**		**560**		**580**	
Iron	µg/L	3,129	**39,000**		**11,000**		2,600		**48,000**		50	U	**91,000**		**91,000**	
Manganese	µg/L	1,460	**6,900**		**19,000**		**8,800**		**2,000**		3.4	J	**11,000**		**11,000**	
Volatile Organic Compounds																
1,1,1,2-Tetrachloroethane	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
1,1,1-Trichloroethane	µg/L	--	0.5	U	0.5	U	0.5	U	0.5	UJ	0.5	UJ	0.5	UJ	0.5	UJ
1,1,2,2-Tetrachloroethane	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
1,1,2-Trichloroethane	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
1,1-Dichloroethane	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
1,1-Dichloroethene	µg/L	7	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
1,1-Dichloropropene	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
1,2,3-Trichlorobenzene	µg/L	--	2	U	2	U	2	U	2	UJ	2	UJ	2	UJ	2	UJ
1,2,3-Trichloropropane	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
1,2,4-Trichlorobenzene	µg/L	--	2	U	2	U	2	U	2	UJ	2	UJ	2	UJ	2	UJ
1,2,4-Trimethylbenzene	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
1,2-Dibromo-3-chloropropane	µg/L	--	5	U	5	U	5	UJ	5	UJ	5	UJ	5	UJ	5	UJ
1,2-Dibromoethane (EDB)	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
1,2-Dichlorobenzene	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
1,2-Dichloroethane	µg/L	5	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
1,2-Dichloroethene	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	0.78	J	1.2	J
1,2-Dichloropropane	µg/L	5	0.5	U	0.5	U	0.5	U	0.5	UJ	0.5	UJ	0.5	UJ	0.5	UJ
1,3,5-Trimethylbenzene	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
1,3-Dichlorobenzene	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
1,3-Dichloropropane	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
1,4-Dichlorobenzene	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
2,2-Dichloropropane	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
2-Butanone (MEK)	µg/L	--	20	U	20	U	20	U	20	UJ	20	UJ	20	UJ	20	UJ
2-Chlorotoluene	µg/L	--	0.5	U	0.5	U	0.5	U	0.5	UJ	0.5	UJ	0.5	UJ	0.5	UJ
2-Hexanone	µg/L	--	10	U	10	U	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
4-Chlorotoluene	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
4-Methyl-2-pentanone (MIBK)	µg/L	--	10	U	10	U	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Acetone	µg/L	--	10	U	10	U	10	U	10	UJ	10	UJ	10	UJ	10	UJ
Benzene	µg/L	5	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
Bromobenzene	µg/L	--	0.5	U	0.5	U	0.5	U	0.5	UJ	0.5	UJ	0.5	UJ	0.5	UJ
Bromochloromethane	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
Bromodichloromethane	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
Bromoform	µg/L	--	2	U	2	U	2	U	2	UJ	2	UJ	2	UJ	2	UJ
Bromomethane	µg/L	--	10	U	10	U	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Carbon disulfide	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
Carbon Tetrachloride	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
Chlorobenzene	µg/L	--	0.5	U	0.5	U	0.5	U	0.5	UJ	0.5	UJ	0.5	UJ	0.5	UJ
Chloroethane	µg/L	--	10	U	10	U	10	U	10	UJ	10	UJ	10	UJ	10	UJ
Chloroform	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
Chloromethane	µg/L	--	2	U	2	U	2	U	2	UJ	2	UJ	2	UJ	2	UJ
cis-1,2-Dichloroethene	µg/L	70	1	U	0.33	J	0.34	J	1	UJ	1	UJ	0.49	J	0.79	J
cis-1,3-Dichloropropene	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
Cumene	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
Dibromochloromethane	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
Dibromomethane	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
Dichlorodifluoromethane	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
Ethylbenzene	µg/L	--	0.5	U	0.5	U	0.5	U	0.5	UJ	0.5	UJ	0.5	UJ	0.5	UJ
Hexachlorobutadiene	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
m,p-Xylene	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
Methyl tert-butyl ether (MTBE)	µg/L	--	2	U	2	J	2	U	2	UJ	2	UJ	2	UJ	2	UJ
Methylene chloride	µg/L	5	10	U	10	U	10	U	10	UJ	10	UJ	10	UJ	10	UJ
n-Butylbenzene	µg/L	--	2	U	2	U	2	U	2	UJ	2	UJ	2	UJ	2	UJ
n-Propylbenzene	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
Naphthalene	µg/L	--	5	U	5	U	5	U	5	UJ	5	UJ	5	UJ	5	UJ
o-Xylene	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
p-Cymene (p-Isopropyltoluene)	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
sec-Butylbenzene	µg/L	--	2	U	2	U	2	U	2	UJ	2	UJ	2	UJ	2	UJ
Styrene	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
tert-Butylbenzene	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
Tetrachloroethene (PCE)	µg/L	5	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
Toluene	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
trans-1,2-Dichloroethene	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	0.38	J
trans-1,3-Dichloropropene	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
Trichloroethene (TCE)	µg/L	5	0.5	U	0.5	U	0.5	U	0.5	UJ	0.5	UJ	0.5	UJ	0.23	J
Trichlorofluoromethane	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
Vinyl acetate	µg/L	--	2	U	2	U	2	U	2	UJ	2	UJ	2	UJ	2	UJ
Vinyl chloride	µg/L	2	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
Xylenes, Total	µg/L	--	1	U	1	U	1	U	1	UJ	1	UJ	1	UJ	1	UJ
Field Parameters																
pH	pH Units	--	7.38		6.46		6.83		6.81		6.62		6.77		6.77	
Specific Conductivity	mS/cm	--	1.07		1.91		0.725		1.43		2.45		1.57		1.57	
Turbidity	NTU	--	20.2		2.57		3.51		3.87		2.49		18.8		18.8	
Dissolved Oxygen	mg/L	--	1.03		1.57		2.59		0.66		0.69		0.74		0.74	
Temperature	°C	--	12.3		16.3		13.3		12.6		16.7		13.4		13.4	
Oxidation Reduction Potential	mV	--	-137		-64.4		-55.3		-145		-80.4		-104		-104	

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

Location		G6M-04-06X		G6M-04-11X		G6M-04-14X		G6M-04-15X		G6M-04-22X		G6M-04-31X		G6M-13-04X	
Sample ID		G6M-04-06X-FAL22		G6M-04-11X-FAL22		G6M-04-14X-FAL22		G6M-04-15X-FAL22		G6M-04-22X-FAL22		G6M-04-31X-FAL22		G6M-13-04X-FAL22	
Area		Area 5		Area 1		Nashua River		Area 1		Area 1		Area 1		Area 5	
Analyte	Units	Cleanup Goal[1]	10/06/2022		10/05/2022		10/04/2022		10/12/2022		10/10/2022		10/10/2022		10/12/2022	
Dissolved Gases																
Ethane	µg/L	--	---		---		---		---		---		---		---	
Ethene	µg/L	--	---		---		---		---		---		---		---	
Methane	µg/L	--	---		---		---		---		---		---		---	
General Chemistry																
Alkalinity, Total (as CaCO3)	mg/L	--	---		---		---		---		---		---		---	
Nitrate-Nitrite (as N)	mg/L	10	---		---		---		---		---		---		---	
Sulfate	mg/L	--	---		---		---		---		---		---		---	
Sulfide	mg/L	--	---		---		---		---		---		---		---	
Total Organic Carbon	mg/L	--	---		---		---		---		---		---		---	
Metals																
Arsenic	µg/L	10	3	U	3	U	9.7		**95**		**720**		**330**		**580**	
Iron	µg/L	3,129	50	U	50	U	26	J	**7,200**		**110,000**		**77,000**		**68,000**	
Manganese	µg/L	1,460	53		5	U	6.8	J	1,000		920		**5,200**		**8,100**	
Volatile Organic Compounds																
1,1,1,2-Tetrachloroethane	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
1,1,1-Trichloroethane	µg/L	--	0.5	U	0.5	U	0.5	U	0.5	UJ	0.5	U	0.5	U	0.5	U
1,1,2,2-Tetrachloroethane	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
1,1,2-Trichloroethane	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
1,1-Dichloroethane	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
1,1-Dichloroethene	µg/L	7	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
1,1-Dichloropropene	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
1,2,3-Trichlorobenzene	µg/L	--	2	U	2	U	2	U	2	UJ	2	U	2	U	2	U
1,2,3-Trichloropropane	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
1,2,4-Trichlorobenzene	µg/L	--	2	U	2	U	2	U	2	UJ	2	U	2	U	2	U
1,2,4-Trimethylbenzene	µg/L	--	1	U	1	U	1	U	1	UJ	0.55	J	1	U	1	U
1,2-Dibromo-3-chloropropane	µg/L	--	5	UJ	5	U	5	U	5	UJ	5	UJ	5	UJ	5	U
1,2-Dibromoethane (EDB)	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
1,2-Dichlorobenzene	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
1,2-Dichloroethane	µg/L	5	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
1,2-Dichloroethene	µg/L	--	1	U	1	U	1	U	1.2	J	1.4	J	1	U	1.2	J
1,2-Dichloropropane	µg/L	5	0.5	U	0.5	U	0.5	U	0.5	UJ	0.5	U	0.5	U	0.5	U
1,3,5-Trimethylbenzene	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
1,3-Dichlorobenzene	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
1,3-Dichloropropane	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
1,4-Dichlorobenzene	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
2,2-Dichloropropane	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
2-Butanone (MEK)	µg/L	--	20	U	20	U	20	U	20	UJ	20	U	20	U	20	U
2-Chlorotoluene	µg/L	--	0.5	U	0.5	U	0.5	U	0.5	UJ	0.5	U	0.5	U	0.5	U
2-Hexanone	µg/L	--	10	UJ	10	U	10	U	10	UJ	10	UJ	10	UJ	10	U
4-Chlorotoluene	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
4-Methyl-2-pentanone (MIBK)	µg/L	--	10	UJ	10	U	10	U	10	UJ	10	UJ	10	UJ	10	U
Acetone	µg/L	--	10	UJ	10	U	10	U	10	UJ	10	U	10	U	10	U
Benzene	µg/L	5	1	U	1	U	1	U	0.38	J	1	U	1	U	1	U
Bromobenzene	µg/L	--	0.5	U	0.5	U	0.5	U	0.5	UJ	0.5	U	0.5	U	0.5	U
Bromochloromethane	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
Bromodichloromethane	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
Bromoform	µg/L	--	2	U	2	U	2	U	2	UJ	2	U	2	U	2	U
Bromomethane	µg/L	--	10	U	10	U	10	U	10	UJ	10	UJ	10	UJ	10	U
Carbon disulfide	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
Carbon Tetrachloride	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
Chlorobenzene	µg/L	--	0.5	U	0.5	U	0.5	U	0.5	UJ	0.5	U	0.5	U	0.5	U
Chloroethane	µg/L	--	10	U	10	U	10	U	10	UJ	10	U	10	U	10	U
Chloroform	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
Chloromethane	µg/L	--	2	U	2	U	2	U	2	UJ	2	U	2	U	2	U
cis-1,2-Dichloroethene	µg/L	70	1	U	1	U	1	U	1.2	J	1.4	J	1	U	1.2	J
cis-1,3-Dichloropropene	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
Cumene	µg/L	--	1	U	1	U	1	U	0.56	J	1	U	1	U	1	U
Dibromochloromethane	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
Dibromomethane	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
Dichlorodifluoromethane	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
Ethylbenzene	µg/L	--	0.5	U	0.5	U	0.5	U	0.5	UJ	0.55	J	0.5	U	0.5	U
Hexachlorobutadiene	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
m,p-Xylene	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
Methyl tert-butyl ether (MTBE)	µg/L	--	2	U	2	U	2	U	2	UJ	2	U	2	U	2	U
Methylene chloride	µg/L	5	10	U	10	U	10	U	10	UJ	10	U	10	U	10	U
n-Butylbenzene	µg/L	--	2	U	2	U	2	U	2	UJ	2	U	2	U	2	U
n-Propylbenzene	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
Naphthalene	µg/L	--	5	U	5	U	5	U	5	UJ	5	U	5	U	5	U
o-Xylene	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
p-Cymene (p-Isopropyltoluene)	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
sec-Butylbenzene	µg/L	--	2	U	2	U	2	U	2	UJ	2	U	2	U	2	U
Styrene	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
tert-Butylbenzene	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
Tetrachloroethene (PCE)	µg/L	5	0.52	J	1	U	0.54	J	0.43	J	1	U	1	U	1	U
Toluene	µg/L	--	1	U	0.45	J	1	U	1	UJ	7.5		1	U	1	U
trans-1,2-Dichloroethene	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
trans-1,3-Dichloropropene	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
Trichloroethene (TCE)	µg/L	5	0.5	U	0.5	U	0.29	J	0.7	J	0.5	U	0.23	J	0.5	U
Trichlorofluoromethane	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
Vinyl acetate	µg/L	--	2	U	2	U	2	U	2	UJ	2	U	2	U	2	U
Vinyl chloride	µg/L	2	1	U	1	U	1	U	1	UJ	1	U	1	U	0.83	J
Xylenes, Total	µg/L	--	1	U	1	U	1	U	1	UJ	1	U	1	U	1	U
Field Parameters																
pH	pH Units	--	6.57		6.31		8.37		6.39		6.15		6.52		6.86	
Specific Conductivity	mS/cm	--	0.215		0.168		0.572		1.25		0.947		1.61		1.2	
Turbidity	NTU	--	7.88		1.36		5.6		2.21		11.9		2.01		1.24	
Dissolved Oxygen	mg/L	--	1.35		7.75		1.37		0.6		0.64		0.6		0.76	
Temperature	°C	--	12		13.4		13.4		11.8		11.4		11.8		16.8	
Oxidation Reduction Potential	mV	--	225.9		578		-61.5		-50.7		-60.9		-119		-125	

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.

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 2022
2022 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

		Location	G6M-95-20X		G6M-97-28X	MW-3	MW-7	XSA-12-95X	XSA-12-96X
		Sample ID	AOC50-DUP04-FAL22	G6M-95-20X-FAL22	G6M-97-28X-FAL22	MW-3-FAL22	MW-7-FAL22	XSA-12-95X-FAL22	XSA-12-96X-FAL22
		Area	Area 1		Area 4	Area 5	Area 5	Area 5	Area 5
Analyte	Units	Cleanup Goal[1]	10/04/2022	10/04/2022	10/06/2022	10/06/2022	10/06/2022	10/06/2022	10/07/2022
Dissolved Gases									
Ethane	µg/L	--	---	---	---	---	---	---	---
Ethene	µg/L	--	---	---	---	---	---	---	---
Methane	µg/L	--	---	---	---	---	---	---	---
General Chemistry									
Alkalinity, Total (as CaCO3)	mg/L	--	---	---	---	---	---	---	---
Nitrate-Nitrite (as N)	mg/L	10	---	---	---	---	---	---	---
Sulfate	mg/L	--	---	---	---	---	---	---	---
Sulfide	mg/L	--	---	---	---	---	---	---	---
Total Organic Carbon	mg/L	--	---	---	---	---	---	---	---
Metals									
Arsenic	µg/L	10	**32**	**32**	**70**	**650**	**130**	1.9 J	1.7 J
Iron	µg/L	3,129	3,000	3,000	**4,300**	**42,000**	**8,600**	1,600	1,900
Manganese	µg/L	1,460	210	220	**5,000**	**8,200**	**13,000**	**12,000**	**5,200**
Volatile Organic Compounds									
1,1,1,2-Tetrachloroethane	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
1,1,1-Trichloroethane	µg/L	--	0.5 U	0.5 U	---	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
1,1-Dichloroethane	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
1,1-Dichloroethene	µg/L	7	1 U	1 U	---	1 U	1 U	1 U	1 U
1,1-Dichloropropene	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
1,2,3-Trichlorobenzene	µg/L	--	2 U	2 U	---	2 U	2 U	2 U	2 U
1,2,3-Trichloropropane	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	µg/L	--	2 U	2 U	---	2 U	2 U	2 U	2 U
1,2,4-Trimethylbenzene	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
1,2-Dibromo-3-chloropropane	µg/L	--	5 U	5 U	---	5 UJ	5 UJ	5 UJ	5 U
1,2-Dibromoethane (EDB)	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
1,2-Dichloroethane	µg/L	5	1 U	1 U	---	1 U	1 U	1 U	1 U
1,2-Dichloroethene	µg/L	--	1 U	1 U	---	1 U	3.1	2.2	7.2
1,2-Dichloropropane	µg/L	5	0.5 U	0.5 U	---	0.5 U	0.5 U	0.5 U	0.5 U
1,3,5-Trimethylbenzene	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
1,3-Dichloropropane	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
2,2-Dichloropropane	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
2-Butanone (MEK)	µg/L	--	20 U	20 U	---	20 U	20 U	20 U	20 U
2-Chlorotoluene	µg/L	--	0.5 U	0.5 U	---	0.5 U	0.5 U	0.5 U	0.5 U
2-Hexanone	µg/L	--	10 U	10 U	---	10 UJ	10 UJ	10 UJ	10 U
4-Chlorotoluene	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
4-Methyl-2-pentanone (MIBK)	µg/L	--	10 U	10 U	---	10 UJ	10 UJ	10 UJ	10 U
Acetone	µg/L	--	10 U	10 U	---	10 UJ	10 UJ	10 UJ	10 U
Benzene	µg/L	5	1 U	1 U	---	1 U	1 U	1 U	1 U
Bromobenzene	µg/L	--	0.5 U	0.5 U	---	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
Bromodichloromethane	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
Bromoform	µg/L	--	2 U	2 U	---	2 U	2 U	2 U	2 U
Bromomethane	µg/L	--	10 U	10 U	---	10 U	10 U	10 U	10 U
Carbon disulfide	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
Carbon Tetrachloride	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
Chlorobenzene	µg/L	--	0.5 U	0.5 U	---	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	µg/L	--	10 U	10 U	---	10 U	10 U	10 U	10 U
Chloroform	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
Chloromethane	µg/L	--	2 U	2 U	---	2 U	2 U	2 U	2 UJ
cis-1,2-Dichloroethene	µg/L	70	1 U	1 U	---	0.31 J	3.1	1.5 J	4.5
cis-1,3-Dichloropropene	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
Cumene	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
Dibromochloromethane	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
Dibromomethane	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
Ethylbenzene	µg/L	--	0.5 U	0.5 U	---	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
m,p-Xylene	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
Methyl tert-butyl ether (MTBE)	µg/L	--	2 U	2 U	---	2 U	2 U	2 U	2 U
Methylene chloride	µg/L	5	10 U	10 U	---	10 U	10 U	10 U	10 U
n-Butylbenzene	µg/L	--	2 U	2 U	---	2 U	2 U	2 U	2 U
n-Propylbenzene	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
Naphthalene	µg/L	--	5 U	5 U	---	5 U	5 U	5 U	5 U
o-Xylene	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
p-Cymene (p-Isopropyltoluene)	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
sec-Butylbenzene	µg/L	--	2 U	2 U	---	2 U	2 U	2 U	2 U
Styrene	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
tert-Butylbenzene	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
Tetrachloroethene (PCE)	µg/L	5	0.41 J	0.49 J	---	1 U	1 U	0.63 J	1.4 J
Toluene	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	µg/L	--	1 U	1 U	---	1 U	1 U	0.65 J	2.8
trans-1,3-Dichloropropene	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
Trichloroethene (TCE)	µg/L	5	0.5 U	0.2 J	---	0.5 U	0.63 J	0.77 J	4.2
Trichlorofluoromethane	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
Vinyl acetate	µg/L	--	2 U	2 U	---	2 U	2 U	2 U	2 UJ
Vinyl chloride	µg/L	2	1 U	1 U	---	0.4 J	**2.7**	1 U	**4**
Xylenes, Total	µg/L	--	1 U	1 U	---	1 U	1 U	1 U	1 U
Field Parameters									
pH	pH Units	--	6.38	6.38	6.77	6.9	6.68	6.95	6.87
Specific Conductivity	mS/cm	--	0.133	0.133	0.528	0.804	0.711	1.383	1.4
Turbidity	NTU	--	3.18	3.18	7.49	2.81	4.12	107.09	59.86
Dissolved Oxygen	mg/L	--	1.35	1.35	0.76	0.81	0.84	1.15	0.97
Temperature	°C	--	13.6	13.6	14.7	19.3	21.9	12.7	12.8
Oxidation Reduction Potential	mV	--	56.7	56.7	-94.6	-129.3	-89.9	-45.4	-63.6

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

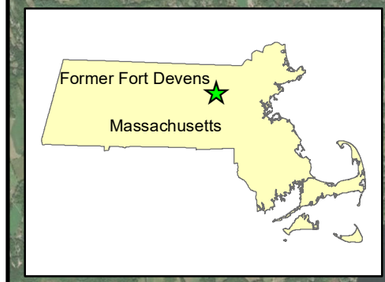
		Location	XSA-12-97X		XSA-12-98X		G6M-04-05X		G6M-04-10X		G6M-04-13X		G6M-13-03X		G6M-95-19X	
		Sample ID	XSA-12-97X-FAL22		XSA-12-98X-FAL22		G6M-04-05X-FAL22		G6M-04-10X-FAL22		G6M-04-13X-FAL22		G6M-13-03X-FAL22		G6M-95-19X-FAL22	
		Area	Area 5		Area 5		Area 5		Area 1 / FDSA		Area 1 / FDSA		Area 3		Area 1	
Analyte	**Units**	**Cleanup Goal[1]**	**10/07/2022**		**10/07/2022**		**10/10/2022**		**10/04/2022**		**10/04/2022**		**10/10/2022**		**10/04/2022**	
Dissolved Gases																
Ethane	µg/L	--	---		---		---		---		---		---		---	
Ethene	µg/L	--	---		---		---		---		---		---		---	
Methane	µg/L	--	---		---		---		---		---		---		---	
General Chemistry																
Alkalinity, Total (as CaCO3)	mg/L	--	---		---		---		---		---		---		---	
Nitrate-Nitrite (as N)	mg/L	10	---		---		---		---		---		---		---	
Sulfate	mg/L	--	---		---		---		---		---		---		---	
Sulfide	mg/L	--	---		---		---		---		---		---		---	
Total Organic Carbon	mg/L	--	---		---		---		---		---		---		---	
Metals																
Arsenic	µg/L	10	**200**		3	U	---		---		---		---		---	
Iron	µg/L	3,129	**7,600**		71	J	---		---		---		---		---	
Manganese	µg/L	1,460	**10,000**		4.1	J	---		---		---		---		---	
Volatile Organic Compounds																
1,1,1,2-Tetrachloroethane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,1,1-Trichloroethane	µg/L	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2,2-Tetrachloroethane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,1,2-Trichloroethane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,1-Dichloroethane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,1-Dichloroethene	µg/L	7	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,1-Dichloropropene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,2,3-Trichlorobenzene	µg/L	--	2	U	2	U	2	U	2	U	2	U	2	U	2	U
1,2,3-Trichloropropane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,2,4-Trichlorobenzene	µg/L	--	2	U	2	U	2	U	2	U	2	U	2	U	2	U
1,2,4-Trimethylbenzene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,2-Dibromo-3-chloropropane	µg/L	--	5	U	5	U	5	UJ	5	U	5	U	5	UJ	5	U
1,2-Dibromoethane (EDB)	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,2-Dichlorobenzene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,2-Dichloroethane	µg/L	5	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,2-Dichloroethene	µg/L	--	0.39	J	1	U	1	U	1	U	1	U	1	U	1	U
1,2-Dichloropropane	µg/L	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,3,5-Trimethylbenzene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,3-Dichlorobenzene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,3-Dichloropropane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,4-Dichlorobenzene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
2,2-Dichloropropane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
2-Butanone (MEK)	µg/L	--	20	U	20	U	20	U	20	U	20	U	20	U	20	U
2-Chlorotoluene	µg/L	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
2-Hexanone	µg/L	--	10	U	10	U	10	UJ	10	U	10	U	10	UJ	10	U
4-Chlorotoluene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
4-Methyl-2-pentanone (MIBK)	µg/L	--	10	U	10	U	10	UJ	10	U	10	U	10	UJ	10	U
Acetone	µg/L	--	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Benzene	µg/L	5	0.69	J	1	U	1	U	1	U	1	U	1	U	1	U
Bromobenzene	µg/L	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Bromochloromethane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Bromodichloromethane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Bromoform	µg/L	--	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Bromomethane	µg/L	--	10	U	10	U	10	UJ	10	U	10	U	10	UJ	10	U
Carbon disulfide	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Carbon Tetrachloride	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Chlorobenzene	µg/L	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Chloroethane	µg/L	--	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Chloroform	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Chloromethane	µg/L	--	2	UJ	2	UJ	2	U	2	U	2	U	2	U	2	U
cis-1,2-Dichloroethene	µg/L	70	0.39	J	1	U	1	U	1	U	1	U	1	U	1	U
cis-1,3-Dichloropropene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Cumene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Dibromochloromethane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Dibromomethane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Dichlorodifluoromethane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Ethylbenzene	µg/L	--	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Hexachlorobutadiene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
m,p-Xylene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Methyl tert-butyl ether (MTBE)	µg/L	--	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Methylene chloride	µg/L	5	10	U	10	U	10	U	10	U	10	U	10	U	10	U
n-Butylbenzene	µg/L	--	2	U	2	U	2	U	2	U	2	U	2	U	2	U
n-Propylbenzene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Naphthalene	µg/L	--	5	U	5	U	5	U	5	U	5	U	5	U	5	U
o-Xylene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
p-Cymene (p-Isopropyltoluene)	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
sec-Butylbenzene	µg/L	--	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Styrene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
tert-Butylbenzene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Tetrachloroethene (PCE)	µg/L	5	1	U	3.4		1	U	0.36	J	1	U	1	U	1.4	J
Toluene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
trans-1,2-Dichloroethene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
trans-1,3-Dichloropropene	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Trichloroethene (TCE)	µg/L	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Trichlorofluoromethane	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Vinyl acetate	µg/L	--	2	UJ	2	UJ	2	U	2	U	2	U	2	U	2	U
Vinyl chloride	µg/L	2	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Xylenes, Total	µg/L	--	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Field Parameters																
pH	pH Units	--	7.07		7.85		6.74		6.24		7.16		5.63		5.69	
Specific Conductivity	mS/cm	--	0.985		0.347		0.258		1.26		0.074		1.63		2.73	
Turbidity	NTU	--	102.56		2.8		5.3		1.28		2.33		2.25		0.35	
Dissolved Oxygen	mg/L	--	0.81		0.7		2.28		0.72		0.75		1.09		3.61	
Temperature	°C	--	15.6		13.1		11.8		11.8		11.8		14		12.8	
Oxidation Reduction Potential	mV	--	-120		423		136		31.9		-107		205		224	

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.

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

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Devens, Massachusetts

Site Location

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

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Site Layout

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

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Area of Contamination 50
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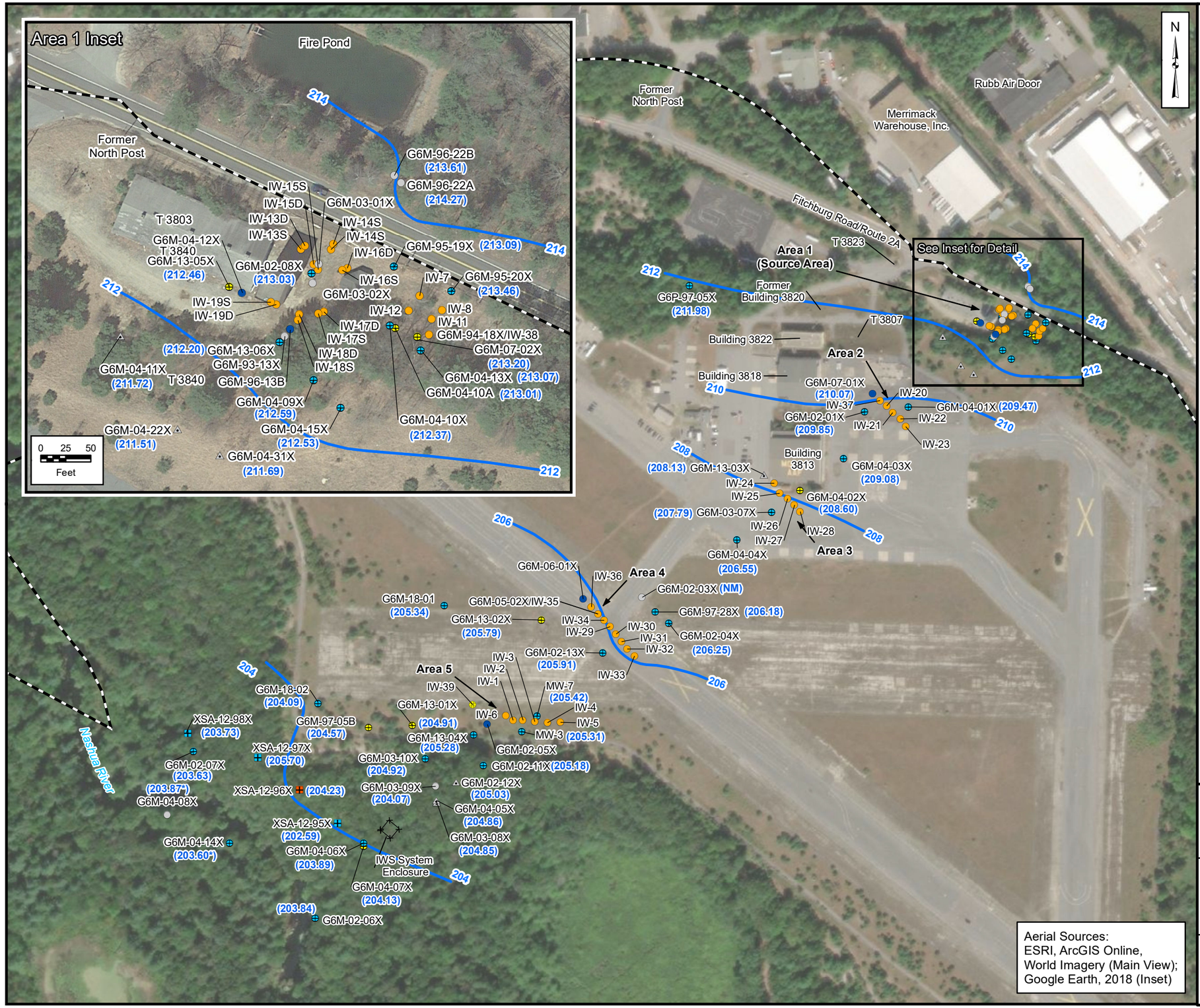
Devens, Massachusetts

Site Layout
Source Area

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-04-14X, and XSA-12-97X 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

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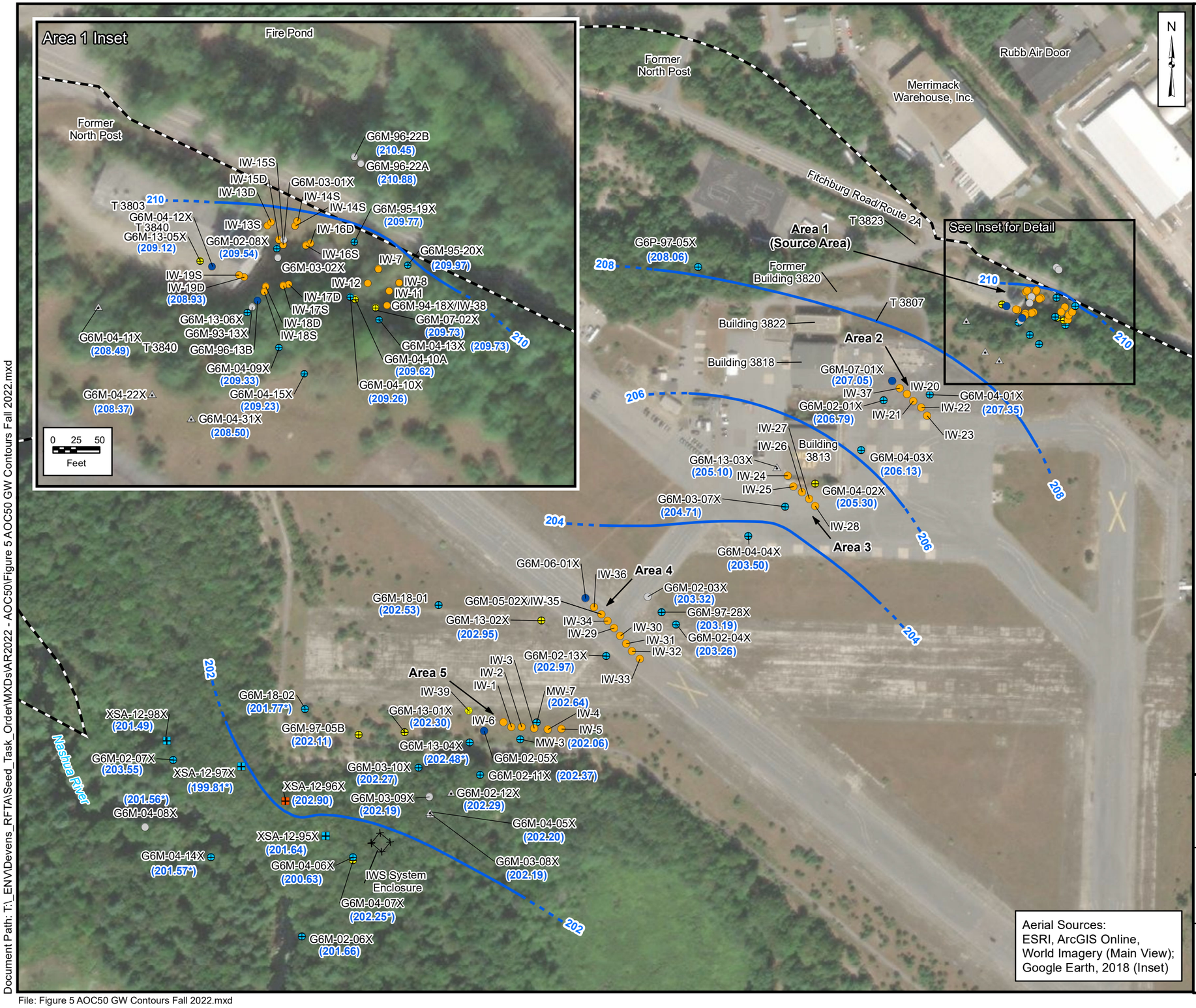
Groundwater Contour Map - Spring 2022

Figure 4

File: Figure 4 - AOC50 GW Contours Spring 2022_V1.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)

Notes:
1. G6M-02-07X, G6M-18-02, G6M-04-08X, G6M-04-14X, G6M-04-07X, and XSA-12-97X 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

0 200 400
Feet

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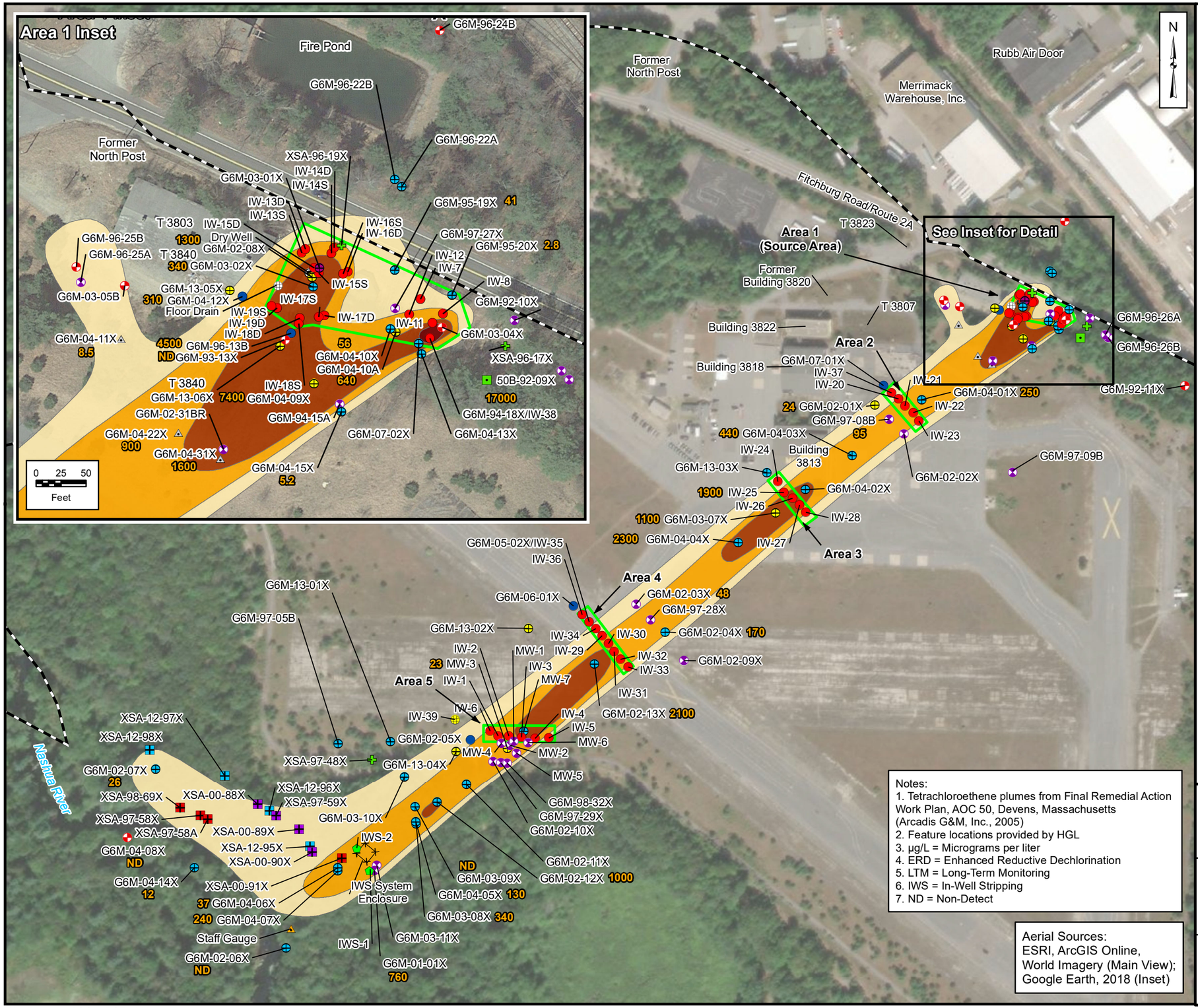
Groundwater Contour Map - Fall 2022

Figure 5

Document Path: T:_ENV\Devens_RFTA\Seed_Task_Order\MXDs\AR2022 - AOC50\Figure 5 AOC50 GW Contours Fall 2022.mxd

File: Figure 5 AOC50 GW Contours Fall 2022.mxd



Legend

- Former Fort Devens Boundary
- ERD LTM Well - Sampled Semi-Annually
- ERD LTM Well - Sampled Annually
- ERD LTM Well - Sampled Biennially
- ERD LTM Well - Sampled Every 3 Years
- LTM Well - Gauge Only
- Monitoring Well
- Monitoring Well Converted to Injection Well
- In-Well Stripping System Well
- MicroWell - Sampled Annually
- MicroWell - Gauge Only
- MicroWell
- Injection Well Installed Prior to 01/2014
- Staff Gauge
- Historical Vertical Groundwater Profiling Location
- Historical Soil Boring
- Injection Well Installed 01/2014
- Dry Well
- Floor Drain
- ERD Injection Well Transect

Interpretive Tetrachloroethene (PCE) Plumes

- 5 - 100 (µg/L)
- 100 - 1,000 (µg/L)
- 1000 - 10,000 (µg/L)
- > 10,000 (µg/L)

1.7 Tetrachloroethene (PCE) Concentration (µg/L)

Notes:
1. Tetrachloroethene plumes from Final Remedial Action Work Plan, AOC 50, Devens, Massachusetts (Arcadis G&M, Inc., 2005)
2. Feature locations provided by HGL
3. µg/L = Micrograms per liter
4. ERD = Enhanced Reductive Dechlorination
5. LTM = Long-Term Monitoring
6. IWS = In-Well Stripping
7. ND = Non-Detect

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

2022 Annual Operations, Maintenance, and Monitoring Report
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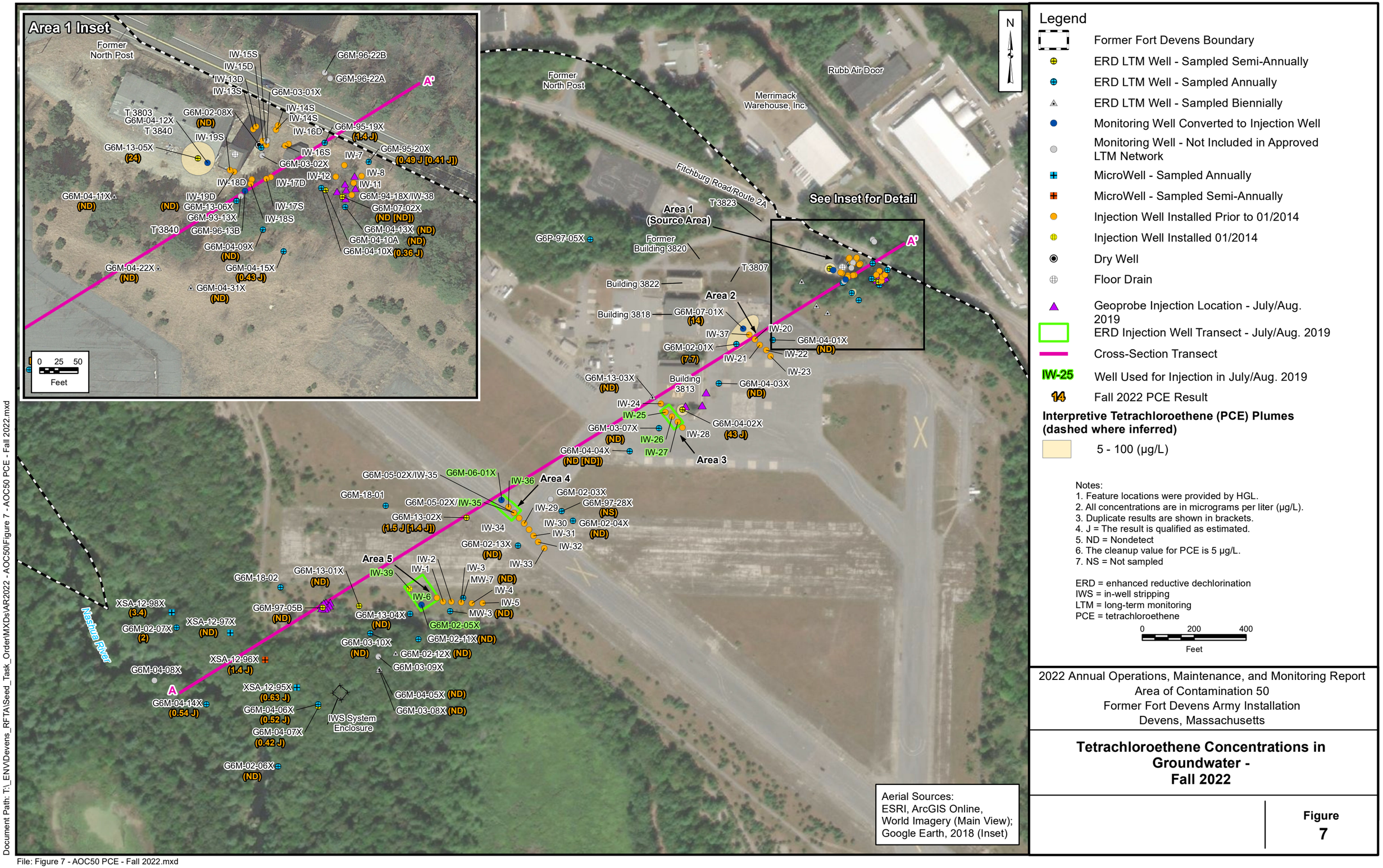
Devens, Massachusetts

Tetrachloroethene Concentrations in Groundwater - Fall 2004

Figure 6

File: Figure 4 - AOC50 PCE - 2004 v2.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
- Dry Well
- Floor Drain
- Geoprobe Injection Location - July/Aug. 2019
- ERD Injection Well Transect - July/Aug. 2019
- Cross-Section Transect
- IW-25 — Well Used for Injection in July/Aug. 2019
- 14 — Fall 2022 PCE Result

Interpretive Tetrachloroethene (PCE) Plumes (dashed where inferred)

- 5 - 100 (µg/L)

Notes:
1. Feature locations were provided by HGL.
2. All concentrations are in micrograms per liter (µg/L).
3. Duplicate results are shown in brackets.
4. J = The result is qualified as estimated.
5. ND = Nondetect
6. The cleanup value for PCE is 5 µg/L.
7. NS = Not sampled

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

0 200 400
Feet

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

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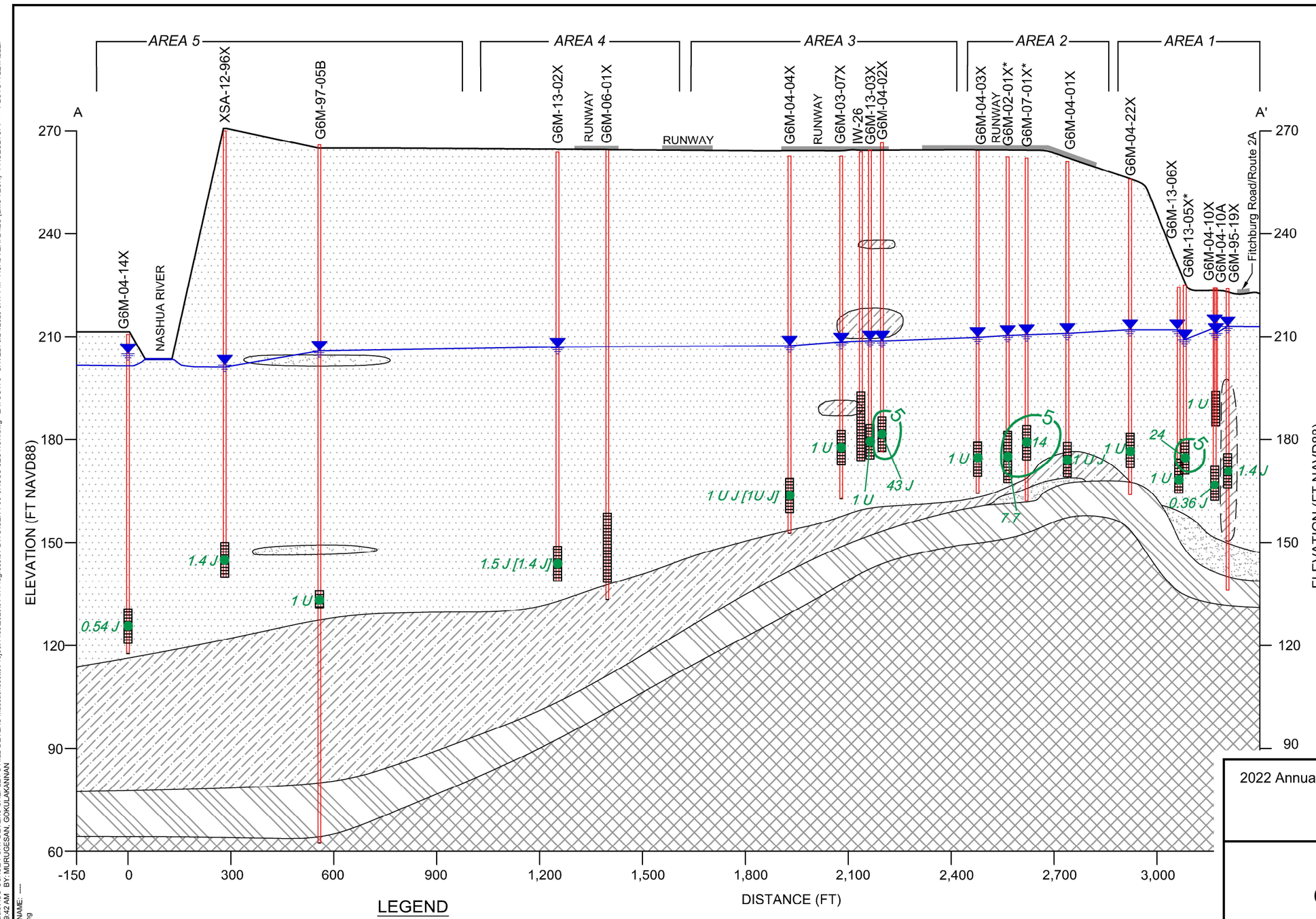
Devens, Massachusetts

Tetrachloroethene Concentrations in Groundwater - Fall 2022

Figure 7

Document Path: T:_ENV\Devens_RFTA\Seed_Task_Order\MXDs\AR2022 - AOC50\Figure 7 - AOC50 PCE - Fall 2022.mxd

File: Figure 7 - AOC50 PCE - Fall 2022.mxd



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. NS = Not Sampled
7. * = Well Location Projected Against Cross-Section Transect Ground Surface; Slight Differences Observed.
8. 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.
9. 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 (2022)
- WELL SCREEN INTERVAL
- BORING
- G6M-13-02X BORING/WELL IDENTIFICATION
- 14 TETRACHLOROETHENE SAMPLE CONCENTRATION (µg/L)
- 2022 TETRACHLOROETHENE CONTOUR (µg/L)

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Devens, Massachusetts

CROSS-SECTION A-A'

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*
C:\Users\murugesg5893\ACCDocs\Arcadis\US-USACE-FORT DEVENS-SHEP...EY'S HILL-DEVENS Massachusetts\Project Files\2022\01-In Progress\01-DWG\GEN-F06-CROSS SECTION.dwg LAYOUT: 8 SAVED: 8/24/2023 6:17 PM ACADVER: 24.2S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE:
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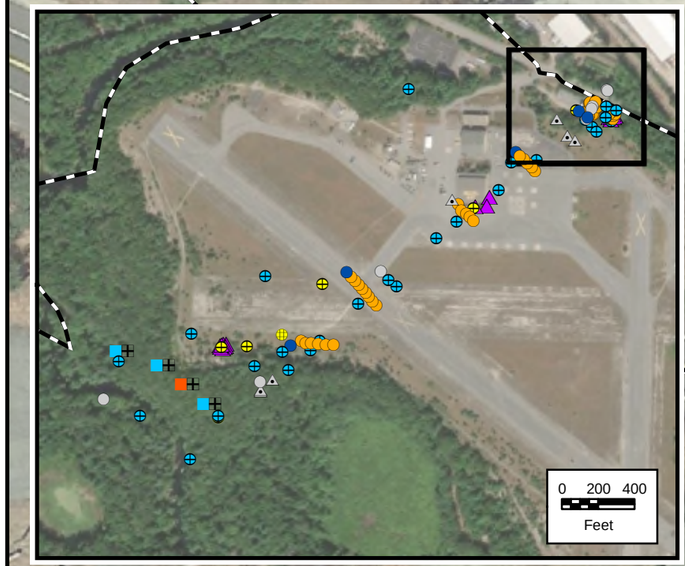


N

Fitchburg Road/Route 2A

Area 1
(Source Area)

G6M-02-08X	
Date	10/04/2022
PCE	1 U
TCE	0.5 U
cis-1,2-DCE	0.91 J
VC	1 U
Ethene	0.71 U
Ethane	3.4
Methane	28000
TOC	15
DO	1.01
ORP	-102

G6M-95-19X	
Date	10/04/2022
PCE	1.4 J
TCE	0.5 U
cis-1,2-DCE	1 U
VC	1 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS
DO	3.61
ORP	224

G6M-04-10X	
Date	10/04/2022
PCE	0.36 J
TCE	0.5 U
cis-1,2-DCE	1 U
VC	1 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS
DO	0.72
ORP	31.9

G6M-04-10A	
Date	10/04/2022
PCE	1 U
TCE	0.39 J
cis-1,2-DCE	0.74 J
VC	1 U
Ethene	8.4
Ethane	16
Methane	20000
TOC	13
DO	1.33
ORP	-86.3

G6M-13-05X	
Date	10/03/2022
PCE	**24**
TCE	**12**
cis-1,2-DCE	12
VC	**12**
Ethene	12
Ethane	47
Methane	16000
TOC	3.9
DO	1.09
ORP	-110

G6M-04-11X	
Date	10/05/2022
PCE	1 U
TCE	0.5 U
cis-1,2-DCE	1 U
VC	1 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS
DO	7.75
ORP	578

G6M-95-20X	
Date	10/04/2022
PCE	0.49 J (0.41 J)
TCE	0.2 J (0.5 U)
cis-1,2-DCE	1 U (1 U)
VC	1 U (1 U)
Ethene	NS (NS)
Ethane	NS (NS)
Methane	NS (NS)
TOC	NS (NS)
DO	1.35 (1.35)
ORP	56.7 (56.7)

G6M-07-02X	
Date	10/05/2022
PCE	1 U (1 UJ)
TCE	0.5 U (0.5 UJ)
cis-1,2-DCE	2.1 J (1.4 J)
VC	0.64 J (1 UJ)
Ethene	2.2 (1.7)
Ethane	1.9 (1.9)
Methane	14000 (15000)
TOC	160 (140)
DO	0.68 (0.68)
ORP	-78.4 (-78.4)

G6M-13-06X	
Date	10/03/2022
PCE	1 U
TCE	0.5 U
cis-1,2-DCE	1 U
VC	1 U
Ethene	3.4
Ethane	11
Methane	16000
TOC	69
DO	1.04
ORP	-57.1

G6M-04-22X	
Date	10/10/2022
PCE	1 U
TCE	0.5 U
cis-1,2-DCE	1.4 J
VC	1 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS
DO	0.64
ORP	-60.9

G6M-04-13X	
Date	10/04/2022
PCE	1 U
TCE	0.5 U
cis-1,2-DCE	1 U
VC	1 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS
DO	0.75
ORP	-107

G6M-04-31X	
Date	10/10/2022
PCE	1 U
TCE	0.23 J
cis-1,2-DCE	1 U
VC	1 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS
DO	0.6
ORP	-119

G6M-04-09X	
Date	10/12/2022
PCE	1 UJ
TCE	0.5 UJ
cis-1,2-DCE	0.94 J
VC	1 UJ
Ethene	3
Ethane	3.3
Methane	15000
TOC	7.1
DO	0.48
ORP	-145

G6M-04-15X	
Date	10/12/2022
PCE	0.43 J
TCE	0.7 J
cis-1,2-DCE	1.2 J
VC	1 UJ
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS
DO	0.6
ORP	-50.7

Aerial Source: Google Earth, 2018

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. 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
LTM = long-term monitoring
PCE = tetrachloroethene
TCE = trichloroethene
TOC = total organic carbon
VC = vinyl chloride
DO = dissolved oxygen
ORP = oxidation reduction potential

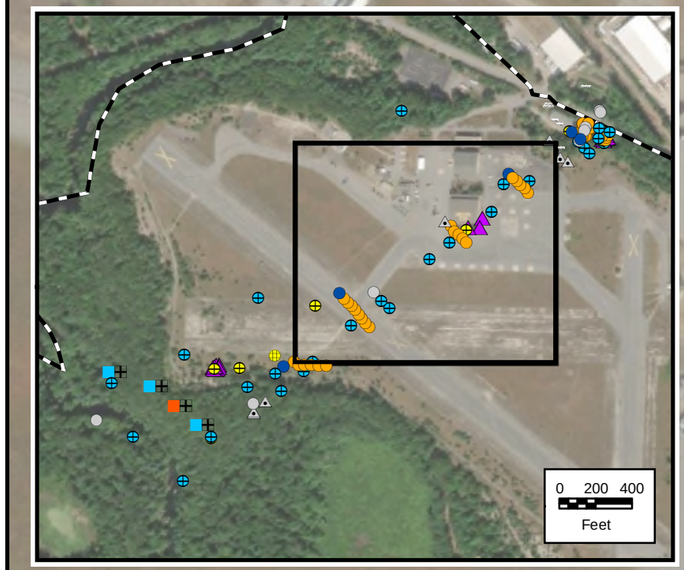
0 100 200
Feet

2022 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50
Former Fort Devens Army Installation
Devens, Massachusetts

CVOC and Biogeochemical Data - Fall 2022, Area 1

Figure 9

Document Path: T:_ENV\Devens_RFTA\Seed_Task_Order\MXDs\AR2022 - AOC50\Figure 9 - CVOC and Biogeochemical Data - Fall 2022 - Area 1.mxd



N

Building 3818

Building 3813

MOORE AAF

Area 2

Area 3

Area 4

G6M-07-01X	
Date	10/07/2022
PCE	**14**
TCE	0.75 J
cis-1,2-DCE	1 U
VC	1 U
Ethene	0.71 U
Ethane	0.76 U
Methane	730
TOC	1.1
DO	0.99
ORP	98.8

G6M-02-01X	
Date	10/07/2022
PCE	**7.7**
TCE	**23**
cis-1,2-DCE	3.7
VC	**2.4**
Ethene	18
Ethane	1.1
Methane	29000
TOC	2.4
DO	0.63
ORP	-142

G6M-04-01X	
Date	10/07/2022
PCE	1 UJ
TCE	0.5 UJ
cis-1,2-DCE	1 UJ
VC	1 UJ
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS
DO	0.69
ORP	-80.4

G6M-13-03X	
Date	10/10/2022
PCE	1 U
TCE	0.5 U
cis-1,2-DCE	1 U
VC	1 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS
DO	1.09
ORP	205

G6M-04-04X	
Date	10/05/2022
PCE	1 UJ (1 UJ)
TCE	0.23 J (0.5 UJ)
cis-1,2-DCE	0.79 J (0.49 J)
VC	1 UJ (1 UJ)
Ethene	NS (NS)
Ethane	NS (NS)
Methane	NS (NS)
TOC	NS (NS)
DO	0.74 (0.74)
ORP	-104 (-104)

G6M-04-02X	
Date	10/05/2022
PCE	**43 J**
TCE	**44 J**
cis-1,2-DCE	**100 J**
VC	**24 J**
Ethene	23
Ethane	2.4
Methane	20000
TOC	7.5
DO	0.71
ORP	-71.2

G6M-04-03X	
Date	10/12/2022
PCE	1 U
TCE	1.7
cis-1,2-DCE	0.65 J
VC	1 U
Ethene	0.71 U
Ethane	2
Methane	20000
TOC	6.5
DO	0.75
ORP	-130

G6M-03-07X	
Date	10/05/2022
PCE	1 U
TCE	0.5 U
cis-1,2-DCE	0.84 J
VC	1 U
Ethene	3.4
Ethane	10
Methane	22000
TOC	16
DO	0.67
ORP	-102

G6M-13-02X	
Date	10/10/2022
PCE	1.5 J (1.4 J)
TCE	3.1 (3)
cis-1,2-DCE	3.9 (3.8)
VC	1 U (1 U)
Ethene	0.71 U (0.71 U)
Ethane	0.76 U (0.33 J)
Methane	5200 (5400)
TOC	2.1 (2.1)
DO	0.69 (0.69)
ORP	3.6 (3.6)

G6M-97-28X	
Date	10/06/2022
PCE	NS
TCE	NS
cis-1,2-DCE	NS
VC	NS
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS
DO	0.76
ORP	-94.6

G6M-02-04X	
Date	10/06/2022
PCE	1 U
TCE	0.5 U
cis-1,2-DCE	1 U
VC	1 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS
DO	0.68
ORP	-165

G6M-02-13X	
Date	10/05/2022
PCE	1 U
TCE	0.5 U
cis-1,2-DCE	0.33 J
VC	1 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS
DO	1.57
ORP	-64.4

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 = 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
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

2022 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50
Former Fort Devens Army Installation
Devens, Massachusetts

CVOC and Biogeochemical Data - Fall 2022, Areas 2 through 4

Figure 10

Document Path: T:_ENV\Devens_RFTA\Seed_Task_Order\MXDs\AR2022 - AOC50\Figure 10 - CVOC and Biogeochemical Data - Fall 2022 - Areas 2-4.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
- 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

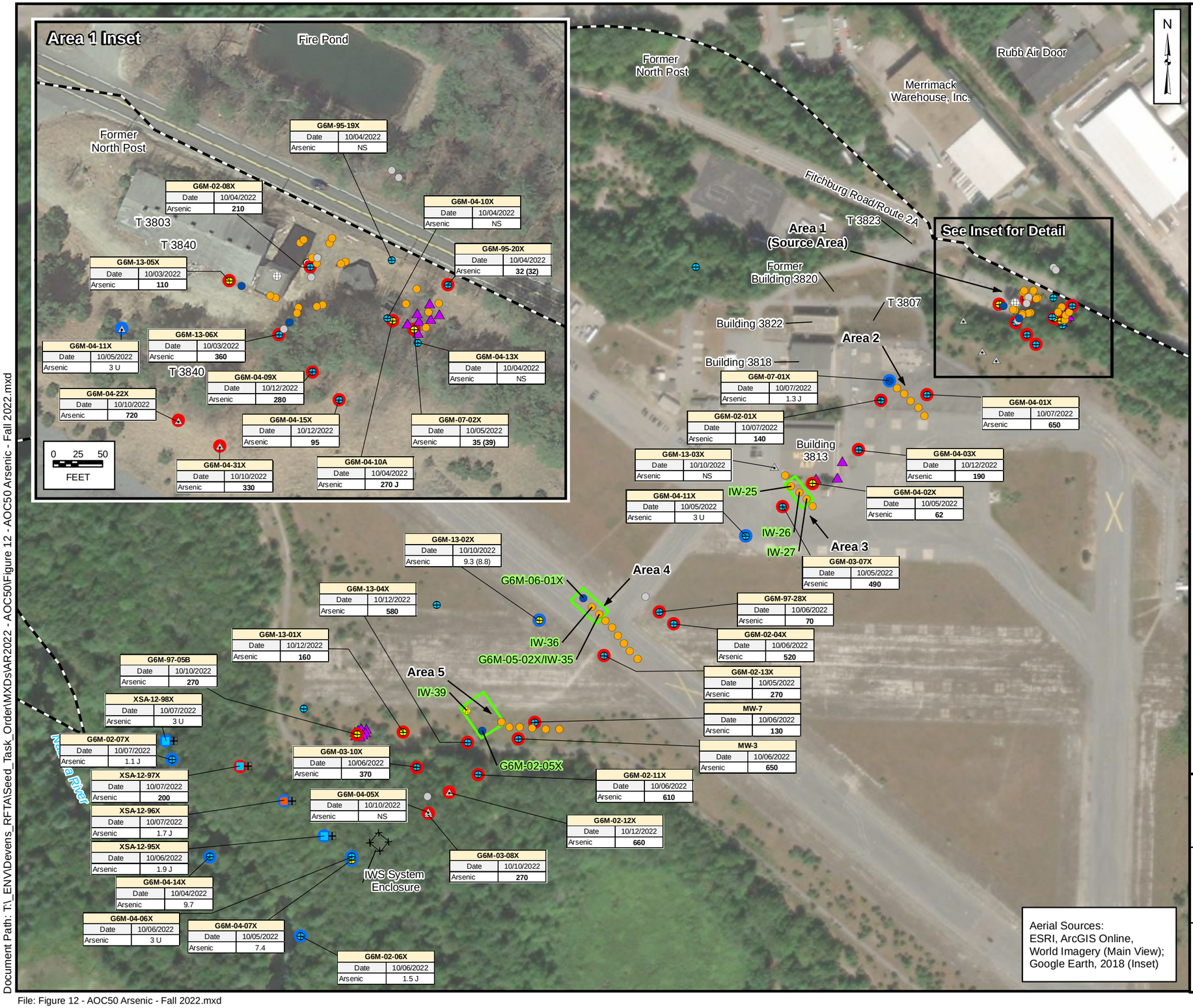
2022 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50
Former Fort Devens Army Installation
Devens, Massachusetts

CVOC and Biogeochemical Data - Fall 2022, Area 5

Figure 11

Document Path: T:_ENV\Devens_RFTA\Seed_Task_Order\MXDs\AR2022 - AOC50\Figure 11 - CVOC and Biogeochemical Data - Fall 2022 - Area 5.mxd

File: Figure 11 - CVOC and Biogeochemical Data - Fall 2022 - Area 5.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
- 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 brackets.
3. J = The result is qualified as estimated .
4. U = The constituent was not detected above the given laboratory reporting limit
5. NS = The analyte was not sampled for.
6. Arsenic cleanup leve l = 10 µg/L
7. BOLD values indicate exceedances of the AOC 50 cleanup level.

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)

2022 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50
Former Fort Devens Army Installation
Devens, Massachusetts

Arsenic Concentrations in Groundwater Fall 2022

Figure 12

Document Path: T:_ENV\Devens_RFTA\Seed_Task_Order\MXDs\AR2022 - AOC50\Figure 12 - AOC50 Arsenic - Fall 2022.mxd

File: Figure 12 - AOC50 Arsenic - Fall 2022.mxd

Appendix A

Groundwater Monitoring Field Forms

Groundwater Gauging Log

Client:	USACE	**Date(s):**	04-27-2022 - 04-28-2022
Project Name:	Fort Devens	**Event(s):**	Spring 2022 LTM
Site Location:	Devens, MA	**Site ID / Operational Area:**	AOC 50
Field Technician:	Diane Champagne, Grace Sheckler, Spencer Gust	**Equipment:**	Solinst 101 water level meter

Well	Date	Time	Scope of Work Completed?	Static Water Level (ft bmp)	Total Depth (ft bmp)	Depth to Product (ft bmp)	Well Head PID Reading (ppmv)	Comments
G6M-02-01X	04-27-2022	13:45	Yes	52.59	89.30	--	--	Well has a dedicated pump in it obstructing the bottom
G6M-02-03X	04-27-2022	--	No	--	--	--	--	Well bolts bent/rusted, cannot open well or gauge.
G6M-02-04X	04-27-2022	12:32	Yes	58.67	106.25	--	--	
G6M-02-06X	04-27-2022	12:24	Yes	5.89	86.95	--	--	
G6M-02-07X	04-27-2022	11:30	Yes	7.09	40.45	--	--	
G6M-02-08X	04-27-2022	09:23	Yes	11.20	72.10	--	--	
G6M-02-11X	04-27-2022	13:40	Yes	58.75	138.15	--	--	
G6M-02-12X	04-27-2022	13:25	Yes	57.43	136.25	--	--	
G6M-02-13X	04-27-2022	12:09	Yes	57.70	119.32	--	--	
G6M-03-07X	04-27-2022	12:48	Yes	54.87	88.00	--	--	
G6M-03-08X	04-27-2022	12:47	Yes	53.75	140.79	--	--	
G6M-03-09X	04-27-2022	13:06	Yes	54.82	142.05	--	--	
G6M-03-10X	04-27-2022	13:16	Yes	60.89	138.22	--	--	
G6M-04-01X	04-27-2022	13:36	Yes	51.68	91.35	--	--	
G6M-04-02X	04-27-2022	10:38	Yes	57.95	92.35	--	--	
G6M-04-03X	04-27-2022	10:48	Yes	55.21	93.11	--	--	
G6M-04-04X	04-27-2022	11:46	Yes	56.11	103.80	--	--	
G6M-04-05X	04-27-2022	12:53	Yes	53.27	112.21	--	--	
G6M-04-06X	04-27-2022	09:31	Yes	60.08	107	--	--	
G6M-04-07X	04-27-2022	09:22	Yes	59.69	132.9	--	--	
G6M-04-08X	04-27-2022	14:59	Yes	5.68	92.35	--	--	
G6M-04-09X	04-27-2022	11:00	Yes	30.07	66.09	--	--	
G6M-04-10A	04-27-2022	10:02	Yes	11.01	42.20	--	--	
G6M-04-10X	04-27-2022	10:08	Yes	11.85	64.00	--	--	

ft-bmp = feet below measuring point
ppmV = parts per million by volume

Groundwater Gauging Log

Client:	USACE	**Date(s):**	04-27-2022 - 04-28-2022
Project Name:	Fort Devens	**Event(s):**	Spring 2022 LTM
Site Location:	Devens, MA	**Site ID / Operational Area:**	AOC 50
Field Technician:	Diane Champagne, Grace Sheckler, Spencer Gust	**Equipment:**	Solinst 101 water level meter

Well	Date	Time	Scope of Work Completed?	Static Water Level (ft bmp)	Total Depth (ft bmp)	Depth to Product (ft bmp)	Well Head PID Reading (ppmv)	Comments
G6M-04-11X	04-27-2022	10:42	Yes	17.75	46.46	--	--	
G6M-04-13X	04-27-2022	10:04	Yes	12.81	42.15	--	--	
G6M-04-14X	04-27-2022	14:49	Yes	7.01	92.73	--	--	
G6M-04-15X	04-27-2022	10:54	Yes	40.70	80.72	--	--	
G6M-04-22X	04-27-2022	10:26	Yes	44.38	85.13	--	--	
G6M-04-31X	04-27-2022	10:20	Yes	44.22	79.99	--	--	
G6M-07-01X	04-27-2022	13:29	Yes	52.03	95.90	--	--	
G6M-07-02X	04-27-2022	09:52	Yes	11.90	30.00	--	--	
G6M-13-01X	04-27-2022	12:01	Yes	61.91	136.55	--	--	
G6M-13-02X	04-27-2022	12:57	Yes	58.03	125.10	--	--	
G6M-13-03X	04-27-2022	09:52	Yes	56.24	90.27	--	--	
G6M-13-04X	04-27-2022	13:59	Yes	61.03	138.53	--	--	
G6M-13-05X	04-27-2022	08:56	Yes	12.54	56.70	--	--	
G6M-13-06X	04-27-2022	09:06	Yes	12.17	62.25	--	--	
G6M-18-01	04-27-2022	12:17	Yes	58.90	125.90	--	--	
G6M-18-02	04-27-2022	11:43	Yes	64.24	136.00	--	--	
G6M-95-19X	04-27-2022	09:35	Yes	10.80	59.10	--	--	
G6M-95-20X	04-27-2022	09:42	Yes	11.15	25.05	--	--	
G6M-96-22A	04-27-2022	14:18	Yes	3.32	52.68	--	--	
G6M-96-22B	04-27-2022	14:08	Yes	3.95	72.20	--	--	
G6M-97-05B	04-27-2022	11:52	Yes	63.55	--	--	--	
G6M-97-28X	04-27-2022	12:21	Yes	59.51	106.80	--	--	
G6P-97-05X	04-27-2022	09:03	Yes	24.74	30.00	--	--	
MW-3	04-27-2022	12:38	Yes	60.44	131.00	--	--	

ft-bmp = feet below measuring point
ppmV = parts per million by volume

Groundwater Gauging Log

Client:	USACE	**Date(s):**	04-27-2022 - 04-28-2022
Project Name:	Fort Devens	**Event(s):**	Spring 2022 LTM
Site Location:	Devens, MA	**Site ID / Operational Area:**	AOC 50
Field Technician:	Diane Champagne, Grace Sheckler, Spencer Gust	**Equipment:**	Solinst 101 water level meter

Well	Date	Time	Scope of Work Completed?	Static Water Level (ft bmp)	Total Depth (ft bmp)	Depth to Product (ft bmp)	Well Head PID Reading (ppmv)	Comments
MW-7	04-27-2022	12:27	Yes	59.55	134.74	--	--	
XSA-12-95X	04-27-2022	11:03	Yes	67.04	132.34	--	--	
XSA-12-96X	04-27-2022	11:56	Yes	65.76	131.76	--	--	
XSA-12-97X	04-28-2022	12:27	Yes	65.08	133.03	--	--	
XSA-12-98X	04-27-2022	11:25	Yes	5.88	73.14	--	--	

ft-bmp = feet below measuring point
ppmV = parts per million by volume

Groundwater Sampling Form

Well ID	G6M-04-02X	**Date**	2022-05-02	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50	
Weather(°F)	55.0 degrees F and Cloudy. The wind is blowing E/SE at 4.7 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	80-90	**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	58.11	**Total Depth (ft-bmp)**		**Water Column (ft)**	34.40	**Gallons in Well**	5.59
Depth to Product (ft-bmp)	N/A	**Pump Intake Depth(ft-bmp)**	85	**Purge Method**	Low-Flow	**Purging Equipment**	Bladder Pump
Purge Start Time	13:35	**Total Volume Purged (ml)**	16000	**Sample ID**	G6M-04-02X	**Sample Time**	14:40
Purge End Time	14:36	**Well Volumes Purged (total)**		**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19j103221
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:40	0	250	58.71	1250	5.92	1.328	248.36	0.81	12.4	-43.2	clear	none
13:45	5	250	58.78	2500	5.91	1.337	163.52	0.5	12.3	-52.5	clear	none
13:55	15	250	58.55	5000	5.9	1.354	139.44	0.54	12.4	-61.3	clear	none
14:01	21	250	58.71	6500	5.89	1.34	191.03	0.35	12.2	-64.9	clear	none
14:06	26	250	58.71	7750	5.89	1.344	119.72	0.32	12.2	-68.2	clear	none
14:10	30	250	58.71	8750	5.89	1.341	78.12	0.3	12.2	-69.1	clear	none
14:15	35	250	58.71	10000	5.89	1.344	75.12	0.29	12.2	-71.5	clear	none
14:20	40	250	58.72	11250	5.89	1.343	186.91	0.28	12.2	-73.8	clear	none
14:25	45	250	58.72	12500	5.88	1.345	79.82	0.27	12.2	-75.3	clear	none
14:30	50	250	58.71	13750	5.88	1.341	86.06	0.26	12.3	-77.5	clear	none
14:35	55	250	58.71	15000	5.88	1.342	77.77	0.25	12.3	-78.3	clear	none

Constituent Sampled	Container	Number	Preservative
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Dissolved Gases (RSK-175)	40 mL Glass	3	HCL
VOCs (Method 8260B)	40 mL Glass	3	HCL
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Nitrate/Nitrite Nitrogen (EPA 353.2)	500 mL Amber	1	H2SO4
Sulfide (Method 9034)	250 mL Plastic	1	Zinc acetate + NaOh

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-04-07X	**Date**	2022-05-02	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50	
Weather(°F)	51.1 degrees F and Mostly Cloudy.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	120.0-130.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	59.98	**Total Depth (ft-bmp)**		**Water Column (ft)**	73.21	**Gallons in Well**	11.93
Depth to Product (ft-bmp)	N/A	**Pump Intake Depth(ft-bmp)**	125	**Purge Method**	Low-Flow	**Purging Equipment**	Bladder Pump
Purge Start Time	02:20	**Total Volume Purged (ml)**	2740	**Sample ID**	G6M-04-07X-SPR22	**Sample Time**	04:50
Purge End Time	04:45	**Well Volumes Purged (total)**	0.06	**Replicate / Code No.**	NA /	**Water Quality Meter/ ID**	YSI ProPlus /
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
02:25	0	140	59.98	700	6.46	0.577	5.7	1.68	11.1	24	Clear	None
02:30	5	140	59.38	700	6.38	0.582	6.6	1.13	11.2	23.4	Clear	None
02:35	10	140	59.38	1400	6.33	0.571	4.2	0.77	11.2	23.5	Clear	None
02:40	15	140	59.38	2037	6.33	0.566	4	0.76	11.2	23.3	Clear	None
02:45	20	140	59.38	2740	6.34	0.56	4.4	0.72	11.2	23.3	Clear	None

Constituent Sampled	Container	Number	Preservative
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Dissolved Gases (RSK-175)	40 mL Glass	3	HCL
VOCs (Method 8260B)	40 mL Glass	3	HCL
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Nitrate/Nitrite Nitrogen (EPA 353.2)	500 mL Amber	1	H2SO4
Sulfide (Method 9034)	250 mL Plastic	1	Zinc acetate + NaOh

Comments: None

Well Information

Well Labeled Properly: _____

Is Well in Good Condition? _____

Well Inspection Comments: _____

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-04-10A	**Date**	2022-05-02	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50	
Weather(°F)	51.1 degrees F and Mostly Cloudy.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	30.0-40.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	11.17	**Total Depth (ft-bmp)**		**Water Column (ft)**	31.19	**Gallons in Well**	5.07
Depth to Product (ft-bmp)	N/A	**Pump Intake Depth(ft-bmp)**	35	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	08:56	**Total Volume Purged (ml)**	4554	**Sample ID**	G6M-04-10A-SPR22	**Sample Time**	09:45
Purge End Time	09:30	**Well Volumes Purged (total)**	0.24	**Replicate / Code No.**	MS/MSD / G6M-04-10A-SPR22	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:00	0	138	11.22	550	6.51	0.364	6.1	1.57	9.6	-97.3	Clear	No Odor
09:06	6	138	11.22	1380	6.52	0.354	5.81	0.99	9.6	-105	Clear	No Odor
09:13	13	138	11.22	2346	6.53	0.364	4.98	0.87	9.8	-107.9	Clear	No Odor
09:18	18	138	11.22	3036	6.54	0.371	4.62	0.84	9.8	-111.8	Clear	No Odor
09:23	23	138	11.22	3726	6.54	0.376	4.29	0.81	10	-113.2	Clear	No Odor
09:29	29	138	11.22	4554	6.55	0.381	4.13	0.79	10	-115.4	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Gases (RSK-175)	40 mL Glass	3	HCL
VOCs (Method 8260B)	40 mL Glass	3	HCL
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Nitrate/Nitrite Nitrogen (EPA 353.2)	500 mL Amber	1	H2SO4
Sulfide (Method 9034)	250 mL Plastic	1	Zinc acetate + NaOh
Total Organic Carbon (Method 9060A)	500 mL Amber	1	H2SO4
Sulfate (Method 9056A)	125 mL Plastic	1	None

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-07-02X	**Date**	2022-05-02	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50	
Weather(°F)	51.1 degrees F and Mostly Cloudy.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	23.0-28.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	12.11	**Total Depth (ft-bmp)**		**Water Column (ft)**	18.10	**Gallons in Well**	2.94
Depth to Product (ft-bmp)	N/A	**Pump Intake Depth(ft-bmp)**	35	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	12:23	**Total Volume Purged (ml)**	3712	**Sample ID**	G6M-07-02X-SPR22	**Sample Time**	13:10
Purge End Time	13:03	**Well Volumes Purged (total)**	0.33	**Replicate / Code No.**	Duplicate /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
12:27	0	168	13.29	672	6.45	0.423	250.79	1.15	9.8	-105	Clear	No Odor
12:33	6	150	13.99	1572	6.44	0.419	306.44	0.97	9.8	-108.4	Clear	No Odor
12:38	11	116	14.3	2152	6.44	0.422	6.67	0.93	9.9	-110	Clear	No Odor
12:43	16	116	14.51	2732	6.47	0.425	5.39	0.91	9.9	-110.7	Clear	No Odor
12:48	21	100	14.65	3222	6.48	0.429	5.3	0.89	10	-112.4	Clear	No Odor
12:53	26	100	14.7	3712	6.48	0.433	5.75	0.88	10.2	-113.4	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Dissolved Gases (RSK-175)	40 mL Glass	3	HCL
VOCs (Method 8260B)	40 mL Glass	3	HCL
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Nitrate/Nitrite Nitrogen (EPA 353.2)	500 mL Amber	1	H2SO4
Sulfide (Method 9034)	250 mL Plastic	1	Zinc acetate + NaOh

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-13-01X	**Date**	2022-05-02	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50	
Weather(°F)	48.9 degrees F and Cloudy. The wind is blowing NE at 3.4 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	125.0-135.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	62.2	**Total Depth (ft-bmp)**		**Water Column (ft)**	74.64	**Gallons in Well**	12.16
Depth to Product (ft-bmp)	N/A	**Pump Intake Depth(ft-bmp)**	122	**Purge Method**	Low-Flow	**Purging Equipment**	Bladder Pump
Purge Start Time	11:05	**Total Volume Purged (ml)**	11000	**Sample ID**	G6M-13-01X	**Sample Time**	11:50
Purge End Time	11:46	**Well Volumes Purged (total)**	0.24	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 019J103221
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:15	0	250	62.3	2500	6.38	0.957	4.81	1.25	11.7	-1.2	clear	none
11:20	5	250	62.25	3750	6.42	0.964	3.28	0.74	11.7	-11.5	clear	none
11:25	10	250	62.26	5000	6.45	0.967	3.11	0.58	11.6	-18.5	clear	none
11:30	15	250	62.25	6250	6.45	0.97	2.99	0.5	11.7	-21.4	clear	none
11:35	20	250	62.26	7500	6.46	0.973	3.06	0.44	11.7	-24.1	clear	none
11:40	25	250	62.25	8750	6.47	0.979	2.93	0.41	11.8	-26.6	clear	none
11:45	30	250	62.25	10000	6.47	0.987	3.11	0.37	12	-29.3	clear	none

Constituent Sampled	Container	Number	Preservative
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Dissolved Gases (RSK-175)	40 mL Glass	3	HCL
VOCs (Method 8260B)	40 mL Glass	3	HCL
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Nitrate/Nitrite Nitrogen (EPA 353.2)	500 mL Amber	1	H2SO4
Sulfide (Method 9034)	250 mL Plastic	1	Zinc acetate + NaOh

Comments: None

Well Information

Well Labeled Properly: _____

Is Well in Good Condition? _____

Well Inspection Comments: _____

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-13-02X	**Date**	2022-05-03	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50	
Weather(°F)	48, Cloudy, some showers.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	115.0-125.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	58.25	**Total Depth (ft-bmp)**		**Water Column (ft)**	67.07	**Gallons in Well**	10.93
Depth to Product (ft-bmp)	N/A	**Pump Intake Depth(ft-bmp)**	120	**Purge Method**	Low-Flow	**Purging Equipment**	Bladder Pump
Purge Start Time	10:04	**Total Volume Purged (ml)**	5400	**Sample ID**	G6M-13-02X-SPR22	**Sample Time**	10:43
Purge End Time	10:42	**Well Volumes Purged (total)**	0.13	**Replicate / Code No.**	NA /	**Water Quality Meter/ ID**	YSI ProPlus / 17E101955
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
10:10	0	200	58.29	1200	5.88	19.1	17	2.01	12.1	74	Clear	No Odor
10:15	5	140	58.27	1900	5.74	49.36	20.3	1.16	12.1	51.7	Clear	No Odor
10:20	10	140	58.28	2600	5.78	71.68	30	0.87	12.3	45	Clear	No Odor
10:25	15	140	58.28	3300	5.8	86.5	37.3	0.74	12.4	43.8	Clear	No Odor
10:30	20	140	58.28	4000	5.83	95.48	50.4	0.57	11.9	44.3	Clear	No Odor
10:35	25	140	58.28	4700	5.84	96.09	52.6	0.55	11.7	45.7	Clear	No Odor
10:40	30	140	58.68	5400	5.87	97.83	53	0.52	11.7	47.3	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Sulfide (Method 9034)	250 mL Plastic	2	Zinc acetate + NaOh
Dissolved Gases (RSK-175)	40 mL Glass	3	HCL
VOCs (Method 8260B)	40 mL Glass	3	HCL
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Nitrate/Nitrite Nitrogen (EPA 353.2)	500 mL Amber	1	H2SO4

Comments: None

Well Information

Well Labeled Properly: _____

Is Well in Good Condition? _____

Well Inspection Comments: _____

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-13-05X	**Date**	2022-05-02	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50	
Weather(°F)	48.9 degrees F and Cloudy.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	45.0-55.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	12.76	**Total Depth (ft-bmp)**		**Water Column (ft)**	44.16	**Gallons in Well**	7.18
Depth to Product (ft-bmp)	N/A	**Pump Intake Depth(ft-bmp)**	50	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	15:20	**Total Volume Purged (ml)**	4164	**Sample ID**	G6M-13-05X-SPR22	**Sample Time**	16:00
Purge End Time	15:52	**Well Volumes Purged (total)**	0.15	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
15:24	0	166	13.18	664	6.6	0.731	94.59	0.98	11.9	-124.9	Clear	No Odor
15:29	5	140	13.18	1494	6.61	0.728	97.7	0.86	11.8	-134.5	Clear	No Odor
15:34	10	140	13.18	2064	6.63	0.726	5.81	0.82	11.8	-137.8	Clear	No Odor
15:39	15	140	13.18	2764	6.63	0.728	3.8	0.78	11.9	-140.7	Clear	No Odor
15:44	20	140	13.18	3464	6.64	0.728	3.82	0.74	11.9	-142.2	Clear	No Odor
15:49	25	140	13.18	4164	6.64	0.728	4.89	0.73	12	-142.7	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Dissolved Gases (RSK-175)	40 mL Glass	3	HCL
VOCs (Method 8260B)	40 mL Glass	3	HCL
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Nitrate/Nitrite Nitrogen (EPA 353.2)	500 mL Amber	1	H2SO4
Sulfide (Method 9034)	250 mL Plastic	1	Zinc acetate + NaOh

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-97-05B	**Date**	2022-05-02	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50	
Weather(°F)	51.1 degrees F and Mostly Cloudy.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	130.0-135.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	63.85	**Total Depth (ft-bmp)**		**Water Column (ft)**	71.45	**Gallons in Well**	11.64
Depth to Product (ft-bmp)	N/A	**Pump Intake Depth(ft-bmp)**	132	**Purge Method**	Low-Flow	**Purging Equipment**	Bladder Pump
Purge Start Time	09:40	**Total Volume Purged (ml)**	9750	**Sample ID**	G6M-97-05B	**Sample Time**	10:20
Purge End Time	10:20	**Well Volumes Purged (total)**	0.22	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19j103221
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:45	0	250	63.95	1250	6.84	0.903	302.74	0.59	11.9	-119.7	clear	none
09:50	5	250	64.2	2500	6.87	0.916	505.22	0.42	11.9	-129.2	clear	none
09:55	10	250	64.25	3750	6.87	0.932	232.45	0.35	11.9	-148.7	clear	none
10:00	15	250	64.22	5000	6.88	0.95	132.31	0.33	12.1	-154.9	clear	none
10:05	20	250	64.2	6750	6.85	0.969	118.01	0.29	12	-156.3	clear	none
10:12	27	250	64.21	8000	6.84	0.972	120.9	0.28	12	-154.9	clear	none
10:15	30	250	64.23	8750	6.84	0.974	118.41	0.27	11.9	-154.4	clear	none

Constituent Sampled	Container	Number	Preservative
Dissolved Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
Dissolved Organic Carbon (Method 9060A)	250 mL Amber	1	H2SO4
Dissolved Gases (RSK-175)	40 mL Glass	3	HCL
VOCs (Method 8260B)	40 mL Glass	3	HCL
Sulfate (Method 9056A)	500 mL Plastic	1	None
Alkalinity (SM 2320B)	250 mL Plastic	1	None
Nitrate/Nitrite Nitrogen (EPA 353.2)	500 mL Amber	1	H2SO4
Sulfide (Method 9034)	250 mL Plastic	1	Zinc acetate + NaOh

Comments: None

Well Information

Well Labeled Properly: _____

Is Well in Good Condition? _____

Well Inspection Comments: _____

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	XSA-12-96X	**Date**	2022-05-02	**Event**		Spring 2022 LTM	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50	
Weather(°F)	51.1 degrees F and Mostly Cloudy.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	121.0-131.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	66.02	**Total Depth (ft-bmp)**		**Water Column (ft)**	66.00	**Gallons in Well**	10.76
Depth to Product (ft-bmp)	N/A	**Pump Intake Depth(ft-bmp)**	126	**Purge Method**	Low-Flow	**Purging Equipment**	Mini-Bladder Pump
Purge Start Time	11:15	**Total Volume Purged (ml)**	4200	**Sample ID**	XSA-12-96X-SPR22	**Sample Time**	00:15
Purge End Time	11:50	**Well Volumes Purged (total)**	0.1	**Replicate / Code No.**	NA /	**Water Quality Meter/ ID**	YSI ProPlus /
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:20	0	140	67	700	7.34	0.782	141.4	0.61	10.5	-138.1	Clear	No Odor
11:25	5	140	67	1400	6.7	1.062	282.2	0.59	10.5	-68.3	Clear	No Odor
11:30	10	140	67	2100	6.53	1.106	204.7	0.58	10.5	-55.6	Clear	No Odor
11:35	15	140	67	2800	6.49	1.115	181.1	0.56	10.5	-49.2	Clear	No Odor
11:40	20	140	67	3500	6.46	1.122	176.5	0.54	10.6	-44.5	Clear	No Odor
11:45	25	140	67	4200	6.43	1.123	170.4	0.53	10.7	-43.8	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
Total Metals (Method 6010C/6020A)	250 mL Plastic	1	HNO3
VOCs (Method 8260B)	40 mL Glass	3	HCL

Comments: None

Well Information

Well Labeled Properly: _____

Is Well in Good Condition? _____

Well Inspection Comments: _____

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	["YSI ProDSS"]
SERIAL NUMBER	19K102593
SAMPLER	Grace Sheckler
DATE	5/2/2022

SINGLE POINT CALIBRATION				
LOT NUMBER	21250049			
EXPIRATION DATE	07/02/2022			
PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	--	183	yes	--
pH	--	13	yes	--
pH	--	-147.3	yes	--
Conductivity	--	1.413	yes	--
ORP	--	231	yes	--
DO	--	100	yes	--
DO	--	0	yes	--
Turbidity	--	0	yes	--
Turbidity	--	124	yes	--

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

NOTES:

Calibration done by palms

5/2/2022

SIGNED DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	["YSI ProDSS"]
SERIAL NUMBER	19K102593
SAMPLER	Grace Sheckler
DATE	5/3/2022

SINGLE POINT CALIBRATION

LOT NUMBER	182827722
EXPIRATION DATE	06/03/2023

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	4.02	4	yes	08:29
pH	7.15	7	yes	08:33
pH	10.11	10	yes	08:37
Conductivity	1.478	1.413	yes	08:23
DO	103	99.9	yes	08:41

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

NOTES:

SIGNED

5/3/2022
DATE

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Gauging Log

Client:	USACE	**Date(s):**	10-03-2022 to 10-04-2022
Project Name:	Fort Devens	**Event(s):**	Fall 2022 LTM
Site Location:	Devens, MA	**Site ID / Operational Area:**	AOC 50
Field Technician:	Spencer Gust, Diane Champagne, Grace Sheckler	**Equipment:**	Solinst 101 water level probe

Well	Date	Time	Scope of Work Completed?	Static Water Level (ft bmp)	Total Depth (ft bmp)	Depth to Product (ft bmp)	Well Head PID Reading (ppmv)	Comments
G6M-02-01X	10-03-2022	12:00	Yes	55.65	91.90	--	--	Dedicated pump in the well.
G6M-02-03X	10-03-2022	08:36	Yes	59.71	103.75	--	--	
G6M-02-04X	10-03-2022	09:00	Yes	61.66	106.54	--	--	
G6M-02-06X	10-03-2022	09:50	Yes	8.07	66.95	--	--	
G6M-02-07X	10-03-2022	10:37	Yes	7.17	40.53	--	--	
G6M-02-08X	10-03-2022	09:33	Yes	14.69	72.00	--	--	
G6M-02-11X	10-03-2022	11:05	Yes	61.56	137.68	--	--	
G6M-02-12X	10-03-2022	10:48	Yes	60.17	134.82	--	--	
G6M-02-13X	10-03-2022	14:57	Yes	60.64	119.56	--	--	
G6M-03-07X	10-03-2022	12:35	Yes	57.95	90.00	--	--	
G6M-03-08X	10-03-2022	10:17	Yes	56.41	139.47	--	--	
G6M-03-09X	10-03-2022	10:29	Yes	56.70	131.81	--	--	
G6M-03-10X	10-03-2022	14:03	Yes	63.54	136.82	--	--	Minor Petroleum-like Odor.
G6M-04-01X	10-03-2022	11:53	Yes	53.80	91.81	--	--	
G6M-04-02X	10-03-2022	12:38	Yes	61.25	92.95	--	--	
G6M-04-03X	10-03-2022	12:11	Yes	58.16	94.10	--	--	
G6M-04-04X	10-03-2022	12:36	Yes	59.16	104.00	--	--	
G6M-04-05X	10-03-2022	13:45	Yes	55.93	112.35	--	--	
G6M-04-06X	10-03-2022	12:56	Yes	63.34	106.00	--	--	
G6M-04-07X	10-03-2022	13:15	Yes	61.57	131.79	--	--	
G6M-04-08X	10-04-2022	13:10	Yes	7.99	92.33	--	--	
G6M-04-09X	10-03-2022	13:05	Yes	33.33	66.27	--	--	
G6M-04-10A	10-03-2022	10:09	Yes	14.40	42.10	--	--	
G6M-04-10X	10-03-2022	10:00	Yes	14.96	63.46	--	--	
G6M-04-11X	10-03-2022	13:22	Yes	20.98	46.89	--	--	
G6M-04-13X	10-03-2022	10:15	Yes	16.15	41.96	--	--	

ft-bmp = feet below measuring point
ppmV = parts per million by volume

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Gauging Log

Client:	USACE	**Date(s):**	10-03-2022 to 10-04-2022
Project Name:	Fort Devens	**Event(s):**	Fall 2022 LTM
Site Location:	Devens, MA	**Site ID / Operational Area:**	AOC 50
Field Technician:	Spencer Gust, Diane Champagne, Grace Sheckler	**Equipment:**	Solinst 101 water level probe

Well	Date	Time	Scope of Work Completed?	Static Water Level (ft bmp)	Total Depth (ft bmp)	Depth to Product (ft bmp)	Well Head PID Reading (ppmv)	Comments
G6M-04-14X	10-04-2022	10:09	Yes	9.04	92.00	--	--	
G6M-04-15X	10-03-2022	12:57	Yes	44.00	80.94	--	--	
G6M-04-22X	10-03-2022	12:46	Yes	47.52	85.35	--	--	
G6M-04-31X	10-03-2022	12:39	Yes	47.41	80.14	--	--	
G6M-07-01X	10-03-2022	11:47	Yes	55.05	96.00	--	--	
G6M-07-02X	10-03-2022	10:11	Yes	15.37	29.90	--	--	
G6M-13-01X	10-03-2022	14:41	Yes	64.52	137.70	--	--	
G6M-13-02X	10-03-2022	13:53	Yes	60.87	125.05	--	--	
G6M-13-03X	10-03-2022	13:36	Yes	59.27	90.21	--	--	
G6M-13-04X	10-03-2022	11:28	Yes	63.83	137.40	--	--	
G6M-13-05X	10-03-2022	09:15	Yes	15.88	56.70	--	--	
G6M-13-06X	10-03-2022	09:26	Yes	15.44	62.10	--	--	
G6M-18-01	10-04-2022	8:49	Yes	61.71	125.92	--	--	
G6M-18-02	10-03-2022	15:19	Yes	66.56	135.95	--	--	
G6M-95-19X	10-03-2022	10:35	Yes	14.12	58.65	--	--	
G6M-95-20X	10-03-2022	09:12	Yes	14.64	24.95	--	--	Checked total depth twice. Bottom is soft, black silt/clay like material.
G6M-96-22A	10-03-2022	08:48	Yes	6.71	52.48	--	--	
G6M-96-22B	10-03-2022	08:50	Yes	7.11	71.80	--	--	
G6M-97-05B	10-03-2022	14:57	Yes	66.01	137.99	--	--	
G6M-97-28X	10-03-2022	08:50	Yes	62.50	107.09	--	--	
G6P-97-05X	10-03-2022	09:04	Yes	28.66	30.00	--	--	Roots on water level probe
MW-3	10-03-2022	16:03	Yes	63.69	135.75	--	--	
MW-7	10-03-2022	15:48	Yes	62.33	134.49	--	--	
XSA-12-95X	10-03-2022	11:57	Yes	67.99	131.38	--	--	
XSA-12-96X	10-03-2022	11:31	Yes	67.09	130.99	--	--	
XSA-12-97X	10-03-2022	09:36	Yes	70.97	132.15	--	--	

ft-bmp = feet below measuring point
ppmV = parts per million by volume

Groundwater Gauging Log

Client:	USACE	**Date(s):**	10-03-2022 to 10-04-2022
Project Name:	Fort Devens	**Event(s):**	Fall 2022 LTM
Site Location:	Devens, MA	**Site ID / Operational Area:**	AOC 50
Field Technician:	Spencer Gust, Diane Champagne, Grace Sheckler	**Equipment:**	Solinst 101 water level probe

Well	Date	Time	Scope of Work Completed?	Static Water Level (ft bmp)	Total Depth (ft bmp)	Depth to Product (ft bmp)	Well Head PID Reading (ppmv)	Comments
XSA-12-98X	10-03-2022	10:55	Yes	8.12	73.07	--	--	

ft-bmp = feet below measuring point
ppmV = parts per million by volume

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	G6M-02-01X	**Date**	2022-10-07	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	63.0 degrees F and Clear. The wind is blowing W/NW at 4.7 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	80.0-95.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	55.69	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	39.31	**Gallons in Well**	6.41
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	90	**Purge Method**	Low-Flow	**Purging Equipment**	Dedicated Bladder
Purge Start Time	09:15	**Total Volume Purged (ml)**	21000	**Sample ID**	G6M-02-01X-FAL22	**Sample Time**	10:45
Purge End Time	10:40	**Well Volumes Purged (total)**	0.86	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:25	0	250	55.71	2250	6.93	1.761	6.05	1.74	16.9	-66.4	Clear	Slight
09:30	5	250	55.71	3750	6.92	1.624	89.43	1.02	16.2	-102.1	Clear	Slight
09:35	10	250	55.71	5000	6.97	1.587	245.97	0.89	16.2	-113.4	Clear	Slight
09:40	15	250	55.71	6250	6.99	1.571	294.71	0.83	16.1	-120.2	Clear	Slight
09:45	20	250	55.71	7500	7.02	1.553	38.77	0.77	15.9	-126.8	Clear	Slight
09:50	25	250	55.71	8750	7.02	1.544	36.22	0.75	15.9	-129.3	Clear	Slight
09:55	30	250	55.71	10000	7.03	1.537	30.37	0.73	15.9	-132.6	Clear	Slight
10:00	35	250	55.71	11250	7.03	1.537	14.46	0.71	15.9	-133.8	Clear	Slight
10:15	50	250	55.71	15000	7.03	1.531	22.31	0.68	15.9	-137.9	Clear	Slight
10:30	65	250	55.71	19000	7.04	1.507	1.96	0.64	15.9	-141.1	Clear	Slight
10:35	70	250	55.71	20000	7.04	1.502	1.38	0.64	16	-141.9	Clear	Slight
10:39	74	250	55.71	21000	7.05	1.498	1.67	0.63	15.9	-142.4	Clear	Slight

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL
Dissolved Metals	250 mL Plastic	1	HNO3
Nitrate/Nitrite	1L Amber	1	H2SO4
Sulfate	250 mL Plastic	2	NaHSO4
Sulfide	125 mL Plastic	1	None
Alkalinity	250 mL Plastic	1	None
Ethane, Ethene, Methane	40 mL Glass	3	HCL
Total Organic Carbon	250 mL Amber	1	H2SO4

Comments: None

Well Information

Well Labeled Properly: _____

Is Well in Good Condition? _____

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-02-04X	**Date**	2022-10-06	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	63.0 degrees F and Partly Cloudy. The wind is blowing NW at 9.2 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	90.0-105.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	61.66	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	43.34	**Gallons in Well**	7.06
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	100	**Purge Method**	Low-Flow	**Purging Equipment**	Disposable Bailer
Purge Start Time	10:50	**Total Volume Purged (ml)**	16500	**Sample ID**	G6M-02-04X-FAL22	**Sample Time**	12:00
Purge End Time	11:57	**Well Volumes Purged (total)**	0.62	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:00	0	250	61.66	2500	6.86	0.561	12.93	2.85	22.1	-111.6	Clear	No Odor
11:06	6	250	61.66	4000	6.95	0.601	12.13	1.66	21.6	-126.5	Clear	No Odor
11:10	10	250	61.66	5000	6.99	0.616	20.41	1.28	21.8	-135.1	Clear	No Odor
11:15	15	250	61.66	6250	7.01	0.628	23.52	1.07	22.1	-143.3	Clear	No Odor
11:20	20	250	61.66	7500	7.01	0.642	37.52	0.96	22.4	-146.6	Clear	No Odor
11:26	26	250	61.66	9000	7.03	0.65	24.38	0.87	22.6	-149.3	Clear	No Odor
11:30	30	250	61.66	10000	7.03	658	33.79	0.79	23.2	-152.6	Clear	No Odor
11:36	36	250	61.67	11500	7.05	0.64	7.51	0.82	20.5	-152.7	Clear	No Odor
11:40	40	250	61.67	12500	7.1	0.603	7.37	0.77	18.4	-155.8	Clear	No Odor
11:45	45	250	61.67	13750	7.13	0.604	7.94	0.72	18.7	-160.8	Clear	No Odor
11:50	50	250	61.67	15000	7.14	0.603	7.27	0.69	18.7	-163.1	Clear	No Odor
11:56	56	250	61.67	16500	7.15	0.604	7.58	0.68	18.6	-164.5	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: _____

Is Well in Good Condition? _____

Well Inspection Comments: _____

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-02-06X	**Date**	2022-10-06	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	63.0 degrees F and Partly Cloudy. The wind is blowing NW at 9.2 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	55.0-65.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	7.87	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	58.88	**Gallons in Well**	9.57
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	60	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	10:30	**Total Volume Purged (ml)**	7500	**Sample ID**	G6M-02-06X-FAL22	**Sample Time**	11:20
Purge End Time	11:20	**Well Volumes Purged (total)**	0.21	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
10:35	0	150	7.86	750	7.31	0.151	66.88	6.93	12.9	573.6	Clear	No Odor
10:40	5	150	7.86	1500	7.25	0.15	47.53	6.48	12.7	573.6	Clear	No Odor
10:45	10	150	7.87	2250	7.21	0.151	26.58	6.37	12.8	577.8	Clear	No Odor
10:50	15	150	7.86	3000	7.2	0.151	16.08	6.34	12.8	582.5	Clear	No Odor
10:55	20	150	7.86	3750	7.19	0.152	10.68	6.34	12.9	588.9	Clear	No Odor
11:00	25	150	7.86	4500	7.2	0.153	6.41	6.29	13	593.3	Clear	No Odor
11:05	30	150	7.86	5250	7.19	0.154	5.53	6.45	13	597.4	Clear	No Odor
11:10	35	150	7.86	6000	7.19	0.154	4.2	6.34	13.1	601.2	Clear	No Odor
11:15	40	150	7.86	6750	7.21	0.153	3.05	6.27	13	603.7	Clear	No Odor
11:20	45	150	7.86	7500	7.21	0.153	2.69	6.2	13.1	605.6	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? yes

Well Inspection Comments: Surrounded by poison ivy

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-02-07X	**Date**	2022-10-07	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	52.0 degrees F and Clear. The wind is blowing undefined at 0.0 mph.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	30.0-40.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	7.09	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	33.36	**Gallons in Well**	5.42
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	35	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	09:24	**Total Volume Purged (ml)**	8160	**Sample ID**	G6M-02-07X-FAL22	**Sample Time**	10:20
Purge End Time	10:15	**Well Volumes Purged (total)**	0.40	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:30	0	160	9.09	960	7.26	0.412	11.44	1	12.5	489.9	Clear	No Odor
09:35	5	160	9.09	1760	7.25	0.407	11.18	0.81	12.5	516.8	Clear	No Odor
09:40	10	160	9.09	2560	7.26	0.404	8.95	0.72	12.5	531.3	Clear	No Odor
09:45	15	160	9.09	3360	7.28	0.403	8.85	0.68	12.5	542.9	Clear	No Odor
09:50	20	160	9.09	4160	7.29	0.405	8.48	0.66	12.5	551	Clear	No Odor
09:55	25	160	9.09	4960	7.3	0.406	4.74	0.64	12.6	559.3	Clear	No Odor
10:00	30	160	9.09	5760	7.32	0.407	4.64	0.61	12.7	564.8	Clear	No Odor
10:05	35	160	9.09	6560	7.33	0.407	3.63	0.6	12.7	570.5	Clear	No Odor
10:10	40	160	9.09	7360	7.35	0.408	3.12	0.59	12.7	575.4	Clear	No Odor
10:15	45	160	9.09	8160	7.36	0.408	2.78	0.58	12.8	579.6	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? yes

Well Inspection Comments: Well in good shape.

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-02-08X	**Date**	2022-10-04	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	53.1 degrees F and Partly Cloudy. The wind is blowing N at 8.1 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	60.0-70.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	14.77	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	55.23	**Gallons in Well**	9
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	65	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	09:15	**Total Volume Purged (ml)**	13500	**Sample ID**	G6M-02-08X-FAL22	**Sample Time**	10:50
Purge End Time	10:45	**Well Volumes Purged (total)**	3.56	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:51	0	150	14.77	5400	6.87	0.1	290.17	1.98	12.3	-78.1	Orange	Moderate
09:56	5	150	14.89	6150	6.86	0.099	375.57	1.57	12.3	-84.4	Orange	Moderate
10:00	9	150	15.6	6750	6.88	0.098	29.35	1.39	12.1	-88.1	Orange	Moderate
10:05	14	150	15.79	7500	6.86	0.098	24.61	1.25	12.2	-89.9	Orange	Moderate
10:10	19	150	15.97	8250	6.85	0.099	26.91	1.22	12.3	-91.8	Orange	Moderate
10:15	24	150	16.15	9000	6.86	0.1	29.65	1.13	12.2	-94.1	Orange	Moderate
10:20	29	150	16.13	9750	6.86	0.101	25.69	1.13	12.3	-95.6	Orange	Moderate
10:26	35	150	16.11	10650	6.87	0.104	12.74	1.02	12.4	-97.4	Orange	Moderate
10:30	39	150	16.01	11250	6.9	0.105	12.98	1.06	12.5	-98.4	Orange	Moderate
10:35	44	150	16.01	12000	6.88	0.107	8.16	1.03	12.4	-101.1	Orange	Moderate
10:40	49	150	16	12750	6.88	0.107	7.99	1.04	12.3	-100.9	Orange	Moderate
10:45	54	150	15.99	13500	6.88	0.109	7.61	1.01	12.4	-101.7	Orange	Moderate

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL
Dissolved Metals	250 mL Plastic	1	HNO3
Nitrate/Nitrite	1L Amber	1	H2SO4
Sulfate	250 mL Plastic	2	NaHSO4
Sulfide	125 mL Plastic	1	None
Alkalinity	250 mL Plastic	1	None
Ethane, Ethene, Methane	40 mL Glass	3	HCL
Total Organic Carbon	250 mL Amber	1	H2SO4

Comments: None

Well Information

Well Labeled Properly: _____

Is Well in Good Condition? _____

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-02-11X	**Date**	2022-10-06	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	66.9 degrees F and Mostly Clear. The wind is blowing E/SE at 8.1 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	125.0-135.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	61.53	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	76.12	**Gallons in Well**	12.37
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	125	**Purge Method**	Low-Flow	**Purging Equipment**	Dedicated Bladder
Purge Start Time	15:17	**Total Volume Purged (ml)**	4200	**Sample ID**	G6M-02-11X-FAL22	**Sample Time**	15:50
Purge End Time	15:47	**Well Volumes Purged (total)**	0.09	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
15:20	0	140	61.53	420	6.57	1.328	9.7	5.43	12.6	-67.1	Clear	Slight
15:25	5	140	61.53	1120	6.72	1.091	2.78	1.25	12.2	-118.8	Clear	Slight
15:30	10	140	61.52	1820	6.73	1.216	2.09	0.92	12.2	-130.3	Clear	Slight
15:35	15	140	61.52	2520	6.75	1.287	1.6	0.79	12.2	-132.8	Clear	Slight
15:39	19	140	61.52	3080	6.77	1.322	1.51	0.73	12.2	-137.4	Clear	Slight
15:43	23	140	61.53	3640	6.78	1.344	3.37	0.69	12.2	-139.8	Clear	Slight
15:47	27	140	61.53	4200	6.8	1.361	3.9	0.66	12.1	-141.2	Clear	Slight

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? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-02-12X	**Date**	2022-10-12	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	53.1 degrees F and Clear. The wind is blowing N at 6.9 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	125.0-135.0	**Casing Diameter (in)**		**Well Casing Material**	NA
Static Water Level (ft-bmp)	60.24	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	74.65	**Gallons in Well**	12.17
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	130	**Purge Method**	Low-Flow	**Purging Equipment**	Portable Bladder
Purge Start Time	10:09	**Total Volume Purged (ml)**	10200	**Sample ID**	G6M-02-12X-FAL22	**Sample Time**	11:02
Purge End Time	11:01	**Well Volumes Purged (total)**	0.22	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
10:26	0	200	60.27	3400	6.98	0.805	5.77	9.36	12.3	-27.8	Clear	No Odor
10:30	4	200	60.27	4200	7.07	0.982	7.99	5.03	12.1	-68.9	Clear	No Odor
10:35	9	200	60.27	5200	7.18	1.093	8.76	1.89	12.2	-106.6	Clear	No Odor
10:40	14	200	60.27	6200	7.27	1.073	10.29	1.34	12.2	-122.9	Clear	No Odor
10:46	20	200	60.27	7400	7.32	1.049	10.54	1.19	12.2	-130.1	Clear	No Odor
10:50	24	200	60.27	8200	7.34	1.047	20.71	1.12	12.3	-133.5	Clear	No Odor
10:55	29	200	60.27	9200	7.35	1.055	19.36	1.06	12.3	-135.7	Clear	No Odor
11:00	34	200	60.27	10200	7.38	1.066	20.18	1.03	12.3	-137.3	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? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-02-13X	**Date**	2022-10-05	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	54.0 degrees F and Cloudy. The wind is blowing NE at 3.4 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	110.0-120.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	60.52	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	58.92	**Gallons in Well**	9.57
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	115	**Purge Method**	Low-Flow	**Purging Equipment**	Dedicated Bladder
Purge Start Time	10:06	**Total Volume Purged (ml)**	8800	**Sample ID**	G6M-02-13X-FAL22	**Sample Time**	10:52
Purge End Time	10:51	**Well Volumes Purged (total)**	0.24	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
10:10	0	200	60.57	800	6.88	1.562	4.8	6.6	15.9	37.9	Clear	No Odor
10:15	5	200	61.55	1800	6.6	1.374	5.74	5.11	15.9	-38.9	Clear	No Odor
10:20	10	200	61.61	2800	6.43	1.4	4.34	3.46	16	-35.5	Clear	No Odor
10:25	15	200	61.71	3800	6.41	1.495	3.59	3.03	16.1	-41.1	Clear	No Odor
10:30	20	200	61.71	4800	6.36	1.647	5.41	2.38	16.5	-48	Clear	No Odor
10:35	25	200	61.71	5800	6.37	1.775	3.03	2.14	16.4	-52.9	Clear	No Odor
10:40	30	200	61.71	6800	6.42	1.856	3.03	1.67	16.3	-58.9	Clear	No Odor
10:45	35	200	61.71	7800	6.45	1.889	1.88	1.62	16.3	-62.5	Clear	No Odor
10:50	40	200	61.71	8800	6.46	1.906	2.57	1.57	16.3	-64.4	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: _____

Is Well in Good Condition? _____

Well Inspection Comments: _____

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-03-07X	**Date**	2022-10-05	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	53.1 degrees F and Rain and Fog/Mist. The wind is blowing at 4.7 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	80.0-90.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	57.91	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	32.09	**Gallons in Well**	5.23
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	70	**Purge Method**	Low-Flow	**Purging Equipment**	Dedicated Bladder
Purge Start Time	11:25	**Total Volume Purged (ml)**	8000	**Sample ID**	G6M-03-07X-FAL22	**Sample Time**	12:40
Purge End Time	12:35	**Well Volumes Purged (total)**	0.4	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:35	0	100	58.01	1000	6.71	0.522	23.16	1.7	14.9	-71.1	Orange	Slight
11:40	5	100	58.01	1500	6.7	0.52	19.67	1.21	14.8	-79.1	Orange	Slight
11:45	10	100	58.01	2000	6.7	0.518	19.82	1.14	14.8	-80.4	Orange	Slight
11:50	15	100	58.01	2500	6.71	0.521	19.36	0.95	14.7	-85.5	Orange	Slight
11:55	20	100	58.01	3000	6.71	0.524	17.24	0.89	14.8	-87.6	Orange	Slight
12:00	25	100	58.02	3500	6.71	0.528	16.19	0.84	14.8	-89.5	Orange	Slight
12:05	30	100	58.02	4000	6.7	0.538	16.43	0.78	14.8	-92.1	Orange	Slight
12:12	37	100	58.02	4700	6.7	0.553	15.69	0.76	14.7	-94.4	Orange	Slight
12:15	40	100	58.01	5000	6.7	0.56	16.17	0.74	14.7	-96.1	Orange	Slight
12:20	45	100	58.01	5500	6.7	0.572	16.11	0.72	14.8	-97.7	Orange	Slight
12:25	50	100	58.02	6000	6.7	0.589	17.47	0.7	14.8	-100.1	Orange	Slight
12:30	55	100	58.01	6500	6.7	0.592	16.46	0.69	14.7	-101.5	Orange	Slight
12:35	60	100	58.02	7000	6.7	0.594	16.08	0.67	14.7	-102.3	Orange	Slight

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL
Dissolved Metals	250 mL Plastic	1	HNO3
Nitrate/Nitrite	1L Amber	1	H2SO4
Sulfate	250 mL Plastic	2	NaHSO4
Sulfide	125 mL Plastic	1	None
Alkalinity	250 mL Plastic	1	None
Ethane, Ethene, Methane	40 mL Glass	3	HCL
Total Organic Carbon	250 mL Amber	1	H2SO4

Comments: None

Well Information

Well Labeled Properly:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Is Well in Good Condition?

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-03-08X	**Date**	2022-10-10	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	Mid 60s, mostly cloudy/showers			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	125.0-140.0	**Casing Diameter (in)**	2	**Well Casing Material**	NA
Static Water Level (ft-bmp)	56.41	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	83.06	**Gallons in Well**	13.53
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	135	**Purge Method**	Low-Flow	**Purging Equipment**	Portable Bladder
Purge Start Time	13:20	**Total Volume Purged (ml)**	6000	**Sample ID**	G6M-03-08X-FAL22	**Sample Time**	13:54
Purge End Time	13:53	**Well Volumes Purged (total)**	0.12	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:30	0	200	56.42	2000	6.88	0.712	5.53	2.66	12.2	-47.3	Clear	No Odor
13:35	5	200	56.42	3000	6.86	0.71	5.45	2.34	12.8	-51.3	Clear	No Odor
13:40	10	200	56.42	4000	6.82	0.713	4.76	2.36	13.2	-53.7	Clear	No Odor
13:45	15	200	56.42	5000	6.81	0.72	3.88	2.49	13.3	-54.4	Clear	No Odor
13:50	20	200	56.42	6000	6.83	0.725	3.51	2.59	13.3	-55.3	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:

Is Well in Good Condition?

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-03-10X	**Date**	2022-10-06	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	71.1 degrees F and Clear. The wind is blowing undefined at 0.0 mph.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	120.0-135.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	63.54	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	73.28	**Gallons in Well**	11.91
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	130	**Purge Method**	Low-Flow	**Purging Equipment**	Dedicated Bladder
Purge Start Time	13:59	**Total Volume Purged (ml)**	6068	**Sample ID**	G6M-03-10X-FAL22	**Sample Time**	14:40
Purge End Time	14:40	**Well Volumes Purged (total)**	0.13	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
14:05	0	148	63.55	888	6.75	1.277	20.28	1.95	12.3	-85.8	Clear	No Odor
14:10	5	148	63.53	1628	6.73	1.326	24.58	1.02	12.7	-122.7	Clear	No Odor
14:15	10	148	63.54	2368	6.74	1.353	2.03	0.9	12.7	-132.4	Clear	No Odor
14:20	15	148	63.54	3108	6.75	1.389	3.36	0.83	12.6	-137.5	Clear	No Odor
14:25	20	148	63.54	3848	6.77	1.404	3.53	0.77	12.6	-141.1	Clear	No Odor
14:30	25	148	63.54	4588	6.79	1.403	4.14	0.73	12.6	-142.6	Clear	No Odor
14:35	30	148	63.54	5328	6.8	1.42	4.8	0.69	12.6	-143.9	Clear	No Odor
14:40	35	148	63.55	6068	6.81	1.426	3.87	0.66	12.6	-145	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? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-04-01X	**Date**	2022-10-07	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	75.0 degrees F and Partly Cloudy. The wind is blowing at 3.4 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	82.0-92.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	53.83	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	0.00	**Gallons in Well**	6.22
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	87	**Purge Method**	Low-Flow	**Purging Equipment**	Portable Bladder
Purge Start Time	13:50	**Total Volume Purged (ml)**	13750	**Sample ID**	MW-04-01X-FAL22	**Sample Time**	14:50
Purge End Time	14:46	**Well Volumes Purged (total)**	0.58	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
14:00	0	250	53.83	2500	6.85	1.761	11.97	3.11	17.8	-65.1	Clear	No Odor
14:06	6	250	53.88	4000	6.55	2.374	6.81	1.35	17.3	-55.8	Clear	No Odor
14:10	10	250	53.83	5000	6.58	2.44	34.91	1.03	17	-64.6	Clear	No Odor
14:16	16	250	53.82	6500	6.59	2.444	17.13	6.6	17.1	-70.1	Clear	No Odor
14:20	20	250	53.83	7500	6.61	2.435	7.91	0.86	17	-72.3	Clear	No Odor
14:25	25	250	53.83	8750	6.62	2.427	7.75	0.82	16.7	-75.1	Clear	No Odor
14:30	30	250	53.82	10000	6.62	2.448	3.59	0.76	16.8	-78.1	Clear	No Odor
14:35	35	250	53.83	11250	6.62	2.447	2.01	0.73	16.8	-78.7	Clear	No Odor
14:40	40	250	53.83	12500	6.62	2.446	2.07	0.71	16.8	-79.5	Clear	No Odor
14:45	45	250	53.83	13750	6.62	2.451	2.49	0.69	16.7	-80.4	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: _____

Is Well in Good Condition? _____

Well Inspection Comments: _____

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-04-02X	**Date**	2022-10-05	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	57.9 degrees F and Cloudy. The wind is blowing N/NE at 10.3 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	80.0-90.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	61.34	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	28.66	**Gallons in Well**	4.67
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	85	**Purge Method**	Low-Flow	**Purging Equipment**	Bladder Pump
Purge Start Time	13:15	**Total Volume Purged (ml)**	23750	**Sample ID**	G6M-04-02X-FAL22	**Sample Time**	14:55
Purge End Time	14:51	**Well Volumes Purged (total)**	1.34	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:30	0	250	61.34	3750	6.24	1.031	21.35	2.1	14.1	-23.8	Yellow	Strong
13:36	6	250	61.34	5250	6.24	1.028	19.29	1.36	14	-45.2	Orange	Strong
13:40	10	250	61.34	6250	6.24	1.027	16.74	1.16	13.9	-50.2	Yellow	Strong
13:45	15	250	61.34	7500	6.23	1.025	13.98	1.01	13.9	-55.7	Yellow	Strong
13:51	21	250	61.34	9000	6.22	1.024	12.41	0.96	13.8	-58.6	Yellow	Strong
13:55	25	250	61.34	10000	6.22	1.018	13.41	0.91	13.7	-61.4	Yellow	Strong
14:00	30	250	61.34	11250	6.21	1.014	13.11	0.88	13.7	-62.6	Yellow	Moderate
14:05	35	250	61.34	12500	6.21	1.013	11.88	0.84	13.7	-63.5	Yellow	Moderate
14:10	40	250	61.34	13750	6.21	1.013	11.04	0.82	13.7	-64.4	Orange	Strong
14:15	45	250	61.34	15000	6.2	1.012	10.21	0.8	13.8	-65.9	Yellow	Strong
14:21	51	250	61.34	16500	6.2	1.01	11.38	0.77	13.8	-66.8	Yellow	Strong
14:41	71	250	61.34	21500	6.2	1.005	9.46	0.72	13.9	-69.1	Orange	Strong
14:45	75	250	61.34	22500	6.2	1.003	8.98	0.72	13.8	-69.8	Yellow	Strong
14:50	80	250	61.34	23750	6.2	1	8.87	0.71	13.7	-71.2	Yellow	Strong

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL
Dissolved Metals	250 mL Plastic	1	HNO3
Nitrate/Nitrite	1L Amber	1	H2SO4
Sulfate	250 mL Plastic	2	NaHSO4
Sulfide	125 mL Plastic	1	None
Alkalinity	250 mL Plastic	1	None
Ethane, Ethene, Methane	40 mL Glass	3	HCL
Total Organic Carbon	250 mL Amber	1	H2SO4

Comments: None

Well Information

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well Labeled Properly: _____

Is Well in Good Condition? _____

Well Inspection Comments: _____

ft-bmp = feet below measuring point
in = inches
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mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-04-03X	**Date**	2022-10-12	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	53.1 degrees F and Clear. The wind is blowing N at 6.9 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	85.0-95.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	58.26	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	36.74	**Gallons in Well**	5.99
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	90	**Purge Method**	Low-Flow	**Purging Equipment**	Disposable Bailer
Purge Start Time	08:35	**Total Volume Purged (ml)**	16250	**Sample ID**	G6M-04-03X-FAL22	**Sample Time**	09:45
Purge End Time	09:41	**Well Volumes Purged (total)**	0.72	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
08:50	0	250	58.29	3750	7.22	0.98	181.07	1.25	14.8	-139.4	Clear	No Odor
08:55	5	250	58.29	5000	7.22	0.807	218.07	1.19	14.8	-139.6	Clear	No Odor
09:00	10	250	58.29	6250	7.16	0.621	329.08	1.04	14.9	-132.5	Clear	No Odor
09:05	15	250	58.28	7500	7.12	0.603	397.76	0.97	15.1	-129.4	Clear	No Odor
09:10	20	250	58.29	8750	7.1	0.605	527.54	0.93	15.2	-128.6	Clear	No Odor
09:16	26	250	58.28	10250	7.08	0.615	147.7	0.86	15.2	-127.3	Clear	No Odor
09:20	30	250	58.28	11250	7.07	0.623	108.6	0.84	15.3	-128.1	Clear	No Odor
09:25	35	250	58.29	12500	7.06	0.635	13.09	0.8	15.6	-128.4	Clear	No Odor
09:30	40	250	58.28	13750	7.07	0.636	2.71	0.77	15.8	-128.9	Clear	No Odor
09:35	45	250	58.28	15000	7.07	0.636	2.93	0.78	15.8	-129.2	Clear	No Odor
09:40	50	250	58.28	16250	7.07	0.638	4.49	0.75	16	-130.4	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL
Dissolved Metals	250 mL Plastic	1	HNO3
Nitrate/Nitrite	1L Amber	1	H2SO4
Sulfate	250 mL Plastic	2	NaHSO4
Sulfide	125 mL Plastic	1	None
Alkalinity	250 mL Plastic	1	None
Ethane, Ethene, Methane	40 mL Glass	3	HCL
Total Organic Carbon	250 mL Amber	1	H2SO4

Comments: None

Well Information

Well Labeled Properly: _____

Is Well in Good Condition? _____

Well Inspection Comments: _____

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-04-04X	**Date**	2022-10-05	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	53.1 degrees F and Cloudy. The wind is blowing N/NW at 5.8 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	94.0-104.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	59.19	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	44.81	**Gallons in Well**	7.3
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	101	**Purge Method**	Low-Flow	**Purging Equipment**	Portable Bladder
Purge Start Time	08:50	**Total Volume Purged (ml)**	13000	**Sample ID**	G6M-04-04X-FAL22	**Sample Time**	10:00
Purge End Time	09:56	**Well Volumes Purged (total)**	0.47	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:00	0	200	59.19	1500	6.45	1.136	36.48	3.93	14.3	-10.2	Clear	Slight
09:05	5	200	59.19	2250	6.65	1.588	15.26	1.89	13.5	-66.4	Clear	Slight
09:10	10	200	59.19	3000	6.73	1.593	16.11	1.33	13.4	-84.5	Clear	No Odor
09:15	15	200	59.19	3750	6.74	1.593	28.72	1.07	13.4	-91.5	Clear	Slight
09:20	20	200	59.19	4500	6.75	1.602	50.44	0.94	13.4	-96.2	Clear	No Odor
09:25	25	200	59.19	5250	6.75	1.603	49.91	0.92	13.3	-97.7	Clear	No Odor
09:31	31	200	59.19	6150	6.76	1.598	11.76	0.86	13.4	-100.4	Clear	No Odor
09:35	35	200	59.19	9000	6.76	1.589	12.72	0.84	13.4	-101.1	Clear	Slight
09:41	41	200	59.19	10200	6.76	1.571	13.21	0.8	13.4	-101.8	Clear	No Odor
09:45	45	200	59.2	11000	6.76	1.579	18.27	0.78	13.4	-101.5	Clear	No Odor
09:51	51	200	50.6	12200	6.76	1.572	18.25	0.75	13.4	-102.3	Clear	No Odor
09:55	55	200	59.2	13000	6.77	1.571	18.76	0.74	13.4	-104.4	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:

Is Well in Good Condition?

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-04-05X	**Date**	2022-10-10	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	54 Mostly Cloudy, Wind 9 mph SW.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	100.0-110.0	**Casing Diameter (in)**	2	**Well Casing Material**	NA
Static Water Level (ft-bmp)	55.4	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	56.42	**Gallons in Well**	8.89
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	105	**Purge Method**	Low-Flow	**Purging Equipment**	Dedicated Bladder
Purge Start Time	14:39	**Total Volume Purged (ml)**	6400	**Sample ID**	G6M-04-05X-FAL22	**Sample Time**	15:14
Purge End Time	15:13	**Well Volumes Purged (total)**	0.19	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
14:45	0	200	55.98	1200	7.15	0.226	17.71	7.62	11.7	128.1	Clear	No Odor
14:50	5	200	55.98	2200	6.76	0.226	11.13	4.18	12	127.1	Clear	No Odor
14:55	10	200	55.98	3200	6.67	0.228	8.84	3.48	12.1	126.8	Clear	No Odor
15:00	15	200	55.96	4200	6.66	0.228	5.31	2.43	12.1	130	Clear	No Odor
15:06	21	200	55.96	5400	6.71	0.228	5.81	2.51	12	133.4	Clear	No Odor
15:11	26	200	55.96	6400	6.74	0.258	5.3	2.28	11.8	135.5	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? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-04-06X	**Date**	2022-10-06	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	62° Sunny, wind 3 mph SE.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	95.0-105.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	63.22	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	41.78	**Gallons in Well**	6.81
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	100	**Purge Method**	Low-Flow	**Purging Equipment**	Dedicated Bladder
Purge Start Time	09:40	**Total Volume Purged (ml)**	8000	**Sample ID**	G6M-04-06X-FAL22	**Sample Time**	10:22
Purge End Time	10:22	**Well Volumes Purged (total)**	0.31	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:45	0	200	62.22	1000	6.83	0.237	7.68	7.8	12.1	229.3	Clear	No Odor
09:50	5	200	62.22	2000	6.57	0.223	10.12	2.95	11.9	231.1	Clear	No Odor
09:55	10	200	62.22	3000	6.53	0.218	13.24	1.98	11.9	231.1	Clear	No Odor
10:00	15	200	62.22	4000	6.54	0.217	11.52	1.72	11.9	230.6	Clear	No Odor
10:05	20	200	62.22	5000	6.56	0.216	7.48	1.58	11.9	229.9	Clear	No Odor
10:10	25	200	62.22	6000	6.57	0.215	8.15	1.48	11.9	229.1	Clear	No Odor
10:15	30	200	62.22	7000	6.56	0.215	7.49	1.4	12	226.9	Clear	No Odor
10:20	35	200	62.22	8000	6.57	0.215	7.88	1.35	12	225.9	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:

Is Well in Good Condition?

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-04-07X	**Date**	2022-10-05	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	Mid-upper 50s, showers			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	120.0-130.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	61.92	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	72.22	**Gallons in Well**	11.74
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	125	**Purge Method**	Low-Flow	**Purging Equipment**	Bladder Pump
Purge Start Time	12:58	**Total Volume Purged (ml)**	6400	**Sample ID**	G6M-04-07X-FAL22	**Sample Time**	13:31
Purge End Time	13:31	**Well Volumes Purged (total)**	0.14	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:07	0	200	61.2	1800	6.79	0.701	5.83	9.07	12.6	84.5	Clear	No Odor
13:10	3	200	62.29	2400	6.64	0.745	4.62	6.64	12	80.3	Clear	No Odor
13:15	8	200	62.29	3400	6.54	0.749	3.4	3.65	12.3	78.8	Clear	No Odor
13:20	13	200	62.29	4400	6.51	0.752	2.6	3.08	12.6	75.9	Clear	No Odor
13:25	18	200	62.29	5400	6.53	0.753	2.72	2.91	12.6	73.8	Clear	No Odor
13:30	23	200	62.29	6400	6.56	0.754	2.49	2.85	12.5	71.9	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL
Dissolved Metals	250 mL Plastic	1	HNO3
Nitrate/Nitrite	1L Amber	1	H2SO4
Sulfate	250 mL Plastic	2	NaHSO4
Sulfide	125 mL Plastic	1	None
Alkalinity	250 mL Plastic	1	None
Ethane, Ethene, Methane	40 mL Glass	3	HCL
Total Organic Carbon	250 mL Amber	1	H2SO4

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	G6M-04-09X	**Date**	2022-10-12	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	68.0 degrees F and Mostly Clear. The wind is blowing SW at 4.7 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	55.0-65.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	33.51	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	27.94	**Gallons in Well**	4.54
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	60	**Purge Method**	Low-Flow	**Purging Equipment**	Portable Bladder
Purge Start Time	11:49	**Total Volume Purged (ml)**	8052	**Sample ID**	G6M-04-09X-FAL22	**Sample Time**	12:55
Purge End Time	12:51	**Well Volumes Purged (total)**	0.47	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:55	0	132	33.45	792	6.64	0.29	143.48	1.45	15.4	-106.8	Black	Moderate
12:00	5	132	33.47	1452	6.67	0.286	36.2	1.35	15.4	-115.9	Black	Moderate
12:05	10	132	33.46	2112	6.72	0.288	32.5	1.04	14.8	-124.1	Black	Moderate
12:10	15	132	33.47	2772	6.73	0.289	30.3	0.92	14.5	-127.3	Gray	Slight
12:15	20	132	33.4	3432	6.74	0.301	29.6	0.77	15.7	-132.4	Gray	Slight
12:20	25	132	33.43	4092	6.77	0.308	30.2	0.69	16.1	-136.5	Gray	Slight
12:25	30	132	33.48	4752	6.77	0.309	32.5	0.63	15.9	-138.8	Gray	Slight
12:30	35	132	33.48	5412	6.79	0.311	31.6	0.59	15.1	-141.3	Gray	Slight
12:35	40	132	33.4	6072	6.78	0.314	34.5	0.55	15.7	-142.3	Gray	Slight
12:40	45	132	33.42	6732	6.79	0.322	35.3	0.52	16.4	-144.6	Gray	Slight
12:45	50	132	33.56	7392	6.81	0.325	35.2	0.5	16	-146.4	Gray	Slight
12:50	55	132	33.51	8052	6.79	0.329	35.1	0.48	16	-145.4	Gray	Slight

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL
Dissolved Metals	250 mL Plastic	1	HNO3
Nitrate/Nitrite	1L Amber	1	H2SO4
Sulfate	250 mL Plastic	2	NaHSO4
Sulfide	125 mL Plastic	1	None
Alkalinity	250 mL Plastic	1	None
Ethane, Ethene, Methane	40 mL Glass	3	HCL
Total Organic Carbon	250 mL Amber	1	H2SO4

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-04-10A	**Date**	2022-10-04	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	48.9 degrees F and Mostly Cloudy. The wind is blowing N/NE at 9.2 mph.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	30.0-40.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	14.35	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	27.70	**Gallons in Well**	4.50
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	35	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	09:48	**Total Volume Purged (ml)**	3240	**Sample ID**	G6M-04-10A-FAL22	**Sample Time**	10:25
Purge End Time	11:56	**Well Volumes Purged (total)**	0.19	**Replicate / Code No.**	Not Applicable / G6M-04-10A-FAL22	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:55	0	120	14.4	840	6.61	0.327	7.69	1.82	11	-67.7	Gray	No Odor
10:00	5	120	14.4	1440	6.58	0.328	8.45	1.51	10.8	-82.4	Gray	No Odor
10:05	10	120	14.4	2040	6.58	0.327	8.19	1.4	10.8	-86.2	Gray	No Odor
10:10	15	120	14.4	2640	6.57	0.327	7.46	1.36	10.8	-85.5	Gray	No Odor
10:15	20	120	14.4	3240	6.58	0.325	7.65	1.33	10.8	-86.3	Gray	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL
Dissolved Metals	250 mL Plastic	1	HNO3
Nitrate/Nitrite	1L Amber	1	H2SO4
Sulfate	250 mL Plastic	2	NaHSO4
Sulfide	125 mL Plastic	1	None
Alkalinity	250 mL Plastic	1	None
Ethane, Ethene, Methane	40 mL Glass	3	HCL
Total Organic Carbon	250 mL Amber	1	H2SO4

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-04-10X	**Date**	2022-10-04	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	48.9 degrees F and Mostly Cloudy. The wind is blowing N/NE at 9.2 mph.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	52.0-62.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	14.9	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	48.50	**Gallons in Well**	7.88
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	57	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	12:58	**Total Volume Purged (ml)**	6760	**Sample ID**	G6M-04-10X	**Sample Time**	13:55
Purge End Time	13:57	**Well Volumes Purged (total)**	0.23	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:05	0	130	14.92	910	7.57	1.293	3.12	1.27	11.4	-125	Clear	Moderate
13:10	5	130	14.93	1560	7.2	1.256	2.08	1	11.5	-63	Clear	Slight
13:15	10	130	14.93	2210	6.93	1.251	2.01	0.89	11.6	-32.6	Clear	Slight
13:20	15	130	14.93	2860	6.75	1.258	1.84	0.84	11.7	-14.4	Clear	Slight
13:25	20	130	14.94	3510	6.61	1.261	1.96	0.79	11.8	-2.2	Clear	Slight
13:30	25	130	14.94	4160	6.49	1.259	1.57	0.77	11.8	9.4	Clear	Slight
13:35	30	130	14.94	4810	6.41	1.258	1.58	0.77	11.7	15.7	Clear	Slight
13:40	35	130	14.94	5460	6.33	1.26	1.42	0.74	12	24.1	Clear	Slight
13:45	40	130	14.94	6110	6.28	1.262	1.45	0.73	11.9	27.7	Clear	Slight
13:50	45	130	14.94	6760	6.24	1.264	1.28	0.72	11.8	31.9	Clear	Slight

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? yes

Well Inspection Comments: Overgrown weeds/trees/brush

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

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Groundwater Sampling Form

Well ID	G6M-04-11X	**Date**	2022-10-05	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	Mid-upper 50s, showers			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	35.0-45.0	**Casing Diameter (in)**	2	**Well Casing Material**	NA
Static Water Level (ft-bmp)	20.97	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	25.91	**Gallons in Well**	3.92
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	40	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	12:15	**Total Volume Purged (ml)**	10790	**Sample ID**	G6M-04-11X-FAL22	**Sample Time**	13:40
Purge End Time	13:39	**Well Volumes Purged (total)**	0.73	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
12:20	0	130	21.51	650	6.34	0.163	2.28	7.92	13.2	53.7	Clear	No Odor
12:25	5	130	21.69	1300	6.36	0.16	1.72	7.94	13.1	114.4	Clear	Slight
12:30	10	130	21.77	1950	6.35	0.161	1.5	7.98	13	171.6	Clear	Slight
12:35	15	130	21.78	2600	6.34	0.162	1.51	7.89	13.1	223.4	Clear	Slight
12:40	20	130	21.78	3250	6.33	0.164	1.63	8.01	13.2	301.6	Clear	Slight
12:45	25	130	21.8	3900	6.33	0.165	1.69	7.88	13.5	356.7	Clear	Slight
12:50	30	130	21.8	4550	6.32	0.165	2.01	7.96	13.5	409.8	Clear	Slight
12:55	35	130	21.8	5200	6.32	0.167	1.52	7.91	13.5	457.7	Clear	Slight
13:00	40	130	21.8	5850	6.32	0.167	1.53	7.92	13.4	486.1	Clear	Slight
13:05	45	130	21.8	6500	6.32	0.167	1.52	7.91	13.4	506.5	Clear	Slight
13:10	50	130	21.8	7150	6.32	0.167	1.56	7.86	13.4	524.4	Clear	Slight
13:15	55	130	21.8	7800	6.31	0.168	1.37	7.9	13.5	537.2	Clear	Slight
13:20	60	130	21.8	8450	6.31	0.168	1.41	7.79	13.4	547.3	Clear	Slight
13:24	64	130	21.8	8970	6.31	0.17	1.42	7.93	13.6	555.6	Clear	Slight
13:28	68	130	21.8	9490	6.31	0.169	1.43	7.79	13.5	563.2	Clear	Slight
13:32	72	130	21.8	10010	6.31	0.168	1.41	7.88	13.4	570.1	Clear	Slight
13:35	75	130	21.8	10400	6.31	0.168	1.38	7.8	13.3	574.1	Clear	Slight
13:38	78	130	21.8	10790	6.31	0.168	1.36	7.75	13.4	577.8	Clear	Slight

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? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-04-13X	**Date**	2022-10-04	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	48.9 degrees F and Mostly Cloudy. The wind is blowing N/NE at 9.2 mph.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	30.0-40.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	16.42	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	25.54	**Gallons in Well**	4.15
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	35	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	14:14	**Total Volume Purged (ml)**	3432	**Sample ID**	G6M-04-13X-FAL22	**Sample Time**	14:45
Purge End Time	14:48	**Well Volumes Purged (total)**	0.22	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
14:20	0	132	16.22	792	7.23	0.08	3.32	1.13	12	-120.9	Clear	No Odor
14:25	5	132	16.22	1452	7.22	0.078	2.35	0.9	11.9	-119.4	Clear	No Odor
14:30	10	132	16.22	2112	7.2	0.076	2.27	0.82	11.9	-114.8	Clear	No Odor
14:35	15	132	16.22	2772	7.18	0.075	2.17	0.77	12	-111.1	Clear	No Odor
14:40	20	132	16.22	3432	7.16	0.074	2.33	0.75	11.8	-107.2	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? yes

Well Inspection Comments: Overgrown weeds, trees, brush

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-04-14X	**Date**	2022-10-04	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	53° Cloudy. Wind 8 mph SW.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	80.0-90.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	9.01	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	82.96	**Gallons in Well**	13.48
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	85	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	13:40	**Total Volume Purged (ml)**	6000	**Sample ID**	G6M-04-14X-FAL22	**Sample Time**	14:22
Purge End Time	14:22	**Well Volumes Purged (total)**	0.12	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:42	0	150	9.01	300	7.78	0.734	41.3	7.05	13.2	89.4	Clear	No Odor
13:49	7	150	9.01	1350	8.18	0.596	7.14	2.15	13.3	-4.9	Clear	No Odor
13:55	13	150	9.01	2250	8.23	0.591	4.93	1.6	13.3	-6.2	Clear	No Odor
14:00	18	150	9.01	3000	8.29	0.587	3.9	1.44	13.3	-3.3	Clear	No Odor
14:05	23	150	9.01	3750	8.34	0.584	7.6	1.29	13.4	-1.7	Clear	No Odor
14:10	28	150	9.01	4500	8.35	0.582	5.5	1.27	13.4	-63.6	Clear	No Odor
14:15	33	150	9.01	5250	8.34	0.576	5.3	1.3	13.5	-68	Clear	No Odor
14:20	38	150	9.01	6000	8.37	0.572	5.6	1.37	13.4	-61.5	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? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	G6M-04-15X	**Date**	2022-10-12	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	60.1 degrees F and Mostly Clear. The wind is blowing W at 4.7 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	70.0-80.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	44.11	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	36.94	**Gallons in Well**	6.00
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	75	**Purge Method**	Low-Flow	**Purging Equipment**	Portable Bladder
Purge Start Time	09:37	**Total Volume Purged (ml)**	9855	**Sample ID**	G6M-04-15X-FAL22	**Sample Time**	10:55
Purge End Time	10:51	**Well Volumes Purged (total)**	0.43	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:40	0	135	43.89	405	6.59	0.963	3.94	3.45	11.8	72.9	Clear	Moderate
09:45	5	135	43.89	1080	6.39	1.077	7.38	1.96	11.7	-25.8	Clear	Moderate
09:50	10	135	43.89	1755	6.37	1.006	7.37	1.63	11.6	-38.9	Clear	Moderate
09:55	15	135	43.89	2430	6.4	1.009	7.2	1.27	11.6	-47.8	Clear	Moderate
10:00	20	135	44	3105	6.42	1.019	5.73	1.08	11.6	-51.6	Clear	Moderate
10:05	25	135	44.05	3780	6.42	1.035	5.93	0.93	11.6	-52.6	Clear	Moderate
10:10	30	135	44.09	4455	6.41	1.06	5.83	0.86	11.6	-52.3	Clear	Moderate
10:15	35	135	44.09	5130	6.4	1.091	4.33	0.79	11.7	-52.3	Clear	Moderate
10:20	40	135	44.1	5805	6.4	1.122	2.51	0.75	11.6	-52.3	Clear	Moderate
10:25	45	135	44.09	6480	6.4	1.156	4.95	0.71	11.8	-52.4	Clear	Moderate
10:30	50	135	44.09	7155	6.4	1.18	2.68	0.68	11.7	-52.7	Clear	Moderate
10:35	55	135	44.1	7830	6.4	1.197	2.26	0.66	11.8	-51.6	Clear	Moderate
10:40	60	135	44.1	8505	6.39	1.221	3.44	0.64	11.8	-51.4	Clear	Moderate
10:45	65	135	44.11	9180	6.4	1.235	2.1	0.62	11.8	-51.4	Clear	Moderate
10:50	70	135	44.11	9855	6.39	1.247	2.21	0.6	11.8	-50.7	Clear	Moderate

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? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-04-22X	**Date**	2022-10-10	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	Mid 60s, mostly cloudy/showers			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	74.0-84.0	**Casing Diameter (in)**	2	**Well Casing Material**	NA
Static Water Level (ft-bmp)	47.47	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	37.83	**Gallons in Well**	5.95
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	79	**Purge Method**	Low-Flow	**Purging Equipment**	Portable Bladder
Purge Start Time	14:28	**Total Volume Purged (ml)**	4329	**Sample ID**	G6M-04-22X-FAL22	**Sample Time**	15:05
Purge End Time	15:05	**Well Volumes Purged (total)**	0.19	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
14:35	0	117	47.92	819	6.18	0.938	11.5	1.26	12.2	-58.4	Clear	Strong
14:40	5	117	47.98	1404	6.18	0.93	11.9	0.97	11.9	-60.5	Clear	Strong
14:45	10	117	47.98	1989	6.17	0.93	11.25	0.81	11.7	-61.5	Clear	Strong
14:50	15	117	48.1	2574	6.17	0.934	11.15	0.75	11.6	-61.7	Clear	Strong
14:55	20	117	48.01	3159	6.16	0.938	12	0.69	11.5	-61.4	Clear	Strong
15:00	25	117	48.01	3744	6.15	0.945	12.1	0.65	11.5	-61	Clear	Strong
15:05	30	117	48.02	4329	6.15	0.947	11.9	0.64	11.4	-60.9	Clear	Strong

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? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	G6M-04-31X	**Date**	2022-10-10	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	62.1 degrees F and Mostly Cloudy. The wind is blowing SW at 11.4 mph.			**Field Technician**		Grace Sheckler	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	68.0-78.0	**Casing Diameter (in)**	2	**Well Casing Material**	NA
Static Water Level (ft-bmp)	47.48	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	32.73	**Gallons in Well**	4.97
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	73	**Purge Method**	Low-Flow	**Purging Equipment**	Portable Bladder
Purge Start Time	12:41	**Total Volume Purged (ml)**	8673	**Sample ID**	G6M-04-31X-FAL22	**Sample Time**	13:45
Purge End Time	13:40	**Well Volumes Purged (total)**	0.46	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
12:45	0	147	47.49	588	6.75	1.377	4.99	4.85	14	-39.9	Clear	Slight
12:50	5	147	47.49	1323	6.53	2.381	4.84	1.21	12.5	-103.8	Clear	Slight
12:55	10	147	47.49	2058	6.54	2.343	2.64	0.96	12.3	-111.1	Clear	Slight
13:00	15	147	47.49	2793	6.55	2.213	3.8	0.82	12.3	-116.3	Clear	Slight
13:05	20	147	47.49	3528	6.54	2.066	2.14	0.75	12.5	-118.8	Clear	Slight
13:10	25	147	47.49	4263	6.54	1.912	1.89	0.69	12.4	-119.4	Clear	Slight
13:15	30	147	47.49	4998	6.54	1.807	1.82	0.66	12.3	-120.1	Clear	Slight
13:20	35	147	47.49	5733	6.54	1.736	2	0.65	12.1	-120.8	Clear	Slight
13:25	40	147	47.49	6468	6.53	1.681	2.36	0.63	12	-120.7	Clear	Slight
13:30	45	147	47.49	7203	6.53	1.645	2.57	0.62	11.9	-119.8	Clear	Slight
13:35	50	147	47.49	7938	6.53	1.622	2.32	0.61	11.8	-119.3	Clear	Slight
13:40	55	147	47.49	8673	6.52	1.605	2.01	0.6	11.8	-119.1	Clear	Slight

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? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-07-01X	**Date**	2022-10-07	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	70.0 degrees F and Mostly Clear. The wind is blowing E/SE at 4.7 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	78.0-98.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	55.15	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	32.85	**Gallons in Well**	5.35
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	88	**Purge Method**	Low-Flow	**Purging Equipment**	Portable Bladder
Purge Start Time	11:45	**Total Volume Purged (ml)**	21250	**Sample ID**	G6M-07-01X-FAL22	**Sample Time**	13:15
Purge End Time	13:11	**Well Volumes Purged (total)**	1.05	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
12:00	0	250	55.22	3750	7.01	0.65	65.99	4.04	17.5	58.4	clear	No odor
12:05	5	250	55.23	4750	6.74	0.831	26.47	1.38	16.3	75.6	clear	No odor
12:11	11	250	55.23	6500	6.69	0.823	20.09	1.12	16.1	80.2	clear	No odor
12:15	15	250	55.24	7500	6.64	0.816	21.01	1.05	16.1	82.7	clear	No odor
12:20	20	250	55.22	8750	6.58	0.797	19.62	0.98	15.9	87.2	clear	No odor
12:25	25	250	55.24	10000	6.47	0.778	18.51	0.9	16.1	93.9	clear	No odor
12:30	30	250	55.23	11250	6.46	0.763	19.52	0.87	16.1	95.4	clear	No odor
12:35	35	250	55.25	12500	6.45	0.74	19.28	0.84	16.1	96.9	clear	No odor
12:40	40	250	55.22	13750	6.45	0.72	21.33	0.82	16.3	97	clear	No odor
12:45	45	250	55.21	15000	6.46	0.697	19.31	0.84	16.3	96.8	clear	No odor
12:50	50	250	55.22	16750	6.45	0.712	19.98	0.89	16.4	95.2	clear	No odor
12:55	55	250	55.22	17500	6.47	0.714	19.77	0.93	16.6	95.9	clear	No odor
13:00	60	250	55.23	18750	6.46	0.684	19.02	0.92	16.6	97.6	clear	No odor
13:05	65	250	55.22	20000	6.46	0.668	19.15	0.97	16.9	98.7	clear	No odor
13:10	70	250	55.23	21250	6.45	0.665	18.78	0.99	16.6	98.8	clear	No odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL
Dissolved Metals	250 mL Plastic	1	HNO3
Nitrate/Nitrite	1L Amber	1	H2SO4
Sulfate	250 mL Plastic	2	NaHSO4
Sulfide	125 mL Plastic	1	None
Alkalinity	250 mL Plastic	1	None
Ethane, Ethene, Methane	40 mL Glass	3	HCL
Total Organic Carbon	250 mL Amber	1	H2SO4

Comments: None

Well Information

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well Labeled Properly: _____

Is Well in Good Condition? _____

Well Inspection Comments: _____

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-07-02X	**Date**	2022-10-05	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	48.9 degrees F and Mostly Cloudy. The wind is blowing N/NE at 9.2 mph.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	23.0-28.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	15.3	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	14.53	**Gallons in Well**	2.36
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	26	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	09:29	**Total Volume Purged (ml)**	3214	**Sample ID**	G6M-07-02X-FAL22	**Sample Time**	10:00
Purge End Time	09:57	**Well Volumes Purged (total)**	0.36	**Replicate / Code No.**	Duplicate /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
09:35	0	134	16.3	804	6.36	0.445	42.45	0.97	11.1	-100.8	Clear	No Odor
09:40	5	134	17.04	1474	6.25	0.433	67.78	0.77	10.9	-89.2	Clear	No Odor
09:45	10	116	17.42	2054	6.2	0.434	3.09	0.71	10.9	-84.1	Clear	No Odor
09:50	15	116	17.67	2634	6.17	0.437	3.45	0.7	10.9	-81.1	Clear	No Odor
09:55	20	116	17.85	3214	6.17	0.442	2.45	0.68	10.9	-78.4	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL
Dissolved Metals	250 mL Plastic	1	HNO3
Nitrate/Nitrite	1L Amber	1	H2SO4
Sulfate	250 mL Plastic	2	NaHSO4
Sulfide	125 mL Plastic	1	None
Alkalinity	250 mL Plastic	1	None
Ethane, Ethene, Methane	40 mL Glass	3	HCL
Total Organic Carbon	250 mL Amber	1	H2SO4

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments: Overgrown weeds/brush/trees

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-13-01X	**Date**	2022-10-12	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	54° Mostly Cloudy. Wind 8 mph SW.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	125.0-135.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	64.64	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	73.18	**Gallons in Well**	11.89
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	130	**Purge Method**	Low-Flow	**Purging Equipment**	Bladder Pump
Purge Start Time	13:15	**Total Volume Purged (ml)**	9000	**Sample ID**	G6M-13-01X-FAL22	**Sample Time**	14:04
Purge End Time	14:02	**Well Volumes Purged (total)**	0.20	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:23	0	200	64.55	1600	6.96	0.987	133.58	6.16	15.9	1.2	Clear	No Odor
13:28	5	200	64.54	2600	6.5	1.003	93.37	2.25	15.3	-29.9	Clear	No Odor
13:33	10	200	64.54	3600	6.46	1.004	65.2	2.65	15.4	-34	Clear	No Odor
13:38	15	200	64.54	4600	6.47	1	84.4	2.53	15.6	-31.7	Clear	No Odor
13:44	21	200	64.54	5800	6.36	0.839	50.66	2.06	16.7	-33.2	Clear	No Odor
13:50	27	200	64.54	7000	6.45	1.003	32.47	1.62	16.8	-35.6	Clear	No Odor
13:55	32	200	64.54	8000	6.43	1.001	30.97	1.5	17	-37.6	Clear	No Odor
14:00	37	200	64.54	9000	6.38	1.007	30.21	1.54	17	-40.4	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL
Dissolved Metals	250 mL Plastic	1	HNO3
Nitrate/Nitrite	1L Amber	1	H2SO4
Sulfate	250 mL Plastic	2	NaHSO4
Sulfide	125 mL Plastic	1	None
Alkalinity	250 mL Plastic	1	None
Ethane, Ethene, Methane	40 mL Glass	3	HCL
Total Organic Carbon	250 mL Amber	1	H2SO4

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-13-02X	**Date**	2022-10-10	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	55.9 degrees F and Partly Cloudy. The wind is blowing at 3.4 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	115.0-125.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	60.9	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	64.10	**Gallons in Well**	10.45
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	120	**Purge Method**	Low-Flow	**Purging Equipment**	Bladder Pump
Purge Start Time	12:15	**Total Volume Purged (ml)**	27500	**Sample ID**	G6M-13-02x-FAL22	**Sample Time**	14:10
Purge End Time	14:06	**Well Volumes Purged (total)**	0.69	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
12:20	0	250	60.9	750	6.53	0.665	11.53	3.33	17.7	34.1	Clear	Slight
12:25	5	250	60.91	2500	6.79	1.076	12.47	1.85	17.2	-14.5	Clear	Slight
12:30	10	250	60.91	3750	6.8	1.112	9.68	1.48	17.6	-16.9	Clear	Slight
12:35	15	250	60.91	5000	6.78	1.097	8.28	1.29	17.5	-12.2	Clear	Slight
12:40	20	250	60.91	6250	6.75	1.088	7.77	1.18	17.9	-6.3	Clear	Slight
12:45	25	250	60.91	7500	6.73	1.076	7.84	1.11	18	-2.8	Clear	Slight
12:51	31	250	60.91	9000	6.7	0.979	9.73	1	15.3	3.6	Clear	Slight
12:56	36	250	60.91	10250	6.68	0.96	10.82	0.92	15.1	7.2	Clear	Slight
13:00	40	250	60.92	11250	6.67	0.961	12.49	0.88	15.3	7.4	Clear	Slight
13:05	45	250	60.92	12500	6.67	0.961	16.31	0.84	15.4	7.1	Clear	Slight
13:10	50	250	60.92	13750	6.67	0.959	20.11	0.81	15.4	6.7	Clear	Slight
13:15	55	250	60.92	15000	6.65	0.948	22.33	0.79	15.2	6.2	Clear	Slight
13:20	60	250	60.91	16250	6.65	0.976	25.47	0.78	16.4	4.7	Clear	Slight
13:26	66	250	60.91	17750	6.65	1.007	29.36	0.76	17.7	3.5	Clear	Slight
13:35	75	250	60.91	20000	6.67	0.965	58.7	0.99	15.4	4.7	Clear	Slight
13:40	80	250	60.91	21250	6.65	0.921	62.34	0.76	14.3	6.1	Clear	Slight
13:45	85	250	60.91	22500	6.65	0.92	69.63	0.74	14.3	6.1	Clear	Slight
13:50	90	250	60.91	23750	6.65	0.923	79.05	0.72	14.4	5.4	Clear	Slight
13:55	95	250	60.91	25500	6.64	0.932	4.89	0.7	14.8	4.2	Clear	Slight
14:00	100	250	60.91	26250	6.65	0.924	4.51	0.7	14.5	3.9	Clear	Slight
14:05	105	250	60.91	27500	6.64	0.92	4.66	0.69	14.4	3.6	Clear	Slight

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL
Dissolved Metals	250 mL Plastic	1	HNO3
Nitrate/Nitrite	1L Amber	1	H2SO4
Sulfate	250 mL Plastic	2	NaHSO4
Sulfide	125 mL Plastic	1	None
Alkalinity	250 mL Plastic	1	None
Ethane, Ethene, Methane	40 mL Glass	3	HCL

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Total Organic Carbon	250 mL Amber	1	H2SO4

Comments: None

Well Information

Well Labeled Properly:

Is Well in Good Condition?

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-13-03X	**Date**	2022-10-10	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	54.0 degrees F and Partly Cloudy. The wind is blowing S/SE at 5.8 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	80.0-90.0	**Casing Diameter (in)**	2	**Well Casing Material**	NA
Static Water Level (ft-bmp)	59.35	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	30.65	**Gallons in Well**	4.99
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	85	**Purge Method**	Low-Flow	**Purging Equipment**	Disposable Bailer
Purge Start Time	10:55	**Total Volume Purged (ml)**	6000	**Sample ID**	G6M-13-03X-FAL22	**Sample Time**	11:35
Purge End Time	11:31	**Well Volumes Purged (total)**	0.32	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:05	0	250	59.35	1500	5.61	1.571	25.02	1.98	14.1	172.7	Clear	No Odor
11:11	6	250	59.35	2250	5.61	1.616	6.38	1.46	14.1	185.4	Clear	No Odor
11:15	10	250	59.35	3000	5.62	1.628	3.94	1.26	14.1	195.5	Clear	No Odor
11:21	16	250	59.35	3750	5.62	1.63	3.12	1.2	14.1	198.6	Clear	No Odor
11:25	20	250	59.35	4500	5.62	1.635	3.45	1.15	14.3	201.2	Clear	No Odor
11:30	25	250	59.35	5250	5.63	1.625	2.25	1.09	14	204.9	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL
	40 mL Glass	3	HCl

Comments: None

Well Information

Well Labeled Properly:

Is Well in Good Condition?

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-13-04X	**Date**	2022-10-12	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	69.1 degrees F and Clear. The wind is blowing W at 5.8 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	125.0-135.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	63.88	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	71.12	**Gallons in Well**	11.59
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	130	**Purge Method**	Low-Flow	**Purging Equipment**	Portable Bladder
Purge Start Time	11:25	**Total Volume Purged (ml)**	25000	**Sample ID**	G6M-13-04X-FAL22	**Sample Time**	13:10
Purge End Time	13:06	**Well Volumes Purged (total)**	0.57	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:40	0	250	63.88	3750	6.94	0.86	7.33	3.68	16.7	-88.5	Orange	Slight
11:46	6	250	63.88	5250	6.78	1.207	64.18	1.79	16.6	-107.1	Orange	Slight
11:50	10	250	63.88	6250	6.8	1.222	62.5	1.56	16.3	-111.7	Orange	Slight
11:55	15	250	63.88	7500	6.82	1.224	12.9	1.26	16.3	-114.6	Orange	Slight
12:00	20	250	63.88	8750	6.83	1.22	11.5	1.12	16.2	-117.1	Orange	Slight
12:05	25	250	63.88	10000	6.84	1.207	5.9	1.09	15.9	-118.4	Orange	Slight
12:10	30	250	63.88	11250	6.84	1.2	5.52	0.98	16.1	-119.8	Orange	Slight
12:15	35	250	63.88	12500	6.83	1.252	4.16	0.89	17.7	-122.8	Orange	Slight
12:20	40	250	63.88	13750	6.82	1.304	2.31	0.83	19.3	-125.4	Orange	Slight
12:30	50	250	63.88	16250	6.81	1.397	1.71	0.99	22.4	-123.1	Orange	Slight
12:35	55	250	63.88	17500	6.82	1.391	1.83	0.92	21.9	-122.8	Orange	Slight
12:40	60	250	63.88	18750	6.81	1.414	3.88	1.05	22	-123.9	Orange	Slight
12:45	65	250	63.88	20000	6.84	1.257	2.43	1.06	17.6	-119.1	Orange	Slight
12:51	71	250	63.88	21500	6.84	1.257	3.44	0.81	17.9	-123	Orange	Slight
12:55	75	250	63.88	22500	6.85	1.234	1.79	0.8	16.8	-124.3	Orange	Slight
13:00	80	250	63.88	23750	6.86	1.207	1.61	0.75	16.8	-124.9	Orange	Slight
13:05	85	250	63.88	25000	6.86	1.204	1.24	0.76	16.8	-124.7	Orange	Slight

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

Comments: Changed nitrogen tank at 12:25

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	G6M-13-05X	**Date**	2022-10-03	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	46.9 degrees F and Mostly Cloudy. The wind is blowing N at 5.8 mph			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	45.0-55.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	15.88	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	40.82	**Gallons in Well**	6.63
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	53	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	13:12	**Total Volume Purged (ml)**	6500	**Sample ID**	G6M-13-05X-FAL22	**Sample Time**	14:05
Purge End Time	14:00	**Well Volumes Purged (total)**	0.26	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (gpm)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:20	0	150	15.88	1500	6.93	0.597	5.09	1.67	13.9	-102.3	Clear	No Odor
13:25	5	150	16.06	2250	6.93	0.592	6.02	1.45	13.8	-104.1	Clear	No Odor
13:31	11	150	16.09	3150	6.93	0.587	7.01	1.28	13.6	-106.6	Clear	No Odor
13:35	15	150	16.09	3750	6.93	0.584	9.74	1.23	13.6	-106.6	Clear	No Odor
13:41	21	150	16.09	4650	6.93	0.585	16.44	1.17	13.7	-108.8	Clear	No Odor
13:45	25	150	16.1	5250	6.93	0.585	27.52	1.15	13.8	-109.2	Clear	No Odor
13:51	31	150	16.11	6150	6.93	0.584	27.8	1.12	13.6	-108.3	Clear	No Odor
13:55	35	150	16.11	6750	6.93	0.582	26.61	1.13	13.6	-109.7	Clear	No Odor
14:00	40	150	16.11	7500	6.93	0.58	27.81	1.09	13.5	-109.9	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL
Dissolved Metals	250 mL Plastic	1	HNO3
Nitrate/Nitrite	1L Amber	1	H2SO4
Sulfate	250 mL Plastic	2	NaHSO4
Sulfide	125 mL Plastic	1	None
Alkalinity	250 mL Plastic	1	None
Ethane, Ethene, Methane	40 mL Glass	3	HCL
Total Organic Carbon	250 mL Amber	1	H2SO4

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-13-06X	**Date**	2022-10-03	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	54.0 degrees F and Cloudy. The wind is blowing NE at 3.4 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	50.0-60.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	15.55	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	44.45	**Gallons in Well**	7.25
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	55	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	15:04	**Total Volume Purged (ml)**	6900	**Sample ID**	G6M-13-06X-FAL22	**Sample Time**	15:55
Purge End Time	15:51	**Well Volumes Purged (total)**	0.25	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
15:10	0	150	15.55	900	6.44	0.836	17.84	1.42	12	-54.3	Clear	Slight
15:15	5	150	15.71	1650	6.4	0.804	231.85	1.26	11.9	-53.6	Clear	Slight
15:20	10	150	15.73	2400	6.38	0.793	26.24	1.14	11.7	-54.3	Clear	Slight
15:25	15	150	15.69	3150	6.38	0.787	241.9	1.06	11.6	-55.2	Clear	Slight
15:32	22	150	15.71	4200	6.38	0.784	8.16	1.05	11.6	-57.3	Orange	Slight
15:36	26	150	15.71	4800	6.38	0.784	7.31	1.05	11.6	-57.7	Orange	Slight
15:40	30	150	15.7	5400	6.38	0.784	8.22	1.05	11.6	-57.3	Orange	Slight
15:45	35	150	15.65	6150	6.38	0.783	8.48	1.05	11.5	-57.4	Orange	Slight
15:50	40	150	15.64	6900	6.38	0.781	8.94	1.04	11.5	-57.1	Orange	Slight

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL
Dissolved Metals	250 mL Plastic	1	HNO3
Nitrate/Nitrite	1L Amber	1	H2SO4
Sulfate	250 mL Plastic	2	NaHSO4
Sulfide	125 mL Plastic	1	None
Alkalinity	250 mL Plastic	1	None
Ethane, Ethene, Methane	40 mL Glass	3	HCL
Total Organic Carbon	250 mL Amber	1	H2SO4

Comments: None

Well Information

Well Labeled Properly: _____

Is Well in Good Condition? _____

Well Inspection Comments: _____

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-95-19X	**Date**	2022-10-04	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	54.0 degrees F and Cloudy.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	48.0-58.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	14.08	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	43.92	**Gallons in Well**	7.16
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	53	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	11:40	**Total Volume Purged (ml)**	9750	**Sample ID**	G6M-95-19X-FAL22	**Sample Time**	12:50
Purge End Time	12:45	**Well Volumes Purged (total)**	0.36	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:45	0	150	14.08	750	5.8	2.474	0.99	5.85	12.9	142.6	Clear	No Odor
11:50	5	150	14.1	1500	5.63	2.485	0.57	5.27	12.7	166.1	Clear	No Odor
11:57	12	150	14.15	2250	5.61	2.568	0.59	4.78	12.6	179.6	Clear	No Odor
12:00	15	150	14.15	3000	5.63	2.595	0.57	4.61	12.7	184.8	Clear	No Odor
12:05	20	150	14.16	3750	5.65	2.643	0.61	4.05	13	191.4	Clear	No Odor
12:11	26	150	14.12	4500	5.67	2.693	0.37	4.32	13.3	197.9	Clear	No Odor
12:17	32	150	14.12	5250	5.67	2.683	0.48	3.98	12.8	203.6	Clear	No Odor
12:20	35	150	14.11	6000	5.68	2.698	0.31	3.73	12.8	206.1	Clear	No Odor
12:25	40	150	14.14	6750	5.68	2.709	0.32	3.79	12.8	210.3	Clear	No Odor
12:30	45	150	14.14	7500	5.68	2.717	0.26	3.7	12.9	214.1	Clear	No Odor
12:35	50	150	14.14	8250	5.68	2.722	0.43	3.74	12.8	218.1	Clear	No Odor
12:40	55	150	14.14	9000	5.68	2.725	0.19	3.78	12.8	221.3	Clear	No Odor
12:45	60	150	14.14	9750	5.69	2.727	0.35	3.61	12.8	224.1	Clear	No Odor

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL

Comments: had to cut down a tree to access the well.

Well Information

Well Labeled Properly:

Is Well in Good Condition?

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-95-20X	**Date**	2022-10-04	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	55.0 degrees F and Cloudy. The wind is blowing NE at 10.3 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	18.0-23.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	14.71	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	8.29	**Gallons in Well**	1.35
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	20	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	13:15	**Total Volume Purged (ml)**	10500	**Sample ID**	G6M-95-20X-FAL22	**Sample Time**	14:30
Purge End Time	14:28	**Well Volumes Purged (total)**	2.05	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:21	0	150	14.71	900	6.5	0.146	28.85	2.89	13.4	167.2	Clear	No Odor
13:25	4	150	14.93	1500	6.38	0.122	26.89	1.83	13.3	127.3	Clear	No Odor
13:31	10	150	15.21	2400	6.37	0.125	14.41	1.59	13.2	106.1	Clear	No Odor
13:35	14	150	15.21	3000	6.37	0.129	8.98	1.6	13.3	92.7	Clear	No Odor
13:40	19	150	15.21	3750	6.37	0.13	7.63	1.41	13.4	84.3	Clear	No Odor
13:45	24	150	15.21	4500	6.37	0.131	7.87	1.4	13.3	80.3	Clear	No Odor
13:50	29	150	15.21	5250	6.37	0.131	5.75	1.4	13.3	76.3	Clear	No Odor
13:55	34	150	15.21	6000	6.37	0.131	6.69	1.39	13.5	73.6	Clear	No Odor
14:00	39	150	15.21	6750	6.37	0.132	6.33	1.35	13.5	70.4	Clear	No Odor
14:05	44	150	15.21	7500	6.37	0.131	4.33	1.35	13.5	68.4	Clear	No Odor
14:11	50	150	15.21	8400	6.37	0.132	3.86	1.37	14.4	66.7	Clear	No Odor
14:15	54	150	15.21	9000	6.37	0.132	3.97	1.26	13.6	62.9	Clear	No Odor
14:20	59	150	15.21	9750	6.37	0.132	3.76	1.27	13.6	61.7	Clear	No Odor
14:25	64	150	15.2	10500	6.38	0.133	3.18	1.35	13.6	56.7	Clear	No Odor

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

Comments: Had to clear saplings, a pine tree and thorn bush to gain access to the well.

Well Information

Well Labeled Properly: _____

Is Well in Good Condition? _____

Well Inspection Comments: _____

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	G6M-97-05B	**Date**	2022-10-10	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	48.9 degrees F and Mostly Cloudy. The wind is blowing E/SE at 4.7 mph.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	130.0-135.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	65.95	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	71.98	**Gallons in Well**	11.70
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	132	**Purge Method**	Low-Flow	**Purging Equipment**	Bladder Pump
Purge Start Time	10:07	**Total Volume Purged (ml)**	5244	**Sample ID**	G6M-97-05B-FAL22	**Sample Time**	10:50
Purge End Time	10:46	**Well Volumes Purged (total)**	0.12	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
10:15	0	138	66.12	1104	6.76	1.09	8.92	0.99	12.4	-142.3	Clear	Moderate
10:20	5	138	66.11	1794	6.71	1.103	6.57	0.78	12.4	-146.4	Clear	Moderate
10:25	10	138	66.11	2484	6.69	1.113	6.47	0.72	12.4	-147.2	Clear	Slight
10:30	15	138	66.11	3174	6.68	1.123	6.21	0.67	12.4	-148.7	Clear	No Odor
10:35	20	138	66.11	3864	6.68	1.128	6.64	0.64	12.4	-148.7	Clear	Slight
10:40	25	138	66.12	4554	6.69	1.132	7.22	0.61	12.4	-148.9	Clear	Slight
10:45	30	138	66.11	5244	6.69	1.131	6.94	0.59	12.5	-149.1	Clear	Slight

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL
Dissolved Metals	250 mL Plastic	1	HNO3
Nitrate/Nitrite	1L Amber	1	H2SO4
Sulfate	250 mL Plastic	2	NaHSO4
Sulfide	125 mL Plastic	1	None
Alkalinity	250 mL Plastic	1	None
Ethane, Ethene, Methane	40 mL Glass	3	HCL
Total Organic Carbon	250 mL Amber	1	H2SO4

Comments: None

Well Information

Well Labeled Properly: yes

Is Well in Good Condition? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	G6M-97-28X	**Date**	2022-10-06	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	54.0 degrees F and Clear. The wind is blowing undefined at 0.0 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	100.0-105.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	62.52	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	42.48	**Gallons in Well**	6.92
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	100	**Purge Method**	Low-Flow	**Purging Equipment**	Portable Bladder
Purge Start Time	08:40	**Total Volume Purged (ml)**	25000	**Sample ID**	G6M-97-28X-FAL22	**Sample Time**	10:25
Purge End Time	10:21	**Well Volumes Purged (total)**	0.95	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
08:45	0	250	62.52	1250	6.65	0.272	3.89	2.49	14.5	-37.2	Clear	Slight
08:50	5	250	62.52	2500	6.65	0.273	3.76	2.18	14.4	-43.5	Clear	Slight
08:55	10	250	62.52	3750	6.68	0.281	6.49	1.56	14.4	-61.6	Clear	Slight
09:01	16	250	62.52	5250	6.7	0.289	10.96	1.38	14.4	-68.7	Clear	Slight
09:05	20	250	62.52	6250	6.71	0.295	22.65	1.27	14.4	-73.8	Clear	Slight
09:10	25	250	62.52	7500	6.72	0.303	31.71	1.18	14.5	-79.4	Clear	Slight
09:15	30	250	62.52	8750	6.73	0.315	23.38	1.11	14.5	-85.3	Clear	Slight
09:25	40	250	62.52	11250	6.76	0.348	6.11	1.12	15.9	-97.1	Clear	Slight
09:30	45	250	62.52	12500	6.8	0.366	6.45	1.13	14.7	-101.9	Clear	Slight
09:35	50	250	62.52	13750	6.82	0.376	6.98	1	14.5	-106.9	Clear	Slight
09:40	55	250	62.52	15750	6.93	0.409	7.88	0.89	14.4	-122.2	Clear	No Odor
09:45	60	250	62.52	16250	6.95	0.415	8.19	0.88	14.4	-124.4	Clear	Slight
09:50	65	250	62.52	17500	6.98	0.431	7.81	0.86	14.4	-127.4	Clear	Slight
09:55	70	250	62.52	18750	6.99	0.458	7.85	0.84	14.5	-127.5	Clear	Slight
10:00	75	250	62.52	20000	6.96	0.515	7.32	0.82	14.5	-119.7	Clear	Slight
10:05	80	250	62.52	21250	6.9	0.519	7.25	0.8	14.7	-108.3	Clear	Slight
10:10	85	250	62.52	22500	6.84	0.521	7.42	0.79	14.6	-99.9	Clear	Slight
10:15	90	250	62.52	23500	6.79	0.527	7.71	0.78	14.6	-99.8	Clear	Slight
10:20	95	250	62.52	25000	6.77	0.528	7.49	0.76	14.7	-94.6	Clear	Slight

Constituent Sampled	Container	Number	Preservative
Dissolved Metals	250 mL Plastic	1	HNO3

Comments:

Had to clear weeds and brush to access the well . PVC riser comes loose when removing pump tubing from the well

Well Information

Well Labeled Properly:

Is Well in Good Condition?

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	MW-3	**Date**	2022-10-06	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	70.0 degrees F and Clear. The wind is blowing at 3.4 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	126.0-136.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	63.2	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	72.80	**Gallons in Well**	11.87
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	131	**Purge Method**	Low-Flow	**Purging Equipment**	Dedicated Bladder
Purge Start Time	13:10	**Total Volume Purged (ml)**	16250	**Sample ID**	MW-3-FAL22	**Sample Time**	14:20
Purge End Time	14:17	**Well Volumes Purged (total)**	0.36	**Replicate / Code No.**	Not Applicable / MW-3-FAL22	**Water Quality Meter/ ID**	YSI Pro DSS / 21c100564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
13:30	0	250	63.2	5000	6.92	0.88	26.32	4.44	21.6	-90.2	Orange	Slight
13:35	5	250	63.2	6250	7.25	0.768	46.97	2.24	18.8	-133.9	Orange	Slight
13:40	10	250	63.2	7500	7.32	0.761	11.11	1.15	18.6	-162.7	Orange	Slight
13:46	16	250	63.21	9000	7.28	0.76	7.82	1.06	18.4	-162.5	Orange	Slight
13:51	21	250	63.2	10250	7.17	0.779	7.52	0.93	18.9	-158.6	Orange	Slight
13:55	25	250	63.2	11250	7.05	0.784	7.98	0.89	18.5	-146.9	Orange	Slight
14:00	30	250	63.2	12500	6.96	0.784	4.08	0.87	18.4	-135.1	Orange	Slight
14:05	35	250	63.2	13570	6.93	0.8	2.85	0.84	19.2	-132.6	Orange	Slight
14:10	40	250	63.2	15000	6.91	0.803	2.99	0.83	19.1	-130.4	Orange	Slight
14:15	45	250	63.21	16250	6.9	0.804	2.81	0.81	19.3	-129.3	Orange	Slight

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

Comments: Had to clear weeds to gain access to the well.

Well Information

Well Labeled Properly:

Is Well in Good Condition?

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	MW-7	**Date**	2022-10-06	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	73.9 degrees F and Clear. The wind is blowing at 3.4 mph.			**Field Technician**		Diane Champagne	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	125.0-135.0	**Casing Diameter (in)**	2.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	62.21	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	72.79	**Gallons in Well**	11.86
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	130	**Purge Method**	Low-Flow	**Purging Equipment**	Portable Bladder
Purge Start Time	14:45	**Total Volume Purged (ml)**	16500	**Sample ID**	MW-7-FAL22	**Sample Time**	15:55
Purge End Time	15:53	**Well Volumes Purged (total)**	0.37	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 21c1006564
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
14:50	0	250	63.25	2250	6.72	0.744	5.09	4.89	24.6	-66.9	Orange	Slight
14:55	5	250	63.25	2500	6.7	0.711	4.71	4.17	23.6	-66.8	Orange	Slight
15:00	10	250	63.25	3750	6.68	0.681	8.45	3.22	22	-68.9	Orange	Slight
15:05	15	250	63.25	5000	6.68	0.674	15.67	2.67	21.7	-74.7	Orange	Slight
15:10	20	250	63.25	6250	6.68	0.672	24.83	2.45	21.8	-79.2	Orange	Slight
15:15	25	250	63.25	7500	6.68	0.675	33.76	2.11	21.8	-82.3	Orange	Slight
15:20	30	250	63.25	8750	6.68	0.677	28.94	2.04	22	-84.7	Orange	Slight
15:25	35	250	63.25	10000	6.68	0.673	7.22	1.83	21.9	-86.4	Orange	Slight
15:30	40	250	63.25	11250	6.68	0.662	7.47	1.75	21.9	-87.4	Orange	Slight
15:40	50	250	63.25	13750	6.67	0.714	4.52	0.9	21.9	-91.6	Orange	Slight
15:45	55	250	63.25	15000	6.67	0.731	4.49	0.9	21.9	-92.9	Orange	Slight
15:51	61	250	63.25	16500	6.68	0.711	4.12	0.84	21.9	-89.9	Orange	Slight

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

Comments: During purge, DTW was taken from TOC

Well Information

Well Labeled Properly:

Is Well in Good Condition?

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	XSA-12-95X	**Date**	2022-10-06	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	53 Mostly Cloudy. Wind 9 mph SSW.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	121.0-131.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	68.29	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	62.71	**Gallons in Well**	2.57
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	126	**Purge Method**	Low-Flow	**Purging Equipment**	Dedicated Bladder
Purge Start Time	12:23	**Total Volume Purged (ml)**	11400	**Sample ID**	XSA-12-95X-FAL22	**Sample Time**	13:21
Purge End Time	13:20	**Well Volumes Purged (total)**	1.17	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
12:25	0	200	68.19	400	10.1	0.797	105.93	7.37	13.2	9.8	Clear	No Odor
12:30	5	200	68.18	1400	10.1	0.828	137.12	4.17	12.7	-108.9	Clear	No Odor
12:35	10	200	68.18	2400	9.94	0.849	108.2	2.75	12.7	-158.5	Clear	No Odor
12:40	15	200	68.18	3400	9.8	0.869	126.96	2	12.7	-176.9	Clear	No Odor
12:45	20	200	68.18	4400	9.55	0.908	139.75	1.69	12.6	-174.1	Clear	No Odor
12:50	25	200	68.18	5400	9.12	0.967	119.86	1.49	12.5	-166.5	Clear	No Odor
12:55	30	200	68.18	6400	8.08	1.084	116.14	1.36	12.6	-135	Clear	No Odor
13:05	40	200	68.18	8400	7.18	1.398	117.5	1.25	12.6	-61.5	Clear	No Odor
13:10	45	200	68.18	9400	7.04	1.358	116.04	1.21	12.8	-53.5	Clear	No Odor
13:15	50	200	68.18	10400	7.03	1.375	112.8	1.18	12.6	-49.5	Clear	No Odor
13:20	55	200	68.18	11400	6.95	1.383	107.09	1.15	12.7	-45.4	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: no

Is Well in Good Condition? yes

Well Inspection Comments: Needed ID on well.

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	XSA-12-96X	**Date**	2022-10-07	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	51 Mostly Cloudy, wind 9 mph SSW			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	121.0-131.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	67.09	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	63.91	**Gallons in Well**	2.62
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	126	**Purge Method**	Low-Flow	**Purging Equipment**	Mini-Bladder Pump
Purge Start Time	09:52	**Total Volume Purged (ml)**	10600	**Sample ID**	XSA-12-96X-FAL22	**Sample Time**	10:49
Purge End Time	10:48	**Well Volumes Purged (total)**	1.07	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
10:05	0	200	67.01	2600	9.11	0.944	64.32	6.95	13.2	-110.1	Clear	No Odor
10:10	5	200	67.01	3600	9.01	0.937	61.14	2.5	13	-122.8	Clear	No Odor
10:15	10	200	67.01	4600	8.88	1.001	47.72	1.4	13	-140.01	Clear	No Odor
10:20	15	200	67.01	5600	8.74	1.035	65.17	1.14	12.7	-177.9	Clear	No Odor
10:25	20	200	67.01	6600	7.99	1.104	67.93	1.06	12.8	-157.3	Clear	No Odor
10:30	25	200	67.01	7600	7.3	1.24	61.72	1.04	12.7	-106.6	Clear	No Odor
10:36	31	200	67.01	8800	6.91	1.378	62.29	1.02	12.7	-65.7	Clear	No Odor
10:40	35	200	67.01	9600	6.89	1.396	60.61	0.99	12.9	-67.4	Clear	No Odor
10:45	40	200	67.01	10600	6.87	1.4	59.86	0.97	12.8	-63.6	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? yes

Well Inspection Comments:

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

Groundwater Sampling Form

Well ID	XSA-12-97X	**Date**	2022-10-07	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	Mid 70s, partly cloudy			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	121.0-131.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	71.56	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	59.44	**Gallons in Well**	2.44
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	126	**Purge Method**	Low-Flow	**Purging Equipment**	Dedicated Bladder
Purge Start Time	12:23	**Total Volume Purged (ml)**	11400	**Sample ID**	XSA-12-97X-FAL22	**Sample Time**	13:22
Purge End Time	13:22	**Well Volumes Purged (total)**	1.23	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 19K102593
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
12:51	0	200	71.03	5600	7.73	0.967	156.86	1.68	13.5	-167.8	Black	No Odor
12:55	4	200	71.03	6400	7.41	0.97	169.4	1.05	15	-163.7	Black	No Odor
12:59	8	200	71.03	7200	7.28	0.981	716.1	0.88	15.6	-162.8	Black	No Odor
13:05	14	200	71.03	8400	7.36	1	249	9.19	16.6	-87.5	Black	No Odor
13:11	20	200	71.03	9600	7.03	0.964	136.53	0.89	16	-125.7	Gray	No Odor
13:15	24	200	71.03	10400	7.12	0.976	125.44	0.83	15.7	-127.5	Gray	No Odor
13:20	29	200	71.03	11400	7.07	0.985	102.56	0.81	15.6	-120	Gray	No Odor

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

Comments: Pump for a few min before hooking up the ysi. The tube must be sitting in some silts/fines that need to be cleared first.

Well Information

Well Labeled Properly: _____

Is Well in Good Condition? _____

Well Inspection Comments: _____

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

SERES Engineering & Services, LLC

ARCADIS a joint venture

Groundwater Sampling Form

Well ID	XSA-12-98X	**Date**	2022-10-07	**Event**		Second Semi-Annual	
Project Name	Fort Devens	**Site Location**	Devens, MA	**Site ID / Operational Area**		AOC 50 / Site wide	
Weather(°F)	70.0 degrees F and Mostly Clear. The wind is blowing E/SE at 4.7 mph.			**Field Technician**		Spencer Gust	
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	60.0-70.0	**Casing Diameter (in)**	1.0	**Well Casing Material**	NA
Static Water Level (ft-bmp)	7.98	**Total Depth (ft-bmp)**	NA	**Water Column(ft)**	64.95	**Gallons in Well**	2.64
Depth to Product (ft-bmp)	NA	**Pump Intake Depth(ft-bmp)**	55	**Purge Method**	Low-Flow	**Purging Equipment**	Peristaltic Pump
Purge Start Time	11:38	**Total Volume Purged (ml)**	11242	**Sample ID**	XSA-12-98X-FAL22	**Sample Time**	12:55
Purge End Time	12:55	**Well Volumes Purged (total)**	1.12	**Replicate / Code No.**	Not Applicable /	**Water Quality Meter/ ID**	YSI Pro DSS / 15E102911
Scope of work completed?	Yes						

Time	Total Elapsed (min)	Rate (mL/min)	Depth to Water (ft)	Volume Purged (mL)	pH (S.U.)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	Redox (mV)	Appearance	
											Color	Odor
11:45	0	146	8.08	1022	9.86	0.428	13.08	1.01	13	372	Clear	No Odor
11:50	5	146	8.08	1752	9.43	0.383	23.17	0.77	12.9	371.7	Clear	No Odor
11:55	10	146	8.08	2482	8.68	0.361	22.1	0.79	13	404.9	Clear	No Odor
12:00	15	146	8.08	3212	8.41	0.356	22.5	0.8	13.1	425.7	Clear	No Odor
12:05	20	146	8.08	3942	8.23	0.35	21.28	0.79	13	444.9	Clear	No Odor
12:10	25	146	8.08	4672	8.1	0.346	19.25	0.77	12.8	463.1	Clear	No Odor
12:15	30	146	8.08	5402	8.04	0.345	16.24	0.76	12.9	472	Clear	No Odor
12:20	35	146	8.08	6132	7.99	0.345	14.68	0.75	12.9	477.7	Clear	No Odor
12:25	40	146	8.08	6862	7.94	0.345	12.7	0.74	12.9	480.6	Clear	No Odor
12:30	45	146	8.08	7592	7.91	0.346	10.42	0.73	13	478.3	Clear	No Odor
12:35	50	146	8.08	8322	7.89	0.346	7.81	0.72	13.1	467.5	Clear	No Odor
12:39	54	146	8.08	8906	7.88	0.346	7.87	0.72	13	459	Clear	No Odor
12:43	58	146	8.08	9490	7.87	0.347	4.98	0.71	13	444.3	Clear	No Odor
12:47	62	146	8.08	10074	7.85	0.348	4.41	0.7	13.2	432.6	Clear	No Odor
12:51	66	146	8.08	10658	7.85	0.348	3.57	0.7	13.2	427.3	Clear	No Odor
12:55	70	146	8.08	11242	7.85	0.347	2.8	0.7	13.1	423.4	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: yes

Is Well in Good Condition? yes

Well Inspection Comments: Well in good shape.

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
S.U = standard units

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	15E102911
SAMPLER	Grace Sheckler
DATE	10/05/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	4.06	4	yes	08:09
pH	7.16	7	yes	08:16
pH	10.22	10	yes	08:22
Conductivity	0.897	1.413	yes	08:34
ORP	246.1	234	yes	08:26
DO	98.6	99.2	yes	08:30

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

NOTES:

SIGNED

10/5/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	YSI Pro Plus
SERIAL NUMBER	19C100564
SAMPLER	Diane Champagne
DATE	10/05/2022

AUTOCALIBRATION

CALIBRATION PARAMETERS	CALIBRATION READINGS		AUTOCALIBRATION WITHIN RANGE	TIME	CALIBRATION RANGES [1]	
	PRE-CALIBRATION	POST-CALIBRATION				
pH	7.07	7		09:48	pH	yes
CONDUCTIVITY	1.445	1.413		09:48	CONDUCTIVITY	yes
ORP	234.56	240.18		09:48	ORP	yes
DO	99.8	99.8		09:48	DO	yes
TURBIDITY	1.11	0		09:48	TURBIDITY	yes

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

NOTES:

SIGNED

10/5/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	Ft Devens LTM SHL
PROJECT NUMBER	30130800
MODEL	YSI Pro Plus
SERIAL NUMBER	19k102593
SAMPLER	Spencer Gust
DATE	10/05/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.65	7	no	--
pH	4.39	4	no	--
pH	10.09	10	yes	--
Conductivity	1.066	1.413	--	--
ORP	235.6	234	yes	--
DO	97.4	100	--	--
Turbidity	0.5	0	--	--
Turbidity	16	10	--	--

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

NOTES:

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10/5/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	YSI Pro Plus
SERIAL NUMBER	21C100564
SAMPLER	Diane Champagne
DATE	10/06/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7	7	yes	08:32
pH	4.04	4.01	yes	08:38
pH	10.06	9.98	yes	08:42
Conductivity	1.516	1.413	yes	08:16
ORP	241.5	240	yes	08:46
DO	101.7	100.1	yes	08:28
Turbidity	0.83	0	--	08:02

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

NOTES:

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10/6/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	15E102911
SAMPLER	Grace Sheckler
DATE	10/06/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	4.03	4	yes	07:57
pH	7.05	7	yes	08:04
pH	9.99	10	yes	08:11
Conductivity	1.351	1.413	yes	07:51
ORP	232	234	yes	07:45
DO	98.8	98.9	yes	07:53

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

NOTES:

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10/6/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	Ft Devens LTM SHL
PROJECT NUMBER	30130800
MODEL	YSI Pro Plus
SERIAL NUMBER	19k102593
SAMPLER	Spencer Gust
DATE	10/06/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.33	7	no	--
pH	4.08	4	yes	--
pH	10.16	10	yes	--
Conductivity	1.417	1.413	--	--
ORP	240	234	yes	--
DO	103.7	100	yes	--
Turbidity	0.3	0	--	--
Turbidity	13	10	--	--

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

NOTES:

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10/6/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	YSI Pro Plus
SERIAL NUMBER	21C100564
SAMPLER	Diane Champagne
DATE	10/07/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	4.14	4.01	yes	08:32
pH	7.41	7	yes	08:26
pH	9.88	10.01	yes	08:17
Conductivity	1.444	1.413	yes	08:35
Conductivity	232.2	240	yes	08:07
ORP	232.2	240	yes	08:07
DO	99.9	99.9	yes	08:35
Turbidity	1.16	1	yes	08:00
Turbidity	0.43	0	yes	08:01

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

NOTES:

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10/7/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	15E102911
SAMPLER	Grace Sheckler
DATE	10/07/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	4.06	4	yes	07:55
pH	7.07	7	yes	08:03
pH	9.98	10	yes	08:08
Conductivity	1.46	1.413	yes	08:22
ORP	235.6	234	yes	08:18
DO	98.8	98.9	yes	08:20

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

NOTES:

SIGNED

10/7/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	Ft Devens LTM SHL
PROJECT NUMBER	30130800
MODEL	YSI Pro Plus
SERIAL NUMBER	19k102593
SAMPLER	Spencer Gust
DATE	10/07/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	6.86	7	yes	--
pH	3.65	4	no	--
pH	9.64	10	no	--
Conductivity	1.389	1.413	--	--
ORP	243.3	234	yes	--
DO	94.9	100	--	--
Turbidity	0.5	0	--	--
Turbidity	17	10	--	--

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

NOTES:

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10/7/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	YSI Pro Plus
SERIAL NUMBER	21C100564
SAMPLER	Diane Champagne
DATE	10/10/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	4.03	4	yes	07:58
pH	7.37	7	yes	07:50
pH	11.39	10	yes	07:55
Conductivity	1.137	1.413	yes	08:03
ORP	233.3	240.1	yes	08:07
DO	97.8	99.9	yes	07:41
Turbidity	5.65	0.01	yes	07:42

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

NOTES:

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10/10/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	15E102911
SAMPLER	Grace Sheckler
DATE	10/10/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	3.92	4	yes	08:11
pH	6.98	7	yes	08:16
pH	9.99	10	yes	08:20
Conductivity	1.367	1.413	yes	08:02
ORP	238.7	231	yes	08:05
DO	98.6	99.8	yes	07:58

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

NOTES:

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10/10/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	Ft Devens LTM SHL
PROJECT NUMBER	30130800
MODEL	YSI Pro Plus
SERIAL NUMBER	19k102593
SAMPLER	Spencer Gust
DATE	10/10/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.29	7	yes	--
pH	4.26	4	yes	--
pH	10.24	10	yes	--
Conductivity	1.392	1.413	--	--
ORP	234	248.3	yes	--
DO	99.7	100	yes	--
Turbidity	0.2	0	--	--
Turbidity	11	10	--	--

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

NOTES:

Spencer P Gust — SIGNED

10/10/2022 — DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	YSI Pro Plus,YSI ProDSS
SERIAL NUMBER	21C100564
SAMPLER	Diane Champagne
DATE	10/12/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	7.13	7	yes	07:52
pH	4.02	4	yes	07:49
pH	9.89	9.99	yes	07:45
Conductivity	1.441	1.413	yes	07:53
ORP	263.3	240.2	yes	08:06
DO	103.2	100.1	yes	07:53
Turbidity	1.17	1	yes	08:16

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

NOTES:

SIGNED

10/12/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	USACE NE Devens TO Y3 8a JV
PROJECT NUMBER	30130800
MODEL	YSI ProDSS
SERIAL NUMBER	15E102911
SAMPLER	Grace Sheckler
DATE	10/12/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	3.97	4	yes	08:19
pH	7.03	7	yes	08:28
pH	9.93	10	yes	08:33
Conductivity	1.477	1.413	yes	08:43
ORP	238.4	231	yes	08:38
DO	100.1	100	yes	08:16

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

NOTES:

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10/12/2022
DATE

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME	Ft Devens LTM SHL
PROJECT NUMBER	30130800
MODEL	YSI Pro Plus
SERIAL NUMBER	19k102593
SAMPLER	Spencer Gust
DATE	10/12/2022

SINGLE POINT CALIBRATION

PARAMETERS	PRE-CALIBRATION	POST-CALIBRATION	SINGLE POINT CALIBRATION WITHIN RANGE	TIME
pH	6.84	7	yes	--
pH	9.62	10	no	--
pH	3.67	4	no	--
Conductivity	1.412	1.413	yes	--
ORP	237.4	234	yes	--
DO	100.7	100	yes	--
Turbidity	0.5	0	--	--
Turbidity	11	10	--	--

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

NOTES:

SIGNED

10/12/2022

DATE

Appendix B

Laboratory Analytical Reports

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

Laboratory Job ID: 680-214942-1
Client Project/Site: AOC 50, Spring 2022

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

Attn: Heather Levesque

Authorized for release by:
5/31/2022 7:49:12 PM

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

LINKS

Review your project results through my EOL

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Definitions/Glossary

Client: Seres Engineering & Services LLC
Project/Site: AOC 50, Spring 2022

Job ID: 680-214942-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
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
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.
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: 680-214942-1
Project/Site: AOC 50, Spring 2022

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-214942-1	G6M-04-02X-SPR22	Water	05/02/22 14:40	05/04/22 10:30
680-214942-2	G6M-04-07X-SPR22	Water	05/02/22 14:50	05/04/22 10:30
680-214942-3	G6M-04-10A-SPR22	Water	05/02/22 10:30	05/04/22 10:30
680-214942-6	G6M-07-02X-SPR22	Water	05/02/22 13:10	05/04/22 10:30
680-214942-7	AOC50-DUP01-SPR22	Water	05/02/22 13:50	05/04/22 10:30
680-214942-8	G6M-013-01X-SPR22	Water	05/02/22 11:50	05/04/22 10:30
680-214942-9	G6M-013-05X-SPR22	Water	05/02/22 16:00	05/04/22 10:30
680-214942-10	G6M-97-05B-SPR22	Water	05/02/22 10:20	05/04/22 10:30
680-214942-11	XSA-12-96X-SPR22	Water	05/02/22 12:15	05/04/22 10:30

Job ID: 680-214942-1

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-214942-1

Comments
No additional comments.

Receipt
The samples were received on 5/4/2022 10:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 2.0º C, 2.1º C, 2.8º C and 3.3º C.

GC/MS VOA
Method 8260B: Surrogate recovery for the following sample was outside the upper control limit: G6M-013-01X-SPR22 (680-214942-8). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8260B: The surrogate recovery for the blank associated with analytical batch 680-720712 was outside the upper control limits.

Method 8260B: The continuing calibration verification (CCV) associated with batch 680-720587 recovered outside acceptance criteria, low biased, for Chloromethane and 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 8260B: The CCVC associated with batch 680-720587 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.

Method 8260B: The closing continuing calibration verification (CCVC) analyzed in batch 680-720587 was outside the method criteria for the 12 hour window by 32 minutes. The data integrity was not impacted and the data has been reported and addressed. All other QC criteria have been met.

(CCVC 680-720587/33)

Method 8260B: The continuing calibration verification (CCV) analyzed in batch 680-720712 was outside the method criteria for the following analyte(s): Dichlorodilfluoromethane, Bromomethane. 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 8260B: The closing continuing calibration verification (CCVC) analyzed in batch 720929 was outside the method criteria for the 12 hour window by 13 minutes. The data integrity was not impacted and the data has been reported and addressed. All other QC criteria have been met.

Method 8260B: The continuing calibration verification (CCV) analyzed in batch 680-721049 was outside the method criteria for the following analyte(s): 2,2-Dichloropropane, Chloromethane and Vinyl acetate. Chloromethane and Vinyl acetate has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. An LCS spiked at the reporting limit was analyzed with the batch with passing recoveries showing adequate sensitivity at the reporting limit had the analytes been present. The samples were non-detect for the analytes. There is insufficient holding time to rerun the samples in hold. These results have been reported and qualified.

Method 8260B: The continuing calibration verification (CCV) associated with batch 680-721049 recovered above the upper control limit for 4-Methyl-2-pentanone. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8260B: The closing continuing calibration verification (CCVC) analyzed in batch 721049 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 8260B: The following samples contained residual chlorine upon receipt: (680-214932-A-5), (680-214932-A-5 MS) and (680-214932-A-5 MSD).

Job ID: 680-214942-1 (Continued)

Laboratory: Eurofins Savannah (Continued)

Method 8260B: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 680-721049 recovered outside control limits for the following analytes: Vinyl acetate.

Method 8260B: The matrix spike/matrix spike duplicate (MS/MSD) for analytical batch 680-721049 exceeded control limits for the following analyte(s): Chloromethane, Note that this analyte is a known poor performer when analyzed using this method.

Method 8260B: The matrix spike and/or The matrix spike duplicate ran outside of the 12 hour tune window. The recoveries were acceptable. The data has been qualified and reported.

G6M-04-10A-SPR22 (680-214942-3[MSD])

Method 8260B: Reanalysis of the following sample(s) was performed outside of the analytical holding time due to ISTD failures in the first run. The samples were rerun on a second clock but didn't inject before midnight. The samples were 1 day out of hold : G6M-04-10A-SPR22 (680-214942-3), G6M-04-10A-SPR22 (680-214942-3[MS]) and G6M-04-10A-SPR22 (680-214942-3[MSD]).

Method 8260B: The method requirement for no headspace was not met. The following volatile samples were analyzed with headspace in the sample container(s): G6M-04-10A-SPR22 (680-214942-3), G6M-04-10A-SPR22 (680-214942-3[MS]) and G6M-04-10A-SPR22 (680-214942-3[MSD]).

Method 8260B: The following sample was diluted due to color: (680-214932-A-5). Elevated reporting limits (RL) are provided.

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

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

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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

General Chemistry
Methods 9034, SM 4500 S2 F: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 680-719553 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 353.2: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for method 353.2_Pres analytical batch 280-575005 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

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

Client: Seres Engineering & Services LLC
Project/Site: AOC 50, Spring 2022

Job ID: 680-214942-1

Client Sample ID: G6M-04-02X-SPR22
Date Collected: 05/02/22 14:40
Date Received: 05/04/22 10:30

Lab Sample ID: 680-214942-1
Matrix: Water

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

Analyte	Result	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		05/13/22 14:35	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		05/13/22 14:35	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		05/13/22 14:35	1
1,1,2-Trichloroethane	1.0	U M	2.0	1.0	0.32	ug/L		05/13/22 14:35	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 14:35	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 14:35	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		05/13/22 14:35	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		05/13/22 14:35	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		05/13/22 14:35	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		05/13/22 14:35	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		05/13/22 14:35	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		05/13/22 14:35	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/13/22 14:35	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		05/13/22 14:35	1
1,2-Dichloroethene, Total	**98**		2.0	1.0	0.37	ug/L		05/13/22 14:35	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		05/13/22 14:35	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		05/13/22 14:35	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/13/22 14:35	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		05/13/22 14:35	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/13/22 14:35	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		05/13/22 14:35	1
2-Butanone (MEK)	20	U M	25	20	6.4	ug/L		05/13/22 14:35	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		05/13/22 14:35	1
2-Hexanone	10	U M	20	10	3.2	ug/L		05/13/22 14:35	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		05/13/22 14:35	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		05/13/22 14:35	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		05/13/22 14:35	1
Acetone	**5.7**	**J**	25	10	3.7	ug/L		05/13/22 14:35	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		05/13/22 14:35	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		05/13/22 14:35	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		05/13/22 14:35	1
Bromomethane	10	U	20	10	3.7	ug/L		05/13/22 14:35	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		05/13/22 14:35	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		05/13/22 14:35	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		05/13/22 14:35	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		05/13/22 14:35	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		05/13/22 14:35	1
Chloroethane	10	U	20	10	4.6	ug/L		05/13/22 14:35	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		05/13/22 14:35	1
Chloromethane	2.0	U Q	2.5	2.0	0.54	ug/L		05/13/22 14:35	1
cis-1,2-Dichloroethene	**98**		2.0	1.0	0.25	ug/L		05/13/22 14:35	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		05/13/22 14:35	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		05/13/22 14:35	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		05/13/22 14:35	1
Dichlorodifluoromethane	1.0	U Q	2.0	1.0	0.36	ug/L		05/13/22 14:35	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		05/13/22 14:35	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 14:35	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		05/13/22 14:35	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		05/13/22 14:35	1

Client Sample ID: G6M-04-02X-SPR22

Date Collected: 05/02/22 14:40
Date Received: 05/04/22 10:30

Lab Sample ID: 680-214942-1

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		05/13/22 14:35	1
Methylene Chloride	10	U	20	10	3.2	ug/L		05/13/22 14:35	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		05/13/22 14:35	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		05/13/22 14:35	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		05/13/22 14:35	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		05/13/22 14:35	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		05/13/22 14:35	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		05/13/22 14:35	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		05/13/22 14:35	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		05/13/22 14:35	1
Tetrachloroethene	**38**		2.0	1.0	0.35	ug/L		05/13/22 14:35	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		05/13/22 14:35	1
trans-1,2-Dichloroethene	**0.71**	**J**	2.0	1.0	0.34	ug/L		05/13/22 14:35	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		05/13/22 14:35	1
Trichloroethene	**35**		1.0	0.50	0.20	ug/L		05/13/22 14:35	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 14:35	1
Vinyl acetate	2.0	U Q	2.5	2.0	0.69	ug/L		05/13/22 14:35	1
Vinyl chloride	**16**		2.0	1.0	0.40	ug/L		05/13/22 14:35	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		05/13/22 14:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*		*05/13/22 14:35*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*05/13/22 14:35*	*1*
Toluene-d8 (Surr)	*103*		*89 - 112*		*05/13/22 14:35*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*05/13/22 14:35*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**1.9**		1.1	0.76	0.30	ug/L		05/12/22 02:33	1
Ethylene	**36**		1.0	0.71	0.31	ug/L		05/12/22 02:33	1
Methane (TCD)	**26000**		390	77	39	ug/L		05/12/22 02:33	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**4.2**		1.0	1.0	0.40	mg/L		05/18/22 01:08	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**22000**		100	50	20	ug/L		05/06/22 19:39	1
Manganese	**7800**		10	5.0	1.3	ug/L		05/06/22 19:39	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**61**		5.0	3.0	0.86	ug/L		05/07/22 13:08	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	**110**		5.0	5.0	5.0	mg/L		05/10/22 22:32	1
Nitrate/Nitrite-N	0.050	U	0.10	0.050	0.044	mg/L		05/15/22 19:45	1
Sulfide	0.81	U	0.81	0.81	0.81	mg/L		05/06/22 11:47	1
Total Organic Carbon	**8.4**		1.0	1.0	0.50	mg/L		05/15/22 00:07	1

Client: Seres Engineering & Services LLC
Project/Site: AOC 50, Spring 2022

Job ID: 680-214942-1

Client Sample ID: G6M-04-07X-SPR22
Date Collected: 05/02/22 14:50
Date Received: 05/04/22 10:30

Lab Sample ID: 680-214942-2
Matrix: Water

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

Analyte	Result	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		05/13/22 14:59	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		05/13/22 14:59	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		05/13/22 14:59	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		05/13/22 14:59	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 14:59	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 14:59	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		05/13/22 14:59	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		05/13/22 14:59	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		05/13/22 14:59	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		05/13/22 14:59	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		05/13/22 14:59	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		05/13/22 14:59	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/13/22 14:59	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		05/13/22 14:59	1
1,2-Dichloroethene, Total	**80**		2.0	1.0	0.37	ug/L		05/13/22 14:59	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		05/13/22 14:59	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		05/13/22 14:59	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/13/22 14:59	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		05/13/22 14:59	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/13/22 14:59	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		05/13/22 14:59	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		05/13/22 14:59	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		05/13/22 14:59	1
2-Hexanone	10	U	20	10	3.2	ug/L		05/13/22 14:59	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		05/13/22 14:59	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		05/13/22 14:59	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		05/13/22 14:59	1
Acetone	10	U	25	10	3.7	ug/L		05/13/22 14:59	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		05/13/22 14:59	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		05/13/22 14:59	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		05/13/22 14:59	1
Bromomethane	10	U	20	10	3.7	ug/L		05/13/22 14:59	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		05/13/22 14:59	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		05/13/22 14:59	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		05/13/22 14:59	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		05/13/22 14:59	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		05/13/22 14:59	1
Chloroethane	10	U	20	10	4.6	ug/L		05/13/22 14:59	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		05/13/22 14:59	1
Chloromethane	2.0	U Q	2.5	2.0	0.54	ug/L		05/13/22 14:59	1
cis-1,2-Dichloroethene	**79**		2.0	1.0	0.25	ug/L		05/13/22 14:59	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		05/13/22 14:59	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		05/13/22 14:59	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		05/13/22 14:59	1
Dichlorodifluoromethane	1.0	U Q	2.0	1.0	0.36	ug/L		05/13/22 14:59	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		05/13/22 14:59	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 14:59	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		05/13/22 14:59	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		05/13/22 14:59	1

Client Sample ID: G6M-04-07X-SPR22

Date Collected: 05/02/22 14:50
Date Received: 05/04/22 10:30

Lab Sample ID: 680-214942-2

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		05/13/22 14:59	1
Methylene Chloride	10	U	20	10	3.2	ug/L		05/13/22 14:59	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		05/13/22 14:59	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		05/13/22 14:59	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		05/13/22 14:59	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		05/13/22 14:59	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		05/13/22 14:59	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		05/13/22 14:59	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		05/13/22 14:59	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		05/13/22 14:59	1
Tetrachloroethene	**4.1**		2.0	1.0	0.35	ug/L		05/13/22 14:59	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		05/13/22 14:59	1
trans-1,2-Dichloroethene	**0.82**	**J**	2.0	1.0	0.34	ug/L		05/13/22 14:59	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		05/13/22 14:59	1
Trichloroethene	**31**		1.0	0.50	0.20	ug/L		05/13/22 14:59	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 14:59	1
Vinyl acetate	2.0	U Q	2.5	2.0	0.69	ug/L		05/13/22 14:59	1
Vinyl chloride	**12**		2.0	1.0	0.40	ug/L		05/13/22 14:59	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		05/13/22 14:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*		*05/13/22 14:59*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*05/13/22 14:59*	*1*
Toluene-d8 (Surr)	*104*		*89 - 112*		*05/13/22 14:59*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*		*05/13/22 14:59*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**0.42**	**J**	1.1	0.76	0.30	ug/L		05/12/22 02:46	1
Ethylene	**0.48**	**J**	1.0	0.71	0.31	ug/L		05/12/22 02:46	1
Methane	**280**		1.2	1.2	0.57	ug/L		05/12/22 02:46	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**6.3**		1.0	1.0	0.40	mg/L		05/18/22 01:21	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**950**		100	50	20	ug/L		05/06/22 19:42	1
Manganese	**3800**		10	5.0	1.3	ug/L		05/06/22 19:42	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**7.2**		5.0	3.0	0.86	ug/L		05/07/22 13:11	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	**230**		5.0	5.0	5.0	mg/L		05/10/22 22:41	1
Nitrate/Nitrite-N	0.050	U	0.10	0.050	0.044	mg/L		05/15/22 19:47	1
Sulfide	0.81	U	0.81	0.81	0.81	mg/L		05/06/22 11:47	1
Total Organic Carbon	**1.4**		1.0	1.0	0.50	mg/L		05/15/22 00:30	1

Client: Seres Engineering & Services LLC
Project/Site: AOC 50, Spring 2022

Job ID: 680-214942-1

Client Sample ID: G6M-04-10A-SPR22

Date Collected: 05/02/22 10:30
Date Received: 05/04/22 10:30

Lab Sample ID: 680-214942-3

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U H	2.0	1.0	0.36	ug/L		05/17/22 10:29	1
1,1,1-Trichloroethane	0.50	U H	1.0	0.50	0.21	ug/L		05/17/22 10:29	1
1,1,2,2-Tetrachloroethane	1.0	U H	2.0	1.0	0.40	ug/L		05/17/22 10:29	1
1,1,2-Trichloroethane	1.0	U H	2.0	1.0	0.32	ug/L		05/17/22 10:29	1
1,1-Dichloroethane	1.0	U H	2.0	1.0	0.33	ug/L		05/17/22 10:29	1
1,1-Dichloroethene	1.0	U H	2.0	1.0	0.33	ug/L		05/17/22 10:29	1
1,1-Dichloropropene	1.0	U H	2.0	1.0	0.28	ug/L		05/17/22 10:29	1
1,2,3-Trichlorobenzene	2.0	U H	5.0	2.0	0.81	ug/L		05/17/22 10:29	1
1,2,3-Trichloropropane	1.0	U H	2.0	1.0	0.48	ug/L		05/17/22 10:29	1
1,2,4-Trichlorobenzene	2.0	U H	5.0	2.0	0.53	ug/L		05/17/22 10:29	1
1,2,4-Trimethylbenzene	**1.7**	**J H**	2.0	1.0	0.43	ug/L		05/17/22 10:29	1
1,2-Dibromo-3-Chloropropane	5.0	U H	10	5.0	1.8	ug/L		05/17/22 10:29	1
1,2-Dichlorobenzene	1.0	U H	2.0	1.0	0.31	ug/L		05/17/22 10:29	1
1,2-Dichloroethane	1.0	U M H	2.0	1.0	0.25	ug/L		05/17/22 10:29	1
1,2-Dichloroethene, Total	**3.4**	**H**	2.0	1.0	0.37	ug/L		05/17/22 10:29	1
1,2-Dichloropropane	0.50	U H	1.0	0.50	0.22	ug/L		05/17/22 10:29	1
1,3,5-Trimethylbenzene	**0.96**	**J M H**	2.0	1.0	0.28	ug/L		05/17/22 10:29	1
1,3-Dichlorobenzene	1.0	U H	2.0	1.0	0.31	ug/L		05/17/22 10:29	1
1,3-Dichloropropane	1.0	U H	2.0	1.0	0.36	ug/L		05/17/22 10:29	1
1,4-Dichlorobenzene	1.0	U H	2.0	1.0	0.31	ug/L		05/17/22 10:29	1
2,2-Dichloropropane	1.0	U H Q J1	2.0	1.0	0.35	ug/L		05/17/22 10:29	1
2-Butanone (MEK)	20	U H	25	20	6.4	ug/L		05/17/22 10:29	1
2-Chlorotoluene	0.50	U H	1.0	0.50	0.25	ug/L		05/17/22 10:29	1
2-Hexanone	10	U H	20	10	3.2	ug/L		05/17/22 10:29	1
4-Chlorotoluene	1.0	U H	2.0	1.0	0.41	ug/L		05/17/22 10:29	1
4-Isopropyltoluene	1.0	U H	2.0	1.0	0.44	ug/L		05/17/22 10:29	1
4-Methyl-2-pentanone (MIBK)	10	U H Q	20	10	2.7	ug/L		05/17/22 10:29	1
Acetone	10	U H	25	10	3.7	ug/L		05/17/22 10:29	1
Benzene	1.0	U H	2.0	1.0	0.27	ug/L		05/17/22 10:29	1
Bromobenzene	0.50	U H	1.0	0.50	0.24	ug/L		05/17/22 10:29	1
Bromoform	2.0	U H	2.5	2.0	0.59	ug/L		05/17/22 10:29	1
Bromomethane	10	U H	20	10	3.7	ug/L		05/17/22 10:29	1
Carbon disulfide	1.0	U H	2.0	1.0	0.43	ug/L		05/17/22 10:29	1
Carbon tetrachloride	1.0	U H	2.0	1.0	0.30	ug/L		05/17/22 10:29	1
Chlorobenzene	0.50	U H	1.0	0.50	0.15	ug/L		05/17/22 10:29	1
Chlorobromomethane	1.0	U H	2.0	1.0	0.34	ug/L		05/17/22 10:29	1
Chlorodibromomethane	1.0	U H	2.0	1.0	0.39	ug/L		05/17/22 10:29	1
Chloroethane	10	U H	20	10	4.6	ug/L		05/17/22 10:29	1
Chloroform	1.0	U H	2.0	1.0	0.27	ug/L		05/17/22 10:29	1
Chloromethane	2.0	U H Q J1	2.5	2.0	0.54	ug/L		05/17/22 10:29	1
cis-1,2-Dichloroethene	**2.3**	**H**	2.0	1.0	0.25	ug/L		05/17/22 10:29	1
cis-1,3-Dichloropropene	1.0	U H	2.0	1.0	0.26	ug/L		05/17/22 10:29	1
Dibromomethane	1.0	U H	2.0	1.0	0.34	ug/L		05/17/22 10:29	1
Dichlorobromomethane	1.0	U H	2.0	1.0	0.25	ug/L		05/17/22 10:29	1
Dichlorodifluoromethane	1.0	U H	2.0	1.0	0.36	ug/L		05/17/22 10:29	1
Ethylbenzene	0.50	U M H	1.0	0.50	0.20	ug/L		05/17/22 10:29	1
Ethylene Dibromide	1.0	U H	2.0	1.0	0.33	ug/L		05/17/22 10:29	1
Hexachlorobutadiene	1.0	U H	5.0	1.0	0.22	ug/L		05/17/22 10:29	1
Isopropylbenzene	**0.26**	**J H**	2.0	1.0	0.26	ug/L		05/17/22 10:29	1

Client Sample ID: G6M-04-10A-SPR22

Date Collected: 05/02/22 10:30
Date Received: 05/04/22 10:30

Lab Sample ID: 680-214942-3

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methyl tert-butyl ether	2.0	U H	5.0	2.0	0.81	ug/L		05/17/22 10:29	1
Methylene Chloride	10	U H	20	10	3.2	ug/L		05/17/22 10:29	1
m-Xylene & p-Xylene	1.0	U H	2.0	1.0	0.49	ug/L		05/17/22 10:29	1
Naphthalene	5.0	U H	10	5.0	2.4	ug/L		05/17/22 10:29	1
n-Butylbenzene	2.0	U H	2.5	2.0	0.52	ug/L		05/17/22 10:29	1
N-Propylbenzene	1.0	U H	2.0	1.0	0.41	ug/L		05/17/22 10:29	1
o-Xylene	1.0	U H	2.0	1.0	0.26	ug/L		05/17/22 10:29	1
sec-Butylbenzene	2.0	U H	2.5	2.0	0.53	ug/L		05/17/22 10:29	1
Styrene	1.0	U H	2.0	1.0	0.27	ug/L		05/17/22 10:29	1
tert-Butylbenzene	1.0	U H	2.0	1.0	0.43	ug/L		05/17/22 10:29	1
Tetrachloroethene	1.0	U H	2.0	1.0	0.35	ug/L		05/17/22 10:29	1
Toluene	1.0	U H	2.0	1.0	0.25	ug/L		05/17/22 10:29	1
trans-1,2-Dichloroethene	**1.0**	**J H**	2.0	1.0	0.34	ug/L		05/17/22 10:29	1
trans-1,3-Dichloropropene	1.0	U H	2.0	1.0	0.23	ug/L		05/17/22 10:29	1
Trichloroethene	**0.24**	**J H**	1.0	0.50	0.20	ug/L		05/17/22 10:29	1
Trichlorofluoromethane	1.0	U H	2.0	1.0	0.33	ug/L		05/17/22 10:29	1
Vinyl acetate	2.0	U H Q	2.5	2.0	0.69	ug/L		05/17/22 10:29	1
Vinyl chloride	1.0	U H	2.0	1.0	0.40	ug/L		05/17/22 10:29	1
Xylenes, Total	1.0	U H	2.0	1.0	0.49	ug/L		05/17/22 10:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*		*05/17/22 10:29*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*05/17/22 10:29*	*1*
Toluene-d8 (Surr)	*101*		*89 - 112*		*05/17/22 10:29*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*		*05/17/22 10:29*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**10**		1.1	0.76	0.30	ug/L		05/16/22 15:07	1
Ethylene	**24**		1.0	0.71	0.31	ug/L		05/16/22 15:07	1
Methane (TCD)	**19000**	**J1**	390	77	39	ug/L		05/16/22 15:07	1

Method: 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		05/18/22 00:16	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**80000**	**J1**	100	50	20	ug/L		05/17/22 12:36	1
Manganese	**900**		10	5.0	1.3	ug/L		05/17/22 12:36	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**290**		5.0	3.0	0.86	ug/L		05/07/22 13:13	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	**130**		5.0	5.0	5.0	mg/L		05/10/22 22:49	1
Nitrate/Nitrite-N	0.050	U J1	0.10	0.050	0.044	mg/L		05/15/22 19:23	1
Sulfide	0.89	U J1	0.89	0.89	0.89	mg/L		05/06/22 11:47	1
Total Organic Carbon	**14**		1.0	1.0	0.50	mg/L		05/15/22 00:54	1

Client: Seres Engineering & Services LLC
Project/Site: AOC 50, Spring 2022

Job ID: 680-214942-1

Client Sample ID: G6M-07-02X-SPR22
Date Collected: 05/02/22 13:10
Date Received: 05/04/22 10:30

Lab Sample ID: 680-214942-6
Matrix: Water

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

Analyte	Result	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		05/13/22 15:22	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		05/13/22 15:22	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		05/13/22 15:22	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		05/13/22 15:22	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 15:22	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 15:22	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		05/13/22 15:22	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		05/13/22 15:22	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		05/13/22 15:22	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		05/13/22 15:22	1
1,2,4-Trimethylbenzene	**1.0**	**J**	2.0	1.0	0.43	ug/L		05/13/22 15:22	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		05/13/22 15:22	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/13/22 15:22	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		05/13/22 15:22	1
1,2-Dichloroethene, Total	**2.3**		2.0	1.0	0.37	ug/L		05/13/22 15:22	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		05/13/22 15:22	1
1,3,5-Trimethylbenzene	**0.29**	**J M**	2.0	1.0	0.28	ug/L		05/13/22 15:22	1
1,3-Dichlorobenzene	**0.44**	**J**	2.0	1.0	0.31	ug/L		05/13/22 15:22	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		05/13/22 15:22	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/13/22 15:22	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		05/13/22 15:22	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		05/13/22 15:22	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		05/13/22 15:22	1
2-Hexanone	10	U	20	10	3.2	ug/L		05/13/22 15:22	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		05/13/22 15:22	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		05/13/22 15:22	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		05/13/22 15:22	1
Acetone	10	U	25	10	3.7	ug/L		05/13/22 15:22	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		05/13/22 15:22	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		05/13/22 15:22	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		05/13/22 15:22	1
Bromomethane	10	U	20	10	3.7	ug/L		05/13/22 15:22	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		05/13/22 15:22	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		05/13/22 15:22	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		05/13/22 15:22	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		05/13/22 15:22	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		05/13/22 15:22	1
Chloroethane	10	U	20	10	4.6	ug/L		05/13/22 15:22	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		05/13/22 15:22	1
Chloromethane	2.0	U Q	2.5	2.0	0.54	ug/L		05/13/22 15:22	1
cis-1,2-Dichloroethene	**2.3**		2.0	1.0	0.25	ug/L		05/13/22 15:22	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		05/13/22 15:22	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		05/13/22 15:22	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		05/13/22 15:22	1
Dichlorodifluoromethane	1.0	U Q	2.0	1.0	0.36	ug/L		05/13/22 15:22	1
Ethylbenzene	**0.26**	**J**	1.0	0.50	0.20	ug/L		05/13/22 15:22	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 15:22	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		05/13/22 15:22	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		05/13/22 15:22	1

Client Sample ID: G6M-07-02X-SPR22

Date Collected: 05/02/22 13:10
Date Received: 05/04/22 10:30

Lab Sample ID: 680-214942-6

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		05/13/22 15:22	1
Methylene Chloride	10	U	20	10	3.2	ug/L		05/13/22 15:22	1
m-Xylene & p-Xylene	**0.61**	**J**	2.0	1.0	0.49	ug/L		05/13/22 15:22	1
Naphthalene	**3.4**	**J**	10	5.0	2.4	ug/L		05/13/22 15:22	1
n-Butylbenzene	**0.55**	**J**	2.5	2.0	0.52	ug/L		05/13/22 15:22	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		05/13/22 15:22	1
o-Xylene	**0.37**	**J**	2.0	1.0	0.26	ug/L		05/13/22 15:22	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		05/13/22 15:22	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		05/13/22 15:22	1
tert-Butylbenzene	1.0	U M	2.0	1.0	0.43	ug/L		05/13/22 15:22	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		05/13/22 15:22	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		05/13/22 15:22	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		05/13/22 15:22	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		05/13/22 15:22	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		05/13/22 15:22	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 15:22	1
Vinyl acetate	2.0	U Q	2.5	2.0	0.69	ug/L		05/13/22 15:22	1
Vinyl chloride	**0.83**	**J**	2.0	1.0	0.40	ug/L		05/13/22 15:22	1
Xylenes, Total	**0.98**	**J**	2.0	1.0	0.49	ug/L		05/13/22 15:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*		*05/13/22 15:22*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*05/13/22 15:22*	*1*
Toluene-d8 (Surr)	*101*		*89 - 112*		*05/13/22 15:22*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*05/13/22 15:22*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**3.6**		1.1	0.76	0.30	ug/L		05/12/22 02:59	1
Ethylene	**3.8**		1.0	0.71	0.31	ug/L		05/12/22 02:59	1
Methane (TCD)	**16000**		390	77	39	ug/L		05/12/22 02:59	1

Method: 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		05/18/22 01:34	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**120000**		100	50	20	ug/L		05/06/22 19:54	1
Manganese	**3000**		10	5.0	1.3	ug/L		05/06/22 19:54	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**47**		5.0	3.0	0.86	ug/L		05/07/22 13:16	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	**110**		5.0	5.0	5.0	mg/L		05/10/22 22:56	1
Nitrate/Nitrite-N	**0.15**		0.10	0.050	0.044	mg/L		05/15/22 19:49	1
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		05/06/22 11:47	1
Total Organic Carbon	**160**	**D**	50	50	25	mg/L		05/15/22 02:03	50

Client: Seres Engineering & Services LLC
Project/Site: AOC 50, Spring 2022

Job ID: 680-214942-1

Client Sample ID: AOC50-DUP01-SPR22
Date Collected: 05/02/22 13:50
Date Received: 05/04/22 10:30

Lab Sample ID: 680-214942-7
Matrix: Water

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

Analyte	Result	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		05/13/22 15:45	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		05/13/22 15:45	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		05/13/22 15:45	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		05/13/22 15:45	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 15:45	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 15:45	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		05/13/22 15:45	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		05/13/22 15:45	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		05/13/22 15:45	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		05/13/22 15:45	1
1,2,4-Trimethylbenzene	**1.1**	**J**	2.0	1.0	0.43	ug/L		05/13/22 15:45	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		05/13/22 15:45	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/13/22 15:45	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		05/13/22 15:45	1
1,2-Dichloroethene, Total	**2.0**		2.0	1.0	0.37	ug/L		05/13/22 15:45	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		05/13/22 15:45	1
1,3,5-Trimethylbenzene	**0.29**	**J M**	2.0	1.0	0.28	ug/L		05/13/22 15:45	1
1,3-Dichlorobenzene	**0.36**	**J**	2.0	1.0	0.31	ug/L		05/13/22 15:45	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		05/13/22 15:45	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/13/22 15:45	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		05/13/22 15:45	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		05/13/22 15:45	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		05/13/22 15:45	1
2-Hexanone	10	U	20	10	3.2	ug/L		05/13/22 15:45	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		05/13/22 15:45	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		05/13/22 15:45	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		05/13/22 15:45	1
Acetone	10	U	25	10	3.7	ug/L		05/13/22 15:45	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		05/13/22 15:45	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		05/13/22 15:45	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		05/13/22 15:45	1
Bromomethane	10	U	20	10	3.7	ug/L		05/13/22 15:45	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		05/13/22 15:45	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		05/13/22 15:45	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		05/13/22 15:45	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		05/13/22 15:45	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		05/13/22 15:45	1
Chloroethane	10	U	20	10	4.6	ug/L		05/13/22 15:45	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		05/13/22 15:45	1
Chloromethane	2.0	U Q	2.5	2.0	0.54	ug/L		05/13/22 15:45	1
cis-1,2-Dichloroethene	**2.0**		2.0	1.0	0.25	ug/L		05/13/22 15:45	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		05/13/22 15:45	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		05/13/22 15:45	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		05/13/22 15:45	1
Dichlorodifluoromethane	1.0	U Q	2.0	1.0	0.36	ug/L		05/13/22 15:45	1
Ethylbenzene	**0.25**	**J**	1.0	0.50	0.20	ug/L		05/13/22 15:45	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 15:45	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		05/13/22 15:45	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		05/13/22 15:45	1

Client Sample ID: AOC50-DUP01-SPR22

Date Collected: 05/02/22 13:50
Date Received: 05/04/22 10:30

Lab Sample ID: 680-214942-7

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		05/13/22 15:45	1
Methylene Chloride	10	U	20	10	3.2	ug/L		05/13/22 15:45	1
m-Xylene & p-Xylene	**0.55**	**J**	2.0	1.0	0.49	ug/L		05/13/22 15:45	1
Naphthalene	**4.2**	**J**	10	5.0	2.4	ug/L		05/13/22 15:45	1
n-Butylbenzene	**0.66**	**J**	2.5	2.0	0.52	ug/L		05/13/22 15:45	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		05/13/22 15:45	1
o-Xylene	**0.37**	**J**	2.0	1.0	0.26	ug/L		05/13/22 15:45	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		05/13/22 15:45	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		05/13/22 15:45	1
tert-Butylbenzene	1.0	U M	2.0	1.0	0.43	ug/L		05/13/22 15:45	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		05/13/22 15:45	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		05/13/22 15:45	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		05/13/22 15:45	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		05/13/22 15:45	1
Trichloroethene	**0.30**	**J**	1.0	0.50	0.20	ug/L		05/13/22 15:45	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 15:45	1
Vinyl acetate	2.0	U Q	2.5	2.0	0.69	ug/L		05/13/22 15:45	1
Vinyl chloride	**0.67**	**J**	2.0	1.0	0.40	ug/L		05/13/22 15:45	1
Xylenes, Total	**0.92**	**J**	2.0	1.0	0.49	ug/L		05/13/22 15:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*		*05/13/22 15:45*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*05/13/22 15:45*	*1*
Toluene-d8 (Surr)	*101*		*89 - 112*		*05/13/22 15:45*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*		*05/13/22 15:45*	*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		05/16/22 13:11	1
Ethylene	**3.9**		1.0	0.71	0.31	ug/L		05/16/22 13:11	1
Methane (TCD)	**18000**		390	77	39	ug/L		05/16/22 13:11	1

Method: 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		05/18/22 01:47	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**150000**		100	50	20	ug/L		05/06/22 19:56	1
Manganese	**3600**		10	5.0	1.3	ug/L		05/06/22 19:56	1

Method: 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		05/07/22 13:19	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	**110**		5.0	5.0	5.0	mg/L		05/10/22 23:24	1
Nitrate/Nitrite-N	**0.13**		0.10	0.050	0.044	mg/L		05/15/22 19:51	1
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		05/06/22 11:47	1
Total Organic Carbon	**150**	**D**	50	50	25	mg/L		05/15/22 02:27	50

Client: Seres Engineering & Services LLC
Project/Site: AOC 50, Spring 2022

Job ID: 680-214942-1

Client Sample ID: G6M-013-01X-SPR22
Date Collected: 05/02/22 11:50
Date Received: 05/04/22 10:30

Lab Sample ID: 680-214942-8
Matrix: Water

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

Analyte	Result	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		05/13/22 17:42	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		05/13/22 17:42	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		05/13/22 17:42	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		05/13/22 17:42	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 17:42	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 17:42	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		05/13/22 17:42	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		05/13/22 17:42	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		05/13/22 17:42	1
1,2,4-Trichlorobenzene	2.0	U M	5.0	2.0	0.53	ug/L		05/13/22 17:42	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		05/13/22 17:42	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		05/13/22 17:42	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/13/22 17:42	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		05/13/22 17:42	1
1,2-Dichloroethene, Total	**0.73**	**J**	2.0	1.0	0.37	ug/L		05/13/22 17:42	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		05/13/22 17:42	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		05/13/22 17:42	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/13/22 17:42	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		05/13/22 17:42	1
1,4-Dichlorobenzene	1.0	U M	2.0	1.0	0.31	ug/L		05/13/22 17:42	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		05/13/22 17:42	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		05/13/22 17:42	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		05/13/22 17:42	1
2-Hexanone	10	U	20	10	3.2	ug/L		05/13/22 17:42	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		05/13/22 17:42	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		05/13/22 17:42	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		05/13/22 17:42	1
Acetone	10	U	25	10	3.7	ug/L		05/13/22 17:42	1
Benzene	1.0	U M	2.0	1.0	0.27	ug/L		05/13/22 17:42	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		05/13/22 17:42	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		05/13/22 17:42	1
Bromomethane	10	U Q	20	10	3.7	ug/L		05/13/22 17:42	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		05/13/22 17:42	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		05/13/22 17:42	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		05/13/22 17:42	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		05/13/22 17:42	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		05/13/22 17:42	1
Chloroethane	10	U	20	10	4.6	ug/L		05/13/22 17:42	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		05/13/22 17:42	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		05/13/22 17:42	1
cis-1,2-Dichloroethene	**0.73**	**J**	2.0	1.0	0.25	ug/L		05/13/22 17:42	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		05/13/22 17:42	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		05/13/22 17:42	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		05/13/22 17:42	1
Dichlorodifluoromethane	1.0	U Q	2.0	1.0	0.36	ug/L		05/13/22 17:42	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		05/13/22 17:42	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 17:42	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		05/13/22 17:42	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		05/13/22 17:42	1

Client Sample ID: G6M-013-01X-SPR22

Date Collected: 05/02/22 11:50
Date Received: 05/04/22 10:30

Lab Sample ID: 680-214942-8

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		05/13/22 17:42	1
Methylene Chloride	10	U	20	10	3.2	ug/L		05/13/22 17:42	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		05/13/22 17:42	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		05/13/22 17:42	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		05/13/22 17:42	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		05/13/22 17:42	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		05/13/22 17:42	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		05/13/22 17:42	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		05/13/22 17:42	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		05/13/22 17:42	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		05/13/22 17:42	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		05/13/22 17:42	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		05/13/22 17:42	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		05/13/22 17:42	1
Trichloroethene	**0.50**	**J**	1.0	0.50	0.20	ug/L		05/13/22 17:42	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 17:42	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		05/13/22 17:42	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		05/13/22 17:42	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		05/13/22 17:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*85 - 114*		*05/13/22 17:42*	*1*
Dibromofluoromethane (Surr)	*118*		*80 - 119*		*05/13/22 17:42*	*1*
Toluene-d8 (Surr)	*134*	*Q*	*89 - 112*		*05/13/22 17:42*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*		*05/13/22 17:42*	*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		05/16/22 13:24	1
Ethylene	0.71	U	1.0	0.71	0.31	ug/L		05/16/22 13:24	1
Methane (TCD)	**1400**		390	77	39	ug/L		05/16/22 13:24	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**14**		1.0	1.0	0.40	mg/L		05/18/22 01:59	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**2900**		100	50	20	ug/L		05/06/22 19:59	1
Manganese	**4500**		10	5.0	1.3	ug/L		05/06/22 19:59	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**180**		5.0	3.0	0.86	ug/L		05/07/22 13:21	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	**68**		5.0	5.0	5.0	mg/L		05/10/22 23:39	1
Nitrate/Nitrite-N	0.050	U	0.10	0.050	0.044	mg/L		05/15/22 19:53	1
Sulfide	0.81	U	0.81	0.81	0.81	mg/L		05/06/22 11:47	1
Total Organic Carbon	**1.4**		1.0	1.0	0.50	mg/L		05/15/22 02:51	1

Client: Seres Engineering & Services LLC
Project/Site: AOC 50, Spring 2022

Job ID: 680-214942-1

Client Sample ID: G6M-013-05X-SPR22
Date Collected: 05/02/22 16:00
Date Received: 05/04/22 10:30

Lab Sample ID: 680-214942-9
Matrix: Water

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

Analyte	Result	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		05/16/22 18:54	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		05/16/22 18:54	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		05/16/22 18:54	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		05/16/22 18:54	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		05/16/22 18:54	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		05/16/22 18:54	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		05/16/22 18:54	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		05/16/22 18:54	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		05/16/22 18:54	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		05/16/22 18:54	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		05/16/22 18:54	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		05/16/22 18:54	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/16/22 18:54	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		05/16/22 18:54	1
1,2-Dichloroethene, Total	**16**		2.0	1.0	0.37	ug/L		05/16/22 18:54	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		05/16/22 18:54	1
1,3,5-Trimethylbenzene	1.0	U M	2.0	1.0	0.28	ug/L		05/16/22 18:54	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/16/22 18:54	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		05/16/22 18:54	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/16/22 18:54	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		05/16/22 18:54	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		05/16/22 18:54	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		05/16/22 18:54	1
2-Hexanone	10	U	20	10	3.2	ug/L		05/16/22 18:54	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		05/16/22 18:54	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		05/16/22 18:54	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		05/16/22 18:54	1
Acetone	10	U	25	10	3.7	ug/L		05/16/22 18:54	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		05/16/22 18:54	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		05/16/22 18:54	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		05/16/22 18:54	1
Bromomethane	10	U	20	10	3.7	ug/L		05/16/22 18:54	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		05/16/22 18:54	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		05/16/22 18:54	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		05/16/22 18:54	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		05/16/22 18:54	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		05/16/22 18:54	1
Chloroethane	10	U	20	10	4.6	ug/L		05/16/22 18:54	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		05/16/22 18:54	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		05/16/22 18:54	1
cis-1,2-Dichloroethene	**16**		2.0	1.0	0.25	ug/L		05/16/22 18:54	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		05/16/22 18:54	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		05/16/22 18:54	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		05/16/22 18:54	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		05/16/22 18:54	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		05/16/22 18:54	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		05/16/22 18:54	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		05/16/22 18:54	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		05/16/22 18:54	1

Client Sample ID: G6M-013-05X-SPR22

Date Collected: 05/02/22 16:00
Date Received: 05/04/22 10:30

Lab Sample ID: 680-214942-9

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		05/16/22 18:54	1
Methylene Chloride	10	U	20	10	3.2	ug/L		05/16/22 18:54	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		05/16/22 18:54	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		05/16/22 18:54	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		05/16/22 18:54	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		05/16/22 18:54	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		05/16/22 18:54	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		05/16/22 18:54	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		05/16/22 18:54	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		05/16/22 18:54	1
Tetrachloroethene	**8.0**		2.0	1.0	0.35	ug/L		05/16/22 18:54	1
Toluene	**0.40**	**J**	2.0	1.0	0.25	ug/L		05/16/22 18:54	1
trans-1,2-Dichloroethene	**0.54**	**J**	2.0	1.0	0.34	ug/L		05/16/22 18:54	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		05/16/22 18:54	1
Trichloroethene	**2.4**		1.0	0.50	0.20	ug/L		05/16/22 18:54	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		05/16/22 18:54	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		05/16/22 18:54	1
Vinyl chloride	**9.4**		2.0	1.0	0.40	ug/L		05/16/22 18:54	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		05/16/22 18:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*		*05/16/22 18:54*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 119*		*05/16/22 18:54*	*1*
Toluene-d8 (Surr)	*103*		*89 - 112*		*05/16/22 18:54*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*		*05/16/22 18:54*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**55**		1.1	0.76	0.30	ug/L		05/16/22 13:37	1
Ethylene	**23**		1.0	0.71	0.31	ug/L		05/16/22 13:37	1
Methane (TCD)	**21000**		390	77	39	ug/L		05/16/22 13:37	1

Method: 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		05/18/22 02:12	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**78000**		100	50	20	ug/L		05/06/22 20:02	1
Manganese	**8300**		10	5.0	1.3	ug/L		05/06/22 20:02	1

Method: 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		05/07/22 13:24	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	**65**		5.0	5.0	5.0	mg/L		05/10/22 23:46	1
Nitrate/Nitrite-N	**0.049**	**J**	0.10	0.050	0.044	mg/L		05/15/22 19:55	1
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		05/06/22 11:47	1
Total Organic Carbon	**6.9**		1.0	1.0	0.50	mg/L		05/15/22 03:10	1

Client: Seres Engineering & Services LLC
Project/Site: AOC 50, Spring 2022

Job ID: 680-214942-1

Client Sample ID: G6M-97-05B-SPR22
Date Collected: 05/02/22 10:20
Date Received: 05/04/22 10:30

Lab Sample ID: 680-214942-10
Matrix: Water

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

Analyte	Result	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		05/13/22 16:09	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		05/13/22 16:09	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		05/13/22 16:09	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		05/13/22 16:09	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 16:09	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 16:09	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		05/13/22 16:09	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		05/13/22 16:09	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		05/13/22 16:09	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		05/13/22 16:09	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		05/13/22 16:09	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		05/13/22 16:09	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/13/22 16:09	1
1,2-Dichloroethane	1.0	U	2.0	1.0	0.25	ug/L		05/13/22 16:09	1
1,2-Dichloroethene, Total	**6.1**		2.0	1.0	0.37	ug/L		05/13/22 16:09	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		05/13/22 16:09	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		05/13/22 16:09	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/13/22 16:09	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		05/13/22 16:09	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/13/22 16:09	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		05/13/22 16:09	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		05/13/22 16:09	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		05/13/22 16:09	1
2-Hexanone	10	U	20	10	3.2	ug/L		05/13/22 16:09	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		05/13/22 16:09	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		05/13/22 16:09	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		05/13/22 16:09	1
Acetone	10	U	25	10	3.7	ug/L		05/13/22 16:09	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		05/13/22 16:09	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		05/13/22 16:09	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		05/13/22 16:09	1
Bromomethane	10	U	20	10	3.7	ug/L		05/13/22 16:09	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		05/13/22 16:09	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		05/13/22 16:09	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		05/13/22 16:09	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		05/13/22 16:09	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		05/13/22 16:09	1
Chloroethane	10	U	20	10	4.6	ug/L		05/13/22 16:09	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		05/13/22 16:09	1
Chloromethane	2.0	U Q	2.5	2.0	0.54	ug/L		05/13/22 16:09	1
cis-1,2-Dichloroethene	**5.8**		2.0	1.0	0.25	ug/L		05/13/22 16:09	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		05/13/22 16:09	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		05/13/22 16:09	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		05/13/22 16:09	1
Dichlorodifluoromethane	1.0	U Q	2.0	1.0	0.36	ug/L		05/13/22 16:09	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		05/13/22 16:09	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 16:09	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		05/13/22 16:09	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		05/13/22 16:09	1

Client Sample ID: G6M-97-05B-SPR22

Lab Sample ID: 680-214942-10

Date Collected: 05/02/22 10:20

Matrix: Water

Date Received: 05/04/22 10:30

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		05/13/22 16:09	1
Methylene Chloride	10	U	20	10	3.2	ug/L		05/13/22 16:09	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		05/13/22 16:09	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		05/13/22 16:09	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		05/13/22 16:09	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		05/13/22 16:09	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		05/13/22 16:09	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		05/13/22 16:09	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		05/13/22 16:09	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		05/13/22 16:09	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		05/13/22 16:09	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		05/13/22 16:09	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		05/13/22 16:09	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		05/13/22 16:09	1
Trichloroethene	**0.52**	**J**	1.0	0.50	0.20	ug/L		05/13/22 16:09	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 16:09	1
Vinyl acetate	2.0	U Q	2.5	2.0	0.69	ug/L		05/13/22 16:09	1
Vinyl chloride	**3.5**		2.0	1.0	0.40	ug/L		05/13/22 16:09	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		05/13/22 16:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*		*05/13/22 16:09*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*05/13/22 16:09*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*05/13/22 16:09*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*		*05/13/22 16:09*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**14**		1.1	0.76	0.30	ug/L		05/16/22 13:50	1
Ethylene	**23**		1.0	0.71	0.31	ug/L		05/16/22 13:50	1
Methane (TCD)	**27000**		390	77	39	ug/L		05/16/22 13:50	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**0.85**	**J**	1.0	1.0	0.40	mg/L		05/18/22 02:25	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**62000**		100	50	20	ug/L		05/06/22 20:05	1
Manganese	**7500**		10	5.0	1.3	ug/L		05/06/22 20:05	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**300**		5.0	3.0	0.86	ug/L		05/07/22 13:26	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	**170**		5.0	5.0	5.0	mg/L		05/11/22 17:35	1
Nitrate/Nitrite-N	0.050	U	0.10	0.050	0.044	mg/L		05/15/22 19:57	1
Sulfide	0.81	U	0.81	0.81	0.81	mg/L		05/06/22 11:47	1
Total Organic Carbon	**36**		1.0	1.0	0.50	mg/L		05/15/22 04:14	1

Client: Seres Engineering & Services LLC
Project/Site: AOC 50, Spring 2022

Job ID: 680-214942-1

Client Sample ID: XSA-12-96X-SPR22
Date Collected: 05/02/22 12:15
Date Received: 05/04/22 10:30

Lab Sample ID: 680-214942-11
Matrix: Water

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

Analyte	Result	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		05/13/22 16:32	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		05/13/22 16:32	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		05/13/22 16:32	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		05/13/22 16:32	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 16:32	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 16:32	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		05/13/22 16:32	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		05/13/22 16:32	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		05/13/22 16:32	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		05/13/22 16:32	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		05/13/22 16:32	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		05/13/22 16:32	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/13/22 16:32	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		05/13/22 16:32	1
1,2-Dichloroethene, Total	**13**		2.0	1.0	0.37	ug/L		05/13/22 16:32	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		05/13/22 16:32	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		05/13/22 16:32	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/13/22 16:32	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		05/13/22 16:32	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/13/22 16:32	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		05/13/22 16:32	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		05/13/22 16:32	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		05/13/22 16:32	1
2-Hexanone	10	U	20	10	3.2	ug/L		05/13/22 16:32	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		05/13/22 16:32	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		05/13/22 16:32	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		05/13/22 16:32	1
Acetone	10	U	25	10	3.7	ug/L		05/13/22 16:32	1
Benzene	**0.33**	**J**	2.0	1.0	0.27	ug/L		05/13/22 16:32	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		05/13/22 16:32	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		05/13/22 16:32	1
Bromomethane	10	U	20	10	3.7	ug/L		05/13/22 16:32	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		05/13/22 16:32	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		05/13/22 16:32	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		05/13/22 16:32	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		05/13/22 16:32	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		05/13/22 16:32	1
Chloroethane	10	U	20	10	4.6	ug/L		05/13/22 16:32	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		05/13/22 16:32	1
Chloromethane	2.0	U Q	2.5	2.0	0.54	ug/L		05/13/22 16:32	1
cis-1,2-Dichloroethene	**9.4**		2.0	1.0	0.25	ug/L		05/13/22 16:32	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		05/13/22 16:32	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		05/13/22 16:32	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		05/13/22 16:32	1
Dichlorodifluoromethane	1.0	U Q	2.0	1.0	0.36	ug/L		05/13/22 16:32	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		05/13/22 16:32	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 16:32	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		05/13/22 16:32	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		05/13/22 16:32	1

Client Sample ID: XSA-12-96X-SPR22
Date Collected: 05/02/22 12:15
Date Received: 05/04/22 10:30

Lab Sample ID: 680-214942-11
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		05/13/22 16:32	1
Methylene Chloride	10	U	20	10	3.2	ug/L		05/13/22 16:32	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		05/13/22 16:32	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		05/13/22 16:32	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		05/13/22 16:32	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		05/13/22 16:32	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		05/13/22 16:32	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		05/13/22 16:32	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		05/13/22 16:32	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		05/13/22 16:32	1
Tetrachloroethene	**5.9**		2.0	1.0	0.35	ug/L		05/13/22 16:32	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		05/13/22 16:32	1
trans-1,2-Dichloroethene	**3.9**		2.0	1.0	0.34	ug/L		05/13/22 16:32	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		05/13/22 16:32	1
Trichloroethene	**9.3**		1.0	0.50	0.20	ug/L		05/13/22 16:32	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 16:32	1
Vinyl acetate	2.0	U Q	2.5	2.0	0.69	ug/L		05/13/22 16:32	1
Vinyl chloride	**8.0**		2.0	1.0	0.40	ug/L		05/13/22 16:32	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		05/13/22 16:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*		*05/13/22 16:32*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 119*		*05/13/22 16:32*	*1*
Toluene-d8 (Surr)	*101*		*89 - 112*		*05/13/22 16:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*97*		*81 - 118*		*05/13/22 16:32*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**2100**		100	50	20	ug/L		05/06/22 20:08	1
Manganese	**5400**		10	5.0	1.3	ug/L		05/06/22 20:08	1

Method: 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		05/07/22 13:34	1

Client: Seres Engineering & Services LLC
Project/Site: AOC 50, Spring 2022

Job ID: 680-214942-1

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

Lab Sample ID: MB 680-720587/10
Matrix: Water
Analysis Batch: 720587

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		05/13/22 13:26	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		05/13/22 13:26	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		05/13/22 13:26	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		05/13/22 13:26	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 13:26	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 13:26	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		05/13/22 13:26	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		05/13/22 13:26	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		05/13/22 13:26	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		05/13/22 13:26	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		05/13/22 13:26	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		05/13/22 13:26	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/13/22 13:26	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		05/13/22 13:26	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		05/13/22 13:26	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		05/13/22 13:26	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		05/13/22 13:26	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/13/22 13:26	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		05/13/22 13:26	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/13/22 13:26	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		05/13/22 13:26	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		05/13/22 13:26	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		05/13/22 13:26	1
2-Hexanone	10	U	20	10	3.2	ug/L		05/13/22 13:26	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		05/13/22 13:26	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		05/13/22 13:26	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		05/13/22 13:26	1
Acetone	10	U	25	10	3.7	ug/L		05/13/22 13:26	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		05/13/22 13:26	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		05/13/22 13:26	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		05/13/22 13:26	1
Bromomethane	10	U	20	10	3.7	ug/L		05/13/22 13:26	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		05/13/22 13:26	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		05/13/22 13:26	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		05/13/22 13:26	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		05/13/22 13:26	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		05/13/22 13:26	1
Chloroethane	10	U	20	10	4.6	ug/L		05/13/22 13:26	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		05/13/22 13:26	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		05/13/22 13:26	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		05/13/22 13:26	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		05/13/22 13:26	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		05/13/22 13:26	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		05/13/22 13:26	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		05/13/22 13:26	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		05/13/22 13:26	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 13:26	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		05/13/22 13:26	1

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

Lab Sample ID: MB 680-720587/10
Matrix: Water
Analysis Batch: 720587

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		05/13/22 13:26	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		05/13/22 13:26	1
Methylene Chloride	10	U	20	10	3.2	ug/L		05/13/22 13:26	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		05/13/22 13:26	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		05/13/22 13:26	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		05/13/22 13:26	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		05/13/22 13:26	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		05/13/22 13:26	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		05/13/22 13:26	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		05/13/22 13:26	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		05/13/22 13:26	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		05/13/22 13:26	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		05/13/22 13:26	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		05/13/22 13:26	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		05/13/22 13:26	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		05/13/22 13:26	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 13:26	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		05/13/22 13:26	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		05/13/22 13:26	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		05/13/22 13:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*		*05/13/22 13:26*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 119*		*05/13/22 13:26*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*05/13/22 13:26*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*		*05/13/22 13:26*	*1*

Lab Sample ID: LCS 680-720587/5
Matrix: Water
Analysis Batch: 720587

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	50.0	49.3		ug/L		99	78 - 124
1,1,1-Trichloroethane	50.0	45.9		ug/L		92	74 - 131
1,1,2,2-Tetrachloroethane	50.0	53.6		ug/L		107	71 - 121
1,1,2-Trichloroethane	50.0	50.7		ug/L		101	80 - 119
1,1-Dichloroethane	50.0	48.4		ug/L		97	77 - 125
1,1-Dichloroethene	50.0	45.9		ug/L		92	71 - 131
1,1-Dichloropropene	50.0	49.7		ug/L		99	79 - 125
1,2,3-Trichlorobenzene	50.0	56.0		ug/L		112	69 - 129
1,2,3-Trichloropropane	50.0	52.3		ug/L		105	73 - 122
1,2,4-Trichlorobenzene	50.0	53.2		ug/L		106	69 - 130
1,2,4-Trimethylbenzene	50.0	45.3		ug/L		91	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	50.9		ug/L		102	62 - 128
1,2-Dichlorobenzene	50.0	50.5		ug/L		101	80 - 119
1,2-Dichloroethane	50.0	49.3		ug/L		99	73 - 128
1,2-Dichloroethene, Total	100	95.2		ug/L		95	79 - 121
1,2-Dichloropropane	50.0	51.4		ug/L		103	78 - 122

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

Lab Sample ID: LCS 680-720587/5
Matrix: Water
Analysis Batch: 720587

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,3,5-Trimethylbenzene	50.0	45.0		ug/L		90	75 - 124
1,3-Dichlorobenzene	50.0	50.9		ug/L		102	80 - 119
1,3-Dichloropropane	50.0	52.3		ug/L		105	80 - 119
1,4-Dichlorobenzene	50.0	49.1		ug/L		98	79 - 118
2,2-Dichloropropane	50.0	43.9		ug/L		88	60 - 139
2-Butanone (MEK)	250	245		ug/L		98	56 - 143
2-Chlorotoluene	50.0	45.5		ug/L		91	79 - 122
2-Hexanone	250	278		ug/L		111	57 - 139
4-Chlorotoluene	50.0	45.6		ug/L		91	78 - 122
4-Isopropyltoluene	50.0	49.2		ug/L		98	77 - 127
4-Methyl-2-pentanone (MIBK)	250	287		ug/L		115	67 - 130
Acetone	250	257		ug/L		103	39 - 160
Benzene	50.0	50.0		ug/L		100	79 - 120
Bromobenzene	50.0	49.0		ug/L		98	80 - 120
Bromoform	50.0	47.8		ug/L		96	66 - 130
Bromomethane	50.0	45.1		ug/L		90	53 - 141
Carbon disulfide	50.0	47.3		ug/L		95	64 - 133
Carbon tetrachloride	50.0	43.5		ug/L		87	72 - 136
Chlorobenzene	50.0	47.4		ug/L		95	82 - 118
Chlorobromomethane	50.0	47.5		ug/L		95	78 - 123
Chlorodibromomethane	50.0	47.1		ug/L		94	74 - 126
Chloroethane	50.0	54.7		ug/L		109	60 - 138
Chloroform	50.0	47.9		ug/L		96	79 - 124
Chloromethane	50.0	38.3		ug/L		77	50 - 139
cis-1,2-Dichloroethene	50.0	47.8		ug/L		96	78 - 123
cis-1,3-Dichloropropene	50.0	51.3		ug/L		103	75 - 124
Dibromomethane	50.0	49.2		ug/L		98	79 - 123
Dichlorobromomethane	50.0	47.8		ug/L		96	79 - 125
Dichlorodifluoromethane	50.0	37.4		ug/L		75	32 - 152
Ethylbenzene	50.0	47.8		ug/L		96	79 - 121
Ethylene Dibromide	50.0	52.1		ug/L		104	75 - 127
Hexachlorobutadiene	50.0	50.5		ug/L		101	66 - 134
Isopropylbenzene	50.0	45.7		ug/L		91	72 - 131
Methyl tert-butyl ether	50.0	52.2		ug/L		104	71 - 124
Methylene Chloride	50.0	48.3		ug/L		97	74 - 124
m-Xylene & p-Xylene	50.0	45.2		ug/L		90	80 - 121
Naphthalene	50.0	56.6		ug/L		113	61 - 128
n-Butylbenzene	50.0	48.1		ug/L		96	75 - 128
N-Propylbenzene	50.0	44.4		ug/L		89	76 - 126
o-Xylene	50.0	46.1		ug/L		92	78 - 122
sec-Butylbenzene	50.0	44.2		ug/L		88	77 - 126
Styrene	50.0	47.4		ug/L		95	78 - 123
tert-Butylbenzene	50.0	44.3		ug/L		89	78 - 124
Tetrachloroethene	50.0	50.7		ug/L		101	74 - 129
Toluene	50.0	50.6		ug/L		101	80 - 121
trans-1,2-Dichloroethene	50.0	47.4		ug/L		95	75 - 124
trans-1,3-Dichloropropene	50.0	51.2		ug/L		102	73 - 127
Trichloroethene	50.0	51.9		ug/L		104	79 - 123
Trichlorofluoromethane	50.0	45.9		ug/L		92	65 - 141

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

Lab Sample ID: LCS 680-720587/5
Matrix: Water
Analysis Batch: 720587

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Vinyl acetate	100	117		ug/L		117	54 - 146
Vinyl chloride	50.0	43.9		ug/L		88	58 - 137
Xylenes, Total	100	91.3		ug/L		91	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*
Dibromofluoromethane (Surr)	*101*		*80 - 119*
Toluene-d8 (Surr)	*102*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*98*		*81 - 118*

Lab Sample ID: LCSD 680-720587/6
Matrix: Water
Analysis Batch: 720587

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
1,1,1,2-Tetrachloroethane	50.0	49.6		ug/L		99	78 - 124	1	20
1,1,1-Trichloroethane	50.0	45.5		ug/L		91	74 - 131	1	20
1,1,2,2-Tetrachloroethane	50.0	52.5		ug/L		105	71 - 121	2	20
1,1,2-Trichloroethane	50.0	49.9		ug/L		100	80 - 119	2	20
1,1-Dichloroethane	50.0	47.9		ug/L		96	77 - 125	1	20
1,1-Dichloroethene	50.0	44.6		ug/L		89	71 - 131	3	20
1,1-Dichloropropene	50.0	49.5		ug/L		99	79 - 125	0	20
1,2,3-Trichlorobenzene	50.0	55.2		ug/L		110	69 - 129	1	20
1,2,3-Trichloropropane	50.0	53.8		ug/L		108	73 - 122	3	20
1,2,4-Trichlorobenzene	50.0	53.2		ug/L		106	69 - 130	0	20
1,2,4-Trimethylbenzene	50.0	44.0		ug/L		88	76 - 124	3	20
1,2-Dibromo-3-Chloropropane	50.0	51.5		ug/L		103	62 - 128	1	20
1,2-Dichlorobenzene	50.0	50.3		ug/L		101	80 - 119	0	20
1,2-Dichloroethane	50.0	48.8		ug/L		98	73 - 128	1	20
1,2-Dichloroethene, Total	100	93.6		ug/L		94	79 - 121	2	20
1,2-Dichloropropane	50.0	52.1		ug/L		104	78 - 122	1	20
1,3,5-Trimethylbenzene	50.0	44.4		ug/L		89	75 - 124	1	20
1,3-Dichlorobenzene	50.0	51.2		ug/L		102	80 - 119	0	20
1,3-Dichloropropane	50.0	52.6		ug/L		105	80 - 119	1	20
1,4-Dichlorobenzene	50.0	49.2		ug/L		98	79 - 118	0	20
2,2-Dichloropropane	50.0	43.4		ug/L		87	60 - 139	1	20
2-Butanone (MEK)	250	246		ug/L		98	56 - 143	0	20
2-Chlorotoluene	50.0	46.1		ug/L		92	79 - 122	1	20
2-Hexanone	250	288		ug/L		115	57 - 139	4	20
4-Chlorotoluene	50.0	45.6		ug/L		91	78 - 122	0	20
4-Isopropyltoluene	50.0	48.3		ug/L		97	77 - 127	2	20
4-Methyl-2-pentanone (MIBK)	250	288		ug/L		115	67 - 130	0	20
Acetone	250	258		ug/L		103	39 - 160	0	20
Benzene	50.0	49.3		ug/L		99	79 - 120	1	20
Bromobenzene	50.0	49.8		ug/L		100	80 - 120	2	20
Bromoform	50.0	48.9		ug/L		98	66 - 130	2	20
Bromomethane	50.0	43.8		ug/L		88	53 - 141	3	20
Carbon disulfide	50.0	46.3		ug/L		93	64 - 133	2	20

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

Lab Sample ID: LCSD 680-720587/6
Matrix: Water
Analysis Batch: 720587

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
Carbon tetrachloride			50.0	43.0		ug/L		86	72 - 136	1	20
Chlorobenzene			50.0	47.7		ug/L		95	82 - 118	1	20
Chlorobromomethane			50.0	46.8		ug/L		94	78 - 123	1	20
Chlorodibromomethane			50.0	48.5		ug/L		97	74 - 126	3	20
Chloroethane			50.0	53.3		ug/L		107	60 - 138	3	20
Chloroform			50.0	46.9		ug/L		94	79 - 124	2	20
Chloromethane			50.0	37.1		ug/L		74	50 - 139	3	20
cis-1,2-Dichloroethene			50.0	46.8		ug/L		94	78 - 123	2	20
cis-1,3-Dichloropropene			50.0	51.3		ug/L		103	75 - 124	0	20
Dibromomethane			50.0	48.1		ug/L		96	79 - 123	2	20
Dichlorobromomethane			50.0	47.4		ug/L		95	79 - 125	1	20
Dichlorodifluoromethane			50.0	37.1		ug/L		74	32 - 152	1	20
Ethylbenzene			50.0	47.8		ug/L		96	79 - 121	0	20
Ethylene Dibromide			50.0	53.3		ug/L		107	75 - 127	2	20
Hexachlorobutadiene			50.0	49.9		ug/L		100	66 - 134	1	20
Isopropylbenzene			50.0	45.3		ug/L		91	72 - 131	1	20
Methyl tert-butyl ether			50.0	52.8		ug/L		106	71 - 124	1	20
Methylene Chloride			50.0	47.8		ug/L		96	74 - 124	1	20
m-Xylene & p-Xylene			50.0	46.1		ug/L		92	80 - 121	2	20
Naphthalene			50.0	56.9		ug/L		114	61 - 128	1	20
n-Butylbenzene			50.0	47.7		ug/L		95	75 - 128	1	20
N-Propylbenzene			50.0	44.4		ug/L		89	76 - 126	0	20
o-Xylene			50.0	45.4		ug/L		91	78 - 122	1	20
sec-Butylbenzene			50.0	43.4		ug/L		87	77 - 126	2	20
Styrene			50.0	47.0		ug/L		94	78 - 123	1	20
tert-Butylbenzene			50.0	43.8		ug/L		88	78 - 124	1	20
Tetrachloroethene			50.0	49.5		ug/L		99	74 - 129	2	20
Toluene			50.0	50.1		ug/L		100	80 - 121	1	20
trans-1,2-Dichloroethene			50.0	46.8		ug/L		94	75 - 124	1	20
trans-1,3-Dichloropropene			50.0	51.9		ug/L		104	73 - 127	1	20
Trichloroethene			50.0	51.4		ug/L		103	79 - 123	1	20
Trichlorofluoromethane			50.0	45.3		ug/L		91	65 - 141	1	20
Vinyl acetate			100	117		ug/L		117	54 - 146	0	20
Vinyl chloride			50.0	43.2		ug/L		86	58 - 137	1	20
Xylenes, Total			100	91.5		ug/L		92	79 - 121	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*
Dibromofluoromethane (Surr)	*99*		*80 - 119*
Toluene-d8 (Surr)	*103*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*98*		*81 - 118*

Lab Sample ID: MB 680-720712/9
Matrix: Water
Analysis Batch: 720712

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		05/13/22 13:01	1

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

Lab Sample ID: MB 680-720712/9
Matrix: Water
Analysis Batch: 720712

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-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		05/13/22 13:01	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		05/13/22 13:01	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		05/13/22 13:01	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 13:01	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 13:01	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		05/13/22 13:01	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		05/13/22 13:01	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		05/13/22 13:01	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		05/13/22 13:01	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		05/13/22 13:01	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		05/13/22 13:01	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/13/22 13:01	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		05/13/22 13:01	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		05/13/22 13:01	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		05/13/22 13:01	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		05/13/22 13:01	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/13/22 13:01	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		05/13/22 13:01	1
1,4-Dichlorobenzene	1.0	U M	2.0	1.0	0.31	ug/L		05/13/22 13:01	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		05/13/22 13:01	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		05/13/22 13:01	1
2-Chlorotoluene	0.50	U M	1.0	0.50	0.25	ug/L		05/13/22 13:01	1
2-Hexanone	10	U	20	10	3.2	ug/L		05/13/22 13:01	1
4-Chlorotoluene	1.0	U M	2.0	1.0	0.41	ug/L		05/13/22 13:01	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		05/13/22 13:01	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		05/13/22 13:01	1
Acetone	10	U	25	10	3.7	ug/L		05/13/22 13:01	1
Benzene	1.0	U M	2.0	1.0	0.27	ug/L		05/13/22 13:01	1
Bromobenzene	0.50	U M	1.0	0.50	0.24	ug/L		05/13/22 13:01	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		05/13/22 13:01	1
Bromomethane	10	U M	20	10	3.7	ug/L		05/13/22 13:01	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		05/13/22 13:01	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		05/13/22 13:01	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		05/13/22 13:01	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		05/13/22 13:01	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		05/13/22 13:01	1
Chloroethane	10	U	20	10	4.6	ug/L		05/13/22 13:01	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		05/13/22 13:01	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		05/13/22 13:01	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		05/13/22 13:01	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		05/13/22 13:01	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		05/13/22 13:01	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		05/13/22 13:01	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		05/13/22 13:01	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		05/13/22 13:01	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 13:01	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		05/13/22 13:01	1
Isopropylbenzene	1.0	U M	2.0	1.0	0.26	ug/L		05/13/22 13:01	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		05/13/22 13:01	1

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

Lab Sample ID: MB 680-720712/9
Matrix: Water
Analysis Batch: 720712

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methylene Chloride	10	U	20	10	3.2	ug/L		05/13/22 13:01	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		05/13/22 13:01	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		05/13/22 13:01	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		05/13/22 13:01	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		05/13/22 13:01	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		05/13/22 13:01	1
sec-Butylbenzene	2.0	U M	2.5	2.0	0.53	ug/L		05/13/22 13:01	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		05/13/22 13:01	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		05/13/22 13:01	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		05/13/22 13:01	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		05/13/22 13:01	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		05/13/22 13:01	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		05/13/22 13:01	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		05/13/22 13:01	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		05/13/22 13:01	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		05/13/22 13:01	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		05/13/22 13:01	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		05/13/22 13:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*		*05/13/22 13:01*	*1*
Dibromofluoromethane (Surr)	*116*		*80 - 119*		*05/13/22 13:01*	*1*
Toluene-d8 (Surr)	*130*	*Q*	*89 - 112*		*05/13/22 13:01*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*		*05/13/22 13:01*	*1*

Lab Sample ID: LCS 680-720712/4
Matrix: Water
Analysis Batch: 720712

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	50.0	53.9		ug/L		108	78 - 124
1,1,1-Trichloroethane	50.0	50.2		ug/L		100	74 - 131
1,1,2,2-Tetrachloroethane	50.0	47.6		ug/L		95	71 - 121
1,1,2-Trichloroethane	50.0	49.4		ug/L		99	80 - 119
1,1-Dichloroethane	50.0	53.3		ug/L		107	77 - 125
1,1-Dichloroethene	50.0	52.4		ug/L		105	71 - 131
1,1-Dichloropropene	50.0	51.2		ug/L		102	79 - 125
1,2,3-Trichlorobenzene	50.0	52.3		ug/L		105	69 - 129
1,2,3-Trichloropropane	50.0	46.9		ug/L		94	73 - 122
1,2,4-Trichlorobenzene	50.0	52.0		ug/L		104	69 - 130
1,2,4-Trimethylbenzene	50.0	53.7		ug/L		107	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	43.2		ug/L		86	62 - 128
1,2-Dichlorobenzene	50.0	49.3		ug/L		99	80 - 119
1,2-Dichloroethane	50.0	49.6		ug/L		99	73 - 128
1,2-Dichloroethene, Total	100	102		ug/L		102	79 - 121
1,2-Dichloropropane	50.0	51.8		ug/L		104	78 - 122
1,3,5-Trimethylbenzene	50.0	54.1		ug/L		108	75 - 124
1,3-Dichlorobenzene	50.0	50.2		ug/L		100	80 - 119

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

Lab Sample ID: LCS 680-720712/4
Matrix: Water
Analysis Batch: 720712

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,3-Dichloropropane	50.0	50.8		ug/L		102	80 - 119
1,4-Dichlorobenzene	50.0	49.8		ug/L		100	79 - 118
2,2-Dichloropropane	50.0	52.2		ug/L		104	60 - 139
2-Butanone (MEK)	250	202		ug/L		81	56 - 143
2-Chlorotoluene	50.0	53.4		ug/L		107	79 - 122
2-Hexanone	250	212		ug/L		85	57 - 139
4-Chlorotoluene	50.0	53.6		ug/L		107	78 - 122
4-Isopropyltoluene	50.0	49.7		ug/L		99	77 - 127
4-Methyl-2-pentanone (MIBK)	250	222		ug/L		89	67 - 130
Acetone	250	224		ug/L		90	39 - 160
Benzene	50.0	51.5		ug/L		103	79 - 120
Bromobenzene	50.0	55.1		ug/L		110	80 - 120
Bromoform	50.0	50.6		ug/L		101	66 - 130
Bromomethane	50.0	62.9		ug/L		126	53 - 141
Carbon disulfide	50.0	51.3		ug/L		103	64 - 133
Carbon tetrachloride	50.0	49.9		ug/L		100	72 - 136
Chlorobenzene	50.0	48.9		ug/L		98	82 - 118
Chlorobromomethane	50.0	54.0		ug/L		108	78 - 123
Chlorodibromomethane	50.0	49.1		ug/L		98	74 - 126
Chloroethane	50.0	59.7		ug/L		119	60 - 138
Chloroform	50.0	51.1		ug/L		102	79 - 124
Chloromethane	50.0	53.9		ug/L		108	50 - 139
cis-1,2-Dichloroethene	50.0	51.4		ug/L		103	78 - 123
cis-1,3-Dichloropropene	50.0	52.0		ug/L		104	75 - 124
Dibromomethane	50.0	48.1		ug/L		96	79 - 123
Dichlorobromomethane	50.0	48.5		ug/L		97	79 - 125
Dichlorodifluoromethane	50.0	43.7		ug/L		87	32 - 152
Ethylbenzene	50.0	52.6		ug/L		105	79 - 121
Ethylene Dibromide	50.0	49.8		ug/L		100	75 - 127
Hexachlorobutadiene	50.0	51.1		ug/L		102	66 - 134
Isopropylbenzene	50.0	53.6		ug/L		107	72 - 131
Methyl tert-butyl ether	50.0	46.8		ug/L		94	71 - 124
Methylene Chloride	50.0	54.7		ug/L		109	74 - 124
m-Xylene & p-Xylene	50.0	53.6		ug/L		107	80 - 121
Naphthalene	50.0	46.5		ug/L		93	61 - 128
n-Butylbenzene	50.0	50.6		ug/L		101	75 - 128
N-Propylbenzene	50.0	54.5		ug/L		109	76 - 126
o-Xylene	50.0	52.2		ug/L		104	78 - 122
sec-Butylbenzene	50.0	54.0		ug/L		108	77 - 126
Styrene	50.0	55.2		ug/L		110	78 - 123
tert-Butylbenzene	50.0	54.4		ug/L		109	78 - 124
Tetrachloroethene	50.0	52.0		ug/L		104	74 - 129
Toluene	50.0	51.3		ug/L		103	80 - 121
trans-1,2-Dichloroethene	50.0	50.8		ug/L		102	75 - 124
trans-1,3-Dichloropropene	50.0	51.3		ug/L		103	73 - 127
Trichloroethene	50.0	51.7		ug/L		103	79 - 123
Trichlorofluoromethane	50.0	49.4		ug/L		99	65 - 141
Vinyl acetate	100	91.6		ug/L		92	54 - 146
Vinyl chloride	50.0	48.5		ug/L		97	58 - 137

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

Lab Sample ID: LCS 680-720712/4
Matrix: Water
Analysis Batch: 720712

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	106		ug/L		106	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*85 - 114*
Dibromofluoromethane (Surr)	*102*		*80 - 119*
Toluene-d8 (Surr)	*102*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*97*		*81 - 118*

Lab Sample ID: LCSD 680-720712/5
Matrix: Water
Analysis Batch: 720712

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
1,1,1,2-Tetrachloroethane			50.0	53.7		ug/L		107	78 - 124	0	20
1,1,1-Trichloroethane			50.0	49.7		ug/L		99	74 - 131	1	20
1,1,2,2-Tetrachloroethane			50.0	48.1		ug/L		96	71 - 121	1	20
1,1,2-Trichloroethane			50.0	49.6		ug/L		99	80 - 119	0	20
1,1-Dichloroethane			50.0	52.8		ug/L		106	77 - 125	1	20
1,1-Dichloroethene			50.0	51.9		ug/L		104	71 - 131	1	20
1,1-Dichloropropene			50.0	51.1		ug/L		102	79 - 125	0	20
1,2,3-Trichlorobenzene			50.0	52.3		ug/L		105	69 - 129	0	20
1,2,3-Trichloropropane			50.0	47.5		ug/L		95	73 - 122	1	20
1,2,4-Trichlorobenzene			50.0	52.0		ug/L		104	69 - 130	0	20
1,2,4-Trimethylbenzene			50.0	52.6		ug/L		105	76 - 124	2	20
1,2-Dibromo-3-Chloropropane			50.0	43.6		ug/L		87	62 - 128	1	20
1,2-Dichlorobenzene			50.0	49.5		ug/L		99	80 - 119	0	20
1,2-Dichloroethane			50.0	50.3		ug/L		101	73 - 128	2	20
1,2-Dichloroethene, Total			100	101		ug/L		101	79 - 121	1	20
1,2-Dichloropropane			50.0	51.6		ug/L		103	78 - 122	0	20
1,3,5-Trimethylbenzene			50.0	52.9		ug/L		106	75 - 124	2	20
1,3-Dichlorobenzene			50.0	49.7		ug/L		99	80 - 119	1	20
1,3-Dichloropropane			50.0	52.0		ug/L		104	80 - 119	2	20
1,4-Dichlorobenzene			50.0	50.2		ug/L		100	79 - 118	1	20
2,2-Dichloropropane			50.0	50.9		ug/L		102	60 - 139	2	20
2-Butanone (MEK)			250	212		ug/L		85	56 - 143	5	20
2-Chlorotoluene			50.0	52.8		ug/L		106	79 - 122	1	20
2-Hexanone			250	217		ug/L		87	57 - 139	2	20
4-Chlorotoluene			50.0	52.9		ug/L		106	78 - 122	1	20
4-Isopropyltoluene			50.0	49.1		ug/L		98	77 - 127	1	20
4-Methyl-2-pentanone (MIBK)			250	232		ug/L		93	67 - 130	4	20
Acetone			250	241		ug/L		96	39 - 160	7	20
Benzene			50.0	51.0		ug/L		102	79 - 120	1	20
Bromobenzene			50.0	54.6		ug/L		109	80 - 120	1	20
Bromoform			50.0	51.3		ug/L		103	66 - 130	1	20
Bromomethane			50.0	64.2		ug/L		128	53 - 141	2	20
Carbon disulfide			50.0	50.6		ug/L		101	64 - 133	1	20
Carbon tetrachloride			50.0	49.3		ug/L		99	72 - 136	1	20
Chlorobenzene			50.0	48.7		ug/L		97	82 - 118	0	20

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

Lab Sample ID: LCSD 680-720712/5
Matrix: Water
Analysis Batch: 720712

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
Chlorobromomethane			50.0	54.3		ug/L		109	78 - 123	1	20
Chlorodibromomethane			50.0	49.3		ug/L		99	74 - 126	1	20
Chloroethane			50.0	59.5		ug/L		119	60 - 138	0	20
Chloroform			50.0	50.9		ug/L		102	79 - 124	0	20
Chloromethane			50.0	54.0		ug/L		108	50 - 139	0	20
cis-1,2-Dichloroethene			50.0	51.1		ug/L		102	78 - 123	1	20
cis-1,3-Dichloropropene			50.0	52.2		ug/L		104	75 - 124	0	20
Dibromomethane			50.0	48.6		ug/L		97	79 - 123	1	20
Dichlorobromomethane			50.0	49.2		ug/L		98	79 - 125	1	20
Dichlorodifluoromethane			50.0	43.0		ug/L		86	32 - 152	2	20
Ethylbenzene			50.0	51.7		ug/L		103	79 - 121	2	20
Ethylene Dibromide			50.0	50.3		ug/L		101	75 - 127	1	20
Hexachlorobutadiene			50.0	51.5		ug/L		103	66 - 134	1	20
Isopropylbenzene			50.0	52.5		ug/L		105	72 - 131	2	20
Methyl tert-butyl ether			50.0	47.7		ug/L		95	71 - 124	2	20
Methylene Chloride			50.0	54.1		ug/L		108	74 - 124	1	20
m-Xylene & p-Xylene			50.0	53.3		ug/L		107	80 - 121	1	20
Naphthalene			50.0	47.3		ug/L		95	61 - 128	2	20
n-Butylbenzene			50.0	49.2		ug/L		98	75 - 128	3	20
N-Propylbenzene			50.0	53.5		ug/L		107	76 - 126	2	20
o-Xylene			50.0	51.8		ug/L		104	78 - 122	1	20
sec-Butylbenzene			50.0	53.2		ug/L		106	77 - 126	1	20
Styrene			50.0	54.8		ug/L		110	78 - 123	1	20
tert-Butylbenzene			50.0	53.5		ug/L		107	78 - 124	2	20
Tetrachloroethene			50.0	52.3		ug/L		105	74 - 129	1	20
Toluene			50.0	51.6		ug/L		103	80 - 121	1	20
trans-1,2-Dichloroethene			50.0	50.2		ug/L		100	75 - 124	1	20
trans-1,3-Dichloropropene			50.0	52.0		ug/L		104	73 - 127	1	20
Trichloroethene			50.0	52.2		ug/L		104	79 - 123	1	20
Trichlorofluoromethane			50.0	49.0		ug/L		98	65 - 141	1	20
Vinyl acetate			100	93.5		ug/L		94	54 - 146	2	20
Vinyl chloride			50.0	47.3		ug/L		95	58 - 137	2	20
Xylenes, Total			100	105		ug/L		105	79 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*90*		*85 - 114*
Dibromofluoromethane (Surr)	*104*		*80 - 119*
Toluene-d8 (Surr)	*103*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*97*		*81 - 118*

Lab Sample ID: MB 680-720929/10
Matrix: Water
Analysis Batch: 720929

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		05/16/22 13:27	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		05/16/22 13:27	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		05/16/22 13:27	1

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

Lab Sample ID: MB 680-720929/10
Matrix: Water
Analysis Batch: 720929

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		05/16/22 13:27	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		05/16/22 13:27	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		05/16/22 13:27	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		05/16/22 13:27	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		05/16/22 13:27	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		05/16/22 13:27	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		05/16/22 13:27	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		05/16/22 13:27	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		05/16/22 13:27	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/16/22 13:27	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		05/16/22 13:27	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		05/16/22 13:27	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		05/16/22 13:27	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		05/16/22 13:27	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/16/22 13:27	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		05/16/22 13:27	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/16/22 13:27	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		05/16/22 13:27	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		05/16/22 13:27	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		05/16/22 13:27	1
2-Hexanone	10	U	20	10	3.2	ug/L		05/16/22 13:27	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		05/16/22 13:27	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		05/16/22 13:27	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		05/16/22 13:27	1
Acetone	10	U	25	10	3.7	ug/L		05/16/22 13:27	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		05/16/22 13:27	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		05/16/22 13:27	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		05/16/22 13:27	1
Bromomethane	10	U	20	10	3.7	ug/L		05/16/22 13:27	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		05/16/22 13:27	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		05/16/22 13:27	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		05/16/22 13:27	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		05/16/22 13:27	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		05/16/22 13:27	1
Chloroethane	10	U	20	10	4.6	ug/L		05/16/22 13:27	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		05/16/22 13:27	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		05/16/22 13:27	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		05/16/22 13:27	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		05/16/22 13:27	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		05/16/22 13:27	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		05/16/22 13:27	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		05/16/22 13:27	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		05/16/22 13:27	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		05/16/22 13:27	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		05/16/22 13:27	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		05/16/22 13:27	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		05/16/22 13:27	1
Methylene Chloride	10	U	20	10	3.2	ug/L		05/16/22 13:27	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		05/16/22 13:27	1

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

Lab Sample ID: MB 680-720929/10
Matrix: Water
Analysis Batch: 720929

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Naphthalene	5.0	U	10	5.0	2.4	ug/L		05/16/22 13:27	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		05/16/22 13:27	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		05/16/22 13:27	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		05/16/22 13:27	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		05/16/22 13:27	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		05/16/22 13:27	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		05/16/22 13:27	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		05/16/22 13:27	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		05/16/22 13:27	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		05/16/22 13:27	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		05/16/22 13:27	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		05/16/22 13:27	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		05/16/22 13:27	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		05/16/22 13:27	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		05/16/22 13:27	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		05/16/22 13:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*05/16/22 13:27*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 119*		*05/16/22 13:27*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*05/16/22 13:27*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*05/16/22 13:27*	*1*

Lab Sample ID: LCS 680-720929/5
Matrix: Water
Analysis Batch: 720929

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	50.0	52.4		ug/L		105	78 - 124
1,1,1-Trichloroethane	50.0	45.7		ug/L		91	74 - 131
1,1,2,2-Tetrachloroethane	50.0	52.6		ug/L		105	71 - 121
1,1,2-Trichloroethane	50.0	51.3		ug/L		103	80 - 119
1,1-Dichloroethane	50.0	48.6		ug/L		97	77 - 125
1,1-Dichloroethene	50.0	46.9		ug/L		94	71 - 131
1,1-Dichloropropene	50.0	50.3		ug/L		101	79 - 125
1,2,3-Trichlorobenzene	50.0	56.7		ug/L		113	69 - 129
1,2,3-Trichloropropane	50.0	55.4		ug/L		111	73 - 122
1,2,4-Trichlorobenzene	50.0	54.5		ug/L		109	69 - 130
1,2,4-Trimethylbenzene	50.0	45.4		ug/L		91	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	53.6		ug/L		107	62 - 128
1,2-Dichlorobenzene	50.0	51.5		ug/L		103	80 - 119
1,2-Dichloroethane	50.0	48.4		ug/L		97	73 - 128
1,2-Dichloroethene, Total	100	95.1		ug/L		95	79 - 121
1,2-Dichloropropane	50.0	52.0		ug/L		104	78 - 122
1,3,5-Trimethylbenzene	50.0	45.1		ug/L		90	75 - 124
1,3-Dichlorobenzene	50.0	51.6		ug/L		103	80 - 119
1,3-Dichloropropane	50.0	52.9		ug/L		106	80 - 119
1,4-Dichlorobenzene	50.0	50.1		ug/L		100	79 - 118

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

Lab Sample ID: LCS 680-720929/5
Matrix: Water
Analysis Batch: 720929

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,2-Dichloropropane	50.0	42.0		ug/L		84	60 - 139
2-Butanone (MEK)	250	256		ug/L		103	56 - 143
2-Chlorotoluene	50.0	46.7		ug/L		93	79 - 122
2-Hexanone	250	296		ug/L		119	57 - 139
4-Chlorotoluene	50.0	46.7		ug/L		93	78 - 122
4-Isopropyltoluene	50.0	49.4		ug/L		99	77 - 127
4-Methyl-2-pentanone (MIBK)	250	298		ug/L		119	67 - 130
Acetone	250	272		ug/L		109	39 - 160
Benzene	50.0	50.0		ug/L		100	79 - 120
Bromobenzene	50.0	50.9		ug/L		102	80 - 120
Bromoform	50.0	52.7		ug/L		105	66 - 130
Bromomethane	50.0	48.7		ug/L		97	53 - 141
Carbon disulfide	50.0	48.7		ug/L		97	64 - 133
Carbon tetrachloride	50.0	44.1		ug/L		88	72 - 136
Chlorobenzene	50.0	49.2		ug/L		98	82 - 118
Chlorobromomethane	50.0	47.8		ug/L		96	78 - 123
Chlorodibromomethane	50.0	49.0		ug/L		98	74 - 126
Chloroethane	50.0	56.3		ug/L		113	60 - 138
Chloroform	50.0	47.7		ug/L		95	79 - 124
Chloromethane	50.0	44.6	M	ug/L		89	50 - 139
cis-1,2-Dichloroethene	50.0	47.4		ug/L		95	78 - 123
cis-1,3-Dichloropropene	50.0	50.7		ug/L		101	75 - 124
Dibromomethane	50.0	48.4		ug/L		97	79 - 123
Dichlorobromomethane	50.0	47.7		ug/L		95	79 - 125
Dichlorodifluoromethane	50.0	43.0		ug/L		86	32 - 152
Ethylbenzene	50.0	49.1		ug/L		98	79 - 121
Ethylene Dibromide	50.0	53.6		ug/L		107	75 - 127
Hexachlorobutadiene	50.0	50.2		ug/L		100	66 - 134
Isopropylbenzene	50.0	46.4		ug/L		93	72 - 131
Methyl tert-butyl ether	50.0	52.7		ug/L		105	71 - 124
Methylene Chloride	50.0	48.6		ug/L		97	74 - 124
m-Xylene & p-Xylene	50.0	46.4		ug/L		93	80 - 121
Naphthalene	50.0	58.4		ug/L		117	61 - 128
n-Butylbenzene	50.0	48.4		ug/L		97	75 - 128
N-Propylbenzene	50.0	45.8		ug/L		92	76 - 126
o-Xylene	50.0	46.5		ug/L		93	78 - 122
sec-Butylbenzene	50.0	44.7		ug/L		89	77 - 126
Styrene	50.0	48.3		ug/L		97	78 - 123
tert-Butylbenzene	50.0	45.1		ug/L		90	78 - 124
Tetrachloroethene	50.0	50.5		ug/L		101	74 - 129
Toluene	50.0	50.9		ug/L		102	80 - 121
trans-1,2-Dichloroethene	50.0	47.7		ug/L		95	75 - 124
trans-1,3-Dichloropropene	50.0	50.6		ug/L		101	73 - 127
Trichloroethene	50.0	53.4		ug/L		107	79 - 123
Trichlorofluoromethane	50.0	46.7		ug/L		93	65 - 141
Vinyl acetate	100	91.7		ug/L		92	54 - 146
Vinyl chloride	50.0	46.7		ug/L		93	58 - 137
Xylenes, Total	100	92.9		ug/L		93	79 - 121

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

Lab Sample ID: LCS 680-720929/5
Matrix: Water
Analysis Batch: 720929

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

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*
Dibromofluoromethane (Surr)	*101*		*80 - 119*
Toluene-d8 (Surr)	*102*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*97*		*81 - 118*

Lab Sample ID: LCSD 680-720929/6
Matrix: Water
Analysis Batch: 720929

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
1,1,1,2-Tetrachloroethane			50.0	51.7		ug/L		103	78 - 124	1	20
1,1,1-Trichloroethane			50.0	46.0		ug/L		92	74 - 131	1	20
1,1,2,2-Tetrachloroethane			50.0	51.7		ug/L		103	71 - 121	2	20
1,1,2-Trichloroethane			50.0	50.5		ug/L		101	80 - 119	1	20
1,1-Dichloroethane			50.0	49.3		ug/L		99	77 - 125	1	20
1,1-Dichloroethene			50.0	47.3		ug/L		95	71 - 131	1	20
1,1-Dichloropropene			50.0	49.9		ug/L		100	79 - 125	1	20
1,2,3-Trichlorobenzene			50.0	56.7		ug/L		113	69 - 129	0	20
1,2,3-Trichloropropane			50.0	54.9		ug/L		110	73 - 122	1	20
1,2,4-Trichlorobenzene			50.0	54.9		ug/L		110	69 - 130	1	20
1,2,4-Trimethylbenzene			50.0	45.3		ug/L		91	76 - 124	0	20
1,2-Dibromo-3-Chloropropane			50.0	53.9		ug/L		108	62 - 128	1	20
1,2-Dichlorobenzene			50.0	51.3		ug/L		103	80 - 119	1	20
1,2-Dichloroethane			50.0	48.6		ug/L		97	73 - 128	0	20
1,2-Dichloroethene, Total			100	95.7		ug/L		96	79 - 121	1	20
1,2-Dichloropropane			50.0	52.0		ug/L		104	78 - 122	0	20
1,3,5-Trimethylbenzene			50.0	45.4		ug/L		91	75 - 124	1	20
1,3-Dichlorobenzene			50.0	51.6		ug/L		103	80 - 119	0	20
1,3-Dichloropropane			50.0	52.9		ug/L		106	80 - 119	0	20
1,4-Dichlorobenzene			50.0	49.4		ug/L		99	79 - 118	1	20
2,2-Dichloropropane			50.0	40.9		ug/L		82	60 - 139	3	20
2-Butanone (MEK)			250	258		ug/L		103	56 - 143	1	20
2-Chlorotoluene			50.0	46.4		ug/L		93	79 - 122	1	20
2-Hexanone			250	295		ug/L		118	57 - 139	0	20
4-Chlorotoluene			50.0	45.9		ug/L		92	78 - 122	2	20
4-Isopropyltoluene			50.0	50.0		ug/L		100	77 - 127	1	20
4-Methyl-2-pentanone (MIBK)			250	296		ug/L		119	67 - 130	1	20
Acetone			250	277		ug/L		111	39 - 160	2	20
Benzene			50.0	50.7		ug/L		101	79 - 120	1	20
Bromobenzene			50.0	50.0		ug/L		100	80 - 120	2	20
Bromoform			50.0	51.6		ug/L		103	66 - 130	2	20
Bromomethane			50.0	48.4		ug/L		97	53 - 141	1	20
Carbon disulfide			50.0	48.7		ug/L		97	64 - 133	0	20
Carbon tetrachloride			50.0	44.5		ug/L		89	72 - 136	1	20
Chlorobenzene			50.0	48.4		ug/L		97	82 - 118	2	20
Chlorobromomethane			50.0	47.9		ug/L		96	78 - 123	0	20
Chlorodibromomethane			50.0	49.5		ug/L		99	74 - 126	1	20
Chloroethane			50.0	57.3		ug/L		115	60 - 138	2	20

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

Lab Sample ID: LCSD 680-720929/6
Matrix: Water
Analysis Batch: 720929

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloroform			50.0	47.3		ug/L		95	79 - 124	1	20
Chloromethane			50.0	43.3	M	ug/L		87	50 - 139	3	20
cis-1,2-Dichloroethene			50.0	47.6		ug/L		95	78 - 123	1	20
cis-1,3-Dichloropropene			50.0	50.4		ug/L		101	75 - 124	1	20
Dibromomethane			50.0	49.0		ug/L		98	79 - 123	1	20
Dichlorobromomethane			50.0	47.3		ug/L		95	79 - 125	1	20
Dichlorodifluoromethane			50.0	44.1		ug/L		88	32 - 152	2	20
Ethylbenzene			50.0	48.4		ug/L		97	79 - 121	1	20
Ethylene Dibromide			50.0	54.8		ug/L		110	75 - 127	2	20
Hexachlorobutadiene			50.0	51.8		ug/L		104	66 - 134	3	20
Isopropylbenzene			50.0	45.8		ug/L		92	72 - 131	1	20
Methyl tert-butyl ether			50.0	52.7		ug/L		105	71 - 124	0	20
Methylene Chloride			50.0	48.8		ug/L		98	74 - 124	0	20
m-Xylene & p-Xylene			50.0	46.2		ug/L		92	80 - 121	0	20
Naphthalene			50.0	57.7		ug/L		115	61 - 128	1	20
n-Butylbenzene			50.0	48.9		ug/L		98	75 - 128	1	20
N-Propylbenzene			50.0	45.4		ug/L		91	76 - 126	1	20
o-Xylene			50.0	45.6		ug/L		91	78 - 122	2	20
sec-Butylbenzene			50.0	44.6		ug/L		89	77 - 126	0	20
Styrene			50.0	47.1		ug/L		94	78 - 123	2	20
tert-Butylbenzene			50.0	45.2		ug/L		90	78 - 124	0	20
Tetrachloroethene			50.0	50.8		ug/L		102	74 - 129	1	20
Toluene			50.0	51.0		ug/L		102	80 - 121	0	20
trans-1,2-Dichloroethene			50.0	48.1		ug/L		96	75 - 124	1	20
trans-1,3-Dichloropropene			50.0	50.6		ug/L		101	73 - 127	0	20
Trichloroethene			50.0	54.1		ug/L		108	79 - 123	1	20
Trichlorofluoromethane			50.0	47.4		ug/L		95	65 - 141	2	20
Vinyl acetate			100	88.5		ug/L		88	54 - 146	4	20
Vinyl chloride			50.0	47.5		ug/L		95	58 - 137	2	20
Xylenes, Total			100	91.8		ug/L		92	79 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*
Dibromofluoromethane (Surr)	*99*		*80 - 119*
Toluene-d8 (Surr)	*103*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*98*		*81 - 118*

Lab Sample ID: MB 680-721049/44
Matrix: Water
Analysis Batch: 721049

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		05/17/22 02:42	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		05/17/22 02:42	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		05/17/22 02:42	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		05/17/22 02:42	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		05/17/22 02:42	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		05/17/22 02:42	1

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

Lab Sample ID: MB 680-721049/44
Matrix: Water
Analysis Batch: 721049

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		05/17/22 02:42	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		05/17/22 02:42	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		05/17/22 02:42	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		05/17/22 02:42	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		05/17/22 02:42	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		05/17/22 02:42	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/17/22 02:42	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		05/17/22 02:42	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		05/17/22 02:42	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		05/17/22 02:42	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		05/17/22 02:42	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/17/22 02:42	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		05/17/22 02:42	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/17/22 02:42	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		05/17/22 02:42	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		05/17/22 02:42	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		05/17/22 02:42	1
2-Hexanone	10	U	20	10	3.2	ug/L		05/17/22 02:42	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		05/17/22 02:42	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		05/17/22 02:42	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		05/17/22 02:42	1
Acetone	10	U	25	10	3.7	ug/L		05/17/22 02:42	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		05/17/22 02:42	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		05/17/22 02:42	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		05/17/22 02:42	1
Bromomethane	10	U	20	10	3.7	ug/L		05/17/22 02:42	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		05/17/22 02:42	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		05/17/22 02:42	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		05/17/22 02:42	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		05/17/22 02:42	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		05/17/22 02:42	1
Chloroethane	10	U	20	10	4.6	ug/L		05/17/22 02:42	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		05/17/22 02:42	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		05/17/22 02:42	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		05/17/22 02:42	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		05/17/22 02:42	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		05/17/22 02:42	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		05/17/22 02:42	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		05/17/22 02:42	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		05/17/22 02:42	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		05/17/22 02:42	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		05/17/22 02:42	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		05/17/22 02:42	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		05/17/22 02:42	1
Methylene Chloride	10	U	20	10	3.2	ug/L		05/17/22 02:42	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		05/17/22 02:42	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		05/17/22 02:42	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		05/17/22 02:42	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		05/17/22 02:42	1

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

Lab Sample ID: MB 680-721049/44
Matrix: Water
Analysis Batch: 721049

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		05/17/22 02:42	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		05/17/22 02:42	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		05/17/22 02:42	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		05/17/22 02:42	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		05/17/22 02:42	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		05/17/22 02:42	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		05/17/22 02:42	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		05/17/22 02:42	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		05/17/22 02:42	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		05/17/22 02:42	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		05/17/22 02:42	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		05/17/22 02:42	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		05/17/22 02:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*		*05/17/22 02:42*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*05/17/22 02:42*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*05/17/22 02:42*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*05/17/22 02:42*	*1*

Lab Sample ID: LCS 680-721049/39
Matrix: Water
Analysis Batch: 721049

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	50.0	55.3		ug/L		111	78 - 124
1,1,1-Trichloroethane	50.0	45.0		ug/L		90	74 - 131
1,1,2,2-Tetrachloroethane	50.0	50.6		ug/L		101	71 - 121
1,1,2-Trichloroethane	50.0	51.4		ug/L		103	80 - 119
1,1-Dichloroethane	50.0	48.6		ug/L		97	77 - 125
1,1-Dichloroethene	50.0	45.5		ug/L		91	71 - 131
1,1-Dichloropropene	50.0	47.6		ug/L		95	79 - 125
1,2,3-Trichlorobenzene	50.0	55.9		ug/L		112	69 - 129
1,2,3-Trichloropropane	50.0	57.8		ug/L		116	73 - 122
1,2,4-Trichlorobenzene	50.0	52.9		ug/L		106	69 - 130
1,2,4-Trimethylbenzene	50.0	48.1		ug/L		96	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	54.4		ug/L		109	62 - 128
1,2-Dichlorobenzene	50.0	51.2		ug/L		102	80 - 119
1,2-Dichloroethane	50.0	47.6		ug/L		95	73 - 128
1,2-Dichloroethene, Total	100	94.3		ug/L		94	79 - 121
1,2-Dichloropropane	50.0	51.2		ug/L		102	78 - 122
1,3,5-Trimethylbenzene	50.0	47.7		ug/L		95	75 - 124
1,3-Dichlorobenzene	50.0	51.3		ug/L		103	80 - 119
1,3-Dichloropropane	50.0	51.5		ug/L		103	80 - 119
1,4-Dichlorobenzene	50.0	49.2		ug/L		98	79 - 118
2,2-Dichloropropane	50.0	28.4	Q	ug/L		57	60 - 139
2-Butanone (MEK)	250	257		ug/L		103	56 - 143
2-Chlorotoluene	50.0	50.8		ug/L		102	79 - 122

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

Lab Sample ID: LCS 680-721049/39
Matrix: Water
Analysis Batch: 721049

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-Hexanone	250	291		ug/L		116	57 - 139
4-Chlorotoluene	50.0	50.6		ug/L		101	78 - 122
4-Isopropyltoluene	50.0	47.3		ug/L		95	77 - 127
4-Methyl-2-pentanone (MIBK)	250	295		ug/L		118	67 - 130
Acetone	250	276		ug/L		111	39 - 160
Benzene	50.0	50.0		ug/L		100	79 - 120
Bromobenzene	50.0	53.1		ug/L		106	80 - 120
Bromoform	50.0	57.0		ug/L		114	66 - 130
Bromomethane	50.0	54.8		ug/L		110	53 - 141
Carbon disulfide	50.0	46.5		ug/L		93	64 - 133
Carbon tetrachloride	50.0	43.7		ug/L		87	72 - 136
Chlorobenzene	50.0	50.0		ug/L		100	82 - 118
Chlorobromomethane	50.0	47.5		ug/L		95	78 - 123
Chlorodibromomethane	50.0	50.3		ug/L		101	74 - 126
Chloroethane	50.0	57.7		ug/L		115	60 - 138
Chloroform	50.0	47.4		ug/L		95	79 - 124
Chloromethane	50.0	40.9	M	ug/L		82	50 - 139
cis-1,2-Dichloroethene	50.0	46.9		ug/L		94	78 - 123
cis-1,3-Dichloropropene	50.0	47.7		ug/L		95	75 - 124
Dibromomethane	50.0	48.5		ug/L		97	79 - 123
Dichlorobromomethane	50.0	47.5		ug/L		95	79 - 125
Dichlorodifluoromethane	50.0	38.4		ug/L		77	32 - 152
Ethylbenzene	50.0	50.0		ug/L		100	79 - 121
Ethylene Dibromide	50.0	52.8		ug/L		106	75 - 127
Hexachlorobutadiene	50.0	47.5		ug/L		95	66 - 134
Isopropylbenzene	50.0	49.1		ug/L		98	72 - 131
Methyl tert-butyl ether	50.0	52.3		ug/L		105	71 - 124
Methylene Chloride	50.0	47.4		ug/L		95	74 - 124
m-Xylene & p-Xylene	50.0	49.5		ug/L		99	80 - 121
Naphthalene	50.0	56.6		ug/L		113	61 - 128
n-Butylbenzene	50.0	44.8		ug/L		90	75 - 128
N-Propylbenzene	50.0	48.8		ug/L		98	76 - 126
o-Xylene	50.0	49.6		ug/L		99	78 - 122
sec-Butylbenzene	50.0	47.6		ug/L		95	77 - 126
Styrene	50.0	51.1		ug/L		102	78 - 123
tert-Butylbenzene	50.0	48.4		ug/L		97	78 - 124
Tetrachloroethene	50.0	49.2		ug/L		98	74 - 129
Toluene	50.0	49.8		ug/L		100	80 - 121
trans-1,2-Dichloroethene	50.0	47.4		ug/L		95	75 - 124
trans-1,3-Dichloropropene	50.0	47.6		ug/L		95	73 - 127
Trichloroethene	50.0	56.5		ug/L		113	79 - 123
Trichlorofluoromethane	50.0	44.1		ug/L		88	65 - 141
Vinyl acetate	100	54.3		ug/L		54	54 - 146
Vinyl chloride	50.0	46.2		ug/L		92	58 - 137
Xylenes, Total	100	99.1		ug/L		99	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*

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

Lab Sample ID: LCS 680-721049/39
Matrix: Water
Analysis Batch: 721049

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

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	98		80 - 119
Toluene-d8 (Surr)	100		89 - 112
1,2-Dichloroethane-d4 (Surr)	95		81 - 118

Lab Sample ID: LCSD 680-721049/40
Matrix: Water
Analysis Batch: 721049

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
1,1,1,2-Tetrachloroethane			50.0	54.8		ug/L		110	78 - 124	1	20
1,1,1-Trichloroethane			50.0	44.6		ug/L		89	74 - 131	1	20
1,1,2,2-Tetrachloroethane			50.0	54.2		ug/L		108	71 - 121	7	20
1,1,2-Trichloroethane			50.0	51.2		ug/L		102	80 - 119	0	20
1,1-Dichloroethane			50.0	48.4		ug/L		97	77 - 125	0	20
1,1-Dichloroethene			50.0	46.1		ug/L		92	71 - 131	1	20
1,1-Dichloropropene			50.0	48.1		ug/L		96	79 - 125	1	20
1,2,3-Trichlorobenzene			50.0	55.3		ug/L		111	69 - 129	1	20
1,2,3-Trichloropropane			50.0	58.7		ug/L		117	73 - 122	2	20
1,2,4-Trichlorobenzene			50.0	53.5		ug/L		107	69 - 130	1	20
1,2,4-Trimethylbenzene			50.0	48.7		ug/L		97	76 - 124	1	20
1,2-Dibromo-3-Chloropropane			50.0	53.7		ug/L		107	62 - 128	1	20
1,2-Dichlorobenzene			50.0	51.3		ug/L		103	80 - 119	0	20
1,2-Dichloroethane			50.0	47.9		ug/L		96	73 - 128	1	20
1,2-Dichloroethene, Total			100	93.5		ug/L		93	79 - 121	1	20
1,2-Dichloropropane			50.0	51.4		ug/L		103	78 - 122	0	20
1,3,5-Trimethylbenzene			50.0	48.6		ug/L		97	75 - 124	2	20
1,3-Dichlorobenzene			50.0	51.2		ug/L		102	80 - 119	0	20
1,3-Dichloropropane			50.0	53.1		ug/L		106	80 - 119	3	20
1,4-Dichlorobenzene			50.0	49.7		ug/L		99	79 - 118	1	20
2,2-Dichloropropane			50.0	27.7	Q	ug/L		55	60 - 139	3	20
2-Butanone (MEK)			250	261		ug/L		105	56 - 143	2	20
2-Chlorotoluene			50.0	50.1		ug/L		100	79 - 122	1	20
2-Hexanone			250	290		ug/L		116	57 - 139	0	20
4-Chlorotoluene			50.0	50.5		ug/L		101	78 - 122	0	20
4-Isopropyltoluene			50.0	48.1		ug/L		96	77 - 127	2	20
4-Methyl-2-pentanone (MIBK)			250	296		ug/L		118	67 - 130	0	20
Acetone			250	269		ug/L		108	39 - 160	3	20
Benzene			50.0	49.2		ug/L		98	79 - 120	2	20
Bromobenzene			50.0	52.6		ug/L		105	80 - 120	1	20
Bromoform			50.0	57.3		ug/L		115	66 - 130	0	20
Bromomethane			50.0	55.9		ug/L		112	53 - 141	2	20
Carbon disulfide			50.0	46.4		ug/L		93	64 - 133	0	20
Carbon tetrachloride			50.0	43.5		ug/L		87	72 - 136	0	20
Chlorobenzene			50.0	49.4		ug/L		99	82 - 118	1	20
Chlorobromomethane			50.0	47.6		ug/L		95	78 - 123	0	20
Chlorodibromomethane			50.0	50.2		ug/L		100	74 - 126	0	20
Chloroethane			50.0	56.6		ug/L		113	60 - 138	2	20
Chloroform			50.0	47.6		ug/L		95	79 - 124	0	20

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

Lab Sample ID: LCSD 680-721049/40
Matrix: Water
Analysis Batch: 721049

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
Chloromethane			50.0	40.4	M	ug/L		81	50 - 139	1	20
cis-1,2-Dichloroethene			50.0	46.6		ug/L		93	78 - 123	1	20
cis-1,3-Dichloropropene			50.0	47.5		ug/L		95	75 - 124	0	20
Dibromomethane			50.0	48.6		ug/L		97	79 - 123	0	20
Dichlorobromomethane			50.0	47.5		ug/L		95	79 - 125	0	20
Dichlorodifluoromethane			50.0	39.0		ug/L		78	32 - 152	1	20
Ethylbenzene			50.0	49.2		ug/L		98	79 - 121	2	20
Ethylene Dibromide			50.0	53.8		ug/L		108	75 - 127	2	20
Hexachlorobutadiene			50.0	47.2		ug/L		94	66 - 134	1	20
Isopropylbenzene			50.0	48.3		ug/L		97	72 - 131	2	20
Methyl tert-butyl ether			50.0	51.9		ug/L		104	71 - 124	1	20
Methylene Chloride			50.0	48.8		ug/L		98	74 - 124	3	20
m-Xylene & p-Xylene			50.0	48.9		ug/L		98	80 - 121	1	20
Naphthalene			50.0	56.8		ug/L		114	61 - 128	0	20
n-Butylbenzene			50.0	45.9		ug/L		92	75 - 128	2	20
N-Propylbenzene			50.0	49.5		ug/L		99	76 - 126	1	20
o-Xylene			50.0	49.9		ug/L		100	78 - 122	0	20
sec-Butylbenzene			50.0	48.1		ug/L		96	77 - 126	1	20
Styrene			50.0	50.9		ug/L		102	78 - 123	0	20
tert-Butylbenzene			50.0	48.5		ug/L		97	78 - 124	0	20
Tetrachloroethene			50.0	49.1		ug/L		98	74 - 129	0	20
Toluene			50.0	49.4		ug/L		99	80 - 121	1	20
trans-1,2-Dichloroethene			50.0	46.9		ug/L		94	75 - 124	1	20
trans-1,3-Dichloropropene			50.0	47.1		ug/L		94	73 - 127	1	20
Trichloroethene			50.0	53.4		ug/L		107	79 - 123	6	20
Trichlorofluoromethane			50.0	45.1		ug/L		90	65 - 141	2	20
Vinyl acetate			100	85.7	Q	ug/L		86	54 - 146	45	20
Vinyl chloride			50.0	45.8		ug/L		92	58 - 137	1	20
Xylenes, Total			100	98.8		ug/L		99	79 - 121	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*
Dibromofluoromethane (Surr)	*99*		*80 - 119*
Toluene-d8 (Surr)	*100*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*97*		*81 - 118*

Lab Sample ID: 680-214942-3 MS
Matrix: Water
Analysis Batch: 721049

Client Sample ID: G6M-04-10A-SPR22
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 H	50.0	52.4	H	ug/L		105	78 - 124
1,1,1-Trichloroethane	0.50	U H	50.0	45.8	H	ug/L		92	74 - 131
1,1,2,2-Tetrachloroethane	1.0	U H	50.0	54.0	H	ug/L		108	71 - 121
1,1,2-Trichloroethane	1.0	U H	50.0	48.2	H	ug/L		96	80 - 119
1,1-Dichloroethane	1.0	U H	50.0	47.1	H	ug/L		94	77 - 125
1,1-Dichloroethene	1.0	U H	50.0	48.1	H	ug/L		96	71 - 131
1,1-Dichloropropene	1.0	U H	50.0	49.9	H	ug/L		100	79 - 125

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

Lab Sample ID: 680-214942-3 MS
Matrix: Water
Analysis Batch: 721049

Client Sample ID: G6M-04-10A-SPR22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichlorobenzene	2.0	U H	50.0	51.1	H	ug/L		102	69 - 129
1,2,3-Trichloropropane	1.0	U H	50.0	53.9	H	ug/L		108	73 - 122
1,2,4-Trichlorobenzene	2.0	U H	50.0	50.2	H	ug/L		100	69 - 130
1,2,4-Trimethylbenzene	1.7	J H	50.0	46.8	H	ug/L		90	76 - 124
1,2-Dibromo-3-Chloropropane	5.0	U H	50.0	49.5	H	ug/L		99	62 - 128
1,2-Dichlorobenzene	1.0	U H	50.0	49.8	H	ug/L		100	80 - 119
1,2-Dichloroethane	1.0	U M H	50.0	46.5	H	ug/L		93	73 - 128
1,2-Dichloroethene, Total	3.4	H	100	96.4	H	ug/L		93	79 - 121
1,2-Dichloropropane	0.50	U H	50.0	49.5	H	ug/L		99	78 - 122
1,3,5-Trimethylbenzene	0.96	J M H	50.0	46.4	H	ug/L		91	75 - 124
1,3-Dichlorobenzene	1.0	U H	50.0	50.6	H	ug/L		101	80 - 119
1,3-Dichloropropane	1.0	U H	50.0	50.5	H	ug/L		101	80 - 119
1,4-Dichlorobenzene	1.0	U H	50.0	48.1	H	ug/L		96	79 - 118
2,2-Dichloropropane	1.0	U H Q J1	50.0	19.4	H J1	ug/L		39	60 - 139
2-Butanone (MEK)	20	U H	250	226	H	ug/L		90	56 - 143
2-Chlorotoluene	0.50	U H	50.0	46.5	H	ug/L		93	79 - 122
2-Hexanone	10	U H	250	277	H	ug/L		111	57 - 139
4-Chlorotoluene	1.0	U H	50.0	46.6	H	ug/L		93	78 - 122
4-Isopropyltoluene	1.0	U H	50.0	48.3	H	ug/L		97	77 - 127
4-Methyl-2-pentanone (MIBK)	10	U H Q	250	283	H	ug/L		113	67 - 130
Acetone	10	U H	250	249	H	ug/L		100	39 - 160
Benzene	1.0	U H	50.0	49.3	H	ug/L		99	79 - 120
Bromobenzene	0.50	U H	50.0	51.1	H	ug/L		102	80 - 120
Bromoform	2.0	U H	50.0	51.9	H	ug/L		104	66 - 130
Bromomethane	10	U H	50.0	31.4	H	ug/L		63	53 - 141
Carbon disulfide	1.0	U H	50.0	49.0	H	ug/L		98	64 - 133
Carbon tetrachloride	1.0	U H	50.0	45.9	H	ug/L		92	72 - 136
Chlorobenzene	0.50	U H	50.0	49.0	H	ug/L		98	82 - 118
Chlorobromomethane	1.0	U H	50.0	46.8	H	ug/L		94	78 - 123
Chlorodibromomethane	1.0	U H	50.0	47.3	H	ug/L		95	74 - 126
Chloroethane	10	U H	50.0	59.5	H	ug/L		119	60 - 138
Chloroform	1.0	U H	50.0	46.2	H	ug/L		92	79 - 124
Chloromethane	2.0	U H Q J1	50.0	76.7	H J1	ug/L		153	50 - 139
cis-1,2-Dichloroethene	2.3	H	50.0	48.1	H	ug/L		92	78 - 123
cis-1,3-Dichloropropene	1.0	U H	50.0	42.4	H	ug/L		85	75 - 124
Dibromomethane	1.0	U H	50.0	47.2	H	ug/L		94	79 - 123
Dichlorobromomethane	1.0	U H	50.0	45.2	H	ug/L		90	79 - 125
Dichlorodifluoromethane	1.0	U H	50.0	46.4	H	ug/L		93	32 - 152
Ethylbenzene	0.50	U M H	50.0	49.8	H	ug/L		100	79 - 121
Ethylene Dibromide	1.0	U H	50.0	50.2	H	ug/L		100	75 - 127
Hexachlorobutadiene	1.0	U H	50.0	48.1	H	ug/L		96	66 - 134
Isopropylbenzene	0.26	J H	50.0	47.7	H	ug/L		95	72 - 131
Methyl tert-butyl ether	2.0	U H	50.0	49.2	H	ug/L		98	71 - 124
Methylene Chloride	10	U H	50.0	47.3	H	ug/L		95	74 - 124
m-Xylene & p-Xylene	1.0	U H	50.0	46.9	H	ug/L		94	80 - 121
Naphthalene	5.0	U H	50.0	50.0	H	ug/L		100	61 - 128
n-Butylbenzene	2.0	U H	50.0	46.3	H	ug/L		93	75 - 128
N-Propylbenzene	1.0	U H	50.0	46.9	H	ug/L		94	76 - 126
o-Xylene	1.0	U H	50.0	47.1	H	ug/L		94	78 - 122

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

Lab Sample ID: 680-214942-3 MS
Matrix: Water
Analysis Batch: 721049

Client Sample ID: G6M-04-10A-SPR22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
sec-Butylbenzene	2.0	U H	50.0	45.8	H	ug/L		92	77 - 126
Styrene	1.0	U H	50.0	46.7	H	ug/L		93	78 - 123
tert-Butylbenzene	1.0	U H	50.0	46.0	H	ug/L		92	78 - 124
Tetrachloroethene	1.0	U H	50.0	51.3	H	ug/L		103	74 - 129
Toluene	1.0	U H	50.0	50.7	H	ug/L		101	80 - 121
trans-1,2-Dichloroethene	1.0	J H	50.0	48.3	H	ug/L		94	75 - 124
trans-1,3-Dichloropropene	1.0	U H	50.0	42.1	H	ug/L		84	73 - 127
Trichloroethene	0.24	J H	50.0	51.7	H	ug/L		103	79 - 123
Trichlorofluoromethane	1.0	U H	50.0	51.3	H	ug/L		103	65 - 141
Vinyl acetate	2.0	U H Q	100	79.5	H	ug/L		79	54 - 146
Vinyl chloride	1.0	U H	50.0	51.7	H	ug/L		103	58 - 137
Xylenes, Total	1.0	U H	100	94.0	H	ug/L		94	79 - 121

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*
Dibromofluoromethane (Surr)	*98*		*80 - 119*
Toluene-d8 (Surr)	*102*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*

Lab Sample ID: 680-214942-3 MSD
Matrix: Water
Analysis Batch: 721049

Client Sample ID: G6M-04-10A-SPR22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	1.0	U H	50.0	53.3	H	ug/L		107	78 - 124	2	20
1,1,1-Trichloroethane	0.50	U H	50.0	45.6	H	ug/L		91	74 - 131	1	20
1,1,2,2-Tetrachloroethane	1.0	U H	50.0	59.9	H	ug/L		120	71 - 121	10	20
1,1,2-Trichloroethane	1.0	U H	50.0	53.4	H	ug/L		107	80 - 119	10	20
1,1-Dichloroethane	1.0	U H	50.0	50.3	H	ug/L		101	77 - 125	7	20
1,1-Dichloroethene	1.0	U H	50.0	46.9	H	ug/L		94	71 - 131	3	20
1,1-Dichloropropene	1.0	U H	50.0	47.9	H	ug/L		96	79 - 125	4	20
1,2,3-Trichlorobenzene	2.0	U H	50.0	56.9	H	ug/L		114	69 - 129	11	20
1,2,3-Trichloropropane	1.0	U H	50.0	59.2	H	ug/L		118	73 - 122	9	20
1,2,4-Trichlorobenzene	2.0	U H	50.0	53.3	H	ug/L		107	69 - 130	6	20
1,2,4-Trimethylbenzene	1.7	J H	50.0	46.1	H	ug/L		89	76 - 124	1	20
1,2-Dibromo-3-Chloropropane	5.0	U H	50.0	60.3	H	ug/L		121	62 - 128	20	20
1,2-Dichlorobenzene	1.0	U H	50.0	50.9	H	ug/L		102	80 - 119	2	20
1,2-Dichloroethane	1.0	U M H	50.0	49.3	H	ug/L		99	73 - 128	6	20
1,2-Dichloroethene, Total	3.4	H	100	96.9	H	ug/L		94	79 - 121	1	20
1,2-Dichloropropane	0.50	U H	50.0	52.1	H	ug/L		104	78 - 122	5	20
1,3,5-Trimethylbenzene	0.96	J M H	50.0	44.5	H	ug/L		87	75 - 124	4	20
1,3-Dichlorobenzene	1.0	U H	50.0	50.6	H	ug/L		101	80 - 119	0	20
1,3-Dichloropropane	1.0	U H	50.0	54.0	H	ug/L		108	80 - 119	7	20
1,4-Dichlorobenzene	1.0	U H	50.0	48.6	H	ug/L		97	79 - 118	1	20
2,2-Dichloropropane	1.0	U H Q J1	50.0	20.5	H J1	ug/L		41	60 - 139	5	20
2-Butanone (MEK)	20	U H	250	261	H	ug/L		104	56 - 143	14	20
2-Chlorotoluene	0.50	U H	50.0	46.5	H	ug/L		93	79 - 122	0	20
2-Hexanone	10	U H	250	311	H	ug/L		124	57 - 139	11	20

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

Lab Sample ID: 680-214942-3 MSD
Matrix: Water
Analysis Batch: 721049

Client Sample ID: G6M-04-10A-SPR22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
4-Chlorotoluene	1.0	U H	50.0	45.4	H	ug/L		91	78 - 122	3	20
4-Isopropyltoluene	1.0	U H	50.0	46.7	H	ug/L		93	77 - 127	3	20
4-Methyl-2-pentanone (MIBK)	10	U H Q	250	320	H	ug/L		128	67 - 130	12	20
Acetone	10	U H	250	285	H	ug/L		114	39 - 160	13	20
Benzene	1.0	U H	50.0	50.3	H	ug/L		101	79 - 120	2	20
Bromobenzene	0.50	U H	50.0	51.3	H	ug/L		103	80 - 120	1	20
Bromoform	2.0	U H	50.0	57.5	H	ug/L		115	66 - 130	10	20
Bromomethane	10	U H	50.0	38.2	H	ug/L		76	53 - 141	20	20
Carbon disulfide	1.0	U H	50.0	47.5	H	ug/L		95	64 - 133	3	20
Carbon tetrachloride	1.0	U H	50.0	43.0	H	ug/L		86	72 - 136	7	20
Chlorobenzene	0.50	U H	50.0	49.0	H	ug/L		98	82 - 118	0	20
Chlorobromomethane	1.0	U H	50.0	50.2	H	ug/L		100	78 - 123	7	20
Chlorodibromomethane	1.0	U H	50.0	51.4	H	ug/L		103	74 - 126	8	20
Chloroethane	10	U H	50.0	64.2	H	ug/L		128	60 - 138	8	20
Chloroform	1.0	U H	50.0	48.5	H	ug/L		97	79 - 124	5	20
Chloromethane	2.0	U H Q J1	50.0	81.9	H J1	ug/L		164	50 - 139	7	20
cis-1,2-Dichloroethene	2.3	H	50.0	49.1	H	ug/L		94	78 - 123	2	20
cis-1,3-Dichloropropene	1.0	U H	50.0	44.4	H	ug/L		89	75 - 124	5	20
Dibromomethane	1.0	U H	50.0	50.2	H	ug/L		100	79 - 123	6	20
Dichlorobromomethane	1.0	U H	50.0	48.5	H	ug/L		97	79 - 125	7	20
Dichlorodifluoromethane	1.0	U H	50.0	44.6	M H	ug/L		89	32 - 152	4	20
Ethylbenzene	0.50	U M H	50.0	47.9	H	ug/L		96	79 - 121	4	20
Ethylene Dibromide	1.0	U H	50.0	54.6	H	ug/L		109	75 - 127	8	20
Hexachlorobutadiene	1.0	U H	50.0	47.7	H	ug/L		95	66 - 134	1	20
Isopropylbenzene	0.26	J H	50.0	45.4	H	ug/L		90	72 - 131	5	20
Methyl tert-butyl ether	2.0	U H	50.0	54.9	H	ug/L		110	71 - 124	11	20
Methylene Chloride	10	U H	50.0	50.6	H	ug/L		101	74 - 124	7	20
m-Xylene & p-Xylene	1.0	U H	50.0	45.8	H	ug/L		92	80 - 121	2	20
Naphthalene	5.0	U H	50.0	60.8	H	ug/L		122	61 - 128	20	20
n-Butylbenzene	2.0	U H	50.0	44.2	H	ug/L		88	75 - 128	5	20
N-Propylbenzene	1.0	U H	50.0	44.7	H	ug/L		89	76 - 126	5	20
o-Xylene	1.0	U H	50.0	46.6	H	ug/L		93	78 - 122	1	20
sec-Butylbenzene	2.0	U H	50.0	42.8	H	ug/L		86	77 - 126	7	20
Styrene	1.0	U H	50.0	47.4	H	ug/L		95	78 - 123	1	20
tert-Butylbenzene	1.0	U H	50.0	43.9	H	ug/L		88	78 - 124	5	20
Tetrachloroethene	1.0	U H	50.0	47.9	H	ug/L		96	74 - 129	7	20
Toluene	1.0	U H	50.0	49.8	H	ug/L		100	80 - 121	2	20
trans-1,2-Dichloroethene	1.0	J H	50.0	47.8	H	ug/L		93	75 - 124	1	20
trans-1,3-Dichloropropene	1.0	U H	50.0	45.0	H	ug/L		90	73 - 127	7	20
Trichloroethene	0.24	J H	50.0	50.2	H	ug/L		100	79 - 123	3	20
Trichlorofluoromethane	1.0	U H	50.0	48.7	H	ug/L		97	65 - 141	5	20
Vinyl acetate	2.0	U H Q	100	88.8	H	ug/L		89	54 - 146	11	20
Vinyl chloride	1.0	U H	50.0	52.6	H	ug/L		105	58 - 137	2	20
Xylenes, Total	1.0	U H	100	92.4	H	ug/L		92	79 - 121	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*
Dibromofluoromethane (Surr)	*105*		*80 - 119*

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

Lab Sample ID: 680-214942-3 MSD
Matrix: Water
Analysis Batch: 721049

Client Sample ID: G6M-04-10A-SPR22
Prep Type: Total/NA

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*100*		*81 - 118*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-720374/37
Matrix: Water
Analysis Batch: 720374

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		05/11/22 19:42	1
Ethylene	0.71	U	1.0	0.71	0.31	ug/L		05/11/22 19:42	1
Methane	1.2	U	1.2	1.2	0.57	ug/L		05/11/22 19:42	1

Lab Sample ID: LCS 680-720374/33
Matrix: Water
Analysis Batch: 720374

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	1770		ug/L		92	73 - 125

Lab Sample ID: LCS 680-720374/35
Matrix: Water
Analysis Batch: 720374

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethane	361	376		ug/L		104	74 - 131
Ethylene	337	343		ug/L		102	72 - 133
Methane	192	199		ug/L		103	73 - 125

Lab Sample ID: LCSD 680-720374/34
Matrix: Water
Analysis Batch: 720374

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	1960		ug/L		102	73 - 125	10	30

Lab Sample ID: LCSD 680-720374/36
Matrix: Water
Analysis Batch: 720374

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	386		ug/L		107	74 - 131	3	30
Ethylene	337	351		ug/L		104	72 - 133	2	30
Methane	192	204		ug/L		106	73 - 125	2	30

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

Lab Sample ID: MB 680-720978/8
Matrix: Water
Analysis Batch: 720978

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		05/16/22 12:27	1
Ethylene	0.71	U	1.0	0.71	0.31	ug/L		05/16/22 12:27	1
Methane	1.2	U	1.2	1.2	0.57	ug/L		05/16/22 12:27	1

Lab Sample ID: LCS 680-720978/3
Matrix: Water
Analysis Batch: 720978

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	1930		ug/L		100	73 - 125

Lab Sample ID: LCS 680-720978/6
Matrix: Water
Analysis Batch: 720978

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethane	361	349		ug/L		97	74 - 131
Ethylene	337	315		ug/L		94	72 - 133
Methane	192	185		ug/L		96	73 - 125

Lab Sample ID: LCSD 680-720978/4
Matrix: Water
Analysis Batch: 720978

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	1970		ug/L		103	73 - 125	2	30

Lab Sample ID: LCSD 680-720978/7
Matrix: Water
Analysis Batch: 720978

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	337		ug/L		94	74 - 131	4	30
Ethylene	337	309		ug/L		92	72 - 133	2	30
Methane	192	179		ug/L		93	73 - 125	3	30

Lab Sample ID: 680-214942-3 MS
Matrix: Water
Analysis Batch: 720978

Client Sample ID: G6M-04-10A-SPR22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethane	10		361	385		ug/L		104	74 - 131
Ethylene	24		337	360		ug/L		100	72 - 133
Methane (TCD)	19000	J1	192	17000	4	ug/L		-910	73 - 125

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

Lab Sample ID: 680-214942-3 MSD
Matrix: Water
Analysis Batch: 720978

Client Sample ID: G6M-04-10A-SPR22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ethane	10		361	387		ug/L		105	74 - 131	1	30
Ethylene	24		337	364		ug/L		101	72 - 133	1	30
Methane (TCD)	19000	J1	192	14900	4	ug/L		-2003	73 - 125	13	30

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-721288/50
Matrix: Water
Analysis Batch: 721288

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		05/17/22 20:37	1

Lab Sample ID: LCS 680-721288/51
Matrix: Water
Analysis Batch: 721288

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	9.09		mg/L		91	87 - 112

Lab Sample ID: LCSD 680-721288/52
Matrix: Water
Analysis Batch: 721288

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	9.08		mg/L		91	87 - 112	0	15

Lab Sample ID: 680-214942-3 MS
Matrix: Water
Analysis Batch: 721288

Client Sample ID: G6M-04-10A-SPR22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	1.0	U	10.0	8.99		mg/L		90	87 - 112

Lab Sample ID: 680-214942-3 MSD
Matrix: Water
Analysis Batch: 721288

Client Sample ID: G6M-04-10A-SPR22
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	10.0	9.02		mg/L		90	87 - 112	0	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-719325/1-A
Matrix: Water
Analysis Batch: 719719

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 719325

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		05/06/22 19:04	1
Manganese	5.0	U	10	5.0	1.3	ug/L		05/06/22 19:04	1

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

Lab Sample ID: LCS 680-719325/2-A
Matrix: Water
Analysis Batch: 719719

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 719325

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	5000	4570		ug/L		91	87 - 115
Manganese	400	383		ug/L		96	90 - 114

Lab Sample ID: MB 680-720979/1-A
Matrix: Water
Analysis Batch: 721330

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 720979

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		05/17/22 12:30	1
Manganese	5.0	U	10	5.0	1.3	ug/L		05/17/22 12:30	1

Lab Sample ID: LCS 680-720979/2-A
Matrix: Water
Analysis Batch: 721330

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 720979

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	5000	5010		ug/L		100	87 - 115
Manganese	400	407		ug/L		102	90 - 114

Lab Sample ID: 680-214942-3 MS
Matrix: Water
Analysis Batch: 721330

Client Sample ID: G6M-04-10A-SPR22
Prep Type: Dissolved
Prep Batch: 720979

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	80000	J1	5000	84800	4	ug/L		89	87 - 115
Manganese	900		400	1300		ug/L		98	90 - 114

Lab Sample ID: 680-214942-3 MSD
Matrix: Water
Analysis Batch: 721330

Client Sample ID: G6M-04-10A-SPR22
Prep Type: Dissolved
Prep Batch: 720979

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	80000	J1	5000	83500	4	ug/L		63	87 - 115	2	20
Manganese	900		400	1270		ug/L		91	90 - 114	2	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-719330/1-A
Matrix: Water
Analysis Batch: 719801

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 719330

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		05/07/22 12:32	1

Lab Sample ID: LCS 680-719330/2-A
Matrix: Water
Analysis Batch: 719801

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 719330

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	104		ug/L		104	84 - 116

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

Lab Sample ID: MB 680-720980/1-A
Matrix: Water
Analysis Batch: 721141

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 720980

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		05/16/22 21:24	1

Lab Sample ID: LCS 680-720980/2-A
Matrix: Water
Analysis Batch: 721141

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 720980

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	101		ug/L		101	84 - 116

Lab Sample ID: 680-214942-3 MS
Matrix: Water
Analysis Batch: 721141

Client Sample ID: G6M-04-10A-SPR22
Prep Type: Dissolved
Prep Batch: 720980

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	280	J1	100	399	J1	ug/L		119	84 - 116

Lab Sample ID: 680-214942-3 MSD
Matrix: Water
Analysis Batch: 721141

Client Sample ID: G6M-04-10A-SPR22
Prep Type: Dissolved
Prep Batch: 720980

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	280	J1	100	384		ug/L		105	84 - 116	4	20

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 680-720255/34
Matrix: Water
Analysis Batch: 720255

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	5.0	mg/L		05/10/22 21:23	1

Lab Sample ID: LCS 680-720255/36
Matrix: Water
Analysis Batch: 720255

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	250	239		mg/L		96	90 - 112

Lab Sample ID: LCSD 680-720255/61
Matrix: Water
Analysis Batch: 720255

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	238		mg/L		95	90 - 112	0	30

Method: 2320B-2011 - Alkalinity, Total (Continued)

Lab Sample ID: 680-214942-7 DU — **Client Sample ID: AOC50-DUP01-SPR22**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 720255

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity	110		104		mg/L		1	30

Lab Sample ID: MB 680-720385/5 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 720385

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0	5.0	5.0	mg/L		05/11/22 16:58	1

Lab Sample ID: LCS 680-720385/7 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 720385

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	250	237		mg/L		95	90 - 112

Lab Sample ID: LCSD 680-720385/32 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 720385

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity	250	238		mg/L		95	90 - 112	0	30

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 280-575005/60 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 575005

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.050	U	0.10	0.050	0.044	mg/L		05/15/22 18:45	1

Lab Sample ID: LCS 280-575005/59 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 575005

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate/Nitrite-N	5.00	5.10		mg/L		102	90 - 110

Lab Sample ID: 680-214942-3 MS — **Client Sample ID: G6M-04-10A-SPR22**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 575005

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate/Nitrite-N	0.050	U J1	4.00	2.91	J1	mg/L		73	90 - 110

Method: 353.2 - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: 680-214942-3 MSD — **Client Sample ID: G6M-04-10A-SPR22**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 575005

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate/Nitrite-N	0.050	U J1	4.00	2.91	J1	mg/L		73	90 - 110	0	10

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 680-719553/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 719553

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		05/06/22 11:47	1

Lab Sample ID: LCS 680-719553/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 719553

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	10.0	8.66		mg/L		87	75 - 125

Lab Sample ID: LCSD 680-719553/3 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 719553

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	10.0	8.40		mg/L		84	75 - 125	3	30

Lab Sample ID: 680-214942-3 MS — **Client Sample ID: G6M-04-10A-SPR22**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 719553

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	0.89	U J1	10.0	7.09	J1	mg/L		71	75 - 125

Lab Sample ID: 680-214942-3 MSD — **Client Sample ID: G6M-04-10A-SPR22**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 719553

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	0.89	U J1	10.0	7.05	J1	mg/L		71	75 - 125	1	30

Lab Sample ID: 680-214942-3 DU — **Client Sample ID: G6M-04-10A-SPR22**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 719553

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfide	0.89	U J1	1.0	U	mg/L		NC	30

Method: 9060 - Organic Carbon, Total (TOC)

Lab Sample ID: MB 680-721153/2
Matrix: Water
Analysis Batch: 721153

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	1.0	1.0	0.50	mg/L		05/14/22 17:54	1

Lab Sample ID: LCS 680-721153/3
Matrix: Water
Analysis Batch: 721153

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	18.8		mg/L		94	80 - 120
TOC Result 1	20.0	18.9		mg/L		94	80 - 120
TOC Result 2	20.0	18.7		mg/L		94	80 - 120
TOC Result 3	20.0	19.0		mg/L		95	80 - 120
TOC Result 4	20.0	18.8		mg/L		94	80 - 120

Lab Sample ID: LCSD 680-721153/4
Matrix: Water
Analysis Batch: 721153

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	18.9		mg/L		94	80 - 120	0	25
TOC Result 1	20.0	18.9		mg/L		94	80 - 120	0	25
TOC Result 2	20.0	18.6		mg/L		93	80 - 120	0	25
TOC Result 3	20.0	18.9		mg/L		95	80 - 120	0	25
TOC Result 4	20.0	19.0		mg/L		95	80 - 120	1	25

Lab Sample ID: 680-214942-3 MS
Matrix: Water
Analysis Batch: 721153

Client Sample ID: G6M-04-10A-SPR22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	14		20.0	32.4		mg/L		94	80 - 120
TOC Result 1	14		20.0	33.0		mg/L		96	80 - 120
TOC Result 2	13		20.0	32.0		mg/L		93	80 - 120
TOC Result 3	13		20.0	32.3		mg/L		94	80 - 120
TOC Result 4	14		20.0	32.3		mg/L		93	80 - 120

Lab Sample ID: 680-214942-3 MSD
Matrix: Water
Analysis Batch: 721153

Client Sample ID: G6M-04-10A-SPR22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Organic Carbon	14		20.0	32.3		mg/L		94	80 - 120	0	25
TOC Result 1	14		20.0	32.3		mg/L		93	80 - 120	2	25
TOC Result 2	13		20.0	32.1		mg/L		93	80 - 120	0	25
TOC Result 3	13		20.0	32.4		mg/L		95	80 - 120	0	25
TOC Result 4	14		20.0	32.4		mg/L		93	80 - 120	0	25

GC/MS VOA

Analysis Batch: 720587

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214942-1	G6M-04-02X-SPR22	Total/NA	Water	8260B	
680-214942-2	G6M-04-07X-SPR22	Total/NA	Water	8260B	
680-214942-6	G6M-07-02X-SPR22	Total/NA	Water	8260B	
680-214942-7	AOC50-DUP01-SPR22	Total/NA	Water	8260B	
680-214942-10	G6M-97-05B-SPR22	Total/NA	Water	8260B	
680-214942-11	XSA-12-96X-SPR22	Total/NA	Water	8260B	
MB 680-720587/10	Method Blank	Total/NA	Water	8260B	
LCS 680-720587/5	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-720587/6	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 720712

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214942-8	G6M-013-01X-SPR22	Total/NA	Water	8260B	
MB 680-720712/9	Method Blank	Total/NA	Water	8260B	
LCS 680-720712/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-720712/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 720929

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214942-9	G6M-013-05X-SPR22	Total/NA	Water	8260B	
MB 680-720929/10	Method Blank	Total/NA	Water	8260B	
LCS 680-720929/5	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-720929/6	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 721049

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214942-3	G6M-04-10A-SPR22	Total/NA	Water	8260B	
MB 680-721049/44	Method Blank	Total/NA	Water	8260B	
LCS 680-721049/39	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-721049/40	Lab Control Sample Dup	Total/NA	Water	8260B	
680-214942-3 MS	G6M-04-10A-SPR22	Total/NA	Water	8260B	
680-214942-3 MSD	G6M-04-10A-SPR22	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 720374

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214942-1	G6M-04-02X-SPR22	Total/NA	Water	RSK-175	
680-214942-2	G6M-04-07X-SPR22	Total/NA	Water	RSK-175	
680-214942-6	G6M-07-02X-SPR22	Total/NA	Water	RSK-175	
MB 680-720374/37	Method Blank	Total/NA	Water	RSK-175	
LCS 680-720374/33	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-720374/35	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-720374/34	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-720374/36	Lab Control Sample Dup	Total/NA	Water	RSK-175	

Analysis Batch: 720978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214942-3	G6M-04-10A-SPR22	Total/NA	Water	RSK-175	
680-214942-7	AOC50-DUP01-SPR22	Total/NA	Water	RSK-175	
680-214942-8	G6M-013-01X-SPR22	Total/NA	Water	RSK-175	

GC VOA (Continued)

Analysis Batch: 720978 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214942-9	G6M-013-05X-SPR22	Total/NA	Water	RSK-175	
680-214942-10	G6M-97-05B-SPR22	Total/NA	Water	RSK-175	
MB 680-720978/8	Method Blank	Total/NA	Water	RSK-175	
LCS 680-720978/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-720978/6	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-720978/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-720978/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	
680-214942-3 MS	G6M-04-10A-SPR22	Total/NA	Water	RSK-175	
680-214942-3 MSD	G6M-04-10A-SPR22	Total/NA	Water	RSK-175	

HPLC/IC

Analysis Batch: 721288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214942-1	G6M-04-02X-SPR22	Total/NA	Water	9056A	
680-214942-2	G6M-04-07X-SPR22	Total/NA	Water	9056A	
680-214942-3	G6M-04-10A-SPR22	Total/NA	Water	9056A	
680-214942-6	G6M-07-02X-SPR22	Total/NA	Water	9056A	
680-214942-7	AOC50-DUP01-SPR22	Total/NA	Water	9056A	
680-214942-8	G6M-013-01X-SPR22	Total/NA	Water	9056A	
680-214942-9	G6M-013-05X-SPR22	Total/NA	Water	9056A	
680-214942-10	G6M-97-05B-SPR22	Total/NA	Water	9056A	
MB 680-721288/50	Method Blank	Total/NA	Water	9056A	
LCS 680-721288/51	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-721288/52	Lab Control Sample Dup	Total/NA	Water	9056A	
680-214942-3 MS	G6M-04-10A-SPR22	Total/NA	Water	9056A	
680-214942-3 MSD	G6M-04-10A-SPR22	Total/NA	Water	9056A	

Metals

Prep Batch: 719325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214942-1	G6M-04-02X-SPR22	Dissolved	Water	3005A	
680-214942-2	G6M-04-07X-SPR22	Dissolved	Water	3005A	
680-214942-6	G6M-07-02X-SPR22	Dissolved	Water	3005A	
680-214942-7	AOC50-DUP01-SPR22	Dissolved	Water	3005A	
680-214942-8	G6M-013-01X-SPR22	Dissolved	Water	3005A	
680-214942-9	G6M-013-05X-SPR22	Dissolved	Water	3005A	
680-214942-10	G6M-97-05B-SPR22	Dissolved	Water	3005A	
680-214942-11	XSA-12-96X-SPR22	Dissolved	Water	3005A	
MB 680-719325/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-719325/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 719330

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214942-1	G6M-04-02X-SPR22	Dissolved	Water	3005A	
680-214942-2	G6M-04-07X-SPR22	Dissolved	Water	3005A	
680-214942-3	G6M-04-10A-SPR22	Dissolved	Water	3005A	
680-214942-6	G6M-07-02X-SPR22	Dissolved	Water	3005A	
680-214942-7	AOC50-DUP01-SPR22	Dissolved	Water	3005A	
680-214942-8	G6M-013-01X-SPR22	Dissolved	Water	3005A	
680-214942-9	G6M-013-05X-SPR22	Dissolved	Water	3005A	

Metals (Continued)

Prep Batch: 719330 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214942-10	G6M-97-05B-SPR22	Dissolved	Water	3005A	
680-214942-11	XSA-12-96X-SPR22	Dissolved	Water	3005A	
MB 680-719330/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-719330/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 719719

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214942-1	G6M-04-02X-SPR22	Dissolved	Water	6010C	719325
680-214942-2	G6M-04-07X-SPR22	Dissolved	Water	6010C	719325
680-214942-6	G6M-07-02X-SPR22	Dissolved	Water	6010C	719325
680-214942-7	AOC50-DUP01-SPR22	Dissolved	Water	6010C	719325
680-214942-8	G6M-013-01X-SPR22	Dissolved	Water	6010C	719325
680-214942-9	G6M-013-05X-SPR22	Dissolved	Water	6010C	719325
680-214942-10	G6M-97-05B-SPR22	Dissolved	Water	6010C	719325
680-214942-11	XSA-12-96X-SPR22	Dissolved	Water	6010C	719325
MB 680-719325/1-A	Method Blank	Total Recoverable	Water	6010C	719325
LCS 680-719325/2-A	Lab Control Sample	Total Recoverable	Water	6010C	719325

Analysis Batch: 719801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214942-1	G6M-04-02X-SPR22	Dissolved	Water	6020A	719330
680-214942-2	G6M-04-07X-SPR22	Dissolved	Water	6020A	719330
680-214942-3	G6M-04-10A-SPR22	Dissolved	Water	6020A	719330
680-214942-6	G6M-07-02X-SPR22	Dissolved	Water	6020A	719330
680-214942-7	AOC50-DUP01-SPR22	Dissolved	Water	6020A	719330
680-214942-8	G6M-013-01X-SPR22	Dissolved	Water	6020A	719330
680-214942-9	G6M-013-05X-SPR22	Dissolved	Water	6020A	719330
680-214942-10	G6M-97-05B-SPR22	Dissolved	Water	6020A	719330
680-214942-11	XSA-12-96X-SPR22	Dissolved	Water	6020A	719330
MB 680-719330/1-A	Method Blank	Total Recoverable	Water	6020A	719330
LCS 680-719330/2-A	Lab Control Sample	Total Recoverable	Water	6020A	719330

Prep Batch: 720979

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214942-3	G6M-04-10A-SPR22	Dissolved	Water	3005A	
MB 680-720979/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-720979/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-214942-3 MS	G6M-04-10A-SPR22	Dissolved	Water	3005A	
680-214942-3 MSD	G6M-04-10A-SPR22	Dissolved	Water	3005A	

Prep Batch: 720980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-720980/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-720980/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-214942-3 MS	G6M-04-10A-SPR22	Dissolved	Water	3005A	
680-214942-3 MSD	G6M-04-10A-SPR22	Dissolved	Water	3005A	

Analysis Batch: 721141

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-720980/1-A	Method Blank	Total Recoverable	Water	6020A	720980
LCS 680-720980/2-A	Lab Control Sample	Total Recoverable	Water	6020A	720980

Metals (Continued)

Analysis Batch: 721141 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214942-3 MS	G6M-04-10A-SPR22	Dissolved	Water	6020A	720980
680-214942-3 MSD	G6M-04-10A-SPR22	Dissolved	Water	6020A	720980

Analysis Batch: 721330

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214942-3	G6M-04-10A-SPR22	Dissolved	Water	6010C	720979
MB 680-720979/1-A	Method Blank	Total Recoverable	Water	6010C	720979
LCS 680-720979/2-A	Lab Control Sample	Total Recoverable	Water	6010C	720979
680-214942-3 MS	G6M-04-10A-SPR22	Dissolved	Water	6010C	720979
680-214942-3 MSD	G6M-04-10A-SPR22	Dissolved	Water	6010C	720979

General Chemistry

Analysis Batch: 575005

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214942-1	G6M-04-02X-SPR22	Total/NA	Water	353.2	
680-214942-2	G6M-04-07X-SPR22	Total/NA	Water	353.2	
680-214942-3	G6M-04-10A-SPR22	Total/NA	Water	353.2	
680-214942-6	G6M-07-02X-SPR22	Total/NA	Water	353.2	
680-214942-7	AOC50-DUP01-SPR22	Total/NA	Water	353.2	
680-214942-8	G6M-013-01X-SPR22	Total/NA	Water	353.2	
680-214942-9	G6M-013-05X-SPR22	Total/NA	Water	353.2	
680-214942-10	G6M-97-05B-SPR22	Total/NA	Water	353.2	
MB 280-575005/60	Method Blank	Total/NA	Water	353.2	
LCS 280-575005/59	Lab Control Sample	Total/NA	Water	353.2	
680-214942-3 MS	G6M-04-10A-SPR22	Total/NA	Water	353.2	
680-214942-3 MSD	G6M-04-10A-SPR22	Total/NA	Water	353.2	

Analysis Batch: 719553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214942-1	G6M-04-02X-SPR22	Total/NA	Water	9034	
680-214942-2	G6M-04-07X-SPR22	Total/NA	Water	9034	
680-214942-3	G6M-04-10A-SPR22	Total/NA	Water	9034	
680-214942-6	G6M-07-02X-SPR22	Total/NA	Water	9034	
680-214942-7	AOC50-DUP01-SPR22	Total/NA	Water	9034	
680-214942-8	G6M-013-01X-SPR22	Total/NA	Water	9034	
680-214942-9	G6M-013-05X-SPR22	Total/NA	Water	9034	
680-214942-10	G6M-97-05B-SPR22	Total/NA	Water	9034	
MB 680-719553/1	Method Blank	Total/NA	Water	9034	
LCS 680-719553/2	Lab Control Sample	Total/NA	Water	9034	
LCSD 680-719553/3	Lab Control Sample Dup	Total/NA	Water	9034	
680-214942-3 MS	G6M-04-10A-SPR22	Total/NA	Water	9034	
680-214942-3 MSD	G6M-04-10A-SPR22	Total/NA	Water	9034	
680-214942-3 DU	G6M-04-10A-SPR22	Total/NA	Water	9034	

Analysis Batch: 720255

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214942-1	G6M-04-02X-SPR22	Total/NA	Water	2320B-2011	
680-214942-2	G6M-04-07X-SPR22	Total/NA	Water	2320B-2011	
680-214942-3	G6M-04-10A-SPR22	Total/NA	Water	2320B-2011	
680-214942-6	G6M-07-02X-SPR22	Total/NA	Water	2320B-2011	

General Chemistry (Continued)

Analysis Batch: 720255 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214942-7	AOC50-DUP01-SPR22	Total/NA	Water	2320B-2011	
680-214942-8	G6M-013-01X-SPR22	Total/NA	Water	2320B-2011	
680-214942-9	G6M-013-05X-SPR22	Total/NA	Water	2320B-2011	
MB 680-720255/34	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-720255/36	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-720255/61	Lab Control Sample Dup	Total/NA	Water	2320B-2011	
680-214942-7 DU	AOC50-DUP01-SPR22	Total/NA	Water	2320B-2011	

Analysis Batch: 720385

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214942-10	G6M-97-05B-SPR22	Total/NA	Water	2320B-2011	
MB 680-720385/5	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-720385/7	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-720385/32	Lab Control Sample Dup	Total/NA	Water	2320B-2011	

Analysis Batch: 721153

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214942-1	G6M-04-02X-SPR22	Total/NA	Water	9060	
680-214942-2	G6M-04-07X-SPR22	Total/NA	Water	9060	
680-214942-3	G6M-04-10A-SPR22	Total/NA	Water	9060	
680-214942-6	G6M-07-02X-SPR22	Total/NA	Water	9060	
680-214942-7	AOC50-DUP01-SPR22	Total/NA	Water	9060	
680-214942-8	G6M-013-01X-SPR22	Total/NA	Water	9060	
680-214942-9	G6M-013-05X-SPR22	Total/NA	Water	9060	
680-214942-10	G6M-97-05B-SPR22	Total/NA	Water	9060	
MB 680-721153/2	Method Blank	Total/NA	Water	9060	
LCS 680-721153/3	Lab Control Sample	Total/NA	Water	9060	
LCSD 680-721153/4	Lab Control Sample Dup	Total/NA	Water	9060	
680-214942-3 MS	G6M-04-10A-SPR22	Total/NA	Water	9060	
680-214942-3 MSD	G6M-04-10A-SPR22	Total/NA	Water	9060	

Client Sample ID: G6M-04-02X-SPR22

Lab Sample ID: 680-214942-1

Date Collected: 05/02/22 14:40

Matrix: Water

Date Received: 05/04/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	720587	05/13/22 14:35	UI	TAL SAV
	Instrument ID: CMSAA									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	720374	05/12/22 02:33	JCK	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	721288	05/18/22 01:08	AF	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	719325	05/05/22 11:32	JE	TAL SAV
Dissolved	Analysis	6010C		1			719719	05/06/22 19:39	BCB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	719330	05/05/22 11:32	JE	TAL SAV
Dissolved	Analysis	6020A		1			719801	05/07/22 13:08	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			720255	05/10/22 22:32	PG	TAL SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2		1	100 mL	100 mL	575005	05/15/22 19:45	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	310 mL	310 mL	719553	05/06/22 11:47	NVF	TAL SAV
	Instrument ID: NoEquip									
Total/NA	Analysis	9060		1	40 mL	40 mL	721153	05/15/22 00:07	JU	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: G6M-04-07X-SPR22

Lab Sample ID: 680-214942-2

Date Collected: 05/02/22 14:50

Matrix: Water

Date Received: 05/04/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	720587	05/13/22 14:59	UI	TAL SAV
	Instrument ID: CMSAA									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	720374	05/12/22 02:46	JCK	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	721288	05/18/22 01:21	AF	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	719325	05/05/22 11:32	JE	TAL SAV
Dissolved	Analysis	6010C		1			719719	05/06/22 19:42	BCB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	719330	05/05/22 11:32	JE	TAL SAV
Dissolved	Analysis	6020A		1			719801	05/07/22 13:11	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			720255	05/10/22 22:41	PG	TAL SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2		1	100 mL	100 mL	575005	05/15/22 19:47	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	310 mL	310 mL	719553	05/06/22 11:47	NVF	TAL SAV
	Instrument ID: NoEquip									

Client Sample ID: G6M-04-07X-SPR22

Lab Sample ID: 680-214942-2

Date Collected: 05/02/22 14:50

Matrix: Water

Date Received: 05/04/22 10:30

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	721153	05/15/22 00:30	JU	TAL SAV

Client Sample ID: G6M-04-10A-SPR22

Lab Sample ID: 680-214942-3

Date Collected: 05/02/22 10:30

Matrix: Water

Date Received: 05/04/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	721049	05/17/22 10:29	EMA	TAL SAV
	Instrument ID: CMSAA									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	720978	05/16/22 15:07	JCK	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	721288	05/18/22 00:16	AF	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	720979	05/16/22 09:54	JE	TAL SAV
Dissolved	Analysis	6010C		1			721330	05/17/22 12:36	BJB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	719330	05/05/22 11:32	JE	TAL SAV
Dissolved	Analysis	6020A		1			719801	05/07/22 13:13	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			720255	05/10/22 22:49	PG	TAL SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2		1	100 mL	100 mL	575005	05/15/22 19:23	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	280 mL	280 mL	719553	05/06/22 11:47	NVF	TAL SAV
	Instrument ID: NoEquip									
Total/NA	Analysis	9060		1	40 mL	40 mL	721153	05/15/22 00:54	JU	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: G6M-07-02X-SPR22

Lab Sample ID: 680-214942-6

Date Collected: 05/02/22 13:10

Matrix: Water

Date Received: 05/04/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	720587	05/13/22 15:22	UI	TAL SAV
	Instrument ID: CMSAA									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	720374	05/12/22 02:59	JCK	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	721288	05/18/22 01:34	AF	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	719325	05/05/22 11:32	JE	TAL SAV
Dissolved	Analysis	6010C		1			719719	05/06/22 19:54	BCB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	719330	05/05/22 11:32	JE	TAL SAV
Dissolved	Analysis	6020A		1			719801	05/07/22 13:16	BWR	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-07-02X-SPR22

Lab Sample ID: 680-214942-6

Date Collected: 05/02/22 13:10

Matrix: Water

Date Received: 05/04/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2320B-2011		1			720255	05/10/22 22:56	PG	TAL SAV
Total/NA	Analysis	353.2		1	100 mL	100 mL	575005	05/15/22 19:49	SVC	TAL DEN
	Instrument ID:	WC_Alp 2								
Total/NA	Analysis	9034		1	250 mL	250 mL	719553	05/06/22 11:47	NVF	TAL SAV
	Instrument ID:	NoEquip								
Total/NA	Analysis	9060		50	40 mL	40 mL	721153	05/15/22 02:03	JU	TAL SAV
	Instrument ID:	TOC7								

Client Sample ID: AOC50-DUP01-SPR22

Lab Sample ID: 680-214942-7

Date Collected: 05/02/22 13:50

Matrix: Water

Date Received: 05/04/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	720587	05/13/22 15:45	UI	TAL SAV
	Instrument ID:	CMSAA								
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	720978	05/16/22 13:11	JCK	TAL SAV
	Instrument ID:	CVGU								
Total/NA	Analysis	9056A		1	5 mL	5 mL	721288	05/18/22 01:47	AF	TAL SAV
	Instrument ID:	CICH								
Dissolved	Prep	3005A			50 mL	50 mL	719325	05/05/22 11:32	JE	TAL SAV
Dissolved	Analysis	6010C		1			719719	05/06/22 19:56	BCB	TAL SAV
	Instrument ID:	ICPH								
Dissolved	Prep	3005A			50 mL	250 mL	719330	05/05/22 11:32	JE	TAL SAV
Dissolved	Analysis	6020A		1			719801	05/07/22 13:19	BWR	TAL SAV
	Instrument ID:	ICPMSD								
Total/NA	Analysis	2320B-2011		1			720255	05/10/22 23:24	PG	TAL SAV
	Instrument ID:	MANTECH 2								
Total/NA	Analysis	353.2		1	100 mL	100 mL	575005	05/15/22 19:51	SVC	TAL DEN
	Instrument ID:	WC_Alp 2								
Total/NA	Analysis	9034		1	250 mL	250 mL	719553	05/06/22 11:47	NVF	TAL SAV
	Instrument ID:	NoEquip								
Total/NA	Analysis	9060		50	40 mL	40 mL	721153	05/15/22 02:27	JU	TAL SAV
	Instrument ID:	TOC7								

Client Sample ID: G6M-013-01X-SPR22

Lab Sample ID: 680-214942-8

Date Collected: 05/02/22 11:50

Matrix: Water

Date Received: 05/04/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	720712	05/13/22 17:42	Y1S	TAL SAV
	Instrument ID:	CMSC								
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	720978	05/16/22 13:24	JCK	TAL SAV
	Instrument ID:	CVGU								
Total/NA	Analysis	9056A		1	5 mL	5 mL	721288	05/18/22 01:59	AF	TAL SAV
	Instrument ID:	CICH								

Client Sample ID: G6M-013-01X-SPR22

Lab Sample ID: 680-214942-8

Date Collected: 05/02/22 11:50

Matrix: Water

Date Received: 05/04/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			50 mL	50 mL	719325	05/05/22 11:32	JE	TAL SAV
Dissolved	Analysis	6010C		1			719719	05/06/22 19:59	BCB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	719330	05/05/22 11:32	JE	TAL SAV
Dissolved	Analysis	6020A		1			719801	05/07/22 13:21	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			720255	05/10/22 23:39	PG	TAL SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2		1	100 mL	100 mL	575005	05/15/22 19:53	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	310 mL	310 mL	719553	05/06/22 11:47	NVF	TAL SAV
	Instrument ID: NoEquip									
Total/NA	Analysis	9060		1	40 mL	40 mL	721153	05/15/22 02:51	JU	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: G6M-013-05X-SPR22

Lab Sample ID: 680-214942-9

Date Collected: 05/02/22 16:00

Matrix: Water

Date Received: 05/04/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	720929	05/16/22 18:54	P1C	TAL SAV
	Instrument ID: CMSAA									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	720978	05/16/22 13:37	JCK	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	721288	05/18/22 02:12	AF	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	719325	05/05/22 11:32	JE	TAL SAV
Dissolved	Analysis	6010C		1			719719	05/06/22 20:02	BCB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	719330	05/05/22 11:32	JE	TAL SAV
Dissolved	Analysis	6020A		1			719801	05/07/22 13:24	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			720255	05/10/22 23:46	PG	TAL SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2		1	100 mL	100 mL	575005	05/15/22 19:55	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	250 mL	250 mL	719553	05/06/22 11:47	NVF	TAL SAV
	Instrument ID: NoEquip									
Total/NA	Analysis	9060		1	40 mL	40 mL	721153	05/15/22 03:10	JU	TAL SAV
	Instrument ID: TOC7									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: AOC 50, Spring 2022

Job ID: 680-214942-1

Client Sample ID: G6M-97-05B-SPR22

Lab Sample ID: 680-214942-10

Date Collected: 05/02/22 10:20

Matrix: Water

Date Received: 05/04/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	720587	05/13/22 16:09	UI	TAL SAV
	Instrument ID: CMSAA									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	720978	05/16/22 13:50	JCK	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	721288	05/18/22 02:25	AF	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	719325	05/05/22 11:32	JE	TAL SAV
Dissolved	Analysis	6010C		1			719719	05/06/22 20:05	BCB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	719330	05/05/22 11:32	JE	TAL SAV
Dissolved	Analysis	6020A		1			719801	05/07/22 13:26	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			720385	05/11/22 17:35	DR	TAL SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2		1	100 mL	100 mL	575005	05/15/22 19:57	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	310 mL	310 mL	719553	05/06/22 11:47	NVF	TAL SAV
	Instrument ID: NoEquip									
Total/NA	Analysis	9060		1	40 mL	40 mL	721153	05/15/22 04:14	JU	TAL SAV
	Instrument ID: TOC7									

Client Sample ID: XSA-12-96X-SPR22

Lab Sample ID: 680-214942-11

Date Collected: 05/02/22 12:15

Matrix: Water

Date Received: 05/04/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	720587	05/13/22 16:32	UI	TAL SAV
	Instrument ID: CMSAA									
Dissolved	Prep	3005A			50 mL	50 mL	719325	05/05/22 11:32	JE	TAL SAV
Dissolved	Analysis	6010C		1			719719	05/06/22 20:08	BCB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	719330	05/05/22 11:32	JE	TAL SAV
Dissolved	Analysis	6020A		1			719801	05/07/22 13:34	BWR	TAL SAV
	Instrument ID: ICPMSD									

Laboratory References:

TAL DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Project/Site: AOC 50, Spring 2022

Job ID: 680-214942-1

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	09-18-22

Laboratory: Eurofins Denver

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-23

Method Summary

Client: Seres Engineering & Services LLC
Project/Site: AOC 50, Spring 2022

Job ID: 680-214942-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
RSK-175	Dissolved Gases (GC)	RSK	TAL SAV
9056A	Anions, Ion Chromatography	SW846	TAL SAV
6010C	Metals (ICP)	SW846	TAL SAV
6020A	Metals (ICP/MS)	SW846	TAL SAV
2320B-2011	Alkalinity, Total	SM	TAL SAV
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	TAL DEN
9034	Sulfide, Acid Soluble and Insoluble (Titrimetric)	SW846	TAL SAV
9060	Organic Carbon, Total (TOC)	SW846	TAL SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL SAV
5030B	Purge and Trap	SW846	TAL 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:

TAL DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

TAL 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
(619) 370-0374, halevesque@seres-es.com

COC # AOC50_SPR22

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 2022
Project Number: 30130800	POC Jerry Lanier, (912) 250-0281, jerry.lanier@et.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 2022						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-SPR22	WG	5.2.22	1440	DC		X	X	X	X	X	X	X	X	X	G6M-04-02X	N1	80 00	90 00	1	
2	G6M-04-07X-SPR22	WG	5-2-22	1450	SG		X	X	X	X	X	X	X	X	X	G6M-04-07X	N1	120 00	130 00	1	
3	G6M-04-10A-SPR22	WG	5-2-22	945	GS		X	X	X	X	X	X	X	X	X	G6M-04-10A	MS1	30 00	40 00	1	
4	G6M-04-10A-SPR22	WG	5-2-22	1030	GS		X	X	X	X	X	X	X	X	X	G6M-04-10A	N1	30 00	40 00	1	
5	G6M-04-10A-SPR22	WG	5.2.22	1100	GS		X	X	X	X	X	X	X	X	X	G6M-04-10A	SD1	30 00	40 00	1	
6	G6M-07-02X-SPR22	WG	5-2-22	1310	GS		X	X	X	X	X	X	X	X	X	G6M-07-02X	N1	22.50	27.50	1	
7	AOC50-DUP01-SPR22	WG	5-2-22	1350	GS		X	X	X	X	X	X	X	X	X	G6M-07-02X	FD1	22.50	27.50	1	
8	G6M-13-01X-SPR22	WG	5-2-22	1150	DC		X	X	X	X	X	X	X	X	X	G6M-13-01X	N1	125 00	135 00	1	
9	G6M-13-02X-SPR22	WG					X	X	X	X	X	X	X	X	X	G6M-13-02X	N1	115 00	125 00	1	
10	G6M-13-05X-SPR22	WG	5-2-22	1600	GS		X	X	X	X	X	X	X	X	X	G6M-13-05X	N1	45 00	55 00	1	
11	G6M-97-05B-SPR22	WG	5-2-22	1020	DC		X	X	X	X	X	X	X	X	X	G6M-97-05B	N1	130 00	135.00	1	
12	XSA-12-96X-SPR22	WG	5-2-22	1215	SG					X	X	X				XSA-12-96X	N1	120 00	130 00	1	
13																					
14																					
15																					
16																					
17																					

Turnaround Time: Standard

680-214942 Chain of Custody

Relinquished by: Sean Gluck
Date 5/2/2022
Time 17.43

Received by: [signature]
Date 5/2/22
Time 1545

ap 5/4/22 10.30

2.0 2.7 3.4
2. 2.1 2.8
3.9/3.3

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5/31/2022

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: 680-693061.1
Client Contact: Shipping/Receiving	Phone	E-Mail: Jerry.Lanier@et.eurofinsus.com	State of Origin: Massachusetts	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): Dept. of Defense ELAP - A2LA; DoD - ANAB		Job #: 680-214942-1
Address: 4955 Yarrow Street, ,	Due Date Requested: 5/17/2022			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: AOC 50, Spring 2022	Project #: 68023801			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	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)	353.2_Pres/ Nitrogen, Nitrate-Nitrite	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
G6M-04-02X-SPR22 (680-214942-1)	5/2/22	14:40 Eastern		Water			X	1	
G6M-04-07X-SPR22 (680-214942-2)	5/2/22	14:50 Eastern		Water			X	1	
G6M-04-10A-SPR22 (680-214942-3)	5/2/22	10:30 Eastern		Water			X	1	
G6M-04-10A-SPR22 (680-214942-3MS)	5/2/22	10:30 Eastern	MS	Water			X	1	
G6M-04-10A-SPR22 (680-214942-3MSD)	5/2/22	10:30 Eastern	MSD	Water			X	1	
G6M-07-02X-SPR22 (680-214942-6)	5/2/22	13:10 Eastern		Water			X	1	
AOC50-DUP01-SPR22 (680-214942-7)	5/2/22	13:50 Eastern		Water			X	1	
G6M-013-01X-SPR22 (680-214942-8)	5/2/22	11:50 Eastern		Water			X	1	
G6M-013-05X-SPR22 (680-214942-9)	5/2/22	16:00 Eastern		Water			X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Southeast, LLC places the ownership of method, analyte & accreditation compliance upon out 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: 5/5 1500	Company	Received by:	Date/Time: 5/6/22 1100	Company: STADSN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.1 CF +0.1 IR12

Ver: 06/08/2021

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5/31/2022

Eurofins Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Phone: 912-354-7858 Fax: 912-352-0165

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Lanier, Jerry A	Carrier Tracking No(s).	COC No 680-693061.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Jerry.Lanier@et.eurofinsus.com	State of Origin: Massachusetts	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note) Dept. of Defense ELAP - A2LA; DoD - ANAB		Job # 680-214942-1
Address: 4955 Yarrow Street, ,	Due Date Requested: 5/17/2022	Analysis Requested		Preservation Codes:
City: Arvada	TAT Requested (days):			A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify) Other:
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: AOC 50, Spring 2022	Project #: 68023801			
Site:	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	353.2_Pres/ Nitrogen, Nitrate-Nitrite	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
G6M-97-05B-SPR22 (680-214942-10)	5/2/22	10:20 Eastern		Water			X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Southeast, LLC places the ownership of method, analyte & accreditation compliance upon out 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 complicance 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
			[signature]	5/6/20 1100	ETADEW
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.7 cf-0.1 IR-2

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-214942-1

Login Number: 214942

List Source: Eurofins Savannah

List Number: 1

Creator: Padayao, Abigail

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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-214942-1

Login Number: 214942
List Number: 2
Creator: Rystrom, Joshua R

List Source: Eurofins Denver
List Creation: 05/06/22 09:42 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

Eurofins Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

Laboratory Job ID: 680-214970-1
Client Project/Site: AOC 50, Spr 2022

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

Attn: Heather Levesque

Authorized for release by:
5/19/2022 6:30:16 PM

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

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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
Project/Site: AOC 50, Spr 2022

Job ID: 680-214970-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-214970-1	G6M-13-02X-SPR22	Water	05/03/22 10:43	05/05/22 10:40

Job ID: 680-214970-1

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-214970-1

Comments
No additional comments.

Receipt
The sample was received on 5/5/2022 10:40 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.7º C.

GC/MS VOA
Method 8260B: The continuing calibration verification (CCV) analyzed in batch 680-721049 was outside the method criteria for the following analyte(s): 2,2-Dichloropropane, Chloromethane and Vinyl acetate. Chloromethane and Vinyl acetate has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. An LCS spiked at the reporting limit was analyzed with the batch with passing recoveries showing adequate sensitivity at the reporting limit had the analytes been present. The samples were non-detect for the analytes. There is insufficient holding time to rerun the samples in hold. These results have been reported and qualified.

Method 8260B: The continuing calibration verification (CCV) associated with batch 680-721049 recovered above the upper control limit for 4-Methyl-2-pentanone. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8260B: The closing continuing calibration verification (CCVC) analyzed in batch 721049 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 8260B: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 680-721049 recovered outside control limits for the following analytes: Vinyl acetate.

Method 8260B: The matrix spike/matrix spike duplicate (MS/MSD) for analytical batch 680-721049 exceeded control limits for the following analyte(s): Chloromethane, Note that this analyte is a known poor performer when analyzed using this method.

Method 8260B: The method requirement for no headspace was not met. The following volatile samples were analyzed with headspace in the sample container(s): (680-214942-M-3), (680-214942-M-3 MS) and (680-214942-M-3 MSD).

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

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

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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

General Chemistry
Methods 9034, SM 4500 S2 F: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 680-719553 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Methods SM 2320B, SM 4500 CO2 D: The sample duplicate precision for the following sample associated with analytical batch 680-720385 was outside control limits: (680-214768-A-5 DU) for free carbon dioxide The associated Laboratory Control Sample / Laboratory Control Sample Duplicate (LCS/LCSD) precision met acceptance criteria.

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

Job ID: 680-214970-1 (Continued)

Laboratory: Eurofins Savannah (Continued)

VOA Prep

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

Client: Seres Engineering & Services LLC
Project/Site: AOC 50, Spr 2022

Job ID: 680-214970-1

Client Sample ID: G6M-13-02X-SPR22
Date Collected: 05/03/22 10:43
Date Received: 05/05/22 10:40

Lab Sample ID: 680-214970-1
Matrix: Water

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

Analyte	Result	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		05/17/22 06:12	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		05/17/22 06:12	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		05/17/22 06:12	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		05/17/22 06:12	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		05/17/22 06:12	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		05/17/22 06:12	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		05/17/22 06:12	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		05/17/22 06:12	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		05/17/22 06:12	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		05/17/22 06:12	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		05/17/22 06:12	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		05/17/22 06:12	1
1,2-Dichlorobenzene	**2.6**		2.0	1.0	0.31	ug/L		05/17/22 06:12	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		05/17/22 06:12	1
1,2-Dichloroethene, Total	**7.4**		2.0	1.0	0.37	ug/L		05/17/22 06:12	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		05/17/22 06:12	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		05/17/22 06:12	1
1,3-Dichlorobenzene	**0.36**	**J**	2.0	1.0	0.31	ug/L		05/17/22 06:12	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		05/17/22 06:12	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/17/22 06:12	1
2,2-Dichloropropane	1.0	U Q	2.0	1.0	0.35	ug/L		05/17/22 06:12	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		05/17/22 06:12	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		05/17/22 06:12	1
2-Hexanone	10	U	20	10	3.2	ug/L		05/17/22 06:12	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		05/17/22 06:12	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		05/17/22 06:12	1
4-Methyl-2-pentanone (MIBK)	10	U Q	20	10	2.7	ug/L		05/17/22 06:12	1
Acetone	10	U	25	10	3.7	ug/L		05/17/22 06:12	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		05/17/22 06:12	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		05/17/22 06:12	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		05/17/22 06:12	1
Bromomethane	10	U	20	10	3.7	ug/L		05/17/22 06:12	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		05/17/22 06:12	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		05/17/22 06:12	1
Chlorobenzene	**1.4**		1.0	0.50	0.15	ug/L		05/17/22 06:12	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		05/17/22 06:12	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		05/17/22 06:12	1
Chloroethane	10	U	20	10	4.6	ug/L		05/17/22 06:12	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		05/17/22 06:12	1
Chloromethane	2.0	U Q	2.5	2.0	0.54	ug/L		05/17/22 06:12	1
cis-1,2-Dichloroethene	**6.8**		2.0	1.0	0.25	ug/L		05/17/22 06:12	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		05/17/22 06:12	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		05/17/22 06:12	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		05/17/22 06:12	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		05/17/22 06:12	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		05/17/22 06:12	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		05/17/22 06:12	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		05/17/22 06:12	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		05/17/22 06:12	1

Client Sample ID: G6M-13-02X-SPR22
Date Collected: 05/03/22 10:43
Date Received: 05/05/22 10:40

Lab Sample ID: 680-214970-1
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		05/17/22 06:12	1
Methylene Chloride	10	U	20	10	3.2	ug/L		05/17/22 06:12	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		05/17/22 06:12	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		05/17/22 06:12	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		05/17/22 06:12	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		05/17/22 06:12	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		05/17/22 06:12	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		05/17/22 06:12	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		05/17/22 06:12	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		05/17/22 06:12	1
Tetrachloroethene	**3.4**		2.0	1.0	0.35	ug/L		05/17/22 06:12	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		05/17/22 06:12	1
trans-1,2-Dichloroethene	**0.67**	**J**	2.0	1.0	0.34	ug/L		05/17/22 06:12	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		05/17/22 06:12	1
Trichloroethene	**8.4**		1.0	0.50	0.20	ug/L		05/17/22 06:12	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		05/17/22 06:12	1
Vinyl acetate	2.0	U Q	2.5	2.0	0.69	ug/L		05/17/22 06:12	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		05/17/22 06:12	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		05/17/22 06:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*		*05/17/22 06:12*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 119*		*05/17/22 06:12*	*1*
Toluene-d8 (Surr)	*103*		*89 - 112*		*05/17/22 06:12*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*81 - 118*		*05/17/22 06:12*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**0.68**	**J**	1.1	0.76	0.30	ug/L		05/12/22 15:38	1
Ethylene	0.71	U	1.0	0.71	0.31	ug/L		05/12/22 15:38	1
Methane (TCD)	**11000**		390	77	39	ug/L		05/12/22 15:38	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**7.6**		1.0	1.0	0.40	mg/L		05/18/22 00:55	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**290**		100	50	20	ug/L		05/09/22 18:15	1
Manganese	**1500**		10	5.0	1.3	ug/L		05/09/22 18:15	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**3.2**	**J**	5.0	3.0	0.86	ug/L		05/09/22 18:29	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	**48**		5.0	5.0	5.0	mg/L		05/11/22 17:42	1
Nitrate/Nitrite-N	**0.053**	**J**	0.10	0.050	0.044	mg/L		05/10/22 18:54	1
Sulfide	0.81	U	0.81	0.81	0.81	mg/L		05/06/22 11:47	1
Total Organic Carbon	**1.1**		1.0	1.0	0.50	mg/L		05/15/22 04:39	1

Client: Seres Engineering & Services LLC
Job ID: 680-214970-1
Project/Site: AOC 50, Spr 2022

Client Sample ID: G6M-13-02X-SPR22
Lab Sample ID: 680-214970-1
Date Collected: 05/03/22 10:43
Matrix: Water
Date Received: 05/05/22 10:40

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon - Quad	1.1		1.0	1.0	0.50	mg/L		05/15/22 04:39	1

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

Lab Sample ID: MB 680-721049/44
Matrix: Water
Analysis Batch: 721049

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		05/17/22 02:42	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		05/17/22 02:42	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		05/17/22 02:42	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		05/17/22 02:42	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		05/17/22 02:42	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		05/17/22 02:42	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		05/17/22 02:42	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		05/17/22 02:42	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		05/17/22 02:42	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		05/17/22 02:42	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		05/17/22 02:42	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		05/17/22 02:42	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/17/22 02:42	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		05/17/22 02:42	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		05/17/22 02:42	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		05/17/22 02:42	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		05/17/22 02:42	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/17/22 02:42	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		05/17/22 02:42	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		05/17/22 02:42	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		05/17/22 02:42	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		05/17/22 02:42	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		05/17/22 02:42	1
2-Hexanone	10	U	20	10	3.2	ug/L		05/17/22 02:42	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		05/17/22 02:42	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		05/17/22 02:42	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		05/17/22 02:42	1
Acetone	10	U	25	10	3.7	ug/L		05/17/22 02:42	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		05/17/22 02:42	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		05/17/22 02:42	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		05/17/22 02:42	1
Bromomethane	10	U	20	10	3.7	ug/L		05/17/22 02:42	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		05/17/22 02:42	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		05/17/22 02:42	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		05/17/22 02:42	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		05/17/22 02:42	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		05/17/22 02:42	1
Chloroethane	10	U	20	10	4.6	ug/L		05/17/22 02:42	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		05/17/22 02:42	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		05/17/22 02:42	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		05/17/22 02:42	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		05/17/22 02:42	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		05/17/22 02:42	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		05/17/22 02:42	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		05/17/22 02:42	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		05/17/22 02:42	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		05/17/22 02:42	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		05/17/22 02:42	1

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

Lab Sample ID: MB 680-721049/44
Matrix: Water
Analysis Batch: 721049

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		05/17/22 02:42	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		05/17/22 02:42	1
Methylene Chloride	10	U	20	10	3.2	ug/L		05/17/22 02:42	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		05/17/22 02:42	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		05/17/22 02:42	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		05/17/22 02:42	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		05/17/22 02:42	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		05/17/22 02:42	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		05/17/22 02:42	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		05/17/22 02:42	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		05/17/22 02:42	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		05/17/22 02:42	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		05/17/22 02:42	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		05/17/22 02:42	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		05/17/22 02:42	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		05/17/22 02:42	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		05/17/22 02:42	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		05/17/22 02:42	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		05/17/22 02:42	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		05/17/22 02:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*		*05/17/22 02:42*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*05/17/22 02:42*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*05/17/22 02:42*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*05/17/22 02:42*	*1*

Lab Sample ID: LCS 680-721049/39
Matrix: Water
Analysis Batch: 721049

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	50.0	55.3		ug/L		111	78 - 124
1,1,1-Trichloroethane	50.0	45.0		ug/L		90	74 - 131
1,1,2,2-Tetrachloroethane	50.0	50.6		ug/L		101	71 - 121
1,1,2-Trichloroethane	50.0	51.4		ug/L		103	80 - 119
1,1-Dichloroethane	50.0	48.6		ug/L		97	77 - 125
1,1-Dichloroethene	50.0	45.5		ug/L		91	71 - 131
1,1-Dichloropropene	50.0	47.6		ug/L		95	79 - 125
1,2,3-Trichlorobenzene	50.0	55.9		ug/L		112	69 - 129
1,2,3-Trichloropropane	50.0	57.8		ug/L		116	73 - 122
1,2,4-Trichlorobenzene	50.0	52.9		ug/L		106	69 - 130
1,2,4-Trimethylbenzene	50.0	48.1		ug/L		96	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	54.4		ug/L		109	62 - 128
1,2-Dichlorobenzene	50.0	51.2		ug/L		102	80 - 119
1,2-Dichloroethane	50.0	47.6		ug/L		95	73 - 128
1,2-Dichloroethene, Total	100	94.3		ug/L		94	79 - 121
1,2-Dichloropropane	50.0	51.2		ug/L		102	78 - 122

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

Lab Sample ID: LCS 680-721049/39
Matrix: Water
Analysis Batch: 721049

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,3,5-Trimethylbenzene	50.0	47.7		ug/L		95	75 - 124
1,3-Dichlorobenzene	50.0	51.3		ug/L		103	80 - 119
1,3-Dichloropropane	50.0	51.5		ug/L		103	80 - 119
1,4-Dichlorobenzene	50.0	49.2		ug/L		98	79 - 118
2,2-Dichloropropane	50.0	28.4	Q	ug/L		57	60 - 139
2-Butanone (MEK)	250	257		ug/L		103	56 - 143
2-Chlorotoluene	50.0	50.8		ug/L		102	79 - 122
2-Hexanone	250	291		ug/L		116	57 - 139
4-Chlorotoluene	50.0	50.6		ug/L		101	78 - 122
4-Isopropyltoluene	50.0	47.3		ug/L		95	77 - 127
4-Methyl-2-pentanone (MIBK)	250	295		ug/L		118	67 - 130
Acetone	250	276		ug/L		111	39 - 160
Benzene	50.0	50.0		ug/L		100	79 - 120
Bromobenzene	50.0	53.1		ug/L		106	80 - 120
Bromoform	50.0	57.0		ug/L		114	66 - 130
Bromomethane	50.0	54.8		ug/L		110	53 - 141
Carbon disulfide	50.0	46.5		ug/L		93	64 - 133
Carbon tetrachloride	50.0	43.7		ug/L		87	72 - 136
Chlorobenzene	50.0	50.0		ug/L		100	82 - 118
Chlorobromomethane	50.0	47.5		ug/L		95	78 - 123
Chlorodibromomethane	50.0	50.3		ug/L		101	74 - 126
Chloroethane	50.0	57.7		ug/L		115	60 - 138
Chloroform	50.0	47.4		ug/L		95	79 - 124
Chloromethane	50.0	40.9	M	ug/L		82	50 - 139
cis-1,2-Dichloroethene	50.0	46.9		ug/L		94	78 - 123
cis-1,3-Dichloropropene	50.0	47.7		ug/L		95	75 - 124
Dibromomethane	50.0	48.5		ug/L		97	79 - 123
Dichlorobromomethane	50.0	47.5		ug/L		95	79 - 125
Dichlorodifluoromethane	50.0	38.4		ug/L		77	32 - 152
Ethylbenzene	50.0	50.0		ug/L		100	79 - 121
Ethylene Dibromide	50.0	52.8		ug/L		106	75 - 127
Hexachlorobutadiene	50.0	47.5		ug/L		95	66 - 134
Isopropylbenzene	50.0	49.1		ug/L		98	72 - 131
Methyl tert-butyl ether	50.0	52.3		ug/L		105	71 - 124
Methylene Chloride	50.0	47.4		ug/L		95	74 - 124
m-Xylene & p-Xylene	50.0	49.5		ug/L		99	80 - 121
Naphthalene	50.0	56.6		ug/L		113	61 - 128
n-Butylbenzene	50.0	44.8		ug/L		90	75 - 128
N-Propylbenzene	50.0	48.8		ug/L		98	76 - 126
o-Xylene	50.0	49.6		ug/L		99	78 - 122
sec-Butylbenzene	50.0	47.6		ug/L		95	77 - 126
Styrene	50.0	51.1		ug/L		102	78 - 123
tert-Butylbenzene	50.0	48.4		ug/L		97	78 - 124
Tetrachloroethene	50.0	49.2		ug/L		98	74 - 129
Toluene	50.0	49.8		ug/L		100	80 - 121
trans-1,2-Dichloroethene	50.0	47.4		ug/L		95	75 - 124
trans-1,3-Dichloropropene	50.0	47.6		ug/L		95	73 - 127
Trichloroethene	50.0	56.5		ug/L		113	79 - 123
Trichlorofluoromethane	50.0	44.1		ug/L		88	65 - 141

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

Lab Sample ID: LCS 680-721049/39
Matrix: Water
Analysis Batch: 721049

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Vinyl acetate	100	54.3		ug/L		54	54 - 146
Vinyl chloride	50.0	46.2		ug/L		92	58 - 137
Xylenes, Total	100	99.1		ug/L		99	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*
Dibromofluoromethane (Surr)	*98*		*80 - 119*
Toluene-d8 (Surr)	*100*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*

Lab Sample ID: LCSD 680-721049/40
Matrix: Water
Analysis Batch: 721049

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
1,1,1,2-Tetrachloroethane	50.0	54.8		ug/L		110	78 - 124	1	20
1,1,1-Trichloroethane	50.0	44.6		ug/L		89	74 - 131	1	20
1,1,2,2-Tetrachloroethane	50.0	54.2		ug/L		108	71 - 121	7	20
1,1,2-Trichloroethane	50.0	51.2		ug/L		102	80 - 119	0	20
1,1-Dichloroethane	50.0	48.4		ug/L		97	77 - 125	0	20
1,1-Dichloroethene	50.0	46.1		ug/L		92	71 - 131	1	20
1,1-Dichloropropene	50.0	48.1		ug/L		96	79 - 125	1	20
1,2,3-Trichlorobenzene	50.0	55.3		ug/L		111	69 - 129	1	20
1,2,3-Trichloropropane	50.0	58.7		ug/L		117	73 - 122	2	20
1,2,4-Trichlorobenzene	50.0	53.5		ug/L		107	69 - 130	1	20
1,2,4-Trimethylbenzene	50.0	48.7		ug/L		97	76 - 124	1	20
1,2-Dibromo-3-Chloropropane	50.0	53.7		ug/L		107	62 - 128	1	20
1,2-Dichlorobenzene	50.0	51.3		ug/L		103	80 - 119	0	20
1,2-Dichloroethane	50.0	47.9		ug/L		96	73 - 128	1	20
1,2-Dichloroethene, Total	100	93.5		ug/L		93	79 - 121	1	20
1,2-Dichloropropane	50.0	51.4		ug/L		103	78 - 122	0	20
1,3,5-Trimethylbenzene	50.0	48.6		ug/L		97	75 - 124	2	20
1,3-Dichlorobenzene	50.0	51.2		ug/L		102	80 - 119	0	20
1,3-Dichloropropane	50.0	53.1		ug/L		106	80 - 119	3	20
1,4-Dichlorobenzene	50.0	49.7		ug/L		99	79 - 118	1	20
2,2-Dichloropropane	50.0	27.7	Q	ug/L		55	60 - 139	3	20
2-Butanone (MEK)	250	261		ug/L		105	56 - 143	2	20
2-Chlorotoluene	50.0	50.1		ug/L		100	79 - 122	1	20
2-Hexanone	250	290		ug/L		116	57 - 139	0	20
4-Chlorotoluene	50.0	50.5		ug/L		101	78 - 122	0	20
4-Isopropyltoluene	50.0	48.1		ug/L		96	77 - 127	2	20
4-Methyl-2-pentanone (MIBK)	250	296		ug/L		118	67 - 130	0	20
Acetone	250	269		ug/L		108	39 - 160	3	20
Benzene	50.0	49.2		ug/L		98	79 - 120	2	20
Bromobenzene	50.0	52.6		ug/L		105	80 - 120	1	20
Bromoform	50.0	57.3		ug/L		115	66 - 130	0	20
Bromomethane	50.0	55.9		ug/L		112	53 - 141	2	20
Carbon disulfide	50.0	46.4		ug/L		93	64 - 133	0	20

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

Lab Sample ID: LCSD 680-721049/40
Matrix: Water
Analysis Batch: 721049

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
Carbon tetrachloride			50.0	43.5		ug/L		87	72 - 136	0	20
Chlorobenzene			50.0	49.4		ug/L		99	82 - 118	1	20
Chlorobromomethane			50.0	47.6		ug/L		95	78 - 123	0	20
Chlorodibromomethane			50.0	50.2		ug/L		100	74 - 126	0	20
Chloroethane			50.0	56.6		ug/L		113	60 - 138	2	20
Chloroform			50.0	47.6		ug/L		95	79 - 124	0	20
Chloromethane			50.0	40.4	M	ug/L		81	50 - 139	1	20
cis-1,2-Dichloroethene			50.0	46.6		ug/L		93	78 - 123	1	20
cis-1,3-Dichloropropene			50.0	47.5		ug/L		95	75 - 124	0	20
Dibromomethane			50.0	48.6		ug/L		97	79 - 123	0	20
Dichlorobromomethane			50.0	47.5		ug/L		95	79 - 125	0	20
Dichlorodifluoromethane			50.0	39.0		ug/L		78	32 - 152	1	20
Ethylbenzene			50.0	49.2		ug/L		98	79 - 121	2	20
Ethylene Dibromide			50.0	53.8		ug/L		108	75 - 127	2	20
Hexachlorobutadiene			50.0	47.2		ug/L		94	66 - 134	1	20
Isopropylbenzene			50.0	48.3		ug/L		97	72 - 131	2	20
Methyl tert-butyl ether			50.0	51.9		ug/L		104	71 - 124	1	20
Methylene Chloride			50.0	48.8		ug/L		98	74 - 124	3	20
m-Xylene & p-Xylene			50.0	48.9		ug/L		98	80 - 121	1	20
Naphthalene			50.0	56.8		ug/L		114	61 - 128	0	20
n-Butylbenzene			50.0	45.9		ug/L		92	75 - 128	2	20
N-Propylbenzene			50.0	49.5		ug/L		99	76 - 126	1	20
o-Xylene			50.0	49.9		ug/L		100	78 - 122	0	20
sec-Butylbenzene			50.0	48.1		ug/L		96	77 - 126	1	20
Styrene			50.0	50.9		ug/L		102	78 - 123	0	20
tert-Butylbenzene			50.0	48.5		ug/L		97	78 - 124	0	20
Tetrachloroethene			50.0	49.1		ug/L		98	74 - 129	0	20
Toluene			50.0	49.4		ug/L		99	80 - 121	1	20
trans-1,2-Dichloroethene			50.0	46.9		ug/L		94	75 - 124	1	20
trans-1,3-Dichloropropene			50.0	47.1		ug/L		94	73 - 127	1	20
Trichloroethene			50.0	53.4		ug/L		107	79 - 123	6	20
Trichlorofluoromethane			50.0	45.1		ug/L		90	65 - 141	2	20
Vinyl acetate			100	85.7	Q	ug/L		86	54 - 146	45	20
Vinyl chloride			50.0	45.8		ug/L		92	58 - 137	1	20
Xylenes, Total			100	98.8		ug/L		99	79 - 121	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*
Dibromofluoromethane (Surr)	*99*		*80 - 119*
Toluene-d8 (Surr)	*100*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*97*		*81 - 118*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-720455/8
Matrix: Water
Analysis Batch: 720455

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		05/12/22 12:39	1
Ethylene	0.71	U	1.0	0.71	0.31	ug/L		05/12/22 12:39	1
Methane	1.2	U	1.2	1.2	0.57	ug/L		05/12/22 12:39	1

Lab Sample ID: LCS 680-720455/3
Matrix: Water
Analysis Batch: 720455

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		101	73 - 125

Lab Sample ID: LCS 680-720455/6
Matrix: Water
Analysis Batch: 720455

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethane	361	316		ug/L		88	74 - 131
Ethylene	337	285		ug/L		85	72 - 133
Methane	192	166		ug/L		86	73 - 125

Lab Sample ID: LCSD 680-720455/4
Matrix: Water
Analysis Batch: 720455

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	1720		ug/L		89	73 - 125	13	30

Lab Sample ID: LCSD 680-720455/7
Matrix: Water
Analysis Batch: 720455

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	336		ug/L		93	74 - 131	6	30
Ethylene	337	299		ug/L		89	72 - 133	5	30
Methane	192	173		ug/L		90	73 - 125	5	30

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-721288/50
Matrix: Water
Analysis Batch: 721288

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		05/17/22 20:37	1

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

Lab Sample ID: LCS 680-721288/51
Matrix: Water
Analysis Batch: 721288

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	9.09		mg/L		91	87 - 112

Lab Sample ID: LCSD 680-721288/52
Matrix: Water
Analysis Batch: 721288

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	9.08		mg/L		91	87 - 112	0	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-719607/1-A
Matrix: Water
Analysis Batch: 720047

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 719607

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		05/09/22 13:07	1
Manganese	5.0	U	10	5.0	1.3	ug/L		05/09/22 13:07	1

Lab Sample ID: LCS 680-719607/2-A
Matrix: Water
Analysis Batch: 720047

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 719607

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	5000	5020		ug/L		100	87 - 115
Manganese	400	405		ug/L		101	90 - 114

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-719611/1-A
Matrix: Water
Analysis Batch: 719967

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 719611

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		05/09/22 18:11	1

Lab Sample ID: LCS 680-719611/2-A
Matrix: Water
Analysis Batch: 719967

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 719611

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	99.8		ug/L		100	84 - 116

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 680-720385/5
Matrix: Water
Analysis Batch: 720385

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	5.0	mg/L		05/11/22 16:58	1

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: LCS 680-720385/7
Matrix: Water
Analysis Batch: 720385

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	250	237		mg/L		95	90 - 112

Lab Sample ID: LCSD 680-720385/32
Matrix: Water
Analysis Batch: 720385

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	238		mg/L		95	90 - 112	0	30

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 280-574491/60
Matrix: Water
Analysis Batch: 574491

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.050	U	0.10	0.050	0.044	mg/L		05/10/22 18:18	1

Lab Sample ID: LCS 280-574491/59
Matrix: Water
Analysis Batch: 574491

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate/Nitrite-N	5.00	5.11		mg/L		102	90 - 110

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 680-719553/1
Matrix: Water
Analysis Batch: 719553

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		05/06/22 11:47	1

Lab Sample ID: LCS 680-719553/2
Matrix: Water
Analysis Batch: 719553

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	8.66		mg/L		87	75 - 125

Lab Sample ID: LCSD 680-719553/3
Matrix: Water
Analysis Batch: 719553

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	8.40		mg/L		84	75 - 125	3	30

Client: Seres Engineering & Services LLC
Project/Site: AOC 50, Spr 2022

Job ID: 680-214970-1

Method: 9060 - Organic Carbon, Total (TOC)

Lab Sample ID: MB 680-721153/2
Matrix: Water
Analysis Batch: 721153

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	1.0	1.0	0.50	mg/L		05/14/22 17:54	1
Total Organic Carbon - Quad	1.0	U	1.0	1.0	0.50	mg/L		05/14/22 17:54	1

Lab Sample ID: LCS 680-721153/3
Matrix: Water
Analysis Batch: 721153

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	18.8		mg/L		94	80 - 120
TOC Result 1	20.0	18.9		mg/L		94	80 - 120
TOC Result 2	20.0	18.7		mg/L		94	80 - 120
TOC Result 3	20.0	19.0		mg/L		95	80 - 120
TOC Result 4	20.0	18.8		mg/L		94	80 - 120
Total Organic Carbon - Quad	20.0	18.8		mg/L		94	80 - 120

Lab Sample ID: LCSD 680-721153/4
Matrix: Water
Analysis Batch: 721153

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	18.9		mg/L		94	80 - 120	0	25
TOC Result 1	20.0	18.9		mg/L		94	80 - 120	0	25
TOC Result 2	20.0	18.6		mg/L		93	80 - 120	0	25
TOC Result 3	20.0	18.9		mg/L		95	80 - 120	0	25
TOC Result 4	20.0	19.0		mg/L		95	80 - 120	1	25
Total Organic Carbon - Quad	20.0	18.9		mg/L		94	80 - 120	0	25

QC Association Summary

Client: Seres Engineering & Services LLC
Project/Site: AOC 50, Spr 2022

Job ID: 680-214970-1

GC/MS VOA

Analysis Batch: 721049

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214970-1	G6M-13-02X-SPR22	Total/NA	Water	8260B	
MB 680-721049/44	Method Blank	Total/NA	Water	8260B	
LCS 680-721049/39	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-721049/40	Lab Control Sample Dup	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 720455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214970-1	G6M-13-02X-SPR22	Total/NA	Water	RSK-175	
MB 680-720455/8	Method Blank	Total/NA	Water	RSK-175	
LCS 680-720455/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-720455/6	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-720455/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-720455/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	

HPLC/IC

Analysis Batch: 721288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214970-1	G6M-13-02X-SPR22	Total/NA	Water	9056A	
MB 680-721288/50	Method Blank	Total/NA	Water	9056A	
LCS 680-721288/51	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-721288/52	Lab Control Sample Dup	Total/NA	Water	9056A	

Metals

Prep Batch: 719607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214970-1	G6M-13-02X-SPR22	Dissolved	Water	3005A	
MB 680-719607/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-719607/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 719611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214970-1	G6M-13-02X-SPR22	Dissolved	Water	3005A	
MB 680-719611/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-719611/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 719967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214970-1	G6M-13-02X-SPR22	Dissolved	Water	6020A	719611
MB 680-719611/1-A	Method Blank	Total Recoverable	Water	6020A	719611
LCS 680-719611/2-A	Lab Control Sample	Total Recoverable	Water	6020A	719611

Analysis Batch: 720047

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214970-1	G6M-13-02X-SPR22	Dissolved	Water	6010C	719607
MB 680-719607/1-A	Method Blank	Total Recoverable	Water	6010C	719607
LCS 680-719607/2-A	Lab Control Sample	Total Recoverable	Water	6010C	719607

General Chemistry

Analysis Batch: 574491

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214970-1	G6M-13-02X-SPR22	Total/NA	Water	353.2	
MB 280-574491/60	Method Blank	Total/NA	Water	353.2	
LCS 280-574491/59	Lab Control Sample	Total/NA	Water	353.2	

Analysis Batch: 719553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214970-1	G6M-13-02X-SPR22	Total/NA	Water	9034	
MB 680-719553/1	Method Blank	Total/NA	Water	9034	
LCS 680-719553/2	Lab Control Sample	Total/NA	Water	9034	
LCSD 680-719553/3	Lab Control Sample Dup	Total/NA	Water	9034	

Analysis Batch: 720385

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214970-1	G6M-13-02X-SPR22	Total/NA	Water	2320B-2011	
MB 680-720385/5	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-720385/7	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-720385/32	Lab Control Sample Dup	Total/NA	Water	2320B-2011	

Analysis Batch: 721153

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-214970-1	G6M-13-02X-SPR22	Total/NA	Water	9060	
MB 680-721153/2	Method Blank	Total/NA	Water	9060	
LCS 680-721153/3	Lab Control Sample	Total/NA	Water	9060	
LCSD 680-721153/4	Lab Control Sample Dup	Total/NA	Water	9060	

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: AOC 50, Spr 2022

Job ID: 680-214970-1

Client Sample ID: G6M-13-02X-SPR22

Date Collected: 05/03/22 10:43
Date Received: 05/05/22 10:40

Lab Sample ID: 680-214970-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	721049	05/17/22 06:12	EMA	TAL SAV
	Instrument ID: CMSAA									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	720455	05/12/22 15:38	JCK	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	721288	05/18/22 00:55	AF	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	719607	05/06/22 15:21	JE	TAL SAV
Dissolved	Analysis	6010C		1			720047	05/09/22 18:15	BCB	TAL SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	719611	05/06/22 15:21	JE	TAL SAV
Dissolved	Analysis	6020A		1			719967	05/09/22 18:29	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			720385	05/11/22 17:42	DR	TAL SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2		1	100 mL	100 mL	574491	05/10/22 18:54	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	310 mL	310 mL	719553	05/06/22 11:47	NVF	TAL SAV
	Instrument ID: NoEquip									
Total/NA	Analysis	9060		1	40 mL	40 mL	721153	05/15/22 04:39	JU	TAL SAV
	Instrument ID: TOC7									

Laboratory References:

TAL DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-214970-1
Project/Site: AOC 50, Spr 2022

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	09-18-22

Laboratory: Eurofins Denver

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-23

Method Summary

Client: Seres Engineering & Services LLC
Project/Site: AOC 50, Spr 2022

Job ID: 680-214970-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
RSK-175	Dissolved Gases (GC)	RSK	TAL SAV
9056A	Anions, Ion Chromatography	SW846	TAL SAV
6010C	Metals (ICP)	SW846	TAL SAV
6020A	Metals (ICP/MS)	SW846	TAL SAV
2320B-2011	Alkalinity, Total	SM	TAL SAV
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	TAL DEN
9034	Sulfide, Acid Soluble and Insoluble (Titrimetric)	SW846	TAL SAV
9060	Organic Carbon, Total (TOC)	SW846	TAL SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL SAV
5030B	Purge and Trap	SW846	TAL 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:

TAL DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

TAL 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
(619) 370-0374, halevesque@seres-es.com

COC # AOC50_SPR22

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 2022
Project Number: 30130800	POC Jerry Lanier, (912) 250-0281, jerry lanier@et.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

680-214970 Chain of Custody

Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Spring 2022

Analytical Test Method

| | | |

Eurofins Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Phone: 912-354-7858 Fax: 912-352-0165

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)
Client Contact: Shipping/Receiving
Company: TestAmerica Laboratories, Inc.
Address: 4955 Yarrow Street, ,
City: Arvada
State, Zip: CO, 80002
Phone: 303-736-0100(Tel) 303-431-7171(Fax)
Email:
Project Name: AOC 50, Spr 2022
Site:

Sampler:
Phone:
Lab PM: Lanier, Jerry A
E-Mail: Jerry.Lanier@et.eurofinsus.com
Carrier Tracking No(s):
State of Origin: Massachusetts
Accreditations Required (See note): Dept. of Defense ELAP - A2LA; DoD - ANAB

Due Date Requested: 5/18/2022
TAT Requested (days):
PO #:
WO #:
Project #: 68023801
SSOW#:

COC No: 680-693160.1
Page: Page 1 of 1
Job #: 680-214970-1

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, Z - other (specify)
Other:

Analysis Requested

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)	353.2_Pres/ Nitrogen, Nitrate-Nitrite	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
G6M-13-02X-SPR22 (680-214970-1)	5/3/22	10:43 Eastern		Water			X	1	

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Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Southeast, LLC places the ownership of method, analyte & accreditation compliance upon out 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
Unconfirmed
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by: Date: Time: Method of Shipment:

	Date/Time	Company		Date/Time	Company
Relinquished by:	5/6 0900		Received by	5/7/22 1040	ETA/DSN
Relinquished by			Received by		
Relinquished by:			Received by:		

Custody Seals Intact: Custody Seal No.: 1577870
Cooler Temperature(s) °C and Other Remarks: 1-6 IR1 CF +0.1

Ver: 06/08/2021

5/19/2022

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-214970-1

Login Number: 214970

List Source: Eurofins Savannah

List Number: 1

Creator: Watters, David

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: 680-214970-1

Login Number: 214970
List Number: 2
Creator: Lee, Jerry

List Source: Eurofins Denver
List Creation: 05/07/22 03:55 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	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 11/28/2022 3:12:41 PM Revision 1

JOB DESCRIPTION

Seres-Arcadis JV, LTM, AOC 50, Fall 2022

JOB NUMBER

680-222340-1

Eurofins Savannah
5102 LaRoche Avenue
Savannah GA 31404

See page two for job notes and contact information.

myEOL

Job Notes

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. This report may not be reproduced, except in full, without the written approval of the laboratory. Questions should be directed to the person who signed this report.

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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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
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.
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
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
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

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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: 680-222340-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-222340-1	G6M-04-10A-FAL22	Water	10/04/22 10:25	10/05/22 10:30
680-222340-2	G6M-04-10X-FAL22	Water	10/04/22 13:55	10/05/22 10:30
680-222340-3	G6M-04-13X-FAL22	Water	10/04/22 14:45	10/05/22 10:30
680-222340-4	G6M-04-14X-FAL22	Water	10/04/22 14:22	10/05/22 10:30
680-222340-5	G6M-13-05X-FAL22	Water	10/03/22 14:05	10/05/22 10:30
680-222340-6	AOC50-DUP04-FAL22	Water	10/04/22 14:30	10/05/22 10:30
680-222340-7	G6M-02-08X-FAL22	Water	10/04/22 10:50	10/05/22 10:30
680-222340-8	G6M-13-06X-FAL22	Water	10/03/22 15:55	10/05/22 10:30
680-222340-9	G6M-95-19X-FAL22	Water	10/04/22 12:50	10/05/22 10:30
680-222340-10	G6M-95-20X-FAL22	Water	10/04/22 14:30	10/05/22 10:30
680-222340-11	AOC50-TB01-FAL22	Water	10/04/22 00:00	10/05/22 10:30

Job ID: 680-222340-1

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-222340-1

Receipt
The samples were received on 10/5/2022 10:30 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 1.2°C

GC/MS VOA
Method 8260D_DOD5: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 680-744932 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 (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 680-745318 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 matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 680-744932 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8260D_DOD5: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 680-745318.

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
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-04-10A-FAL22 (680-222340-1), G6M-04-10A-FAL22 (680-222340-1[MS]), G6M-04-10A-FAL22 (680-222340-1[MSD]), G6M-13-05X-FAL22 (680-222340-5), G6M-02-08X-FAL22 (680-222340-7), G6M-13-06X-FAL22 (680-222340-8) and (680-222340-D-7 DU).

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, Fall 2022

Job ID: 680-222340-1

Client Sample ID: G6M-04-10A-FAL22
Date Collected: 10/04/22 10:25
Date Received: 10/05/22 10:30

Lab Sample ID: 680-222340-1
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		10/13/22 20:02	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/13/22 20:02	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/13/22 20:02	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/13/22 20:02	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/13/22 20:02	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/13/22 20:02	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/13/22 20:02	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/13/22 20:02	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/13/22 20:02	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/13/22 20:02	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/13/22 20:02	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/13/22 20:02	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/13/22 20:02	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/13/22 20:02	1
Chloroethane	10	U Q J1	20	10	4.6	ug/L		10/13/22 20:02	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/13/22 20:02	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/13/22 20:02	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/13/22 20:02	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/13/22 20:02	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/13/22 20:02	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/13/22 20:02	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/13/22 20:02	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/13/22 20:02	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/13/22 20:02	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/13/22 20:02	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/13/22 20:02	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/13/22 20:02	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/13/22 20:02	1
1,2-Dichloroethane	1.0	U	2.0	1.0	0.25	ug/L		10/13/22 20:02	1
cis-1,2-Dichloroethene	**0.74**	**J**	2.0	1.0	0.25	ug/L		10/13/22 20:02	1
trans-1,2-Dichloroethene	**0.35**	**J**	2.0	1.0	0.34	ug/L		10/13/22 20:02	1
1,2-Dichloroethene, Total	**1.1**	**J**	2.0	1.0	0.37	ug/L		10/13/22 20:02	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/13/22 20:02	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/13/22 20:02	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/13/22 20:02	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/13/22 20:02	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/13/22 20:02	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/13/22 20:02	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/13/22 20:02	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/13/22 20:02	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/13/22 20:02	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/13/22 20:02	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/13/22 20:02	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/13/22 20:02	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/13/22 20:02	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/13/22 20:02	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/13/22 20:02	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/13/22 20:02	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/13/22 20:02	1

Client Sample ID: G6M-04-10A-FAL22
Lab Sample ID: 680-222340-1

Date Collected: 10/04/22 10:25
Matrix: Water
Date Received: 10/05/22 10:30

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		10/13/22 20:02	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/13/22 20:02	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/13/22 20:02	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/13/22 20:02	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/13/22 20:02	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/13/22 20:02	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/13/22 20:02	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/13/22 20:02	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/13/22 20:02	1
Trichloroethene	**0.39**	**J**	1.0	0.50	0.20	ug/L		10/13/22 20:02	1
Trichlorofluoromethane	1.0	U J1	2.0	1.0	0.33	ug/L		10/13/22 20:02	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/13/22 20:02	1
1,2,4-Trimethylbenzene	**2.1**		2.0	1.0	0.43	ug/L		10/13/22 20:02	1
1,3,5-Trimethylbenzene	**0.79**	**J**	2.0	1.0	0.28	ug/L		10/13/22 20:02	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/13/22 20:02	1
Vinyl chloride	1.0	U M	2.0	1.0	0.40	ug/L		10/13/22 20:02	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/13/22 20:02	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/13/22 20:02	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/13/22 20:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*89 - 112*		*10/13/22 20:02*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*		*10/13/22 20:02*	*1*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*		*10/13/22 20:02*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*10/13/22 20:02*	*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		10/14/22 23:15	1
Ethylene	**8.4**		1.0	0.71	0.31	ug/L		10/14/22 23:15	1
Methane (TCD)	**20000**	**J1**	390	77	39	ug/L		10/14/22 23:15	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**1.2**	**J1**	1.0	1.0	0.40	mg/L		10/21/22 02:04	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**80000**	**J1**	100	50	20	ug/L		10/07/22 15:07	1
Manganese	**770**	**J1**	10	5.0	1.3	ug/L		10/07/22 15:07	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**270**	**J1**	5.0	3.0	0.86	ug/L		10/10/22 19:16	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**180**		5.0	5.0	2.2	mg/L		10/10/22 18:29	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	**0.043**	**J**	0.050	0.025	0.010	mg/L		10/08/22 14:07	1
Sulfide (SW846 9034)	1.7	U	2.5	1.7	0.83	mg/L		10/06/22 14:12	1

Client: Seres Engineering & Services LLC
Job ID: 680-222340-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-04-10A-FAL22
Lab Sample ID: 680-222340-1
Date Collected: 10/04/22 10:25
Matrix: Water
Date Received: 10/05/22 10:30

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon (SW846 9060)	13		1.0	1.0	0.50	mg/L		10/17/22 21:32	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Job ID: 680-222340-1

Client Sample ID: G6M-04-10X-FAL22
Date Collected: 10/04/22 13:55
Date Received: 10/05/22 10:30

Lab Sample ID: 680-222340-2
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		10/15/22 16:21	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/15/22 16:21	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/15/22 16:21	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/15/22 16:21	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/15/22 16:21	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/15/22 16:21	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/15/22 16:21	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/15/22 16:21	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/15/22 16:21	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/15/22 16:21	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/15/22 16:21	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/15/22 16:21	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/15/22 16:21	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/15/22 16:21	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/15/22 16:21	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/15/22 16:21	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/15/22 16:21	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/15/22 16:21	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/15/22 16:21	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/15/22 16:21	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/15/22 16:21	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/15/22 16:21	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/15/22 16:21	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/15/22 16:21	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/15/22 16:21	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/15/22 16:21	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/15/22 16:21	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/15/22 16:21	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/15/22 16:21	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/15/22 16:21	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/15/22 16:21	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/15/22 16:21	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/15/22 16:21	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/15/22 16:21	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/15/22 16:21	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/15/22 16:21	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/15/22 16:21	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/15/22 16:21	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/15/22 16:21	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/15/22 16:21	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/15/22 16:21	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/15/22 16:21	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/15/22 16:21	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/15/22 16:21	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/15/22 16:21	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/15/22 16:21	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/15/22 16:21	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/15/22 16:21	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/15/22 16:21	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Job ID: 680-222340-1

Client Sample ID: G6M-04-10X-FAL22
Date Collected: 10/04/22 13:55
Date Received: 10/05/22 10:30

Lab Sample ID: 680-222340-2
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		10/15/22 16:21	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/15/22 16:21	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/15/22 16:21	1
Tetrachloroethene	**0.36**	**J**	2.0	1.0	0.35	ug/L		10/15/22 16:21	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/15/22 16:21	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/15/22 16:21	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/15/22 16:21	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/15/22 16:21	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/15/22 16:21	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/15/22 16:21	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/15/22 16:21	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/15/22 16:21	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/15/22 16:21	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/15/22 16:21	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/15/22 16:21	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/15/22 16:21	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/15/22 16:21	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/15/22 16:21	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/15/22 16:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*89 - 112*		*10/15/22 16:21*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*10/15/22 16:21*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*10/15/22 16:21*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 119*		*10/15/22 16:21*	*1*

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Job ID: 680-222340-1

Client Sample ID: G6M-04-13X-FAL22
Date Collected: 10/04/22 14:45
Date Received: 10/05/22 10:30

Lab Sample ID: 680-222340-3
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		10/15/22 16:40	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/15/22 16:40	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/15/22 16:40	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/15/22 16:40	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/15/22 16:40	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/15/22 16:40	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/15/22 16:40	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/15/22 16:40	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/15/22 16:40	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/15/22 16:40	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/15/22 16:40	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/15/22 16:40	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/15/22 16:40	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/15/22 16:40	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/15/22 16:40	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/15/22 16:40	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/15/22 16:40	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/15/22 16:40	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/15/22 16:40	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/15/22 16:40	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/15/22 16:40	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/15/22 16:40	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/15/22 16:40	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/15/22 16:40	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/15/22 16:40	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/15/22 16:40	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/15/22 16:40	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/15/22 16:40	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/15/22 16:40	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/15/22 16:40	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/15/22 16:40	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/15/22 16:40	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/15/22 16:40	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/15/22 16:40	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/15/22 16:40	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/15/22 16:40	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/15/22 16:40	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/15/22 16:40	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/15/22 16:40	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/15/22 16:40	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/15/22 16:40	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/15/22 16:40	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/15/22 16:40	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/15/22 16:40	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/15/22 16:40	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/15/22 16:40	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/15/22 16:40	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/15/22 16:40	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/15/22 16:40	1

Client: Seres Engineering & Services LLC
Job ID: 680-222340-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-04-13X-FAL22
Lab Sample ID: 680-222340-3
Date Collected: 10/04/22 14:45
Matrix: Water
Date Received: 10/05/22 10:30

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		10/15/22 16:40	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/15/22 16:40	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/15/22 16:40	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/15/22 16:40	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/15/22 16:40	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/15/22 16:40	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/15/22 16:40	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/15/22 16:40	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/15/22 16:40	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/15/22 16:40	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/15/22 16:40	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/15/22 16:40	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/15/22 16:40	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/15/22 16:40	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/15/22 16:40	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/15/22 16:40	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/15/22 16:40	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/15/22 16:40	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/15/22 16:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*89 - 112*		*10/15/22 16:40*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*		*10/15/22 16:40*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*10/15/22 16:40*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*10/15/22 16:40*	*1*

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Job ID: 680-222340-1

Client Sample ID: G6M-04-14X-FAL22
Date Collected: 10/04/22 14:22
Date Received: 10/05/22 10:30

Lab Sample ID: 680-222340-4
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		10/13/22 14:57	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/13/22 14:57	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/13/22 14:57	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/13/22 14:57	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/13/22 14:57	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/13/22 14:57	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/13/22 14:57	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/13/22 14:57	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/13/22 14:57	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/13/22 14:57	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/13/22 14:57	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/13/22 14:57	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/13/22 14:57	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/13/22 14:57	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/13/22 14:57	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/13/22 14:57	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/13/22 14:57	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/13/22 14:57	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/13/22 14:57	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/13/22 14:57	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/13/22 14:57	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/13/22 14:57	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/13/22 14:57	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/13/22 14:57	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/13/22 14:57	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/13/22 14:57	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/13/22 14:57	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/13/22 14:57	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/13/22 14:57	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/13/22 14:57	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/13/22 14:57	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/13/22 14:57	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/13/22 14:57	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/13/22 14:57	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/13/22 14:57	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/13/22 14:57	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/13/22 14:57	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/13/22 14:57	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/13/22 14:57	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/13/22 14:57	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/13/22 14:57	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/13/22 14:57	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/13/22 14:57	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/13/22 14:57	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/13/22 14:57	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/13/22 14:57	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/13/22 14:57	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/13/22 14:57	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/13/22 14:57	1

Client Sample ID: G6M-04-14X-FAL22
Lab Sample ID: 680-222340-4

Date Collected: 10/04/22 14:22
Matrix: Water
Date Received: 10/05/22 10:30

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		10/13/22 14:57	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/13/22 14:57	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/13/22 14:57	1
Tetrachloroethene	**0.54**	**J**	2.0	1.0	0.35	ug/L		10/13/22 14:57	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/13/22 14:57	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/13/22 14:57	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/13/22 14:57	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/13/22 14:57	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/13/22 14:57	1
Trichloroethene	**0.29**	**J**	1.0	0.50	0.20	ug/L		10/13/22 14:57	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/13/22 14:57	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/13/22 14:57	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/13/22 14:57	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/13/22 14:57	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/13/22 14:57	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/13/22 14:57	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/13/22 14:57	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/13/22 14:57	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/13/22 14:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*89 - 112*		*10/13/22 14:57*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*10/13/22 14:57*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*10/13/22 14:57*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 119*		*10/13/22 14:57*	*1*

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**26**	**J**	100	50	20	ug/L		10/07/22 15:29	1
Manganese	**6.8**	**J**	10	5.0	1.3	ug/L		10/07/22 15:29	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**9.7**		5.0	3.0	0.86	ug/L		10/10/22 19:30	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Job ID: 680-222340-1

Client Sample ID: G6M-13-05X-FAL22
Date Collected: 10/03/22 14:05
Date Received: 10/05/22 10:30

Lab Sample ID: 680-222340-5
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		10/13/22 15:16	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/13/22 15:16	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/13/22 15:16	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/13/22 15:16	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/13/22 15:16	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/13/22 15:16	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/13/22 15:16	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/13/22 15:16	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/13/22 15:16	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/13/22 15:16	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/13/22 15:16	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/13/22 15:16	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/13/22 15:16	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/13/22 15:16	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/13/22 15:16	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/13/22 15:16	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/13/22 15:16	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/13/22 15:16	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/13/22 15:16	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/13/22 15:16	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/13/22 15:16	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/13/22 15:16	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/13/22 15:16	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/13/22 15:16	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/13/22 15:16	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/13/22 15:16	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/13/22 15:16	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/13/22 15:16	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/13/22 15:16	1
cis-1,2-Dichloroethene	**12**		2.0	1.0	0.25	ug/L		10/13/22 15:16	1
trans-1,2-Dichloroethene	**0.57**	**J**	2.0	1.0	0.34	ug/L		10/13/22 15:16	1
1,2-Dichloroethene, Total	**12**		2.0	1.0	0.37	ug/L		10/13/22 15:16	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/13/22 15:16	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/13/22 15:16	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/13/22 15:16	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/13/22 15:16	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/13/22 15:16	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/13/22 15:16	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/13/22 15:16	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/13/22 15:16	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/13/22 15:16	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/13/22 15:16	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/13/22 15:16	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/13/22 15:16	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/13/22 15:16	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/13/22 15:16	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/13/22 15:16	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/13/22 15:16	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/13/22 15:16	1

Client Sample ID: G6M-13-05X-FAL22
Lab Sample ID: 680-222340-5

Date Collected: 10/03/22 14:05
Matrix: Water
Date Received: 10/05/22 10:30

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		10/13/22 15:16	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/13/22 15:16	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/13/22 15:16	1
Tetrachloroethene	**24**		2.0	1.0	0.35	ug/L		10/13/22 15:16	1
Toluene	**0.34**	**J**	2.0	1.0	0.25	ug/L		10/13/22 15:16	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/13/22 15:16	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/13/22 15:16	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/13/22 15:16	1
1,1,2-Trichloroethane	1.0	U M	2.0	1.0	0.32	ug/L		10/13/22 15:16	1
Trichloroethene	**12**		1.0	0.50	0.20	ug/L		10/13/22 15:16	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/13/22 15:16	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/13/22 15:16	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/13/22 15:16	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/13/22 15:16	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/13/22 15:16	1
Vinyl chloride	**12**		2.0	1.0	0.40	ug/L		10/13/22 15:16	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/13/22 15:16	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/13/22 15:16	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/13/22 15:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*89 - 112*		*10/13/22 15:16*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*10/13/22 15:16*	*1*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*		*10/13/22 15:16*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 119*		*10/13/22 15:16*	*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		10/14/22 22:36	1
Ethylene	**12**		1.0	0.71	0.31	ug/L		10/14/22 22:36	1
Methane (TCD)	**16000**		390	77	39	ug/L		10/14/22 22:36	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		10/21/22 01:27	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**68000**		100	50	20	ug/L		10/07/22 15:34	1
Manganese	**7100**		10	5.0	1.3	ug/L		10/07/22 15:34	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**110**		5.0	3.0	0.86	ug/L		10/10/22 19:36	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		10/14/22 16:20	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	0.025	U	0.050	0.025	0.010	mg/L		10/08/22 14:11	1
Sulfide (SW846 9034)	1.7	U	2.5	1.7	0.83	mg/L		10/06/22 14:12	1

Client: Seres Engineering & Services LLC
Job ID: 680-222340-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-13-05X-FAL22
Lab Sample ID: 680-222340-5
Date Collected: 10/03/22 14:05
Matrix: Water
Date Received: 10/05/22 10:30

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon (SW846 9060)	3.9		1.0	1.0	0.50	mg/L		10/17/22 22:24	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Job ID: 680-222340-1

Client Sample ID: AOC50-DUP04-FAL22
Date Collected: 10/04/22 14:30
Date Received: 10/05/22 10:30

Lab Sample ID: 680-222340-6
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		10/13/22 17:29	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/13/22 17:29	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/13/22 17:29	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/13/22 17:29	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/13/22 17:29	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/13/22 17:29	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/13/22 17:29	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/13/22 17:29	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/13/22 17:29	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/13/22 17:29	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/13/22 17:29	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/13/22 17:29	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/13/22 17:29	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/13/22 17:29	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/13/22 17:29	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/13/22 17:29	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/13/22 17:29	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/13/22 17:29	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/13/22 17:29	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/13/22 17:29	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/13/22 17:29	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/13/22 17:29	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/13/22 17:29	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/13/22 17:29	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/13/22 17:29	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/13/22 17:29	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/13/22 17:29	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/13/22 17:29	1
1,2-Dichloroethane	1.0	U	2.0	1.0	0.25	ug/L		10/13/22 17:29	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/13/22 17:29	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/13/22 17:29	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/13/22 17:29	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/13/22 17:29	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/13/22 17:29	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/13/22 17:29	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/13/22 17:29	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/13/22 17:29	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/13/22 17:29	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/13/22 17:29	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/13/22 17:29	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/13/22 17:29	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/13/22 17:29	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/13/22 17:29	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/13/22 17:29	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/13/22 17:29	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/13/22 17:29	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/13/22 17:29	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/13/22 17:29	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/13/22 17:29	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Job ID: 680-222340-1

Client Sample ID: AOC50-DUP04-FAL22
Date Collected: 10/04/22 14:30
Date Received: 10/05/22 10:30

Lab Sample ID: 680-222340-6
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		10/13/22 17:29	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/13/22 17:29	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/13/22 17:29	1
Tetrachloroethene	**0.41**	**J**	2.0	1.0	0.35	ug/L		10/13/22 17:29	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/13/22 17:29	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/13/22 17:29	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/13/22 17:29	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/13/22 17:29	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/13/22 17:29	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/13/22 17:29	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/13/22 17:29	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/13/22 17:29	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/13/22 17:29	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/13/22 17:29	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/13/22 17:29	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/13/22 17:29	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/13/22 17:29	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/13/22 17:29	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/13/22 17:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*89 - 112*		*10/13/22 17:29*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*		*10/13/22 17:29*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*10/13/22 17:29*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 119*		*10/13/22 17:29*	*1*

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**3000**		100	50	20	ug/L		10/07/22 15:37	1
Manganese	**210**		10	5.0	1.3	ug/L		10/07/22 15:37	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**32**		5.0	3.0	0.86	ug/L		10/10/22 19:44	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Job ID: 680-222340-1

Client Sample ID: G6M-02-08X-FAL22
Date Collected: 10/04/22 10:50
Date Received: 10/05/22 10:30

Lab Sample ID: 680-222340-7
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		10/13/22 15:35	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/13/22 15:35	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/13/22 15:35	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/13/22 15:35	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/13/22 15:35	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/13/22 15:35	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/13/22 15:35	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/13/22 15:35	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/13/22 15:35	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/13/22 15:35	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/13/22 15:35	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/13/22 15:35	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/13/22 15:35	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/13/22 15:35	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/13/22 15:35	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/13/22 15:35	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/13/22 15:35	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/13/22 15:35	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/13/22 15:35	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/13/22 15:35	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/13/22 15:35	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/13/22 15:35	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/13/22 15:35	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/13/22 15:35	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/13/22 15:35	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/13/22 15:35	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/13/22 15:35	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/13/22 15:35	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/13/22 15:35	1
cis-1,2-Dichloroethene	**0.91**	**J**	2.0	1.0	0.25	ug/L		10/13/22 15:35	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/13/22 15:35	1
1,2-Dichloroethene, Total	**0.91**	**J**	2.0	1.0	0.37	ug/L		10/13/22 15:35	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/13/22 15:35	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/13/22 15:35	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/13/22 15:35	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/13/22 15:35	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/13/22 15:35	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/13/22 15:35	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/13/22 15:35	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/13/22 15:35	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/13/22 15:35	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/13/22 15:35	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/13/22 15:35	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/13/22 15:35	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/13/22 15:35	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/13/22 15:35	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/13/22 15:35	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/13/22 15:35	1
N-Propylbenzene	1.0	U M	2.0	1.0	0.41	ug/L		10/13/22 15:35	1

Client Sample ID: G6M-02-08X-FAL22
Lab Sample ID: 680-222340-7

Date Collected: 10/04/22 10:50
Matrix: Water
Date Received: 10/05/22 10:30

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		10/13/22 15:35	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/13/22 15:35	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/13/22 15:35	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/13/22 15:35	1
Toluene	**3.8**		2.0	1.0	0.25	ug/L		10/13/22 15:35	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/13/22 15:35	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/13/22 15:35	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/13/22 15:35	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/13/22 15:35	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/13/22 15:35	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/13/22 15:35	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/13/22 15:35	1
1,2,4-Trimethylbenzene	**0.77**	**J**	2.0	1.0	0.43	ug/L		10/13/22 15:35	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/13/22 15:35	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/13/22 15:35	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/13/22 15:35	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/13/22 15:35	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/13/22 15:35	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/13/22 15:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*89 - 112*		*10/13/22 15:35*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*		*10/13/22 15:35*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*10/13/22 15:35*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 119*		*10/13/22 15:35*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**3.4**		1.1	0.76	0.30	ug/L		10/14/22 22:49	1
Ethylene	0.71	U	1.0	0.71	0.31	ug/L		10/14/22 22:49	1
Methane (TCD)	**28000**		390	77	39	ug/L		10/14/22 22:49	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**1.1**		1.0	1.0	0.40	mg/L		10/21/22 01:40	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		10/07/22 15:40	1
Manganese	**240**		10	5.0	1.3	ug/L		10/07/22 15:40	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**210**		5.0	3.0	0.86	ug/L		10/10/22 19:47	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**52**		5.0	5.0	2.2	mg/L		10/11/22 16:50	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	0.025	U	0.050	0.025	0.010	mg/L		10/08/22 14:12	1
Sulfide (SW846 9034)	1.7	U	2.5	1.7	0.83	mg/L		10/06/22 14:12	1

Client: Seres Engineering & Services LLC
Job ID: 680-222340-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-02-08X-FAL22
Lab Sample ID: 680-222340-7
Date Collected: 10/04/22 10:50
Matrix: Water
Date Received: 10/05/22 10:30

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon (SW846 9060)	15		1.0	1.0	0.50	mg/L		10/17/22 22:40	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Job ID: 680-222340-1

Client Sample ID: G6M-13-06X-FAL22
Date Collected: 10/03/22 15:55
Date Received: 10/05/22 10:30

Lab Sample ID: 680-222340-8
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	**28**		25	10	3.7	ug/L		10/13/22 17:48	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/13/22 17:48	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/13/22 17:48	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/13/22 17:48	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/13/22 17:48	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/13/22 17:48	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/13/22 17:48	1
2-Butanone (MEK)	**89**		25	20	6.4	ug/L		10/13/22 17:48	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/13/22 17:48	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/13/22 17:48	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/13/22 17:48	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/13/22 17:48	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/13/22 17:48	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/13/22 17:48	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/13/22 17:48	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/13/22 17:48	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/13/22 17:48	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/13/22 17:48	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/13/22 17:48	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/13/22 17:48	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/13/22 17:48	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/13/22 17:48	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/13/22 17:48	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/13/22 17:48	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/13/22 17:48	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/13/22 17:48	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/13/22 17:48	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/13/22 17:48	1
1,2-Dichloroethane	1.0	U	2.0	1.0	0.25	ug/L		10/13/22 17:48	1
cis-1,2-Dichloroethene	1.0	U M	2.0	1.0	0.25	ug/L		10/13/22 17:48	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/13/22 17:48	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/13/22 17:48	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/13/22 17:48	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/13/22 17:48	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/13/22 17:48	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/13/22 17:48	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/13/22 17:48	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/13/22 17:48	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/13/22 17:48	1
Ethylbenzene	**0.97**	**J**	1.0	0.50	0.20	ug/L		10/13/22 17:48	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/13/22 17:48	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/13/22 17:48	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/13/22 17:48	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/13/22 17:48	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/13/22 17:48	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/13/22 17:48	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/13/22 17:48	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/13/22 17:48	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/13/22 17:48	1

Client Sample ID: G6M-13-06X-FAL22
Lab Sample ID: 680-222340-8

Date Collected: 10/03/22 15:55
Matrix: Water
Date Received: 10/05/22 10:30

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		10/13/22 17:48	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/13/22 17:48	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/13/22 17:48	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/13/22 17:48	1
Toluene	**7.4**		2.0	1.0	0.25	ug/L		10/13/22 17:48	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/13/22 17:48	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/13/22 17:48	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/13/22 17:48	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/13/22 17:48	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/13/22 17:48	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/13/22 17:48	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/13/22 17:48	1
1,2,4-Trimethylbenzene	**2.0**		2.0	1.0	0.43	ug/L		10/13/22 17:48	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/13/22 17:48	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/13/22 17:48	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/13/22 17:48	1
o-Xylene	**0.38**	**J**	2.0	1.0	0.26	ug/L		10/13/22 17:48	1
m-Xylene & p-Xylene	**0.56**	**J**	2.0	1.0	0.49	ug/L		10/13/22 17:48	1
Xylenes, Total	**0.94**	**J**	2.0	1.0	0.49	ug/L		10/13/22 17:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*89 - 112*		*10/13/22 17:48*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*		*10/13/22 17:48*	*1*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*		*10/13/22 17:48*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*10/13/22 17:48*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**11**		1.1	0.76	0.30	ug/L		10/14/22 23:02	1
Ethylene	**3.4**		1.0	0.71	0.31	ug/L		10/14/22 23:02	1
Methane (TCD)	**16000**		390	77	39	ug/L		10/14/22 23:02	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		10/21/22 01:52	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**160000**		100	50	20	ug/L		10/07/22 15:47	1
Manganese	**1100**		10	5.0	1.3	ug/L		10/07/22 15:47	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**360**		5.0	3.0	0.86	ug/L		10/10/22 19:49	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**78**		5.0	5.0	2.2	mg/L		10/10/22 18:48	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	**0.027**	**J**	0.050	0.025	0.010	mg/L		10/08/22 14:13	1
Sulfide (SW846 9034)	1.7	U	2.5	1.7	0.83	mg/L		10/06/22 14:12	1

Client: Seres Engineering & Services LLC
Job ID: 680-222340-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-13-06X-FAL22
Lab Sample ID: 680-222340-8
Date Collected: 10/03/22 15:55
Matrix: Water
Date Received: 10/05/22 10:30

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon (SW846 9060)	69	D	2.0	2.0	1.0	mg/L		10/17/22 22:57	2

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Job ID: 680-222340-1

Client Sample ID: G6M-95-19X-FAL22
Date Collected: 10/04/22 12:50
Date Received: 10/05/22 10:30

Lab Sample ID: 680-222340-9
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		10/13/22 17:10	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/13/22 17:10	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/13/22 17:10	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/13/22 17:10	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/13/22 17:10	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/13/22 17:10	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/13/22 17:10	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/13/22 17:10	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/13/22 17:10	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/13/22 17:10	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/13/22 17:10	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/13/22 17:10	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/13/22 17:10	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/13/22 17:10	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/13/22 17:10	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/13/22 17:10	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/13/22 17:10	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/13/22 17:10	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/13/22 17:10	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/13/22 17:10	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/13/22 17:10	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/13/22 17:10	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/13/22 17:10	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/13/22 17:10	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/13/22 17:10	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/13/22 17:10	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/13/22 17:10	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/13/22 17:10	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/13/22 17:10	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/13/22 17:10	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/13/22 17:10	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/13/22 17:10	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/13/22 17:10	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/13/22 17:10	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/13/22 17:10	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/13/22 17:10	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/13/22 17:10	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/13/22 17:10	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/13/22 17:10	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/13/22 17:10	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/13/22 17:10	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/13/22 17:10	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/13/22 17:10	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/13/22 17:10	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/13/22 17:10	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/13/22 17:10	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/13/22 17:10	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/13/22 17:10	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/13/22 17:10	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Job ID: 680-222340-1

Client Sample ID: G6M-95-19X-FAL22
Date Collected: 10/04/22 12:50
Date Received: 10/05/22 10:30

Lab Sample ID: 680-222340-9
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		10/13/22 17:10	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/13/22 17:10	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/13/22 17:10	1
Tetrachloroethene	**1.4**	**J**	2.0	1.0	0.35	ug/L		10/13/22 17:10	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/13/22 17:10	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/13/22 17:10	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/13/22 17:10	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/13/22 17:10	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/13/22 17:10	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/13/22 17:10	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/13/22 17:10	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/13/22 17:10	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/13/22 17:10	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/13/22 17:10	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/13/22 17:10	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/13/22 17:10	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/13/22 17:10	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/13/22 17:10	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/13/22 17:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*89 - 112*		*10/13/22 17:10*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*		*10/13/22 17:10*	*1*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*		*10/13/22 17:10*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 119*		*10/13/22 17:10*	*1*

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Job ID: 680-222340-1

Client Sample ID: G6M-95-20X-FAL22
Date Collected: 10/04/22 14:30
Date Received: 10/05/22 10:30

Lab Sample ID: 680-222340-10
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		10/15/22 16:59	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/15/22 16:59	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/15/22 16:59	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/15/22 16:59	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/15/22 16:59	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/15/22 16:59	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/15/22 16:59	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/15/22 16:59	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/15/22 16:59	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/15/22 16:59	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/15/22 16:59	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/15/22 16:59	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/15/22 16:59	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/15/22 16:59	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/15/22 16:59	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/15/22 16:59	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/15/22 16:59	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/15/22 16:59	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/15/22 16:59	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/15/22 16:59	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/15/22 16:59	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/15/22 16:59	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/15/22 16:59	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/15/22 16:59	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/15/22 16:59	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/15/22 16:59	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/15/22 16:59	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/15/22 16:59	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/15/22 16:59	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/15/22 16:59	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/15/22 16:59	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/15/22 16:59	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/15/22 16:59	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/15/22 16:59	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/15/22 16:59	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/15/22 16:59	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/15/22 16:59	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/15/22 16:59	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/15/22 16:59	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/15/22 16:59	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/15/22 16:59	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/15/22 16:59	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/15/22 16:59	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/15/22 16:59	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/15/22 16:59	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/15/22 16:59	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/15/22 16:59	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/15/22 16:59	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/15/22 16:59	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Job ID: 680-222340-1

Client Sample ID: G6M-95-20X-FAL22
Date Collected: 10/04/22 14:30
Date Received: 10/05/22 10:30

Lab Sample ID: 680-222340-10
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		10/15/22 16:59	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/15/22 16:59	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/15/22 16:59	1
Tetrachloroethene	**0.49**	**J**	2.0	1.0	0.35	ug/L		10/15/22 16:59	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/15/22 16:59	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/15/22 16:59	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/15/22 16:59	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/15/22 16:59	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/15/22 16:59	1
Trichloroethene	**0.20**	**J**	1.0	0.50	0.20	ug/L		10/15/22 16:59	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/15/22 16:59	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/15/22 16:59	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/15/22 16:59	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/15/22 16:59	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/15/22 16:59	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/15/22 16:59	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/15/22 16:59	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/15/22 16:59	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/15/22 16:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*89 - 112*		*10/15/22 16:59*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*		*10/15/22 16:59*	*1*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*		*10/15/22 16:59*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*10/15/22 16:59*	*1*

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**3000**		100	50	20	ug/L		10/07/22 15:50	1
Manganese	**220**		10	5.0	1.3	ug/L		10/07/22 15:50	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**32**		5.0	3.0	0.86	ug/L		10/10/22 19:52	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Job ID: 680-222340-1

Client Sample ID: AOC50-TB01-FAL22
Date Collected: 10/04/22 00:00
Date Received: 10/05/22 10:30

Lab Sample ID: 680-222340-11
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		10/15/22 15:43	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/15/22 15:43	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/15/22 15:43	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/15/22 15:43	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/15/22 15:43	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/15/22 15:43	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/15/22 15:43	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/15/22 15:43	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/15/22 15:43	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/15/22 15:43	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/15/22 15:43	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/15/22 15:43	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/15/22 15:43	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/15/22 15:43	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/15/22 15:43	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/15/22 15:43	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/15/22 15:43	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/15/22 15:43	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/15/22 15:43	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/15/22 15:43	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/15/22 15:43	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/15/22 15:43	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/15/22 15:43	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/15/22 15:43	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/15/22 15:43	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/15/22 15:43	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/15/22 15:43	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/15/22 15:43	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/15/22 15:43	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/15/22 15:43	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/15/22 15:43	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/15/22 15:43	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/15/22 15:43	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/15/22 15:43	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/15/22 15:43	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/15/22 15:43	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/15/22 15:43	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/15/22 15:43	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/15/22 15:43	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/15/22 15:43	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/15/22 15:43	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/15/22 15:43	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/15/22 15:43	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/15/22 15:43	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/15/22 15:43	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/15/22 15:43	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/15/22 15:43	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/15/22 15:43	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/15/22 15:43	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Job ID: 680-222340-1

Client Sample ID: AOC50-TB01-FAL22
Date Collected: 10/04/22 00:00
Date Received: 10/05/22 10:30

Lab Sample ID: 680-222340-11
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		10/15/22 15:43	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/15/22 15:43	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/15/22 15:43	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/15/22 15:43	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/15/22 15:43	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/15/22 15:43	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/15/22 15:43	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/15/22 15:43	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/15/22 15:43	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/15/22 15:43	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/15/22 15:43	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/15/22 15:43	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/15/22 15:43	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/15/22 15:43	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/15/22 15:43	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/15/22 15:43	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/15/22 15:43	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/15/22 15:43	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/15/22 15:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*89 - 112*		*10/15/22 15:43*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*10/15/22 15:43*	*1*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*		*10/15/22 15:43*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*10/15/22 15:43*	*1*

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Job ID: 680-222340-1

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

Lab Sample ID: MB 680-744932/8
Matrix: Water
Analysis Batch: 744932

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		10/13/22 13:12	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/13/22 13:12	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/13/22 13:12	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/13/22 13:12	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/13/22 13:12	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/13/22 13:12	1
Bromomethane	10	U	20	10	3.7	ug/L		10/13/22 13:12	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/13/22 13:12	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/13/22 13:12	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/13/22 13:12	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/13/22 13:12	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/13/22 13:12	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/13/22 13:12	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/13/22 13:12	1
Chloroethane	10	U	20	10	4.6	ug/L		10/13/22 13:12	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/13/22 13:12	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/13/22 13:12	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/13/22 13:12	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/13/22 13:12	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/13/22 13:12	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/13/22 13:12	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/13/22 13:12	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/13/22 13:12	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/13/22 13:12	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/13/22 13:12	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/13/22 13:12	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/13/22 13:12	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/13/22 13:12	1
1,2-Dichloroethane	1.0	U	2.0	1.0	0.25	ug/L		10/13/22 13:12	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/13/22 13:12	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/13/22 13:12	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/13/22 13:12	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/13/22 13:12	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/13/22 13:12	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/13/22 13:12	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/13/22 13:12	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/13/22 13:12	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/13/22 13:12	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/13/22 13:12	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/13/22 13:12	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/13/22 13:12	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/13/22 13:12	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/13/22 13:12	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/13/22 13:12	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/13/22 13:12	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/13/22 13:12	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/13/22 13:12	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/13/22 13:12	1

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

Lab Sample ID: MB 680-744932/8
Matrix: Water
Analysis Batch: 744932

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		10/13/22 13:12	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/13/22 13:12	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/13/22 13:12	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/13/22 13:12	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/13/22 13:12	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/13/22 13:12	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/13/22 13:12	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/13/22 13:12	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/13/22 13:12	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/13/22 13:12	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/13/22 13:12	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/13/22 13:12	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/13/22 13:12	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/13/22 13:12	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/13/22 13:12	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/13/22 13:12	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/13/22 13:12	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/13/22 13:12	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/13/22 13:12	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/13/22 13:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*89 - 112*		*10/13/22 13:12*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*81 - 118*		*10/13/22 13:12*	*1*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*		*10/13/22 13:12*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 119*		*10/13/22 13:12*	*1*

Lab Sample ID: LCS 680-744932/4
Matrix: Water
Analysis Batch: 744932

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	250	228		ug/L		91	39 - 160
Benzene	50.0	47.4		ug/L		95	79 - 120
Bromobenzene	50.0	48.1		ug/L		96	80 - 120
Chlorobromomethane	50.0	49.0		ug/L		98	78 - 123
Dichlorobromomethane	50.0	48.4		ug/L		97	79 - 125
Bromoform	50.0	47.4		ug/L		95	66 - 130
Bromomethane	50.0	65.6		ug/L		131	53 - 141
2-Butanone (MEK)	250	249		ug/L		100	56 - 143
n-Butylbenzene	50.0	48.8		ug/L		98	75 - 128
sec-Butylbenzene	50.0	49.9		ug/L		100	77 - 126
tert-Butylbenzene	50.0	49.7		ug/L		99	78 - 124
Carbon disulfide	50.0	47.1		ug/L		94	64 - 133
Carbon tetrachloride	50.0	48.1		ug/L		96	72 - 136
Chlorobenzene	50.0	47.7		ug/L		95	82 - 118
Chloroethane	50.0	122	Q	ug/L		245	60 - 138
Chloroform	50.0	47.3		ug/L		95	79 - 124

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

Lab Sample ID: LCS 680-744932/4
Matrix: Water
Analysis Batch: 744932

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	47.5		ug/L		95	50 - 139
2-Chlorotoluene	50.0	47.3		ug/L		95	79 - 122
4-Chlorotoluene	50.0	49.1		ug/L		98	78 - 122
Chlorodibromomethane	50.0	49.2		ug/L		98	74 - 126
1,2-Dibromo-3-Chloropropane	50.0	45.5		ug/L		91	62 - 128
Ethylene Dibromide	50.0	50.8		ug/L		102	75 - 127
Dibromomethane	50.0	50.3		ug/L		101	79 - 123
1,2-Dichlorobenzene	50.0	48.0		ug/L		96	80 - 119
1,3-Dichlorobenzene	50.0	48.4		ug/L		97	80 - 119
1,4-Dichlorobenzene	50.0	46.7		ug/L		93	79 - 118
Dichlorodifluoromethane	50.0	43.5		ug/L		87	32 - 152
1,1-Dichloroethane	50.0	48.0		ug/L		96	77 - 125
1,2-Dichloroethane	50.0	50.0		ug/L		100	73 - 128
cis-1,2-Dichloroethene	50.0	48.6		ug/L		97	78 - 123
trans-1,2-Dichloroethene	50.0	48.1		ug/L		96	75 - 124
1,2-Dichloroethene, Total	100	96.7		ug/L		97	79 - 121
1,1-Dichloroethene	50.0	44.9		ug/L		90	71 - 131
1,2-Dichloropropane	50.0	47.8		ug/L		96	78 - 122
1,3-Dichloropropane	50.0	48.8		ug/L		98	80 - 119
2,2-Dichloropropane	50.0	44.7		ug/L		89	60 - 139
1,1-Dichloropropene	50.0	47.9		ug/L		96	79 - 125
cis-1,3-Dichloropropene	50.0	48.8		ug/L		98	75 - 124
trans-1,3-Dichloropropene	50.0	50.6		ug/L		101	73 - 127
Ethylbenzene	50.0	47.5		ug/L		95	79 - 121
Hexachlorobutadiene	50.0	46.6		ug/L		93	66 - 134
2-Hexanone	250	225		ug/L		90	57 - 139
Isopropylbenzene	50.0	47.0		ug/L		94	72 - 131
4-Isopropyltoluene	50.0	47.0		ug/L		94	77 - 127
Methylene Chloride	50.0	48.8		ug/L		98	74 - 124
4-Methyl-2-pentanone (MIBK)	250	223		ug/L		89	67 - 130
Methyl tert-butyl ether	50.0	49.6		ug/L		99	71 - 124
Naphthalene	50.0	47.8		ug/L		96	61 - 128
N-Propylbenzene	50.0	48.3		ug/L		97	76 - 126
Styrene	50.0	50.8		ug/L		102	78 - 123
1,1,1,2-Tetrachloroethane	50.0	47.7		ug/L		95	78 - 124
1,1,2,2-Tetrachloroethane	50.0	48.6		ug/L		97	71 - 121
Tetrachloroethene	50.0	46.3		ug/L		93	74 - 129
Toluene	50.0	48.0		ug/L		96	80 - 121
1,2,3-Trichlorobenzene	50.0	47.6		ug/L		95	69 - 129
1,2,4-Trichlorobenzene	50.0	48.1		ug/L		96	69 - 130
1,1,1-Trichloroethane	50.0	46.0		ug/L		92	74 - 131
1,1,2-Trichloroethane	50.0	46.5		ug/L		93	80 - 119
Trichloroethene	50.0	48.8		ug/L		98	79 - 123
Trichlorofluoromethane	50.0	48.6		ug/L		97	65 - 141
1,2,3-Trichloropropane	50.0	49.0		ug/L		98	73 - 122
1,2,4-Trimethylbenzene	50.0	47.5		ug/L		95	76 - 124
1,3,5-Trimethylbenzene	50.0	51.0		ug/L		102	75 - 124
Vinyl acetate	100	111		ug/L		111	54 - 146
Vinyl chloride	50.0	47.7		ug/L		95	58 - 137

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

Lab Sample ID: LCS 680-744932/4
Matrix: Water
Analysis Batch: 744932

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	47.8		ug/L		96	78 - 122
m-Xylene & p-Xylene	50.0	47.9		ug/L		96	80 - 121
Xylenes, Total	100	95.7		ug/L		96	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*99*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*97*		*81 - 118*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*
Dibromofluoromethane (Surr)	*99*		*80 - 119*

Lab Sample ID: LCSD 680-744932/5
Matrix: Water
Analysis Batch: 744932

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	237		ug/L		95	39 - 160	4	20
Benzene	50.0	48.6		ug/L		97	79 - 120	2	20
Bromobenzene	50.0	48.3		ug/L		97	80 - 120	0	20
Chlorobromomethane	50.0	50.3		ug/L		101	78 - 123	3	20
Dichlorobromomethane	50.0	49.4		ug/L		99	79 - 125	2	20
Bromoform	50.0	47.6		ug/L		95	66 - 130	0	20
Bromomethane	50.0	67.9		ug/L		136	53 - 141	3	20
2-Butanone (MEK)	250	261		ug/L		104	56 - 143	4	20
n-Butylbenzene	50.0	49.0		ug/L		98	75 - 128	0	20
sec-Butylbenzene	50.0	50.1		ug/L		100	77 - 126	0	20
tert-Butylbenzene	50.0	49.9		ug/L		100	78 - 124	0	20
Carbon disulfide	50.0	48.2		ug/L		96	64 - 133	2	20
Carbon tetrachloride	50.0	48.2		ug/L		96	72 - 136	0	20
Chlorobenzene	50.0	48.0		ug/L		96	82 - 118	1	20
Chloroethane	50.0	128	Q	ug/L		256	60 - 138	4	20
Chloroform	50.0	48.7		ug/L		97	79 - 124	3	20
Chloromethane	50.0	50.1		ug/L		100	50 - 139	5	20
2-Chlorotoluene	50.0	48.5		ug/L		97	79 - 122	3	20
4-Chlorotoluene	50.0	49.8		ug/L		100	78 - 122	2	20
Chlorodibromomethane	50.0	50.6		ug/L		101	74 - 126	3	20
1,2-Dibromo-3-Chloropropane	50.0	46.6		ug/L		93	62 - 128	2	20
Ethylene Dibromide	50.0	52.7		ug/L		105	75 - 127	4	20
Dibromomethane	50.0	52.6		ug/L		105	79 - 123	5	20
1,2-Dichlorobenzene	50.0	48.1		ug/L		96	80 - 119	0	20
1,3-Dichlorobenzene	50.0	48.8		ug/L		98	80 - 119	1	20
1,4-Dichlorobenzene	50.0	47.3		ug/L		95	79 - 118	1	20
Dichlorodifluoromethane	50.0	45.8		ug/L		92	32 - 152	5	20
1,1-Dichloroethane	50.0	48.8		ug/L		98	77 - 125	2	20
1,2-Dichloroethane	50.0	52.6		ug/L		105	73 - 128	5	20
cis-1,2-Dichloroethene	50.0	49.7		ug/L		99	78 - 123	2	20
trans-1,2-Dichloroethene	50.0	49.2		ug/L		98	75 - 124	2	20
1,2-Dichloroethene, Total	100	98.9		ug/L		99	79 - 121	2	20
1,1-Dichloroethene	50.0	45.3		ug/L		91	71 - 131	1	20

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

Lab Sample ID: LCSD 680-744932/5
Matrix: Water
Analysis Batch: 744932

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	49.1		ug/L		98	78 - 122	3	20
1,3-Dichloropropane	50.0	51.0		ug/L		102	80 - 119	4	20
2,2-Dichloropropane	50.0	44.7		ug/L		89	60 - 139	0	20
1,1-Dichloropropene	50.0	48.8		ug/L		98	79 - 125	2	20
cis-1,3-Dichloropropene	50.0	50.8		ug/L		102	75 - 124	4	20
trans-1,3-Dichloropropene	50.0	52.5		ug/L		105	73 - 127	4	20
Ethylbenzene	50.0	48.3		ug/L		97	79 - 121	2	20
Hexachlorobutadiene	50.0	45.0		ug/L		90	66 - 134	3	20
2-Hexanone	250	240		ug/L		96	57 - 139	7	20
Isopropylbenzene	50.0	47.5		ug/L		95	72 - 131	1	20
4-Isopropyltoluene	50.0	46.9		ug/L		94	77 - 127	0	20
Methylene Chloride	50.0	51.3		ug/L		103	74 - 124	5	20
4-Methyl-2-pentanone (MIBK)	250	238		ug/L		95	67 - 130	7	20
Methyl tert-butyl ether	50.0	51.4		ug/L		103	71 - 124	4	20
Naphthalene	50.0	49.0		ug/L		98	61 - 128	2	20
N-Propylbenzene	50.0	48.8		ug/L		98	76 - 126	1	20
Styrene	50.0	50.9		ug/L		102	78 - 123	0	20
1,1,1,2-Tetrachloroethane	50.0	47.9		ug/L		96	78 - 124	1	20
1,1,2,2-Tetrachloroethane	50.0	50.6		ug/L		101	71 - 121	4	20
Tetrachloroethene	50.0	46.5		ug/L		93	74 - 129	0	20
Toluene	50.0	48.8		ug/L		98	80 - 121	2	20
1,2,3-Trichlorobenzene	50.0	48.3		ug/L		97	69 - 129	1	20
1,2,4-Trichlorobenzene	50.0	47.8		ug/L		96	69 - 130	1	20
1,1,1-Trichloroethane	50.0	46.6		ug/L		93	74 - 131	1	20
1,1,2-Trichloroethane	50.0	48.6		ug/L		97	80 - 119	4	20
Trichloroethene	50.0	49.5		ug/L		99	79 - 123	1	20
Trichlorofluoromethane	50.0	49.9		ug/L		100	65 - 141	3	20
1,2,3-Trichloropropane	50.0	51.8		ug/L		104	73 - 122	6	20
1,2,4-Trimethylbenzene	50.0	47.9		ug/L		96	76 - 124	1	20
1,3,5-Trimethylbenzene	50.0	51.2		ug/L		102	75 - 124	0	20
Vinyl acetate	100	119		ug/L		119	54 - 146	7	20
Vinyl chloride	50.0	49.0		ug/L		98	58 - 137	3	20
o-Xylene	50.0	48.4		ug/L		97	78 - 122	1	20
m-Xylene & p-Xylene	50.0	48.7		ug/L		97	80 - 121	2	20
Xylenes, Total	100	97.1		ug/L		97	79 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*101*		*81 - 118*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*
Dibromofluoromethane (Surr)	*101*		*80 - 119*

Lab Sample ID: 680-222340-1 MS
Matrix: Water
Analysis Batch: 744932

Client Sample ID: G6M-04-10A-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	10	U	250	213		ug/L		85	39 - 160

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

Lab Sample ID: 680-222340-1 MS
Matrix: Water
Analysis Batch: 744932

Client Sample ID: G6M-04-10A-FAL22
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	47.1		ug/L		94	79 - 120
Bromobenzene	0.50	U	50.0	47.9		ug/L		96	80 - 120
Chlorobromomethane	1.0	U	50.0	48.3		ug/L		97	78 - 123
Dichlorobromomethane	1.0	U	50.0	46.4		ug/L		93	79 - 125
Bromoform	2.0	U	50.0	46.9		ug/L		94	66 - 130
Bromomethane	10	U Q	50.0	55.2		ug/L		110	53 - 141
2-Butanone (MEK)	20	U	250	235		ug/L		94	56 - 143
n-Butylbenzene	2.0	U	50.0	50.0		ug/L		100	75 - 128
sec-Butylbenzene	2.0	U	50.0	51.4		ug/L		103	77 - 126
tert-Butylbenzene	1.0	U	50.0	50.7		ug/L		101	78 - 124
Carbon disulfide	1.0	U	50.0	49.8		ug/L		100	64 - 133
Carbon tetrachloride	1.0	U	50.0	50.6		ug/L		101	72 - 136
Chlorobenzene	0.50	U	50.0	48.0		ug/L		96	82 - 118
Chloroethane	10	U Q J1	50.0	145	J1	ug/L		289	60 - 138
Chloroform	1.0	U	50.0	47.2		ug/L		94	79 - 124
Chloromethane	2.0	U	50.0	44.1		ug/L		88	50 - 139
2-Chlorotoluene	0.50	U	50.0	47.3		ug/L		95	79 - 122
4-Chlorotoluene	1.0	U	50.0	48.2		ug/L		96	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	45.2		ug/L		90	62 - 128
Ethylene Dibromide	1.0	U	50.0	48.4		ug/L		97	75 - 127
Dibromomethane	1.0	U	50.0	48.5		ug/L		97	79 - 123
1,2-Dichlorobenzene	1.0	U	50.0	46.7		ug/L		93	80 - 119
1,3-Dichlorobenzene	1.0	U	50.0	47.6		ug/L		95	80 - 119
1,4-Dichlorobenzene	1.0	U	50.0	46.2		ug/L		92	79 - 118
Dichlorodifluoromethane	1.0	U	50.0	48.5		ug/L		97	32 - 152
1,1-Dichloroethane	1.0	U	50.0	47.4		ug/L		95	77 - 125
1,2-Dichloroethane	1.0	U	50.0	48.8		ug/L		98	73 - 128
cis-1,2-Dichloroethene	0.74	J	50.0	47.7		ug/L		94	78 - 123
trans-1,2-Dichloroethene	0.35	J	50.0	49.5		ug/L		98	75 - 124
1,2-Dichloroethene, Total	1.1	J	100	97.3		ug/L		96	79 - 121
1,1-Dichloroethene	1.0	U	50.0	48.0		ug/L		96	71 - 131
1,2-Dichloropropane	0.50	U	50.0	45.9		ug/L		92	78 - 122
1,3-Dichloropropane	1.0	U	50.0	46.9		ug/L		94	80 - 119
2,2-Dichloropropane	1.0	U	50.0	40.2		ug/L		80	60 - 139
1,1-Dichloropropene	1.0	U	50.0	49.0		ug/L		98	79 - 125
cis-1,3-Dichloropropene	1.0	U	50.0	46.4		ug/L		93	75 - 124
trans-1,3-Dichloropropene	1.0	U	50.0	47.3		ug/L		95	73 - 127
Ethylbenzene	0.50	U	50.0	48.6		ug/L		97	79 - 121
Hexachlorobutadiene	1.0	U	50.0	46.1		ug/L		92	66 - 134
2-Hexanone	10	U	250	222		ug/L		89	57 - 139
Isopropylbenzene	1.0	U	50.0	48.3		ug/L		97	72 - 131
4-Isopropyltoluene	1.0	U	50.0	47.7		ug/L		95	77 - 127
Methylene Chloride	10	U	50.0	48.4		ug/L		97	74 - 124
4-Methyl-2-pentanone (MIBK)	10	U	250	220		ug/L		88	67 - 130
Methyl tert-butyl ether	2.0	U	50.0	46.8		ug/L		94	71 - 124
Naphthalene	5.0	U	50.0	46.8		ug/L		94	61 - 128
N-Propylbenzene	1.0	U	50.0	49.2		ug/L		98	76 - 126
Styrene	1.0	U	50.0	50.2		ug/L		100	78 - 123

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

Lab Sample ID: 680-222340-1 MS
Matrix: Water
Analysis Batch: 744932

Client Sample ID: G6M-04-10A-FAL22
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	48.8		ug/L		98	78 - 124
1,1,2,2-Tetrachloroethane	1.0	U	50.0	48.1		ug/L		96	71 - 121
Tetrachloroethene	1.0	U	50.0	47.2		ug/L		94	74 - 129
Toluene	1.0	U	50.0	46.9		ug/L		94	80 - 121
1,2,3-Trichlorobenzene	2.0	U	50.0	46.2		ug/L		92	69 - 129
1,2,4-Trichlorobenzene	2.0	U	50.0	47.0		ug/L		94	69 - 130
1,1,1-Trichloroethane	0.50	U	50.0	47.2		ug/L		94	74 - 131
1,1,2-Trichloroethane	1.0	U	50.0	44.6		ug/L		89	80 - 119
Trichloroethene	0.39	J	50.0	49.6		ug/L		98	79 - 123
Trichlorofluoromethane	1.0	U J1	50.0	68.9		ug/L		138	65 - 141
1,2,3-Trichloropropane	1.0	U	50.0	48.6		ug/L		97	73 - 122
1,2,4-Trimethylbenzene	2.1		50.0	50.4		ug/L		97	76 - 124
1,3,5-Trimethylbenzene	0.79	J	50.0	51.9		ug/L		102	75 - 124
Vinyl acetate	2.0	U	100	98.3		ug/L		98	54 - 146
Vinyl chloride	1.0	U M	50.0	51.2		ug/L		102	58 - 137
o-Xylene	1.0	U	50.0	47.9		ug/L		96	78 - 122
m-Xylene & p-Xylene	1.0	U	50.0	48.5		ug/L		97	80 - 121
Xylenes, Total	1.0	U	100	96.4		ug/L		96	79 - 121

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*97*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*88*		*81 - 118*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*
Dibromofluoromethane (Surr)	*98*		*80 - 119*

Lab Sample ID: 680-222340-1 MSD
Matrix: Water
Analysis Batch: 744932

Client Sample ID: G6M-04-10A-FAL22
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	218		ug/L		87	39 - 160	2	20
Benzene	1.0	U	50.0	48.3		ug/L		97	79 - 120	2	20
Bromobenzene	0.50	U	50.0	48.6		ug/L		97	80 - 120	1	20
Chlorobromomethane	1.0	U	50.0	49.9		ug/L		100	78 - 123	3	20
Dichlorobromomethane	1.0	U	50.0	48.5		ug/L		97	79 - 125	4	20
Bromoform	2.0	U	50.0	47.7		ug/L		95	66 - 130	2	20
Bromomethane	10	U Q	50.0	61.8		ug/L		124	53 - 141	11	20
2-Butanone (MEK)	20	U	250	240		ug/L		96	56 - 143	2	20
n-Butylbenzene	2.0	U	50.0	51.9		ug/L		104	75 - 128	4	20
sec-Butylbenzene	2.0	U	50.0	52.5		ug/L		105	77 - 126	2	20
tert-Butylbenzene	1.0	U	50.0	52.7		ug/L		105	78 - 124	4	20
Carbon disulfide	1.0	U	50.0	51.8		ug/L		104	64 - 133	4	20
Carbon tetrachloride	1.0	U	50.0	51.8		ug/L		104	72 - 136	2	20
Chlorobenzene	0.50	U	50.0	49.5		ug/L		99	82 - 118	3	20
Chloroethane	10	U Q J1	50.0	148	J1	ug/L		295	60 - 138	2	20
Chloroform	1.0	U	50.0	48.5		ug/L		97	79 - 124	3	20
Chloromethane	2.0	U	50.0	44.8		ug/L		90	50 - 139	2	20
2-Chlorotoluene	0.50	U	50.0	48.9		ug/L		98	79 - 122	3	20

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

Lab Sample ID: 680-222340-1 MSD
Matrix: Water
Analysis Batch: 744932

Client Sample ID: G6M-04-10A-FAL22
Prep Type: Total/NA

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	50.1		ug/L		100	78 - 122	4	20
Chlorodibromomethane	1.0	U	50.0	49.0		ug/L		98	74 - 126	4	20
1,2-Dibromo-3-Chloropropane	5.0	U	50.0	46.3		ug/L		93	62 - 128	2	20
Ethylene Dibromide	1.0	U	50.0	49.3		ug/L		99	75 - 127	2	20
Dibromomethane	1.0	U	50.0	49.6		ug/L		99	79 - 123	2	20
1,2-Dichlorobenzene	1.0	U	50.0	48.6		ug/L		97	80 - 119	4	20
1,3-Dichlorobenzene	1.0	U	50.0	49.4		ug/L		99	80 - 119	4	20
1,4-Dichlorobenzene	1.0	U	50.0	48.4		ug/L		97	79 - 118	5	20
Dichlorodifluoromethane	1.0	U	50.0	49.1		ug/L		98	32 - 152	1	20
1,1-Dichloroethane	1.0	U	50.0	48.6		ug/L		97	77 - 125	3	20
1,2-Dichloroethane	1.0	U	50.0	50.0		ug/L		100	73 - 128	2	20
cis-1,2-Dichloroethene	0.74	J	50.0	49.5		ug/L		98	78 - 123	4	20
trans-1,2-Dichloroethene	0.35	J	50.0	51.1		ug/L		102	75 - 124	3	20
1,2-Dichloroethene, Total	1.1	J	100	101		ug/L		100	79 - 121	3	20
1,1-Dichloroethene	1.0	U	50.0	48.9		ug/L		98	71 - 131	2	20
1,2-Dichloropropane	0.50	U	50.0	47.5		ug/L		95	78 - 122	4	20
1,3-Dichloropropane	1.0	U	50.0	47.6		ug/L		95	80 - 119	2	20
2,2-Dichloropropane	1.0	U	50.0	41.5		ug/L		83	60 - 139	3	20
1,1-Dichloropropene	1.0	U	50.0	50.8		ug/L		102	79 - 125	3	20
cis-1,3-Dichloropropene	1.0	U	50.0	47.2		ug/L		94	75 - 124	2	20
trans-1,3-Dichloropropene	1.0	U	50.0	48.7		ug/L		97	73 - 127	3	20
Ethylbenzene	0.50	U	50.0	50.2		ug/L		100	79 - 121	3	20
Hexachlorobutadiene	1.0	U	50.0	47.7		ug/L		95	66 - 134	4	20
2-Hexanone	10	U	250	228		ug/L		91	57 - 139	2	20
Isopropylbenzene	1.0	U	50.0	50.0		ug/L		100	72 - 131	3	20
4-Isopropyltoluene	1.0	U	50.0	49.2		ug/L		98	77 - 127	3	20
Methylene Chloride	10	U	50.0	49.8		ug/L		100	74 - 124	3	20
4-Methyl-2-pentanone (MIBK)	10	U	250	227		ug/L		91	67 - 130	3	20
Methyl tert-butyl ether	2.0	U	50.0	48.5		ug/L		97	71 - 124	4	20
Naphthalene	5.0	U	50.0	48.8		ug/L		98	61 - 128	4	20
N-Propylbenzene	1.0	U	50.0	50.6		ug/L		101	76 - 126	3	20
Styrene	1.0	U	50.0	51.8		ug/L		104	78 - 123	3	20
1,1,1,2-Tetrachloroethane	1.0	U	50.0	49.2		ug/L		98	78 - 124	1	20
1,1,2,2-Tetrachloroethane	1.0	U	50.0	49.2		ug/L		98	71 - 121	2	20
Tetrachloroethene	1.0	U	50.0	48.3		ug/L		97	74 - 129	2	20
Toluene	1.0	U	50.0	48.5		ug/L		97	80 - 121	3	20
1,2,3-Trichlorobenzene	2.0	U	50.0	47.3		ug/L		95	69 - 129	2	20
1,2,4-Trichlorobenzene	2.0	U	50.0	47.4		ug/L		95	69 - 130	1	20
1,1,1-Trichloroethane	0.50	U	50.0	48.9		ug/L		98	74 - 131	3	20
1,1,2-Trichloroethane	1.0	U	50.0	45.1		ug/L		90	80 - 119	1	20
Trichloroethene	0.39	J	50.0	51.3		ug/L		102	79 - 123	3	20
Trichlorofluoromethane	1.0	U J1	50.0	55.5	J1	ug/L		111	65 - 141	22	20
1,2,3-Trichloropropane	1.0	U	50.0	51.0		ug/L		102	73 - 122	5	20
1,2,4-Trimethylbenzene	2.1		50.0	52.1		ug/L		100	76 - 124	3	20
1,3,5-Trimethylbenzene	0.79	J	50.0	54.1		ug/L		107	75 - 124	4	20
Vinyl acetate	2.0	U	100	102		ug/L		102	54 - 146	3	20
Vinyl chloride	1.0	U M	50.0	51.8		ug/L		104	58 - 137	1	20
o-Xylene	1.0	U	50.0	48.9		ug/L		98	78 - 122	2	20
m-Xylene & p-Xylene	1.0	U	50.0	50.6		ug/L		101	80 - 121	4	20

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

Lab Sample ID: 680-222340-1 MSD
Matrix: Water
Analysis Batch: 744932

Client Sample ID: G6M-04-10A-FAL22
Prep Type: Total/NA

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	99.5		ug/L		100	79 - 121	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*99*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*98*		*81 - 118*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*
Dibromofluoromethane (Surr)	*101*		*80 - 119*

Lab Sample ID: MB 680-745318/8
Matrix: Water
Analysis Batch: 745318

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		10/15/22 14:26	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/15/22 14:26	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/15/22 14:26	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/15/22 14:26	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/15/22 14:26	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/15/22 14:26	1
Bromomethane	10	U	20	10	3.7	ug/L		10/15/22 14:26	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/15/22 14:26	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/15/22 14:26	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/15/22 14:26	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/15/22 14:26	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/15/22 14:26	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/15/22 14:26	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/15/22 14:26	1
Chloroethane	10	U	20	10	4.6	ug/L		10/15/22 14:26	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/15/22 14:26	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/15/22 14:26	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/15/22 14:26	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/15/22 14:26	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/15/22 14:26	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/15/22 14:26	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/15/22 14:26	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/15/22 14:26	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/15/22 14:26	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/15/22 14:26	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/15/22 14:26	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/15/22 14:26	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/15/22 14:26	1
1,2-Dichloroethane	1.0	U	2.0	1.0	0.25	ug/L		10/15/22 14:26	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/15/22 14:26	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/15/22 14:26	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/15/22 14:26	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/15/22 14:26	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/15/22 14:26	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/15/22 14:26	1

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

Lab Sample ID: MB 680-745318/8
Matrix: Water
Analysis Batch: 745318

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		10/15/22 14:26	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/15/22 14:26	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/15/22 14:26	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/15/22 14:26	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/15/22 14:26	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/15/22 14:26	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/15/22 14:26	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/15/22 14:26	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/15/22 14:26	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/15/22 14:26	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/15/22 14:26	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/15/22 14:26	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/15/22 14:26	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/15/22 14:26	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/15/22 14:26	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/15/22 14:26	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/15/22 14:26	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/15/22 14:26	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/15/22 14:26	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/15/22 14:26	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/15/22 14:26	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/15/22 14:26	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/15/22 14:26	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/15/22 14:26	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/15/22 14:26	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/15/22 14:26	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/15/22 14:26	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/15/22 14:26	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/15/22 14:26	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/15/22 14:26	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/15/22 14:26	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/15/22 14:26	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/15/22 14:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*89 - 112*		*10/15/22 14:26*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*81 - 118*		*10/15/22 14:26*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*10/15/22 14:26*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 119*		*10/15/22 14:26*	*1*

Lab Sample ID: LCS 680-745318/4
Matrix: Water
Analysis Batch: 745318

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	250	217		ug/L		87	39 - 160
Benzene	50.0	48.7		ug/L		97	79 - 120
Bromobenzene	50.0	50.6		ug/L		101	80 - 120

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

Lab Sample ID: LCS 680-745318/4
Matrix: Water
Analysis Batch: 745318

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	52.2		ug/L		104	78 - 123
Dichlorobromomethane	50.0	49.7		ug/L		99	79 - 125
Bromoform	50.0	48.9		ug/L		98	66 - 130
Bromomethane	50.0	65.7		ug/L		131	53 - 141
2-Butanone (MEK)	250	243		ug/L		97	56 - 143
n-Butylbenzene	50.0	48.6		ug/L		97	75 - 128
sec-Butylbenzene	50.0	52.1		ug/L		104	77 - 126
tert-Butylbenzene	50.0	52.0		ug/L		104	78 - 124
Carbon disulfide	50.0	50.2		ug/L		100	64 - 133
Carbon tetrachloride	50.0	49.2		ug/L		98	72 - 136
Chlorobenzene	50.0	49.1		ug/L		98	82 - 118
Chloroethane	50.0	138	Q	ug/L		277	60 - 138
Chloroform	50.0	49.1		ug/L		98	79 - 124
Chloromethane	50.0	50.3		ug/L		101	50 - 139
2-Chlorotoluene	50.0	49.0		ug/L		98	79 - 122
4-Chlorotoluene	50.0	50.0		ug/L		100	78 - 122
Chlorodibromomethane	50.0	51.8		ug/L		104	74 - 126
1,2-Dibromo-3-Chloropropane	50.0	45.0		ug/L		90	62 - 128
Ethylene Dibromide	50.0	52.7		ug/L		105	75 - 127
Dibromomethane	50.0	52.6		ug/L		105	79 - 123
1,2-Dichlorobenzene	50.0	48.4		ug/L		97	80 - 119
1,3-Dichlorobenzene	50.0	49.4		ug/L		99	80 - 119
1,4-Dichlorobenzene	50.0	47.5		ug/L		95	79 - 118
Dichlorodifluoromethane	50.0	46.1		ug/L		92	32 - 152
1,1-Dichloroethane	50.0	49.4		ug/L		99	77 - 125
1,2-Dichloroethane	50.0	51.9		ug/L		104	73 - 128
cis-1,2-Dichloroethene	50.0	49.6		ug/L		99	78 - 123
trans-1,2-Dichloroethene	50.0	51.4		ug/L		103	75 - 124
1,2-Dichloroethene, Total	100	101		ug/L		101	79 - 121
1,1-Dichloroethene	50.0	47.6		ug/L		95	71 - 131
1,2-Dichloropropane	50.0	48.6		ug/L		97	78 - 122
1,3-Dichloropropane	50.0	51.0		ug/L		102	80 - 119
2,2-Dichloropropane	50.0	46.6		ug/L		93	60 - 139
1,1-Dichloropropene	50.0	49.1		ug/L		98	79 - 125
cis-1,3-Dichloropropene	50.0	50.9		ug/L		102	75 - 124
trans-1,3-Dichloropropene	50.0	52.4		ug/L		105	73 - 127
Ethylbenzene	50.0	49.3		ug/L		99	79 - 121
Hexachlorobutadiene	50.0	46.2		ug/L		92	66 - 134
2-Hexanone	250	217		ug/L		87	57 - 139
Isopropylbenzene	50.0	49.4		ug/L		99	72 - 131
4-Isopropyltoluene	50.0	47.7		ug/L		95	77 - 127
Methylene Chloride	50.0	51.6		ug/L		103	74 - 124
4-Methyl-2-pentanone (MIBK)	250	217		ug/L		87	67 - 130
Methyl tert-butyl ether	50.0	51.5		ug/L		103	71 - 124
Naphthalene	50.0	47.2		ug/L		94	61 - 128
N-Propylbenzene	50.0	49.8		ug/L		100	76 - 126
Styrene	50.0	52.4		ug/L		105	78 - 123
1,1,1,2-Tetrachloroethane	50.0	49.3		ug/L		99	78 - 124
1,1,2,2-Tetrachloroethane	50.0	49.4		ug/L		99	71 - 121

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

Lab Sample ID: LCS 680-745318/4
Matrix: Water
Analysis Batch: 745318

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	49.3		ug/L		99	74 - 129
Toluene	50.0	49.2		ug/L		98	80 - 121
1,2,3-Trichlorobenzene	50.0	48.8		ug/L		98	69 - 129
1,2,4-Trichlorobenzene	50.0	48.5		ug/L		97	69 - 130
1,1,1-Trichloroethane	50.0	48.0		ug/L		96	74 - 131
1,1,2-Trichloroethane	50.0	47.9		ug/L		96	80 - 119
Trichloroethene	50.0	50.7		ug/L		101	79 - 123
Trichlorofluoromethane	50.0	53.4		ug/L		107	65 - 141
1,2,3-Trichloropropane	50.0	50.1		ug/L		100	73 - 122
1,2,4-Trimethylbenzene	50.0	49.6		ug/L		99	76 - 124
1,3,5-Trimethylbenzene	50.0	52.8		ug/L		106	75 - 124
Vinyl acetate	100	110		ug/L		110	54 - 146
Vinyl chloride	50.0	51.2		ug/L		102	58 - 137
o-Xylene	50.0	49.5		ug/L		99	78 - 122
m-Xylene & p-Xylene	50.0	49.7		ug/L		99	80 - 121
Xylenes, Total	100	99.2		ug/L		99	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*103*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*101*		*81 - 118*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*
Dibromofluoromethane (Surr)	*103*		*80 - 119*

Lab Sample ID: LCSD 680-745318/5
Matrix: Water
Analysis Batch: 745318

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	203		ug/L		81	39 - 160	7	20
Benzene	50.0	47.2		ug/L		94	79 - 120	3	20
Bromobenzene	50.0	49.0		ug/L		98	80 - 120	3	20
Chlorobromomethane	50.0	48.6		ug/L		97	78 - 123	7	20
Dichlorobromomethane	50.0	47.7		ug/L		95	79 - 125	4	20
Bromoform	50.0	47.8		ug/L		96	66 - 130	2	20
Bromomethane	50.0	64.6		ug/L		129	53 - 141	2	20
2-Butanone (MEK)	250	235		ug/L		94	56 - 143	3	20
n-Butylbenzene	50.0	49.4		ug/L		99	75 - 128	2	20
sec-Butylbenzene	50.0	52.3		ug/L		105	77 - 126	0	20
tert-Butylbenzene	50.0	52.3		ug/L		105	78 - 124	1	20
Carbon disulfide	50.0	49.1		ug/L		98	64 - 133	2	20
Carbon tetrachloride	50.0	48.4		ug/L		97	72 - 136	2	20
Chlorobenzene	50.0	48.7		ug/L		97	82 - 118	1	20
Chloroethane	50.0	127	Q	ug/L		254	60 - 138	9	20
Chloroform	50.0	47.0		ug/L		94	79 - 124	4	20
Chloromethane	50.0	47.7		ug/L		95	50 - 139	5	20
2-Chlorotoluene	50.0	48.9		ug/L		98	79 - 122	0	20
4-Chlorotoluene	50.0	50.5		ug/L		101	78 - 122	1	20
Chlorodibromomethane	50.0	48.8		ug/L		98	74 - 126	6	20

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

Lab Sample ID: LCSD 680-745318/5
Matrix: Water
Analysis Batch: 745318

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	43.3		ug/L		87	62 - 128	4	20
Ethylene Dibromide	50.0	50.2		ug/L		100	75 - 127	5	20
Dibromomethane	50.0	49.5		ug/L		99	79 - 123	6	20
1,2-Dichlorobenzene	50.0	48.0		ug/L		96	80 - 119	1	20
1,3-Dichlorobenzene	50.0	48.3		ug/L		97	80 - 119	2	20
1,4-Dichlorobenzene	50.0	47.3		ug/L		95	79 - 118	0	20
Dichlorodifluoromethane	50.0	39.4		ug/L		79	32 - 152	16	20
1,1-Dichloroethane	50.0	47.1		ug/L		94	77 - 125	5	20
1,2-Dichloroethane	50.0	49.3		ug/L		99	73 - 128	5	20
cis-1,2-Dichloroethene	50.0	47.6		ug/L		95	78 - 123	4	20
trans-1,2-Dichloroethene	50.0	49.2		ug/L		98	75 - 124	4	20
1,2-Dichloroethene, Total	100	96.9		ug/L		97	79 - 121	4	20
1,1-Dichloroethene	50.0	46.8		ug/L		94	71 - 131	2	20
1,2-Dichloropropane	50.0	46.1		ug/L		92	78 - 122	5	20
1,3-Dichloropropane	50.0	48.0		ug/L		96	80 - 119	6	20
2,2-Dichloropropane	50.0	44.9		ug/L		90	60 - 139	4	20
1,1-Dichloropropene	50.0	48.6		ug/L		97	79 - 125	1	20
cis-1,3-Dichloropropene	50.0	48.2		ug/L		96	75 - 124	6	20
trans-1,3-Dichloropropene	50.0	49.7		ug/L		99	73 - 127	5	20
Ethylbenzene	50.0	49.1		ug/L		98	79 - 121	0	20
Hexachlorobutadiene	50.0	47.2		ug/L		94	66 - 134	2	20
2-Hexanone	250	208		ug/L		83	57 - 139	4	20
Isopropylbenzene	50.0	49.7		ug/L		99	72 - 131	1	20
4-Isopropyltoluene	50.0	47.9		ug/L		96	77 - 127	0	20
Methylene Chloride	50.0	49.4		ug/L		99	74 - 124	4	20
4-Methyl-2-pentanone (MIBK)	250	207		ug/L		83	67 - 130	5	20
Methyl tert-butyl ether	50.0	48.1		ug/L		96	71 - 124	7	20
Naphthalene	50.0	45.8		ug/L		92	61 - 128	3	20
N-Propylbenzene	50.0	50.3		ug/L		101	76 - 126	1	20
Styrene	50.0	52.9		ug/L		106	78 - 123	1	20
1,1,1,2-Tetrachloroethane	50.0	48.8		ug/L		98	78 - 124	1	20
1,1,2,2-Tetrachloroethane	50.0	48.9		ug/L		98	71 - 121	1	20
Tetrachloroethene	50.0	48.4		ug/L		97	74 - 129	2	20
Toluene	50.0	47.8		ug/L		96	80 - 121	3	20
1,2,3-Trichlorobenzene	50.0	47.3		ug/L		95	69 - 129	3	20
1,2,4-Trichlorobenzene	50.0	47.8		ug/L		96	69 - 130	1	20
1,1,1-Trichloroethane	50.0	46.0		ug/L		92	74 - 131	4	20
1,1,2-Trichloroethane	50.0	45.9		ug/L		92	80 - 119	4	20
Trichloroethene	50.0	49.3		ug/L		99	79 - 123	3	20
Trichlorofluoromethane	50.0	48.5		ug/L		97	65 - 141	10	20
1,2,3-Trichloropropane	50.0	50.4		ug/L		101	73 - 122	1	20
1,2,4-Trimethylbenzene	50.0	48.8		ug/L		98	76 - 124	2	20
1,3,5-Trimethylbenzene	50.0	52.8		ug/L		106	75 - 124	0	20
Vinyl acetate	100	105		ug/L		105	54 - 146	6	20
Vinyl chloride	50.0	48.1		ug/L		96	58 - 137	6	20
o-Xylene	50.0	49.1		ug/L		98	78 - 122	1	20
m-Xylene & p-Xylene	50.0	49.9		ug/L		100	80 - 121	0	20
Xylenes, Total	100	99.0		ug/L		99	79 - 121	0	20

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

Lab Sample ID: LCSD 680-745318/5
Matrix: Water
Analysis Batch: 745318

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

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*98*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*
Dibromofluoromethane (Surr)	*98*		*80 - 119*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-745195/37
Matrix: Water
Analysis Batch: 745195

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		10/14/22 18:15	1
Ethylene	0.71	U	1.0	0.71	0.31	ug/L		10/14/22 18:15	1
Methane	1.2	U	1.2	1.2	0.57	ug/L		10/14/22 18:15	1

Lab Sample ID: LCS 680-745195/33
Matrix: Water
Analysis Batch: 745195

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	1830		ug/L		95	73 - 125

Lab Sample ID: LCS 680-745195/35
Matrix: Water
Analysis Batch: 745195

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethane	361	347		ug/L		96	74 - 131
Ethylene	337	315		ug/L		94	72 - 133
Methane	192	184		ug/L		96	73 - 125

Lab Sample ID: LCSD 680-745195/34
Matrix: Water
Analysis Batch: 745195

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	1820		ug/L		95	73 - 125	0	30

Lab Sample ID: LCSD 680-745195/36
Matrix: Water
Analysis Batch: 745195

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	1	30
Ethylene	337	310		ug/L		92	72 - 133	1	30
Methane	192	183		ug/L		95	73 - 125	1	30

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

Lab Sample ID: 680-222340-1 MS
Matrix: Water
Analysis Batch: 745195

Client Sample ID: G6M-04-10A-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethane	16		361	378		ug/L		101	74 - 131
Ethylene	8.4		337	339		ug/L		98	72 - 133
Methane (TCD)	20000	J1	192	21600	4	ug/L		929	73 - 125

Lab Sample ID: 680-222340-1 MSD
Matrix: Water
Analysis Batch: 745195

Client Sample ID: G6M-04-10A-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ethane	16		361	379		ug/L		101	74 - 131	0	30
Ethylene	8.4		337	340		ug/L		99	72 - 133	0	30
Methane (TCD)	20000	J1	192	20400	4	ug/L		287	73 - 125	6	30

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-746037/2
Matrix: Water
Analysis Batch: 746037

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		10/20/22 09:39	1

Lab Sample ID: LCS 680-746037/3
Matrix: Water
Analysis Batch: 746037

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	10.2		mg/L		102	87 - 112

Lab Sample ID: LCSD 680-746037/4
Matrix: Water
Analysis Batch: 746037

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	10.2		mg/L		102	87 - 112	1	15

Lab Sample ID: 680-222340-1 MS
Matrix: Water
Analysis Batch: 746037

Client Sample ID: G6M-04-10A-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	1.2	J1	10.0	9.13	J1	mg/L		80	87 - 112

Lab Sample ID: 680-222340-1 MSD
Matrix: Water
Analysis Batch: 746037

Client Sample ID: G6M-04-10A-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	1.2	J1	10.0	9.52	J1	mg/L		84	87 - 112	4	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-743861/1-A
Matrix: Water
Analysis Batch: 744169

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 743861

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/07/22 14:57	1
Manganese	5.0	U	10	5.0	1.3	ug/L		10/07/22 14:57	1

Lab Sample ID: LCS 680-743861/2-A
Matrix: Water
Analysis Batch: 744169

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 743861

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	5000	4910		ug/L		98	87 - 115
Manganese	400	403		ug/L		101	90 - 114

Lab Sample ID: 680-222340-1 MS
Matrix: Water
Analysis Batch: 744169

Client Sample ID: G6M-04-10A-FAL22
Prep Type: Dissolved
Prep Batch: 743861

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	80000	J1	5000	74700	4	ug/L		-109	87 - 115
Manganese	770	J1	400	1020	J1	ug/L		65	90 - 114

Lab Sample ID: 680-222340-1 MSD
Matrix: Water
Analysis Batch: 744169

Client Sample ID: G6M-04-10A-FAL22
Prep Type: Dissolved
Prep Batch: 743861

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	80000	J1	5000	83100	4	ug/L		58	87 - 115	11	20
Manganese	770	J1	400	1170		ug/L		100	90 - 114	13	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-743947/1-A
Matrix: Water
Analysis Batch: 744603

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 743947

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		10/10/22 19:11	1

Lab Sample ID: LCS 680-743947/2-A
Matrix: Water
Analysis Batch: 744603

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 743947

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	114		ug/L		114	84 - 116

Lab Sample ID: 680-222340-1 MS
Matrix: Water
Analysis Batch: 744603

Client Sample ID: G6M-04-10A-FAL22
Prep Type: Dissolved
Prep Batch: 743947

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	270	J1	100	334	J1	ug/L		61	84 - 116

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

Lab Sample ID: 680-222340-1 MSD
Matrix: Water
Analysis Batch: 744603

Client Sample ID: G6M-04-10A-FAL22
Prep Type: Dissolved
Prep Batch: 743947

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	270	J1	100	392	J1	ug/L		119	84 - 116	16	20

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 680-744592/4
Matrix: Water
Analysis Batch: 744592

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		10/10/22 18:02	1

Lab Sample ID: LCS 680-744592/6
Matrix: Water
Analysis Batch: 744592

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	250	248		mg/L		99	90 - 112

Lab Sample ID: LCSD 680-744592/31
Matrix: Water
Analysis Batch: 744592

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	248		mg/L		99	90 - 112	0	30

Lab Sample ID: 680-222340-1 DU
Matrix: Water
Analysis Batch: 744592

Client Sample ID: G6M-04-10A-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity	180		177		mg/L		0	30

Lab Sample ID: MB 680-744769/4
Matrix: Water
Analysis Batch: 744769

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		10/11/22 15:08	1

Lab Sample ID: LCS 680-744769/6
Matrix: Water
Analysis Batch: 744769

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	250	253		mg/L		101	90 - 112

Method: 2320B-2011 - Alkalinity, Total (Continued)

Lab Sample ID: LCSD 680-744769/31
Matrix: Water
Analysis Batch: 744769

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	251		mg/L		100	90 - 112	1	30

Lab Sample ID: MB 680-745285/4
Matrix: Water
Analysis Batch: 745285

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		10/14/22 11:31	1

Lab Sample ID: LCS 680-745285/6
Matrix: Water
Analysis Batch: 745285

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Alkalinity			250	256		mg/L		103	90 - 112		

Lab Sample ID: LCSD 680-745285/31
Matrix: Water
Analysis Batch: 745285

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	248		mg/L		99	90 - 112	3	30

Method: 353.2-1993 R2.0 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 680-744257/14
Matrix: Water
Analysis Batch: 744257

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	0.050	0.025	0.010	mg/L		10/08/22 14:02	1

Lab Sample ID: LCS 680-744257/17
Matrix: Water
Analysis Batch: 744257

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: 680-222340-1 MS
Matrix: Water
Analysis Batch: 744257

Client Sample ID: G6M-04-10A-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Nitrate Nitrite as N	0.043	J	1.00	1.07		mg/L		103	90 - 110		

Method: 353.2-1993 R2.0 - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: 680-222340-1 MSD — **Client Sample ID: G6M-04-10A-FAL22**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 744257

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate Nitrite as N	0.043	J	1.00	1.06		mg/L		102	90 - 110	1	10

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 680-743939/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 743939

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		10/06/22 14:12	1

Lab Sample ID: LCS 680-743939/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 743939

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	10.0	8.43		mg/L		84	75 - 125

Lab Sample ID: LCSD 680-743939/3 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 743939

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	10.0	8.29		mg/L		83	75 - 125	2	30

Lab Sample ID: 680-222340-1 MS — **Client Sample ID: G6M-04-10A-FAL22**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 743939

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	1.7	U	6.94	5.73		mg/L		83	75 - 125

Lab Sample ID: 680-222340-1 MSD — **Client Sample ID: G6M-04-10A-FAL22**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 743939

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	1.7	U	6.94	6.06		mg/L		87	75 - 125	6	30

Lab Sample ID: 680-222340-7 DU — **Client Sample ID: G6M-02-08X-FAL22**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 743939

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfide	1.7	U	1.7	U	mg/L		NC	30

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Job ID: 680-222340-1

Method: 9060 - Organic Carbon, Total (TOC)

Lab Sample ID: MB 680-745623/2
Matrix: Water
Analysis Batch: 745623

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	1.0	1.0	0.50	mg/L		10/17/22 20:29	1

Lab Sample ID: LCS 680-745623/3
Matrix: Water
Analysis Batch: 745623

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	20.7		mg/L		104	80 - 120		

Lab Sample ID: LCSD 680-745623/4
Matrix: Water
Analysis Batch: 745623

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	20.7		mg/L		104	80 - 120	0	25

Lab Sample ID: 680-222340-1 MS
Matrix: Water
Analysis Batch: 745623

Client Sample ID: G6M-04-10A-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Organic Carbon	13		20.0	34.0		mg/L		108	80 - 120		

Lab Sample ID: 680-222340-1 MSD
Matrix: Water
Analysis Batch: 745623

Client Sample ID: G6M-04-10A-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Organic Carbon	13		20.0	33.7		mg/L		106	80 - 120	1	25

GC/MS VOA

Analysis Batch: 744932

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222340-1	G6M-04-10A-FAL22	Total/NA	Water	8260D	
680-222340-4	G6M-04-14X-FAL22	Total/NA	Water	8260D	
680-222340-5	G6M-13-05X-FAL22	Total/NA	Water	8260D	
680-222340-6	AOC50-DUP04-FAL22	Total/NA	Water	8260D	
680-222340-7	G6M-02-08X-FAL22	Total/NA	Water	8260D	
680-222340-8	G6M-13-06X-FAL22	Total/NA	Water	8260D	
680-222340-9	G6M-95-19X-FAL22	Total/NA	Water	8260D	
MB 680-744932/8	Method Blank	Total/NA	Water	8260D	
LCS 680-744932/4	Lab Control Sample	Total/NA	Water	8260D	
LCSD 680-744932/5	Lab Control Sample Dup	Total/NA	Water	8260D	
680-222340-1 MS	G6M-04-10A-FAL22	Total/NA	Water	8260D	
680-222340-1 MSD	G6M-04-10A-FAL22	Total/NA	Water	8260D	

Analysis Batch: 745318

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222340-2	G6M-04-10X-FAL22	Total/NA	Water	8260D	
680-222340-3	G6M-04-13X-FAL22	Total/NA	Water	8260D	
680-222340-10	G6M-95-20X-FAL22	Total/NA	Water	8260D	
680-222340-11	AOC50-TB01-FAL22	Total/NA	Water	8260D	
MB 680-745318/8	Method Blank	Total/NA	Water	8260D	
LCS 680-745318/4	Lab Control Sample	Total/NA	Water	8260D	
LCSD 680-745318/5	Lab Control Sample Dup	Total/NA	Water	8260D	

GC VOA

Analysis Batch: 745195

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222340-1	G6M-04-10A-FAL22	Total/NA	Water	RSK-175	
680-222340-5	G6M-13-05X-FAL22	Total/NA	Water	RSK-175	
680-222340-7	G6M-02-08X-FAL22	Total/NA	Water	RSK-175	
680-222340-8	G6M-13-06X-FAL22	Total/NA	Water	RSK-175	
MB 680-745195/37	Method Blank	Total/NA	Water	RSK-175	
LCS 680-745195/33	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-745195/35	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-745195/34	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-745195/36	Lab Control Sample Dup	Total/NA	Water	RSK-175	
680-222340-1 MS	G6M-04-10A-FAL22	Total/NA	Water	RSK-175	
680-222340-1 MSD	G6M-04-10A-FAL22	Total/NA	Water	RSK-175	

HPLC/IC

Analysis Batch: 746037

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222340-1	G6M-04-10A-FAL22	Total/NA	Water	9056A	
680-222340-5	G6M-13-05X-FAL22	Total/NA	Water	9056A	
680-222340-7	G6M-02-08X-FAL22	Total/NA	Water	9056A	
680-222340-8	G6M-13-06X-FAL22	Total/NA	Water	9056A	
MB 680-746037/2	Method Blank	Total/NA	Water	9056A	
LCS 680-746037/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-746037/4	Lab Control Sample Dup	Total/NA	Water	9056A	
680-222340-1 MS	G6M-04-10A-FAL22	Total/NA	Water	9056A	
680-222340-1 MSD	G6M-04-10A-FAL22	Total/NA	Water	9056A	

Metals

Prep Batch: 743861

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222340-1	G6M-04-10A-FAL22	Dissolved	Water	3005A	
680-222340-4	G6M-04-14X-FAL22	Dissolved	Water	3005A	
680-222340-5	G6M-13-05X-FAL22	Dissolved	Water	3005A	
680-222340-6	AOC50-DUP04-FAL22	Dissolved	Water	3005A	
680-222340-7	G6M-02-08X-FAL22	Dissolved	Water	3005A	
680-222340-8	G6M-13-06X-FAL22	Dissolved	Water	3005A	
680-222340-10	G6M-95-20X-FAL22	Dissolved	Water	3005A	
MB 680-743861/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-743861/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-222340-1 MS	G6M-04-10A-FAL22	Dissolved	Water	3005A	
680-222340-1 MSD	G6M-04-10A-FAL22	Dissolved	Water	3005A	

Prep Batch: 743947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222340-1	G6M-04-10A-FAL22	Dissolved	Water	3005A	
680-222340-4	G6M-04-14X-FAL22	Dissolved	Water	3005A	
680-222340-5	G6M-13-05X-FAL22	Dissolved	Water	3005A	
680-222340-6	AOC50-DUP04-FAL22	Dissolved	Water	3005A	
680-222340-7	G6M-02-08X-FAL22	Dissolved	Water	3005A	
680-222340-8	G6M-13-06X-FAL22	Dissolved	Water	3005A	
680-222340-10	G6M-95-20X-FAL22	Dissolved	Water	3005A	
MB 680-743947/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-743947/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-222340-1 MS	G6M-04-10A-FAL22	Dissolved	Water	3005A	
680-222340-1 MSD	G6M-04-10A-FAL22	Dissolved	Water	3005A	

Analysis Batch: 744169

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222340-1	G6M-04-10A-FAL22	Dissolved	Water	6010C	743861
680-222340-4	G6M-04-14X-FAL22	Dissolved	Water	6010C	743861
680-222340-5	G6M-13-05X-FAL22	Dissolved	Water	6010C	743861
680-222340-6	AOC50-DUP04-FAL22	Dissolved	Water	6010C	743861
680-222340-7	G6M-02-08X-FAL22	Dissolved	Water	6010C	743861
680-222340-8	G6M-13-06X-FAL22	Dissolved	Water	6010C	743861
680-222340-10	G6M-95-20X-FAL22	Dissolved	Water	6010C	743861
MB 680-743861/1-A	Method Blank	Total Recoverable	Water	6010C	743861
LCS 680-743861/2-A	Lab Control Sample	Total Recoverable	Water	6010C	743861
680-222340-1 MS	G6M-04-10A-FAL22	Dissolved	Water	6010C	743861
680-222340-1 MSD	G6M-04-10A-FAL22	Dissolved	Water	6010C	743861

Analysis Batch: 744603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222340-1	G6M-04-10A-FAL22	Dissolved	Water	6020A	743947
680-222340-4	G6M-04-14X-FAL22	Dissolved	Water	6020A	743947
680-222340-5	G6M-13-05X-FAL22	Dissolved	Water	6020A	743947
680-222340-6	AOC50-DUP04-FAL22	Dissolved	Water	6020A	743947
680-222340-7	G6M-02-08X-FAL22	Dissolved	Water	6020A	743947
680-222340-8	G6M-13-06X-FAL22	Dissolved	Water	6020A	743947
680-222340-10	G6M-95-20X-FAL22	Dissolved	Water	6020A	743947
MB 680-743947/1-A	Method Blank	Total Recoverable	Water	6020A	743947
LCS 680-743947/2-A	Lab Control Sample	Total Recoverable	Water	6020A	743947

Metals (Continued)

Analysis Batch: 744603 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222340-1 MS	G6M-04-10A-FAL22	Dissolved	Water	6020A	743947
680-222340-1 MSD	G6M-04-10A-FAL22	Dissolved	Water	6020A	743947

General Chemistry

Analysis Batch: 743939

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222340-1	G6M-04-10A-FAL22	Total/NA	Water	9034	
680-222340-5	G6M-13-05X-FAL22	Total/NA	Water	9034	
680-222340-7	G6M-02-08X-FAL22	Total/NA	Water	9034	
680-222340-8	G6M-13-06X-FAL22	Total/NA	Water	9034	
MB 680-743939/1	Method Blank	Total/NA	Water	9034	
LCS 680-743939/2	Lab Control Sample	Total/NA	Water	9034	
LCSD 680-743939/3	Lab Control Sample Dup	Total/NA	Water	9034	
680-222340-1 MS	G6M-04-10A-FAL22	Total/NA	Water	9034	
680-222340-1 MSD	G6M-04-10A-FAL22	Total/NA	Water	9034	
680-222340-7 DU	G6M-02-08X-FAL22	Total/NA	Water	9034	

Analysis Batch: 744257

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222340-1	G6M-04-10A-FAL22	Total/NA	Water	353.2-1993 R2.0	
680-222340-5	G6M-13-05X-FAL22	Total/NA	Water	353.2-1993 R2.0	
680-222340-7	G6M-02-08X-FAL22	Total/NA	Water	353.2-1993 R2.0	
680-222340-8	G6M-13-06X-FAL22	Total/NA	Water	353.2-1993 R2.0	
MB 680-744257/14	Method Blank	Total/NA	Water	353.2-1993 R2.0	
LCS 680-744257/17	Lab Control Sample	Total/NA	Water	353.2-1993 R2.0	
680-222340-1 MS	G6M-04-10A-FAL22	Total/NA	Water	353.2-1993 R2.0	
680-222340-1 MSD	G6M-04-10A-FAL22	Total/NA	Water	353.2-1993 R2.0	

Analysis Batch: 744592

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222340-1	G6M-04-10A-FAL22	Total/NA	Water	2320B-2011	
680-222340-8	G6M-13-06X-FAL22	Total/NA	Water	2320B-2011	
MB 680-744592/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-744592/6	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-744592/31	Lab Control Sample Dup	Total/NA	Water	2320B-2011	
680-222340-1 DU	G6M-04-10A-FAL22	Total/NA	Water	2320B-2011	

Analysis Batch: 744769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222340-7	G6M-02-08X-FAL22	Total/NA	Water	2320B-2011	
MB 680-744769/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-744769/6	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-744769/31	Lab Control Sample Dup	Total/NA	Water	2320B-2011	

Analysis Batch: 745285

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222340-5	G6M-13-05X-FAL22	Total/NA	Water	2320B-2011	
MB 680-745285/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-745285/6	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-745285/31	Lab Control Sample Dup	Total/NA	Water	2320B-2011	

General Chemistry

Analysis Batch: 745623

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222340-1	G6M-04-10A-FAL22	Total/NA	Water	9060	
680-222340-5	G6M-13-05X-FAL22	Total/NA	Water	9060	
680-222340-7	G6M-02-08X-FAL22	Total/NA	Water	9060	
680-222340-8	G6M-13-06X-FAL22	Total/NA	Water	9060	
MB 680-745623/2	Method Blank	Total/NA	Water	9060	
LCS 680-745623/3	Lab Control Sample	Total/NA	Water	9060	
LCSD 680-745623/4	Lab Control Sample Dup	Total/NA	Water	9060	
680-222340-1 MS	G6M-04-10A-FAL22	Total/NA	Water	9060	
680-222340-1 MSD	G6M-04-10A-FAL22	Total/NA	Water	9060	

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-222340-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-04-10A-FAL22
Lab Sample ID: 680-222340-1
Date Collected: 10/04/22 10:25
Matrix: Water
Date Received: 10/05/22 10:30

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	744932	10/13/22 20:02	P1C	EET SAV
	Instrument ID: CMSU									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	745195	10/14/22 23:15	JCK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	746037	10/21/22 02:04	AF	EET SAV
	Instrument ID: CICL									
Dissolved	Prep	3005A			50 mL	50 mL	743861	10/06/22 10:27	RR	EET SAV
Dissolved	Analysis	6010C		1			744169	10/07/22 15:07	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	743947	10/06/22 10:27	RR	EET SAV
Dissolved	Analysis	6020A		1			744603	10/10/22 19:16	BJB	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			744592	10/10/22 18:29	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	744257	10/08/22 14:07	MB	EET SAV
	Instrument ID: LACHAT2									
Total/NA	Analysis	9034		1	300 mL	300 mL	743939	10/06/22 14:12	JAS	EET SAV
	Instrument ID: NoEquip									
Total/NA	Analysis	9060		1	40 mL	40 mL	745623	10/17/22 21:32	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: G6M-04-10X-FAL22
Lab Sample ID: 680-222340-2
Date Collected: 10/04/22 13:55
Matrix: Water
Date Received: 10/05/22 10:30

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	745318	10/15/22 16:21	P1C	EET SAV
	Instrument ID: CMSU									

Client Sample ID: G6M-04-13X-FAL22
Lab Sample ID: 680-222340-3
Date Collected: 10/04/22 14:45
Matrix: Water
Date Received: 10/05/22 10:30

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	745318	10/15/22 16:40	P1C	EET SAV
	Instrument ID: CMSU									

Client Sample ID: G6M-04-14X-FAL22
Lab Sample ID: 680-222340-4
Date Collected: 10/04/22 14:22
Matrix: Water
Date Received: 10/05/22 10:30

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	744932	10/13/22 14:57	P1C	EET SAV
	Instrument ID: CMSU									

Client Sample ID: G6M-04-14X-FAL22
Lab Sample ID: 680-222340-4

Date Collected: 10/04/22 14:22
Matrix: Water
Date Received: 10/05/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			50 mL	50 mL	743861	10/06/22 10:27	RR	EET SAV
Dissolved	Analysis	6010C		1			744169	10/07/22 15:29	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	743947	10/06/22 10:27	RR	EET SAV
Dissolved	Analysis	6020A		1			744603	10/10/22 19:30	BJB	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-13-05X-FAL22
Lab Sample ID: 680-222340-5

Date Collected: 10/03/22 14:05
Matrix: Water
Date Received: 10/05/22 10:30

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	744932	10/13/22 15:16	P1C	EET SAV
	Instrument ID: CMSU									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	745195	10/14/22 22:36	JCK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	746037	10/21/22 01:27	AF	EET SAV
	Instrument ID: CICL									
Dissolved	Prep	3005A			50 mL	50 mL	743861	10/06/22 10:27	RR	EET SAV
Dissolved	Analysis	6010C		1			744169	10/07/22 15:34	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	743947	10/06/22 10:27	RR	EET SAV
Dissolved	Analysis	6020A		1			744603	10/10/22 19:36	BJB	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			745285	10/14/22 16:20	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	744257	10/08/22 14:11	MB	EET SAV
	Instrument ID: LACHAT2									
Total/NA	Analysis	9034		1	300 mL	300 mL	743939	10/06/22 14:12	JAS	EET SAV
	Instrument ID: NoEquip									
Total/NA	Analysis	9060		1	40 mL	40 mL	745623	10/17/22 22:24	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: AOC50-DUP04-FAL22
Lab Sample ID: 680-222340-6

Date Collected: 10/04/22 14:30
Matrix: Water
Date Received: 10/05/22 10:30

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	744932	10/13/22 17:29	P1C	EET SAV
	Instrument ID: CMSU									
Dissolved	Prep	3005A			50 mL	50 mL	743861	10/06/22 10:27	RR	EET SAV
Dissolved	Analysis	6010C		1			744169	10/07/22 15:37	BCB	EET SAV
	Instrument ID: ICPH									

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-222340-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: AOC50-DUP04-FAL22
Lab Sample ID: 680-222340-6
Date Collected: 10/04/22 14:30
Matrix: Water
Date Received: 10/05/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			50 mL	250 mL	743947	10/06/22 10:27	RR	EET SAV
Dissolved	Analysis	6020A		1			744603	10/10/22 19:44	BJB	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-02-08X-FAL22
Lab Sample ID: 680-222340-7
Date Collected: 10/04/22 10:50
Matrix: Water
Date Received: 10/05/22 10:30

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	744932	10/13/22 15:35	P1C	EET SAV
	Instrument ID: CMSU									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	745195	10/14/22 22:49	JCK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	746037	10/21/22 01:40	AF	EET SAV
	Instrument ID: CICL									
Dissolved	Prep	3005A			50 mL	50 mL	743861	10/06/22 10:27	RR	EET SAV
Dissolved	Analysis	6010C		1			744169	10/07/22 15:40	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	743947	10/06/22 10:27	RR	EET SAV
Dissolved	Analysis	6020A		1			744603	10/10/22 19:47	BJB	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			744769	10/11/22 16:50	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	744257	10/08/22 14:12	MB	EET SAV
	Instrument ID: LACHAT2									
Total/NA	Analysis	9034		1	300 mL	300 mL	743939	10/06/22 14:12	JAS	EET SAV
	Instrument ID: NoEquip									
Total/NA	Analysis	9060		1	40 mL	40 mL	745623	10/17/22 22:40	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: G6M-13-06X-FAL22
Lab Sample ID: 680-222340-8
Date Collected: 10/03/22 15:55
Matrix: Water
Date Received: 10/05/22 10:30

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	744932	10/13/22 17:48	P1C	EET SAV
	Instrument ID: CMSU									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	745195	10/14/22 23:02	JCK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	746037	10/21/22 01:52	AF	EET SAV
	Instrument ID: CICL									
Dissolved	Prep	3005A			50 mL	50 mL	743861	10/06/22 10:27	RR	EET SAV
Dissolved	Analysis	6010C		1			744169	10/07/22 15:47	BCB	EET SAV
	Instrument ID: ICPH									

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-222340-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-13-06X-FAL22
Lab Sample ID: 680-222340-8
Date Collected: 10/03/22 15:55
Matrix: Water
Date Received: 10/05/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			50 mL	250 mL	743947	10/06/22 10:27	RR	EET SAV
Dissolved	Analysis	6020A		1			744603	10/10/22 19:49	BJB	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			744592	10/10/22 18:48	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	744257	10/08/22 14:13	MB	EET SAV
	Instrument ID: LACHAT2									
Total/NA	Analysis	9034		1	300 mL	300 mL	743939	10/06/22 14:12	JAS	EET SAV
	Instrument ID: NoEquip									
Total/NA	Analysis	9060		2	40 mL	40 mL	745623	10/17/22 22:57	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: G6M-95-19X-FAL22
Lab Sample ID: 680-222340-9
Date Collected: 10/04/22 12:50
Matrix: Water
Date Received: 10/05/22 10:30

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	744932	10/13/22 17:10	P1C	EET SAV
	Instrument ID: CMSU									

Client Sample ID: G6M-95-20X-FAL22
Lab Sample ID: 680-222340-10
Date Collected: 10/04/22 14:30
Matrix: Water
Date Received: 10/05/22 10:30

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	745318	10/15/22 16:59	P1C	EET SAV
	Instrument ID: CMSU									
Dissolved	Prep	3005A			50 mL	50 mL	743861	10/06/22 10:27	RR	EET SAV
Dissolved	Analysis	6010C		1			744169	10/07/22 15:50	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	743947	10/06/22 10:27	RR	EET SAV
Dissolved	Analysis	6020A		1			744603	10/10/22 19:52	BJB	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: AOC50-TB01-FAL22
Lab Sample ID: 680-222340-11
Date Collected: 10/04/22 00:00
Matrix: Water
Date Received: 10/05/22 10:30

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	745318	10/15/22 15:43	P1C	EET SAV
	Instrument ID: CMSU									

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: 680-222340-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

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: 680-222340-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

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

Seres-Arcadis JV
Nathan Mullens
669 Marina Drive, Suite B7 Charleston, SC 29492
(843) 478 0336, jennifer.singer@arcadis.com

COC # AOC50_FAL22

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 Fall 2022
Project Number: 30130800	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 2022

						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)			
	Sample ID	Matrix	Date	Time	Samp Init.												Location ID	Type	Top	Bottom	Cooler	Comments
							46	47	8	9	9	29	7	5	10							
21	G6M-04-06X-FAL22	WG								X	X	X					G6M-04-06X	N1	95 00	136 00	1	
22	G6M-04-07X-FAL22	WG					X	X	X	X	X	X	X	X	X		G6M-04-07X	N1	120 00	130.00	1	
23	G6M-04-09X-FAL22	WG					X	X	X	X	X	X	X	X	X		G6M-04-09X	N1	55.00	65 00	1	
24	G6M-04-10A-FAL22	WG	10.4.22	1025	GS		X	X	X	X	X	X	X	X	X		G6M-04-10A	MS1	30 00	40.00	1	
25	G6M-04-10A-FAL22	WG	10.4.22	1100	GS		X	X	X	X	X	X	X	X	X		G6M-04-10A	N1	30 00	40 00	1	
26	G6M-04-10A-FAL22	WG	10 4.22	1130	GS		X	X	X	X	X	X	X	X	X		G6M-04-10A	SD1	30 00	40 00	1	
27	G6M-04-10X-FAL22	WG	10.4.22	1355	GS							X					G6M-04-10X	N1	52 00	62.00	1	
28	G6M-04-11X-FAL22	WG								X	X	X					G6M-04-11X	N1	35.00	45.00	1	
29	G6M-04-13X-FAL22	WG	10.4.22	1445	GS							X					G6M-04-13X	N1	30 00	40.00	1	
30	G6M-04-14X-FAL22	WG	10-4-22	1722	SG					X	X	X					G6M-04-14X	N1	80 00	90 00	1	
31	G6M-04-15X-FAL22	WG								X	X	X					G6M-04-15X	N1	70.00	80 00	1	
32	G6M-04-22X-FAL22	WG								X	X	X					G6M-04-22X	N1	74.00	84 00	1	
33	G6M-04-31X-FAL22	WG								X	X	X					G6M-04-31X	N1	68 00	78.00	1	
34	G6M-07-01X-FAL22	WG					X	X	X	X	X	X	X	X	X		G6M-07-01X	N1	78 00	98 00		
35	G6M-07-02X-FAL22	WG					X	X	X	X	X	X	X	X	X		G6M-07-02X	N1	22.50	27.50		
36	G6M-13-01X-FAL22	WG					X	X	X	X	X	X	X	X	X		G6M-13-01X	N1	125 00	135 00		
37	G6M-13-02X-FAL22	WG					X	X	X	X	X	X	X	X	X		G6M-13-02X	N1	115.00	125.00		
38	G6M-13-03X-FAL22	WG										X					G6M-13-03X	N1	80 00	90.00		
39	G6M-13-04X-FAL22	WG								X	X	X					G6M-13-04X	N1	125 00	135.00		
40	G6M-13-05X-FAL22	WG	10.3 22	1405	DC		X	X	X	X	X	X	X	X	X		G6M-13-05X	N1	45 00	55.00	1	

680-222340 Chain of Custody

Relinquished by: (Signature)
Date 10/5/22
Time 1015
Received by: (Signature)

Received by Laboratory: (Signature)
Date
Time

TA 10-5-22 1030
1.3/1.2 0.8/0.7

11/28/2022 (Rev. 1)

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Nathan Mullens
669 Marina Drive, Suite B7 Charleston, SC 29492
(843) 478 0336, jennifer.singer@arcadis.com

COC # AOC50_FAL22

Boston #215

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah GA
Project Number: 30130800	POC: Jerry Lanier, 912-250-0281, jerry.lanier@eurofinsus.com
WBS Code:	Ship to: Eurofins TestAmerica, 5102 LaRoche Avenue Savannah, GA 31404

Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2022

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 2022

	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						
41	G6M-13-06X-FAL22	WG	10.3.22	1555	DC	X	X	X	X	X	X	X	X	X	G6M-13-06X	N1	50 00	60.00	1	
42	G6M-95-19X-FAL22	WG	10-4-22	1250	DC						X				G6M-95-19X	N1	48.00	58 00	1	
43	G6M-95-20X-FAL22	WG	10.4.22	1430	DC				X	X	X				G6M-95-20X	N1	18.00	23.00	1	
44	G6M-97-05B-FAL22	WG				X	X	X	X	X	X	X	X	X	G6M-97-05B	N1	130 00	135.00	1	
45	G6M-97-28X-FAL22	WG							X	X					G6M-97-28X	N1	100 00	105 00	1	
46	MW-3-FAL22	WG							X	X	X				MW-3	MS1	126 00	137 00	1	
47	MW-3-FAL22	WG							X	X	X				MW-3	N1	126 00	137 00	1	
48	MW-3-FAL22	WG							X	X	X				MW-3	SD1	126 00	137 00	1	
49	MW-7-FAL22	WG							X	X	X				MW-7	N1	6.58	135 00	1	
50	XSA-12-95X-FAL22	WG							X	X	X				XSA-12-95X	N1	120 00	130 00	1	
51	XSA-12-96X-FAL22	WG							X	X	X				XSA-12-96X	N1	120.00	130 00	1	
52	XSA-12-97X-FAL22	WG.							X	X	X				XSA-12-97X	N1	120 00	130.00	1	
53	XSA-12-98X-FAL22	WG							X	X	X				XSA-12-98X	N1	60.00	70.00	1	
54	AOC50-TB-FAL22	Lab water	trip Blank									X								
55																				
56																				
57																				
58																				

Turnaround Time: Standard

Relinquished by: (Signature)
Date 0 4 22
Time 4 15
Received by: (Signature)

Received by Laboratory: (Signature)
Date
Time

TA 10.5.22 1030

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Nathan Mullens
669 Marina Drive, Suite B7, Charleston, SC 29492
(843) 478 0336, jennifer.singer@arcadis.com

COC # AOC50_FAL22

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, Fall 2022
Project Number: 30130800	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 2022

						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)			
	Sample ID	Matrix	Date	Time	Samp Init.												Location ID	Sample Type	Top	Bottom	Cooler	Comments
							46	47	8	9	9	29	7	5	10							
1	AOC50-DUP01-FAL22	WG								X	X	X					G6M-04-04X	FD1	94 00	104.00	1	
2	AOC50-DUP02-FAL22	WG					X	X	X	X	X	X	X	X	X		G6M-07-02X	FD1	22.50	27.50	1	
3	AOC50-DUP03-FAL22	WG					X	X	X	X	X	X	X	X	X		G6M-13-02X	FD1	115 00	125 00	1	
4	AOC50-DUP04-FAL22	WG	10.4.22	1430	DC					X	X	X					G6M-95-20X	FD1	18.00	23 00	1	
5	G6M-02-01X-FAL22	WG					X	X	X	X	X	X	X	X	X		G6M-02-01X	N1	80 00	95.00	1	
6	G6M-02-04X-FAL22	WG								X	X	X					G6M-02-04X	N1	90 00	105.00	1	
7	G6M-02-06X-FAL22	WG								X	X	X					G6M-02-06X	N1	55 00	65.00	1	
8	G6M-02-07X-FAL22	WG								X	X	X					G6M-02-07X	N1	30 00	40.00	1	
9	G6M-02-08X-FAL22	WG	10.4.22	1050	DC		X	X	X	X	X	X	X	X	X		G6M-02-08X	N1	60 00	70.00	1	
10	G6M-02-11X-FAL22	WG								X	X	X					G6M-02-11X	N1	125.00	135 00	1	
11	G6M-02-12X-FAL22	WG								X	X	X					G6M-02-12X	N1	125.00	135 00	1	
12	G6M-02-13X-FAL22	WG								X	X	X					G6M-02-13X	N1	110 00	120 00	1	
13	G6M-03-07X-FAL22	WG					X	X	X	X	X	X	X	X	X		G6M-03-07X	N1	80 00	90.00	1	
14	G6M-03-08X-FAL22	WG								X	X	X					G6M-03-08X	N1	125.00	140 00	1	
15	G6M-03-10X-FAL22	WG								X	X	X					G6M-03-10X	N1	120 00	135 00	1	
16	G6M-04-01X-FAL22	WG								X	X	X					G6M-04-01X	N1	82.00	92 00	1	
17	G6M-04-02X-FAL22	WG					X	X	X	X	X	X	X	X	X		G6M-04-02X	N1	80 00	90 00	1	
18	G6M-04-03X-FAL22	WG								X	X	X					G6M-04-03X	N1	85 00	95.00	1	
19	G6M-04-04X-FAL22	WG								X	X	X					G6M-04-04X	N1	94.00	104 00	1	
20	G6M-04-05X-FAL22	WG										X					G6M-04-05X	N1	100.00	110 00	1	

Relinquished by: (Signature)
Date 10.4.22
Time 1715
Received by: (Signature)

Received by Laboratory: (Signature)
Date 10-5-22
Time 1030

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-222340-1

Login Number: 222340
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.	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 America



ANALYTICAL REPORT

Eurofins Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

Laboratory Job ID: 680-222692-1
Client Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

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

Attn: Heather Levesque

Authorized for release by:
10/25/2022 6:18:11 PM

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

LINKS

Review your project results through my EOL

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Results relate only to the items tested and the sample(s) as received by the laboratory.

Qualifiers

GC/MS VOA

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.
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
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
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.
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)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-222692-1	AOC50-DUP01-FAL22	Water	10/05/22 10:00	10/08/22 10:30
680-222692-2	AOC50-DUP02-FAL22	Water	10/05/22 10:35	10/08/22 10:30
680-222692-3	G6M-02-04X-FAL22	Water	10/06/22 12:00	10/08/22 10:30
680-222692-4	G6M-02-06X-FAL22	Water	10/06/22 11:20	10/08/22 10:30
680-222692-5	G6M-02-11X-FAL22	Water	10/06/22 15:50	10/08/22 10:30
680-222692-6	G6M-02-13X-FAL22	Water	10/05/22 10:52	10/08/22 10:30
680-222692-7	G6M-03-07X-FAL22	Water	10/05/22 12:40	10/08/22 10:30
680-222692-8	G6M-03-10X-FAL22	Water	10/06/22 14:40	10/08/22 10:30
680-222692-9	G6M-04-02X-FAL22	Water	10/05/22 14:55	10/08/22 10:30
680-222692-10	G6M-04-04X-FAL22	Water	10/05/22 10:00	10/08/22 10:30
680-222692-11	G6M-04-06X-FAL22	Water	10/06/22 10:22	10/08/22 10:30
680-222692-12	G6M-04-07X-FAL22	Water	10/05/22 13:31	10/08/22 10:30
680-222692-13	G6M-04-11X-FAL22	Water	10/05/22 13:40	10/08/22 10:30
680-222692-14	G6M-07-02X-FAL22	Water	10/05/22 10:00	10/08/22 10:30
680-222692-15	G6M-97-28X-FAL22	Water	10/06/22 10:25	10/08/22 10:30
680-222692-16	MW-3-FAL22	Water	10/06/22 14:20	10/08/22 10:30
680-222692-17	MW-7-FAL22	Water	10/06/22 15:55	10/08/22 10:30
680-222692-18	XSA-12-95X-FAL22	Water	10/06/22 13:21	10/08/22 10:30
680-222692-19	AOC50-TB02-FAL22	Water	10/05/22 00:00	10/08/22 10:30
680-222692-20	G6M-07-01X-FAL22	Water	10/07/22 13:15	10/08/22 10:30
680-222692-21	XSA-12-96X-FAL22	Water	10/07/22 10:49	10/08/22 10:30
680-222692-22	XSA-12-97X-FAL22	Water	10/07/22 13:22	10/08/22 10:30
680-222692-23	XSA-12-98X-FAL22	Water	10/07/22 12:55	10/08/22 10:30
680-222692-24	AOC50-RB01-FAL22	Water	10/07/22 09:15	10/08/22 10:30
680-222692-25	AOC50-TB03-FAL22	Water	10/07/22 00:00	10/08/22 10:30
680-222692-26	G6M-02-01X-FAL22	Water	10/07/22 10:45	10/08/22 10:30
680-222692-27	G6M-02-07X-FAL22	Water	10/07/22 10:20	10/08/22 10:30
680-222692-28	G6M-04-01X-FAL22	Water	10/07/22 14:50	10/08/22 10:30

Job ID: 680-222692-1

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-222692-1

Receipt
The samples were received on 10/8/2022 10:30 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 1.4°C, 4.7°C and 4.9°C

GC/MS VOA
Method 8260D_DOD5: The method blank for analytical batch 680-745419 contained 1,2,4-Trichlorobenzene above the method detection limit (MDL). Associated samples were not re-analyzed because results were less than half the reporting limit (RL) OR practical quantitation limit (PQL).

Method 8260D_DOD5: Toluene-d8 surrogate recovery for the blank associated with analytical batch 680-745419 was outside the upper control limits.

Method 8260D_DOD5: Toluene-d8 Surrogate recovery for the following samples were outside the upper control limit: AOC50-DUP01-FAL22 (680-222692-1), AOC50-DUP02-FAL22 (680-222692-2), G6M-02-13X-FAL22 (680-222692-6), G6M-03-07X-FAL22 (680-222692-7), G6M-04-02X-FAL22 (680-222692-9), G6M-04-04X-FAL22 (680-222692-10), G6M-04-07X-FAL22 (680-222692-12), G6M-04-11X-FAL22 (680-222692-13) and AOC50-TB02-FAL22 (680-222692-19). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8260D_DOD5: Toluene-d8 Surrogate recovery for the following samples were outside control limits: G6M-04-02X-FAL22 (680-222692-9) and G6M-04-07X-FAL22 (680-222692-12). Evidence of matrix interferences is not obvious.

Method 8260D_DOD5: Surrogate recovery for the following sample was outside the upper control limit: G6M-07-02X-FAL22 (680-222692-14). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8260D_DOD5: The method requirement for no headspace was not met. The following volatile samples were analyzed with headspace in the sample container(s): AOC50-DUP01-FAL22 (680-222692-1), AOC50-DUP02-FAL22 (680-222692-2) and G6M-04-04X-FAL22 (680-222692-10).

Method 8260D_DOD5: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 680-746027 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 matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 680-746027 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8260D_DOD5: The method requirement for no headspace was not met. The following volatile sample was analyzed with headspace in the sample container(s): G6M-03-10X-FAL22 (680-222692-8).

Method 8260D_DOD5: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 680-746246 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 method requirement for no headspace was not met. The following volatile sample was analyzed with headspace in the sample container(s): G6M-04-01X-FAL22 (680-222692-28).

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.

Job ID: 680-222692-1 (Continued)

Laboratory: Eurofins Savannah (Continued)

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 2320B: The sample duplicate precision for the following sample associated with analytical batch 680-744956 was outside control limits: (680-222692-F-26 DU). The associated Laboratory Control Sample / Laboratory Control Sample Duplicate (LCS/LCSD) precision met acceptance criteria.

Method 353.2_Pres: The method blank for analytical batch 680-744680 contained <AffectedAnalytes> 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 9034: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 680-744573 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was 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-DUP02-FAL22 (680-222692-2), G6M-03-07X-FAL22 (680-222692-7), G6M-04-02X-FAL22 (680-222692-9), G6M-04-07X-FAL22 (680-222692-12), G6M-07-02X-FAL22 (680-222692-14), G6M-02-01X-FAL22 (680-222692-26), (680-222692-B-2 DU), (680-222692-B-7 MS) and (680-222692-B-7 MSD).

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: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: AOC50-DUP01-FAL22
Lab Sample ID: 680-222692-1
Date Collected: 10/05/22 10:00
Matrix: Water
Date Received: 10/08/22 10:30

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		10/17/22 16:18	1
Benzene	1.0	U M	2.0	1.0	0.27	ug/L		10/17/22 16:18	1
Bromobenzene	0.50	U Q	1.0	0.50	0.24	ug/L		10/17/22 16:18	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/17/22 16:18	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/17/22 16:18	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		10/17/22 16:18	1
Bromomethane	10	U	20	10	3.7	ug/L		10/17/22 16:18	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		10/17/22 16:18	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/17/22 16:18	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/17/22 16:18	1
tert-Butylbenzene	1.0	U Q	2.0	1.0	0.43	ug/L		10/17/22 16:18	1
Carbon disulfide	1.0	U Q	2.0	1.0	0.43	ug/L		10/17/22 16:18	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/17/22 16:18	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/17/22 16:18	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/17/22 16:18	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/17/22 16:18	1
Chloromethane	2.0	U Q	2.5	2.0	0.54	ug/L		10/17/22 16:18	1
2-Chlorotoluene	0.50	U Q	1.0	0.50	0.25	ug/L		10/17/22 16:18	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/17/22 16:18	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/17/22 16:18	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/17/22 16:18	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/17/22 16:18	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/17/22 16:18	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/17/22 16:18	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/17/22 16:18	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/17/22 16:18	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 16:18	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/17/22 16:18	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/17/22 16:18	1
cis-1,2-Dichloroethene	**0.49**	**J**	2.0	1.0	0.25	ug/L		10/17/22 16:18	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/17/22 16:18	1
1,2-Dichloroethene, Total	**0.78**	**J**	2.0	1.0	0.37	ug/L		10/17/22 16:18	1
1,1-Dichloroethene	1.0	U Q	2.0	1.0	0.33	ug/L		10/17/22 16:18	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/17/22 16:18	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 16:18	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/17/22 16:18	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/17/22 16:18	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/17/22 16:18	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/17/22 16:18	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/17/22 16:18	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/17/22 16:18	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/17/22 16:18	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/17/22 16:18	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/17/22 16:18	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/17/22 16:18	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/17/22 16:18	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/17/22 16:18	1
Naphthalene	5.0	U Q	10	5.0	2.4	ug/L		10/17/22 16:18	1
N-Propylbenzene	1.0	U Q	2.0	1.0	0.41	ug/L		10/17/22 16:18	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: AOC50-DUP01-FAL22
Lab Sample ID: 680-222692-1
Date Collected: 10/05/22 10:00
Matrix: Water
Date Received: 10/08/22 10:30

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		10/17/22 16:18	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 16:18	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/17/22 16:18	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/17/22 16:18	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/17/22 16:18	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/17/22 16:18	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/17/22 16:18	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/17/22 16:18	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/17/22 16:18	1
Trichloroethene	0.50	U M	1.0	0.50	0.20	ug/L		10/17/22 16:18	1
Trichlorofluoromethane	1.0	U Q	2.0	1.0	0.33	ug/L		10/17/22 16:18	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/17/22 16:18	1
1,2,4-Trimethylbenzene	1.0	U Q	2.0	1.0	0.43	ug/L		10/17/22 16:18	1
1,3,5-Trimethylbenzene	1.0	U Q	2.0	1.0	0.28	ug/L		10/17/22 16:18	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/17/22 16:18	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/17/22 16:18	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/17/22 16:18	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/17/22 16:18	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/17/22 16:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*126*	*Q*	*89 - 112*		*10/17/22 16:18*	*1*
1,2-Dichloroethane-d4 (Surr)	*85*		*81 - 118*		*10/17/22 16:18*	*1*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*		*10/17/22 16:18*	*1*
Dibromofluoromethane (Surr)	*115*		*80 - 119*		*10/17/22 16:18*	*1*

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**91000**		100	50	20	ug/L		10/10/22 16:41	1
Manganese	**11000**		10	5.0	1.3	ug/L		10/10/22 16:41	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**560**		5.0	3.0	0.86	ug/L		10/10/22 23:19	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: AOC50-DUP02-FAL22
Lab Sample ID: 680-222692-2
Date Collected: 10/05/22 10:35
Matrix: Water
Date Received: 10/08/22 10:30

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	**6.5**	**J**	25	10	3.7	ug/L		10/17/22 16:37	1
Benzene	1.0	U M	2.0	1.0	0.27	ug/L		10/17/22 16:37	1
Bromobenzene	0.50	U Q	1.0	0.50	0.24	ug/L		10/17/22 16:37	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/17/22 16:37	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/17/22 16:37	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		10/17/22 16:37	1
Bromomethane	10	U	20	10	3.7	ug/L		10/17/22 16:37	1
2-Butanone (MEK)	**7.3**	**J Q**	25	20	6.4	ug/L		10/17/22 16:37	1
n-Butylbenzene	**1.1**	**J**	2.5	2.0	0.52	ug/L		10/17/22 16:37	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/17/22 16:37	1
tert-Butylbenzene	1.0	U Q	2.0	1.0	0.43	ug/L		10/17/22 16:37	1
Carbon disulfide	1.0	U Q	2.0	1.0	0.43	ug/L		10/17/22 16:37	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/17/22 16:37	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/17/22 16:37	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/17/22 16:37	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/17/22 16:37	1
Chloromethane	2.0	U Q	2.5	2.0	0.54	ug/L		10/17/22 16:37	1
2-Chlorotoluene	0.50	U Q	1.0	0.50	0.25	ug/L		10/17/22 16:37	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/17/22 16:37	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/17/22 16:37	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/17/22 16:37	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/17/22 16:37	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/17/22 16:37	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/17/22 16:37	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/17/22 16:37	1
1,4-Dichlorobenzene	1.0	U M	2.0	1.0	0.31	ug/L		10/17/22 16:37	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 16:37	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/17/22 16:37	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/17/22 16:37	1
cis-1,2-Dichloroethene	**1.4**	**J**	2.0	1.0	0.25	ug/L		10/17/22 16:37	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/17/22 16:37	1
1,2-Dichloroethene, Total	**1.4**	**J**	2.0	1.0	0.37	ug/L		10/17/22 16:37	1
1,1-Dichloroethene	1.0	U Q	2.0	1.0	0.33	ug/L		10/17/22 16:37	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/17/22 16:37	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 16:37	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/17/22 16:37	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/17/22 16:37	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/17/22 16:37	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/17/22 16:37	1
Ethylbenzene	**0.30**	**J**	1.0	0.50	0.20	ug/L		10/17/22 16:37	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/17/22 16:37	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/17/22 16:37	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/17/22 16:37	1
4-Isopropyltoluene	1.0	U M	2.0	1.0	0.44	ug/L		10/17/22 16:37	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/17/22 16:37	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/17/22 16:37	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/17/22 16:37	1
Naphthalene	**5.0**	**J Q**	10	5.0	2.4	ug/L		10/17/22 16:37	1
N-Propylbenzene	1.0	U Q	2.0	1.0	0.41	ug/L		10/17/22 16:37	1

Client Sample ID: AOC50-DUP02-FAL22
Lab Sample ID: 680-222692-2

Date Collected: 10/05/22 10:35
Matrix: Water
Date Received: 10/08/22 10:30

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		10/17/22 16:37	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 16:37	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/17/22 16:37	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/17/22 16:37	1
Toluene	**0.58**	**J**	2.0	1.0	0.25	ug/L		10/17/22 16:37	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/17/22 16:37	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/17/22 16:37	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/17/22 16:37	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/17/22 16:37	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/17/22 16:37	1
Trichlorofluoromethane	1.0	U Q	2.0	1.0	0.33	ug/L		10/17/22 16:37	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/17/22 16:37	1
1,2,4-Trimethylbenzene	**1.5**	**J Q**	2.0	1.0	0.43	ug/L		10/17/22 16:37	1
1,3,5-Trimethylbenzene	**0.39**	**J Q**	2.0	1.0	0.28	ug/L		10/17/22 16:37	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/17/22 16:37	1
Vinyl chloride	1.0	U M	2.0	1.0	0.40	ug/L		10/17/22 16:37	1
o-Xylene	**0.43**	**J**	2.0	1.0	0.26	ug/L		10/17/22 16:37	1
m-Xylene & p-Xylene	**0.75**	**J**	2.0	1.0	0.49	ug/L		10/17/22 16:37	1
Xylenes, Total	**1.2**	**J**	2.0	1.0	0.49	ug/L		10/17/22 16:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*131*	*Q*	*89 - 112*		*10/17/22 16:37*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*		*10/17/22 16:37*	*1*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*		*10/17/22 16:37*	*1*
Dibromofluoromethane (Surr)	*117*		*80 - 119*		*10/17/22 16:37*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**1.9**		1.1	0.76	0.30	ug/L		10/14/22 20:33	1
Ethylene	**1.7**		1.0	0.71	0.31	ug/L		10/14/22 20:33	1
Methane (TCD)	**15000**		390	77	39	ug/L		10/14/22 20:33	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		10/21/22 23:27	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**130000**		100	50	20	ug/L		10/10/22 16:43	1
Manganese	**3600**		10	5.0	1.3	ug/L		10/10/22 16:43	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**39**		5.0	3.0	0.86	ug/L		10/10/22 23:22	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**120**		5.0	5.0	2.2	mg/L		10/12/22 16:39	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-2011)	**120**		5.0	5.0	5.0	mg/L		10/12/22 16:39	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: AOC50-DUP02-FAL22
Lab Sample ID: 680-222692-2
Date Collected: 10/05/22 10:35
Matrix: Water
Date Received: 10/08/22 10:30

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Carbonate Alkalinity as CaCO3 (SM 2320B-2011)	5.0	U	5.0	5.0	5.0	mg/L		10/12/22 16:39	1
Hydroxide Alkalinity (SM 2320B-2011)	5.0	U	5.0	5.0	5.0	mg/L		10/12/22 16:39	1
Carbon Dioxide, Free (SM 2320B-2011)	**560**		5.0	5.0	5.0	mg/L		10/12/22 16:39	1
Phenolphthalein Alkalinity (SM 2320B-2011)	5.0	U	5.0	5.0	5.0	mg/L		10/12/22 16:39	1
Bicarbonate ion as HCO3 (SM 2320B-2011)	**150**		6.1	6.1	6.1	mg/L		10/12/22 16:39	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	**0.040**	**J**	0.050	0.025	0.010	mg/L		10/11/22 15:35	1
Sulfide (SW846 9034)	0.89	U	0.89	0.89	0.89	mg/L		10/11/22 09:23	1
Total Organic Carbon (SW846 9060)	**140**	**D**	5.0	5.0	2.5	mg/L		10/17/22 23:16	5
Total Organic Carbon - Quad (SW846 9060)	**140**	**D**	5.0	5.0	2.5	mg/L		10/17/22 23:16	5

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-02-04X-FAL22
Lab Sample ID: 680-222692-3
Date Collected: 10/06/22 12:00
Matrix: Water
Date Received: 10/08/22 10:30

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		10/20/22 16:12	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/20/22 16:12	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/20/22 16:12	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/20/22 16:12	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/20/22 16:12	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/20/22 16:12	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/20/22 16:12	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/20/22 16:12	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/20/22 16:12	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/20/22 16:12	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/20/22 16:12	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/20/22 16:12	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/20/22 16:12	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/20/22 16:12	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/20/22 16:12	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/20/22 16:12	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/20/22 16:12	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/20/22 16:12	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/20/22 16:12	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/20/22 16:12	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		10/20/22 16:12	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 16:12	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/20/22 16:12	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/20/22 16:12	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/20/22 16:12	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/20/22 16:12	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/20/22 16:12	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 16:12	1
1,2-Dichloroethane	1.0	U	2.0	1.0	0.25	ug/L		10/20/22 16:12	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/20/22 16:12	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/20/22 16:12	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/20/22 16:12	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 16:12	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/20/22 16:12	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/20/22 16:12	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/20/22 16:12	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/20/22 16:12	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/20/22 16:12	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/20/22 16:12	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/20/22 16:12	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/20/22 16:12	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		10/20/22 16:12	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/20/22 16:12	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/20/22 16:12	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/20/22 16:12	1
4-Methyl-2-pentanone (MIBK)	10	U Q	20	10	2.7	ug/L		10/20/22 16:12	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/20/22 16:12	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/20/22 16:12	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/20/22 16:12	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-02-04X-FAL22
Lab Sample ID: 680-222692-3
Date Collected: 10/06/22 12:00
Matrix: Water
Date Received: 10/08/22 10:30

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		10/20/22 16:12	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/20/22 16:12	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/20/22 16:12	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/20/22 16:12	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/20/22 16:12	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/20/22 16:12	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/20/22 16:12	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/20/22 16:12	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/20/22 16:12	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/20/22 16:12	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 16:12	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/20/22 16:12	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/20/22 16:12	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/20/22 16:12	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/20/22 16:12	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/20/22 16:12	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/20/22 16:12	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/20/22 16:12	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/20/22 16:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*89 - 112*		*10/20/22 16:12*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*81 - 118*		*10/20/22 16:12*	*1*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*		*10/20/22 16:12*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*10/20/22 16:12*	*1*

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**47000**		100	50	20	ug/L		10/10/22 16:46	1
Manganese	**2000**		10	5.0	1.3	ug/L		10/10/22 16:46	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**520**		5.0	3.0	0.86	ug/L		10/10/22 23:24	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-02-06X-FAL22
Lab Sample ID: 680-222692-4
Date Collected: 10/06/22 11:20
Matrix: Water
Date Received: 10/08/22 10:30

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		10/20/22 15:34	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/20/22 15:34	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/20/22 15:34	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/20/22 15:34	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/20/22 15:34	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/20/22 15:34	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/20/22 15:34	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/20/22 15:34	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/20/22 15:34	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/20/22 15:34	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/20/22 15:34	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/20/22 15:34	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/20/22 15:34	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/20/22 15:34	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/20/22 15:34	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/20/22 15:34	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/20/22 15:34	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/20/22 15:34	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/20/22 15:34	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/20/22 15:34	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		10/20/22 15:34	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 15:34	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/20/22 15:34	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/20/22 15:34	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/20/22 15:34	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/20/22 15:34	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/20/22 15:34	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 15:34	1
1,2-Dichloroethane	1.0	U	2.0	1.0	0.25	ug/L		10/20/22 15:34	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/20/22 15:34	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/20/22 15:34	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/20/22 15:34	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 15:34	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/20/22 15:34	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/20/22 15:34	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/20/22 15:34	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/20/22 15:34	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/20/22 15:34	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/20/22 15:34	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/20/22 15:34	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/20/22 15:34	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		10/20/22 15:34	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/20/22 15:34	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/20/22 15:34	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/20/22 15:34	1
4-Methyl-2-pentanone (MIBK)	10	U Q	20	10	2.7	ug/L		10/20/22 15:34	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/20/22 15:34	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/20/22 15:34	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/20/22 15:34	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-02-06X-FAL22
Lab Sample ID: 680-222692-4
Date Collected: 10/06/22 11:20
Matrix: Water
Date Received: 10/08/22 10:30

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		10/20/22 15:34	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/20/22 15:34	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/20/22 15:34	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/20/22 15:34	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/20/22 15:34	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/20/22 15:34	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/20/22 15:34	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/20/22 15:34	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/20/22 15:34	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/20/22 15:34	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 15:34	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/20/22 15:34	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/20/22 15:34	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/20/22 15:34	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/20/22 15:34	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/20/22 15:34	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/20/22 15:34	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/20/22 15:34	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/20/22 15:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*89 - 112*		*10/20/22 15:34*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*81 - 118*		*10/20/22 15:34*	*1*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*		*10/20/22 15:34*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 119*		*10/20/22 15:34*	*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		10/10/22 16:53	1
Manganese	5.0	U	10	5.0	1.3	ug/L		10/10/22 16:53	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		10/10/22 23:33	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-02-11X-FAL22
Lab Sample ID: 680-222692-5
Date Collected: 10/06/22 15:50
Matrix: Water
Date Received: 10/08/22 10:30

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

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-02-11X-FAL22
Lab Sample ID: 680-222692-5
Date Collected: 10/06/22 15:50
Matrix: Water
Date Received: 10/08/22 10:30

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		10/20/22 15:15	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/20/22 15:15	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/20/22 15:15	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/20/22 15:15	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/20/22 15:15	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/20/22 15:15	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/20/22 15:15	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/20/22 15:15	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/20/22 15:15	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/20/22 15:15	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 15:15	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/20/22 15:15	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/20/22 15:15	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/20/22 15:15	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/20/22 15:15	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/20/22 15:15	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/20/22 15:15	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/20/22 15:15	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/20/22 15:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*89 - 112*		*10/20/22 15:15*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*		*10/20/22 15:15*	*1*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*		*10/20/22 15:15*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*10/20/22 15:15*	*1*

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**40000**		100	50	20	ug/L		10/10/22 16:56	1
Manganese	**9200**		10	5.0	1.3	ug/L		10/10/22 16:56	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**610**		5.0	3.0	0.86	ug/L		10/10/22 23:35	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-02-13X-FAL22
Lab Sample ID: 680-222692-6
Date Collected: 10/05/22 10:52
Matrix: Water
Date Received: 10/08/22 10:30

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		10/17/22 16:56	1
Benzene	1.0	U M	2.0	1.0	0.27	ug/L		10/17/22 16:56	1
Bromobenzene	0.50	U Q	1.0	0.50	0.24	ug/L		10/17/22 16:56	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/17/22 16:56	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/17/22 16:56	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		10/17/22 16:56	1
Bromomethane	10	U	20	10	3.7	ug/L		10/17/22 16:56	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		10/17/22 16:56	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/17/22 16:56	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/17/22 16:56	1
tert-Butylbenzene	1.0	U Q	2.0	1.0	0.43	ug/L		10/17/22 16:56	1
Carbon disulfide	1.0	U Q	2.0	1.0	0.43	ug/L		10/17/22 16:56	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/17/22 16:56	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/17/22 16:56	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/17/22 16:56	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/17/22 16:56	1
Chloromethane	2.0	U Q	2.5	2.0	0.54	ug/L		10/17/22 16:56	1
2-Chlorotoluene	0.50	U Q	1.0	0.50	0.25	ug/L		10/17/22 16:56	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/17/22 16:56	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/17/22 16:56	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/17/22 16:56	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/17/22 16:56	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/17/22 16:56	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/17/22 16:56	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/17/22 16:56	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/17/22 16:56	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 16:56	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/17/22 16:56	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/17/22 16:56	1
cis-1,2-Dichloroethene	**0.33**	**J**	2.0	1.0	0.25	ug/L		10/17/22 16:56	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/17/22 16:56	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/17/22 16:56	1
1,1-Dichloroethene	1.0	U Q	2.0	1.0	0.33	ug/L		10/17/22 16:56	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/17/22 16:56	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 16:56	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/17/22 16:56	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/17/22 16:56	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/17/22 16:56	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/17/22 16:56	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/17/22 16:56	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/17/22 16:56	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/17/22 16:56	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/17/22 16:56	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/17/22 16:56	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/17/22 16:56	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/17/22 16:56	1
Methyl tert-butyl ether	**2.0**	**J**	5.0	2.0	0.81	ug/L		10/17/22 16:56	1
Naphthalene	5.0	U Q	10	5.0	2.4	ug/L		10/17/22 16:56	1
N-Propylbenzene	1.0	U Q	2.0	1.0	0.41	ug/L		10/17/22 16:56	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-02-13X-FAL22
Lab Sample ID: 680-222692-6
Date Collected: 10/05/22 10:52
Matrix: Water
Date Received: 10/08/22 10:30

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		10/17/22 16:56	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 16:56	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/17/22 16:56	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/17/22 16:56	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/17/22 16:56	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/17/22 16:56	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/17/22 16:56	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/17/22 16:56	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/17/22 16:56	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/17/22 16:56	1
Trichlorofluoromethane	1.0	U Q	2.0	1.0	0.33	ug/L		10/17/22 16:56	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/17/22 16:56	1
1,2,4-Trimethylbenzene	1.0	U Q	2.0	1.0	0.43	ug/L		10/17/22 16:56	1
1,3,5-Trimethylbenzene	1.0	U Q	2.0	1.0	0.28	ug/L		10/17/22 16:56	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/17/22 16:56	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/17/22 16:56	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/17/22 16:56	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/17/22 16:56	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/17/22 16:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*127*	*Q*	*89 - 112*		*10/17/22 16:56*	*1*
1,2-Dichloroethane-d4 (Surr)	*84*		*81 - 118*		*10/17/22 16:56*	*1*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*		*10/17/22 16:56*	*1*
Dibromofluoromethane (Surr)	*113*		*80 - 119*		*10/17/22 16:56*	*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		10/10/22 16:58	1
Manganese	**19000**		10	5.0	1.3	ug/L		10/10/22 16:58	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**270**		5.0	3.0	0.86	ug/L		10/10/22 23:38	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-03-07X-FAL22
Lab Sample ID: 680-222692-7
Date Collected: 10/05/22 12:40
Matrix: Water
Date Received: 10/08/22 10:30

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		10/17/22 17:15	1
Benzene	1.0	U M	2.0	1.0	0.27	ug/L		10/17/22 17:15	1
Bromobenzene	0.50	U Q	1.0	0.50	0.24	ug/L		10/17/22 17:15	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/17/22 17:15	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/17/22 17:15	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		10/17/22 17:15	1
Bromomethane	10	U	20	10	3.7	ug/L		10/17/22 17:15	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		10/17/22 17:15	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/17/22 17:15	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/17/22 17:15	1
tert-Butylbenzene	1.0	U Q	2.0	1.0	0.43	ug/L		10/17/22 17:15	1
Carbon disulfide	1.0	U Q	2.0	1.0	0.43	ug/L		10/17/22 17:15	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/17/22 17:15	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/17/22 17:15	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/17/22 17:15	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/17/22 17:15	1
Chloromethane	2.0	U Q	2.5	2.0	0.54	ug/L		10/17/22 17:15	1
2-Chlorotoluene	0.50	U Q	1.0	0.50	0.25	ug/L		10/17/22 17:15	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/17/22 17:15	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/17/22 17:15	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/17/22 17:15	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/17/22 17:15	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/17/22 17:15	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/17/22 17:15	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/17/22 17:15	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/17/22 17:15	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 17:15	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/17/22 17:15	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/17/22 17:15	1
cis-1,2-Dichloroethene	**0.84**	**J**	2.0	1.0	0.25	ug/L		10/17/22 17:15	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/17/22 17:15	1
1,2-Dichloroethene, Total	**1.1**	**J**	2.0	1.0	0.37	ug/L		10/17/22 17:15	1
1,1-Dichloroethene	1.0	U Q	2.0	1.0	0.33	ug/L		10/17/22 17:15	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/17/22 17:15	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 17:15	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/17/22 17:15	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/17/22 17:15	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/17/22 17:15	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/17/22 17:15	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/17/22 17:15	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/17/22 17:15	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/17/22 17:15	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/17/22 17:15	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/17/22 17:15	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/17/22 17:15	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/17/22 17:15	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/17/22 17:15	1
Naphthalene	5.0	U Q	10	5.0	2.4	ug/L		10/17/22 17:15	1
N-Propylbenzene	1.0	U Q	2.0	1.0	0.41	ug/L		10/17/22 17:15	1

Client Sample ID: G6M-03-07X-FAL22
Lab Sample ID: 680-222692-7
Date Collected: 10/05/22 12:40
Matrix: Water
Date Received: 10/08/22 10:30

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		10/17/22 17:15	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 17:15	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/17/22 17:15	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/17/22 17:15	1
Toluene	**0.65**	**J**	2.0	1.0	0.25	ug/L		10/17/22 17:15	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/17/22 17:15	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/17/22 17:15	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/17/22 17:15	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/17/22 17:15	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/17/22 17:15	1
Trichlorofluoromethane	1.0	U Q	2.0	1.0	0.33	ug/L		10/17/22 17:15	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/17/22 17:15	1
1,2,4-Trimethylbenzene	1.0	U M Q	2.0	1.0	0.43	ug/L		10/17/22 17:15	1
1,3,5-Trimethylbenzene	1.0	U M Q	2.0	1.0	0.28	ug/L		10/17/22 17:15	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/17/22 17:15	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/17/22 17:15	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/17/22 17:15	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/17/22 17:15	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/17/22 17:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*130*	*Q*	*89 - 112*		*10/17/22 17:15*	*1*
1,2-Dichloroethane-d4 (Surr)	*85*		*81 - 118*		*10/17/22 17:15*	*1*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*10/17/22 17:15*	*1*
Dibromofluoromethane (Surr)	*115*		*80 - 119*		*10/17/22 17:15*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**10**		1.1	0.76	0.30	ug/L		10/14/22 21:18	1
Ethylene	**3.4**		1.0	0.71	0.31	ug/L		10/14/22 21:18	1
Methane (TCD)	**22000**		390	77	39	ug/L		10/14/22 21:18	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**0.70**	**J**	1.0	1.0	0.40	mg/L		10/21/22 23:40	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**86000**		100	50	20	ug/L		10/10/22 17:01	1
Manganese	**2000**		10	5.0	1.3	ug/L		10/10/22 17:01	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**490**		5.0	3.0	0.86	ug/L		10/10/22 23:41	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**200**		5.0	5.0	2.2	mg/L		10/12/22 16:50	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-2011)	**200**		5.0	5.0	5.0	mg/L		10/12/22 16:50	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-03-07X-FAL22
Lab Sample ID: 680-222692-7
Date Collected: 10/05/22 12:40
Matrix: Water
Date Received: 10/08/22 10:30

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Carbonate Alkalinity as CaCO3 (SM 2320B-2011)	5.0	U	5.0	5.0	5.0	mg/L		10/12/22 16:50	1
Hydroxide Alkalinity (SM 2320B-2011)	5.0	U	5.0	5.0	5.0	mg/L		10/12/22 16:50	1
Carbon Dioxide, Free (SM 2320B-2011)	**130**		5.0	5.0	5.0	mg/L		10/12/22 16:50	1
Phenolphthalein Alkalinity (SM 2320B-2011)	5.0	U	5.0	5.0	5.0	mg/L		10/12/22 16:50	1
Bicarbonate ion as HCO3 (SM 2320B-2011)	**250**		6.1	6.1	6.1	mg/L		10/12/22 16:50	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	**0.049**	**J**	0.050	0.025	0.010	mg/L		10/11/22 15:36	1
Sulfide (SW846 9034)	0.86	U J1	0.86	0.86	0.86	mg/L		10/11/22 09:23	1
Total Organic Carbon (SW846 9060)	**16**		1.0	1.0	0.50	mg/L		10/17/22 23:35	1
Total Organic Carbon - Quad (SW846 9060)	**16**		1.0	1.0	0.50	mg/L		10/17/22 23:35	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-03-10X-FAL22
Lab Sample ID: 680-222692-8
Date Collected: 10/06/22 14:40
Matrix: Water
Date Received: 10/08/22 10:30

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		10/20/22 16:31	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/20/22 16:31	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/20/22 16:31	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/20/22 16:31	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/20/22 16:31	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/20/22 16:31	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/20/22 16:31	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/20/22 16:31	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/20/22 16:31	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/20/22 16:31	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/20/22 16:31	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/20/22 16:31	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/20/22 16:31	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/20/22 16:31	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/20/22 16:31	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/20/22 16:31	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/20/22 16:31	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/20/22 16:31	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/20/22 16:31	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/20/22 16:31	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		10/20/22 16:31	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 16:31	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/20/22 16:31	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/20/22 16:31	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/20/22 16:31	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/20/22 16:31	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/20/22 16:31	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 16:31	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/20/22 16:31	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/20/22 16:31	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/20/22 16:31	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/20/22 16:31	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 16:31	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/20/22 16:31	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/20/22 16:31	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/20/22 16:31	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/20/22 16:31	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/20/22 16:31	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/20/22 16:31	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/20/22 16:31	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/20/22 16:31	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		10/20/22 16:31	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/20/22 16:31	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/20/22 16:31	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/20/22 16:31	1
4-Methyl-2-pentanone (MIBK)	10	U Q	20	10	2.7	ug/L		10/20/22 16:31	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/20/22 16:31	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/20/22 16:31	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/20/22 16:31	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-03-10X-FAL22
Lab Sample ID: 680-222692-8
Date Collected: 10/06/22 14:40
Matrix: Water
Date Received: 10/08/22 10:30

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		10/20/22 16:31	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/20/22 16:31	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/20/22 16:31	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/20/22 16:31	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/20/22 16:31	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/20/22 16:31	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/20/22 16:31	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/20/22 16:31	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/20/22 16:31	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/20/22 16:31	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 16:31	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/20/22 16:31	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/20/22 16:31	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/20/22 16:31	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/20/22 16:31	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/20/22 16:31	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/20/22 16:31	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/20/22 16:31	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/20/22 16:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*89 - 112*		*10/20/22 16:31*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*		*10/20/22 16:31*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*10/20/22 16:31*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*10/20/22 16:31*	*1*

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**48000**		100	50	20	ug/L		10/18/22 18:28	1
Manganese	**2000**		10	5.0	1.3	ug/L		10/18/22 18:28	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**370**		5.0	3.0	0.86	ug/L		10/18/22 18:32	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-04-02X-FAL22
Lab Sample ID: 680-222692-9
Date Collected: 10/05/22 14:55
Matrix: Water
Date Received: 10/08/22 10:30

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	**14**	**J**	25	10	3.7	ug/L		10/17/22 17:34	1
Benzene	1.0	U M	2.0	1.0	0.27	ug/L		10/17/22 17:34	1
Bromobenzene	0.50	U Q	1.0	0.50	0.24	ug/L		10/17/22 17:34	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/17/22 17:34	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/17/22 17:34	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		10/17/22 17:34	1
Bromomethane	10	U	20	10	3.7	ug/L		10/17/22 17:34	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		10/17/22 17:34	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/17/22 17:34	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/17/22 17:34	1
tert-Butylbenzene	1.0	U Q	2.0	1.0	0.43	ug/L		10/17/22 17:34	1
Carbon disulfide	1.0	U Q	2.0	1.0	0.43	ug/L		10/17/22 17:34	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/17/22 17:34	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/17/22 17:34	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/17/22 17:34	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/17/22 17:34	1
Chloromethane	2.0	U Q	2.5	2.0	0.54	ug/L		10/17/22 17:34	1
2-Chlorotoluene	0.50	U Q	1.0	0.50	0.25	ug/L		10/17/22 17:34	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/17/22 17:34	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/17/22 17:34	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/17/22 17:34	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/17/22 17:34	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/17/22 17:34	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/17/22 17:34	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/17/22 17:34	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/17/22 17:34	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 17:34	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/17/22 17:34	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/17/22 17:34	1
cis-1,2-Dichloroethene	**100**		2.0	1.0	0.25	ug/L		10/17/22 17:34	1
trans-1,2-Dichloroethene	**0.96**	**J**	2.0	1.0	0.34	ug/L		10/17/22 17:34	1
1,2-Dichloroethene, Total	**100**		2.0	1.0	0.37	ug/L		10/17/22 17:34	1
1,1-Dichloroethene	1.0	U Q	2.0	1.0	0.33	ug/L		10/17/22 17:34	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/17/22 17:34	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 17:34	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/17/22 17:34	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/17/22 17:34	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/17/22 17:34	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/17/22 17:34	1
Ethylbenzene	0.50	U M	1.0	0.50	0.20	ug/L		10/17/22 17:34	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/17/22 17:34	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/17/22 17:34	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/17/22 17:34	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/17/22 17:34	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/17/22 17:34	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/17/22 17:34	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/17/22 17:34	1
Naphthalene	5.0	U Q	10	5.0	2.4	ug/L		10/17/22 17:34	1
N-Propylbenzene	1.0	U Q	2.0	1.0	0.41	ug/L		10/17/22 17:34	1

Client Sample ID: G6M-04-02X-FAL22
Lab Sample ID: 680-222692-9

Date Collected: 10/05/22 14:55
Matrix: Water
Date Received: 10/08/22 10:30

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		10/17/22 17:34	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 17:34	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/17/22 17:34	1
Tetrachloroethene	**43**		2.0	1.0	0.35	ug/L		10/17/22 17:34	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/17/22 17:34	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/17/22 17:34	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/17/22 17:34	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/17/22 17:34	1
1,1,2-Trichloroethane	1.0	U M	2.0	1.0	0.32	ug/L		10/17/22 17:34	1
Trichloroethene	**44**		1.0	0.50	0.20	ug/L		10/17/22 17:34	1
Trichlorofluoromethane	1.0	U Q	2.0	1.0	0.33	ug/L		10/17/22 17:34	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/17/22 17:34	1
1,2,4-Trimethylbenzene	1.0	U Q	2.0	1.0	0.43	ug/L		10/17/22 17:34	1
1,3,5-Trimethylbenzene	1.0	U Q	2.0	1.0	0.28	ug/L		10/17/22 17:34	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/17/22 17:34	1
Vinyl chloride	**24**		2.0	1.0	0.40	ug/L		10/17/22 17:34	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/17/22 17:34	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/17/22 17:34	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/17/22 17:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*128*	*Q*	*89 - 112*		*10/17/22 17:34*	*1*
1,2-Dichloroethane-d4 (Surr)	*84*		*81 - 118*		*10/17/22 17:34*	*1*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*		*10/17/22 17:34*	*1*
Dibromofluoromethane (Surr)	*115*		*80 - 119*		*10/17/22 17:34*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**2.4**		1.1	0.76	0.30	ug/L		10/15/22 11:14	1
Ethylene	**23**		1.0	0.71	0.31	ug/L		10/15/22 11:14	1
Methane (TCD)	**20000**		390	77	39	ug/L		10/15/22 11:14	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**5.0**		1.0	1.0	0.40	mg/L		10/22/22 00:47	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		10/10/22 17:03	1
Manganese	**8900**		10	5.0	1.3	ug/L		10/10/22 17:03	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**62**		5.0	3.0	0.86	ug/L		10/10/22 23:44	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**140**		5.0	5.0	2.2	mg/L		10/12/22 16:59	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-2011)	**140**		5.0	5.0	5.0	mg/L		10/12/22 16:59	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-04-02X-FAL22
Lab Sample ID: 680-222692-9
Date Collected: 10/05/22 14:55
Matrix: Water
Date Received: 10/08/22 10:30

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Carbonate Alkalinity as CaCO3 (SM 2320B-2011)	5.0	U	5.0	5.0	5.0	mg/L		10/12/22 16:59	1
Hydroxide Alkalinity (SM 2320B-2011)	5.0	U	5.0	5.0	5.0	mg/L		10/12/22 16:59	1
Carbon Dioxide, Free (SM 2320B-2011)	**110**		5.0	5.0	5.0	mg/L		10/12/22 16:59	1
Phenolphthalein Alkalinity (SM 2320B-2011)	5.0	U	5.0	5.0	5.0	mg/L		10/12/22 16:59	1
Bicarbonate ion as HCO3 (SM 2320B-2011)	**170**		6.1	6.1	6.1	mg/L		10/12/22 16:59	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	0.025	U	0.050	0.025	0.010	mg/L		10/11/22 15:37	1
Sulfide (SW846 9034)	0.83	U	0.83	0.83	0.83	mg/L		10/11/22 09:23	1
Total Organic Carbon (SW846 9060)	**7.5**		1.0	1.0	0.50	mg/L		10/17/22 23:53	1
Total Organic Carbon - Quad (SW846 9060)	**7.5**		1.0	1.0	0.50	mg/L		10/17/22 23:53	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-04-04X-FAL22
Lab Sample ID: 680-222692-10
Date Collected: 10/05/22 10:00
Matrix: Water
Date Received: 10/08/22 10:30

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		10/17/22 17:53	1
Benzene	1.0	U M	2.0	1.0	0.27	ug/L		10/17/22 17:53	1
Bromobenzene	0.50	U Q	1.0	0.50	0.24	ug/L		10/17/22 17:53	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/17/22 17:53	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/17/22 17:53	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		10/17/22 17:53	1
Bromomethane	10	U	20	10	3.7	ug/L		10/17/22 17:53	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		10/17/22 17:53	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/17/22 17:53	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/17/22 17:53	1
tert-Butylbenzene	1.0	U Q	2.0	1.0	0.43	ug/L		10/17/22 17:53	1
Carbon disulfide	1.0	U Q	2.0	1.0	0.43	ug/L		10/17/22 17:53	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/17/22 17:53	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/17/22 17:53	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/17/22 17:53	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/17/22 17:53	1
Chloromethane	2.0	U Q	2.5	2.0	0.54	ug/L		10/17/22 17:53	1
2-Chlorotoluene	0.50	U Q	1.0	0.50	0.25	ug/L		10/17/22 17:53	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/17/22 17:53	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/17/22 17:53	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/17/22 17:53	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/17/22 17:53	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/17/22 17:53	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/17/22 17:53	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/17/22 17:53	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/17/22 17:53	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 17:53	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/17/22 17:53	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/17/22 17:53	1
cis-1,2-Dichloroethene	**0.79**	**J**	2.0	1.0	0.25	ug/L		10/17/22 17:53	1
trans-1,2-Dichloroethene	**0.38**	**J**	2.0	1.0	0.34	ug/L		10/17/22 17:53	1
1,2-Dichloroethene, Total	**1.2**	**J**	2.0	1.0	0.37	ug/L		10/17/22 17:53	1
1,1-Dichloroethene	1.0	U Q	2.0	1.0	0.33	ug/L		10/17/22 17:53	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/17/22 17:53	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 17:53	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/17/22 17:53	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/17/22 17:53	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/17/22 17:53	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/17/22 17:53	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/17/22 17:53	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/17/22 17:53	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/17/22 17:53	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/17/22 17:53	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/17/22 17:53	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/17/22 17:53	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/17/22 17:53	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/17/22 17:53	1
Naphthalene	5.0	U Q	10	5.0	2.4	ug/L		10/17/22 17:53	1
N-Propylbenzene	1.0	U Q	2.0	1.0	0.41	ug/L		10/17/22 17:53	1

Client Sample ID: G6M-04-04X-FAL22
Lab Sample ID: 680-222692-10
Date Collected: 10/05/22 10:00
Matrix: Water
Date Received: 10/08/22 10:30

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		10/17/22 17:53	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 17:53	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/17/22 17:53	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/17/22 17:53	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/17/22 17:53	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/17/22 17:53	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/17/22 17:53	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/17/22 17:53	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/17/22 17:53	1
Trichloroethene	**0.23**	**J M**	1.0	0.50	0.20	ug/L		10/17/22 17:53	1
Trichlorofluoromethane	1.0	U Q	2.0	1.0	0.33	ug/L		10/17/22 17:53	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/17/22 17:53	1
1,2,4-Trimethylbenzene	1.0	U Q	2.0	1.0	0.43	ug/L		10/17/22 17:53	1
1,3,5-Trimethylbenzene	1.0	U Q	2.0	1.0	0.28	ug/L		10/17/22 17:53	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/17/22 17:53	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/17/22 17:53	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/17/22 17:53	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/17/22 17:53	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/17/22 17:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*131*	*Q*	*89 - 112*		*10/17/22 17:53*	*1*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*		*10/17/22 17:53*	*1*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*10/17/22 17:53*	*1*
Dibromofluoromethane (Surr)	*117*		*80 - 119*		*10/17/22 17:53*	*1*

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**91000**		100	50	20	ug/L		10/10/22 17:06	1
Manganese	**11000**		10	5.0	1.3	ug/L		10/10/22 17:06	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**580**		5.0	3.0	0.86	ug/L		10/10/22 23:46	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-04-06X-FAL22
Lab Sample ID: 680-222692-11
Date Collected: 10/06/22 10:22
Matrix: Water
Date Received: 10/08/22 10:30

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		10/20/22 17:09	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/20/22 17:09	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/20/22 17:09	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/20/22 17:09	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/20/22 17:09	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/20/22 17:09	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/20/22 17:09	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/20/22 17:09	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/20/22 17:09	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/20/22 17:09	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/20/22 17:09	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/20/22 17:09	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/20/22 17:09	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/20/22 17:09	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/20/22 17:09	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/20/22 17:09	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/20/22 17:09	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/20/22 17:09	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/20/22 17:09	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/20/22 17:09	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		10/20/22 17:09	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 17:09	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/20/22 17:09	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/20/22 17:09	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/20/22 17:09	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/20/22 17:09	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/20/22 17:09	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 17:09	1
1,2-Dichloroethane	1.0	U	2.0	1.0	0.25	ug/L		10/20/22 17:09	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/20/22 17:09	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/20/22 17:09	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/20/22 17:09	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 17:09	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/20/22 17:09	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/20/22 17:09	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/20/22 17:09	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/20/22 17:09	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/20/22 17:09	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/20/22 17:09	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/20/22 17:09	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/20/22 17:09	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		10/20/22 17:09	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/20/22 17:09	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/20/22 17:09	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/20/22 17:09	1
4-Methyl-2-pentanone (MIBK)	10	U Q	20	10	2.7	ug/L		10/20/22 17:09	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/20/22 17:09	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/20/22 17:09	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/20/22 17:09	1

Client Sample ID: G6M-04-06X-FAL22
Lab Sample ID: 680-222692-11
Date Collected: 10/06/22 10:22
Matrix: Water
Date Received: 10/08/22 10:30

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		10/20/22 17:09	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/20/22 17:09	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/20/22 17:09	1
Tetrachloroethene	**0.52**	**J**	2.0	1.0	0.35	ug/L		10/20/22 17:09	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/20/22 17:09	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/20/22 17:09	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/20/22 17:09	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/20/22 17:09	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/20/22 17:09	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/20/22 17:09	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 17:09	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/20/22 17:09	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/20/22 17:09	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/20/22 17:09	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/20/22 17:09	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/20/22 17:09	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/20/22 17:09	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/20/22 17:09	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/20/22 17:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*89 - 112*		*10/20/22 17:09*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*81 - 118*		*10/20/22 17:09*	*1*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*		*10/20/22 17:09*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 119*		*10/20/22 17:09*	*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		10/10/22 17:08	1
Manganese	**53**		10	5.0	1.3	ug/L		10/10/22 17:08	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		10/10/22 23:49	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-04-07X-FAL22
Lab Sample ID: 680-222692-12
Date Collected: 10/05/22 13:31
Matrix: Water
Date Received: 10/08/22 10:30

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		10/17/22 18:12	1
Benzene	1.0	U M	2.0	1.0	0.27	ug/L		10/17/22 18:12	1
Bromobenzene	0.50	U Q	1.0	0.50	0.24	ug/L		10/17/22 18:12	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/17/22 18:12	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/17/22 18:12	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		10/17/22 18:12	1
Bromomethane	10	U	20	10	3.7	ug/L		10/17/22 18:12	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		10/17/22 18:12	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/17/22 18:12	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/17/22 18:12	1
tert-Butylbenzene	1.0	U Q	2.0	1.0	0.43	ug/L		10/17/22 18:12	1
Carbon disulfide	1.0	U Q	2.0	1.0	0.43	ug/L		10/17/22 18:12	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/17/22 18:12	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/17/22 18:12	1
Chloroethane	10	U M Q	20	10	4.6	ug/L		10/17/22 18:12	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/17/22 18:12	1
Chloromethane	2.0	U Q	2.5	2.0	0.54	ug/L		10/17/22 18:12	1
2-Chlorotoluene	0.50	U Q	1.0	0.50	0.25	ug/L		10/17/22 18:12	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/17/22 18:12	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/17/22 18:12	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/17/22 18:12	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/17/22 18:12	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/17/22 18:12	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/17/22 18:12	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/17/22 18:12	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/17/22 18:12	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 18:12	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/17/22 18:12	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/17/22 18:12	1
cis-1,2-Dichloroethene	**150**		2.0	1.0	0.25	ug/L		10/17/22 18:12	1
trans-1,2-Dichloroethene	**1.3**	**J**	2.0	1.0	0.34	ug/L		10/17/22 18:12	1
1,2-Dichloroethene, Total	**150**		2.0	1.0	0.37	ug/L		10/17/22 18:12	1
1,1-Dichloroethene	1.0	U Q	2.0	1.0	0.33	ug/L		10/17/22 18:12	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/17/22 18:12	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 18:12	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/17/22 18:12	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/17/22 18:12	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/17/22 18:12	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/17/22 18:12	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/17/22 18:12	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/17/22 18:12	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/17/22 18:12	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/17/22 18:12	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/17/22 18:12	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/17/22 18:12	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/17/22 18:12	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/17/22 18:12	1
Naphthalene	5.0	U Q	10	5.0	2.4	ug/L		10/17/22 18:12	1
N-Propylbenzene	1.0	U Q	2.0	1.0	0.41	ug/L		10/17/22 18:12	1

Client Sample ID: G6M-04-07X-FAL22
Lab Sample ID: 680-222692-12
Date Collected: 10/05/22 13:31
Matrix: Water
Date Received: 10/08/22 10:30

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		10/17/22 18:12	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 18:12	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/17/22 18:12	1
Tetrachloroethene	**0.42**	**J**	2.0	1.0	0.35	ug/L		10/17/22 18:12	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/17/22 18:12	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/17/22 18:12	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/17/22 18:12	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/17/22 18:12	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/17/22 18:12	1
Trichloroethene	**24**		1.0	0.50	0.20	ug/L		10/17/22 18:12	1
Trichlorofluoromethane	1.0	U Q	2.0	1.0	0.33	ug/L		10/17/22 18:12	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/17/22 18:12	1
1,2,4-Trimethylbenzene	1.0	U Q	2.0	1.0	0.43	ug/L		10/17/22 18:12	1
1,3,5-Trimethylbenzene	1.0	U Q	2.0	1.0	0.28	ug/L		10/17/22 18:12	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/17/22 18:12	1
Vinyl chloride	**28**		2.0	1.0	0.40	ug/L		10/17/22 18:12	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/17/22 18:12	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/17/22 18:12	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/17/22 18:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*131*	*Q*	*89 - 112*		*10/17/22 18:12*	*1*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*		*10/17/22 18:12*	*1*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*10/17/22 18:12*	*1*
Dibromofluoromethane (Surr)	*116*		*80 - 119*		*10/17/22 18:12*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**0.54**	**J**	1.1	0.76	0.30	ug/L		10/14/22 21:44	1
Ethylene	**0.46**	**J**	1.0	0.71	0.31	ug/L		10/14/22 21:44	1
Methane	**270**		1.2	1.2	0.57	ug/L		10/14/22 21:44	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**5.6**		1.0	1.0	0.40	mg/L		10/21/22 23:54	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**1100**		100	50	20	ug/L		10/10/22 17:13	1
Manganese	**4200**		10	5.0	1.3	ug/L		10/10/22 17:13	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		10/10/22 23:55	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**260**		5.0	5.0	2.2	mg/L		10/12/22 17:10	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-2011)	**260**		5.0	5.0	5.0	mg/L		10/12/22 17:10	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-04-07X-FAL22
Lab Sample ID: 680-222692-12
Date Collected: 10/05/22 13:31
Matrix: Water
Date Received: 10/08/22 10:30

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Carbonate Alkalinity as CaCO3 (SM 2320B-2011)	5.0	U	5.0	5.0	5.0	mg/L		10/12/22 17:10	1
Hydroxide Alkalinity (SM 2320B-2011)	5.0	U	5.0	5.0	5.0	mg/L		10/12/22 17:10	1
Carbon Dioxide, Free (SM 2320B-2011)	**53**		5.0	5.0	5.0	mg/L		10/12/22 17:10	1
Phenolphthalein Alkalinity (SM 2320B-2011)	5.0	U	5.0	5.0	5.0	mg/L		10/12/22 17:10	1
Bicarbonate ion as HCO3 (SM 2320B-2011)	**320**		6.1	6.1	6.1	mg/L		10/12/22 17:10	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	0.025	U	0.050	0.025	0.010	mg/L		10/11/22 15:38	1
Sulfide (SW846 9034)	**3.7**		0.83	0.83	0.83	mg/L		10/11/22 09:23	1
Total Organic Carbon (SW846 9060)	**1.4**		1.0	1.0	0.50	mg/L		10/18/22 00:11	1
Total Organic Carbon - Quad (SW846 9060)	**1.4**		1.0	1.0	0.50	mg/L		10/18/22 00:11	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-04-11X-FAL22
Lab Sample ID: 680-222692-13
Date Collected: 10/05/22 13:40
Matrix: Water
Date Received: 10/08/22 10:30

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		10/17/22 18:32	1
Benzene	1.0	U M	2.0	1.0	0.27	ug/L		10/17/22 18:32	1
Bromobenzene	0.50	U Q	1.0	0.50	0.24	ug/L		10/17/22 18:32	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/17/22 18:32	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/17/22 18:32	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		10/17/22 18:32	1
Bromomethane	10	U	20	10	3.7	ug/L		10/17/22 18:32	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		10/17/22 18:32	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/17/22 18:32	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/17/22 18:32	1
tert-Butylbenzene	1.0	U Q	2.0	1.0	0.43	ug/L		10/17/22 18:32	1
Carbon disulfide	1.0	U Q	2.0	1.0	0.43	ug/L		10/17/22 18:32	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/17/22 18:32	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/17/22 18:32	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/17/22 18:32	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/17/22 18:32	1
Chloromethane	2.0	U Q	2.5	2.0	0.54	ug/L		10/17/22 18:32	1
2-Chlorotoluene	0.50	U Q	1.0	0.50	0.25	ug/L		10/17/22 18:32	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/17/22 18:32	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/17/22 18:32	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/17/22 18:32	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/17/22 18:32	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/17/22 18:32	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/17/22 18:32	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/17/22 18:32	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/17/22 18:32	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 18:32	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/17/22 18:32	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/17/22 18:32	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/17/22 18:32	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/17/22 18:32	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/17/22 18:32	1
1,1-Dichloroethene	1.0	U Q	2.0	1.0	0.33	ug/L		10/17/22 18:32	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/17/22 18:32	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 18:32	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/17/22 18:32	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/17/22 18:32	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/17/22 18:32	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/17/22 18:32	1
Ethylbenzene	0.50	U M	1.0	0.50	0.20	ug/L		10/17/22 18:32	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/17/22 18:32	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/17/22 18:32	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/17/22 18:32	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/17/22 18:32	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/17/22 18:32	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/17/22 18:32	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/17/22 18:32	1
Naphthalene	5.0	U Q	10	5.0	2.4	ug/L		10/17/22 18:32	1
N-Propylbenzene	1.0	U Q	2.0	1.0	0.41	ug/L		10/17/22 18:32	1

Client Sample ID: G6M-04-11X-FAL22
Lab Sample ID: 680-222692-13
Date Collected: 10/05/22 13:40
Matrix: Water
Date Received: 10/08/22 10:30

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		10/17/22 18:32	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 18:32	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/17/22 18:32	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/17/22 18:32	1
Toluene	**0.45**	**J**	2.0	1.0	0.25	ug/L		10/17/22 18:32	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/17/22 18:32	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/17/22 18:32	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/17/22 18:32	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/17/22 18:32	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/17/22 18:32	1
Trichlorofluoromethane	1.0	U Q	2.0	1.0	0.33	ug/L		10/17/22 18:32	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/17/22 18:32	1
1,2,4-Trimethylbenzene	1.0	U Q	2.0	1.0	0.43	ug/L		10/17/22 18:32	1
1,3,5-Trimethylbenzene	1.0	U Q	2.0	1.0	0.28	ug/L		10/17/22 18:32	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/17/22 18:32	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/17/22 18:32	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/17/22 18:32	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/17/22 18:32	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/17/22 18:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*131*	*Q*	*89 - 112*		*10/17/22 18:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*85*		*81 - 118*		*10/17/22 18:32*	*1*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*10/17/22 18:32*	*1*
Dibromofluoromethane (Surr)	*117*		*80 - 119*		*10/17/22 18:32*	*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		10/18/22 18:38	1
Manganese	5.0	U	10	5.0	1.3	ug/L		10/18/22 18:38	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		10/18/22 18:35	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-07-02X-FAL22
Lab Sample ID: 680-222692-14
Date Collected: 10/05/22 10:00
Matrix: Water
Date Received: 10/08/22 10:30

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	**7.8**	**J**	25	10	3.7	ug/L		10/17/22 18:51	1
Benzene	1.0	U M	2.0	1.0	0.27	ug/L		10/17/22 18:51	1
Bromobenzene	0.50	U Q	1.0	0.50	0.24	ug/L		10/17/22 18:51	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/17/22 18:51	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/17/22 18:51	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		10/17/22 18:51	1
Bromomethane	10	U	20	10	3.7	ug/L		10/17/22 18:51	1
2-Butanone (MEK)	**8.7**	**J Q**	25	20	6.4	ug/L		10/17/22 18:51	1
n-Butylbenzene	**0.89**	**J**	2.5	2.0	0.52	ug/L		10/17/22 18:51	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/17/22 18:51	1
tert-Butylbenzene	1.0	U Q	2.0	1.0	0.43	ug/L		10/17/22 18:51	1
Carbon disulfide	1.0	U Q	2.0	1.0	0.43	ug/L		10/17/22 18:51	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/17/22 18:51	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/17/22 18:51	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/17/22 18:51	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/17/22 18:51	1
Chloromethane	2.0	U Q	2.5	2.0	0.54	ug/L		10/17/22 18:51	1
2-Chlorotoluene	0.50	U Q	1.0	0.50	0.25	ug/L		10/17/22 18:51	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/17/22 18:51	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/17/22 18:51	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/17/22 18:51	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/17/22 18:51	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/17/22 18:51	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/17/22 18:51	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/17/22 18:51	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/17/22 18:51	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 18:51	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/17/22 18:51	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/17/22 18:51	1
cis-1,2-Dichloroethene	**2.1**		2.0	1.0	0.25	ug/L		10/17/22 18:51	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/17/22 18:51	1
1,2-Dichloroethene, Total	**2.1**		2.0	1.0	0.37	ug/L		10/17/22 18:51	1
1,1-Dichloroethene	1.0	U Q	2.0	1.0	0.33	ug/L		10/17/22 18:51	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/17/22 18:51	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 18:51	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/17/22 18:51	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/17/22 18:51	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/17/22 18:51	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/17/22 18:51	1
Ethylbenzene	**0.27**	**J**	1.0	0.50	0.20	ug/L		10/17/22 18:51	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/17/22 18:51	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/17/22 18:51	1
Isopropylbenzene	1.0	U M	2.0	1.0	0.26	ug/L		10/17/22 18:51	1
4-Isopropyltoluene	1.0	U M	2.0	1.0	0.44	ug/L		10/17/22 18:51	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/17/22 18:51	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/17/22 18:51	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/17/22 18:51	1
Naphthalene	**4.8**	**J Q**	10	5.0	2.4	ug/L		10/17/22 18:51	1
N-Propylbenzene	1.0	U Q	2.0	1.0	0.41	ug/L		10/17/22 18:51	1

Client Sample ID: G6M-07-02X-FAL22
Lab Sample ID: 680-222692-14

Date Collected: 10/05/22 10:00
Matrix: Water
Date Received: 10/08/22 10:30

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		10/17/22 18:51	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 18:51	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/17/22 18:51	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/17/22 18:51	1
Toluene	**0.61**	**J**	2.0	1.0	0.25	ug/L		10/17/22 18:51	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/17/22 18:51	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/17/22 18:51	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/17/22 18:51	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/17/22 18:51	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/17/22 18:51	1
Trichlorofluoromethane	1.0	U Q	2.0	1.0	0.33	ug/L		10/17/22 18:51	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/17/22 18:51	1
1,2,4-Trimethylbenzene	**1.3**	**J Q**	2.0	1.0	0.43	ug/L		10/17/22 18:51	1
1,3,5-Trimethylbenzene	**0.38**	**J Q**	2.0	1.0	0.28	ug/L		10/17/22 18:51	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/17/22 18:51	1
Vinyl chloride	**0.64**	**J M**	2.0	1.0	0.40	ug/L		10/17/22 18:51	1
o-Xylene	**0.40**	**J**	2.0	1.0	0.26	ug/L		10/17/22 18:51	1
m-Xylene & p-Xylene	**0.78**	**J**	2.0	1.0	0.49	ug/L		10/17/22 18:51	1
Xylenes, Total	**1.2**	**J**	2.0	1.0	0.49	ug/L		10/17/22 18:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*132*	*Q*	*89 - 112*		*10/17/22 18:51*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*		*10/17/22 18:51*	*1*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*10/17/22 18:51*	*1*
Dibromofluoromethane (Surr)	*120*	*Q*	*80 - 119*		*10/17/22 18:51*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**1.9**		1.1	0.76	0.30	ug/L		10/14/22 21:57	1
Ethylene	**2.2**		1.0	0.71	0.31	ug/L		10/14/22 21:57	1
Methane (TCD)	**14000**		390	77	39	ug/L		10/14/22 21:57	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		10/22/22 00:07	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**120000**		100	50	20	ug/L		10/10/22 17:11	1
Manganese	**3400**		10	5.0	1.3	ug/L		10/10/22 17:11	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**35**		5.0	3.0	0.86	ug/L		10/10/22 23:52	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**120**		5.0	5.0	2.2	mg/L		10/12/22 17:18	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-2011)	**120**		5.0	5.0	5.0	mg/L		10/12/22 17:18	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-07-02X-FAL22
Lab Sample ID: 680-222692-14
Date Collected: 10/05/22 10:00
Matrix: Water
Date Received: 10/08/22 10:30

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Carbonate Alkalinity as CaCO3 (SM 2320B-2011)	5.0	U	5.0	5.0	5.0	mg/L		10/12/22 17:18	1
Hydroxide Alkalinity (SM 2320B-2011)	5.0	U	5.0	5.0	5.0	mg/L		10/12/22 17:18	1
Carbon Dioxide, Free (SM 2320B-2011)	**920**		5.0	5.0	5.0	mg/L		10/12/22 17:18	1
Phenolphthalein Alkalinity (SM 2320B-2011)	5.0	U	5.0	5.0	5.0	mg/L		10/12/22 17:18	1
Bicarbonate ion as HCO3 (SM 2320B-2011)	**150**		6.1	6.1	6.1	mg/L		10/12/22 17:18	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	0.025	U	0.050	0.025	0.010	mg/L		10/11/22 15:40	1
Sulfide (SW846 9034)	0.86	U	0.86	0.86	0.86	mg/L		10/11/22 09:23	1
Total Organic Carbon (SW846 9060)	**160**	**D**	5.0	5.0	2.5	mg/L		10/18/22 01:02	5
Total Organic Carbon - Quad (SW846 9060)	**160**	**D**	5.0	5.0	2.5	mg/L		10/18/22 01:02	5

Client Sample Results

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-97-28X-FAL22
Lab Sample ID: 680-222692-15

Date Collected: 10/06/22 10:25
Matrix: Water
Date Received: 10/08/22 10:30

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	4300		100	50	20	ug/L		10/10/22 17:23	1
Manganese	5000		10	5.0	1.3	ug/L		10/10/22 17:23	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	70		5.0	3.0	0.86	ug/L		10/11/22 00:06	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: MW-3-FAL22
Lab Sample ID: 680-222692-16
Date Collected: 10/06/22 14:20
Matrix: Water
Date Received: 10/08/22 10:30

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		10/20/22 19:03	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/20/22 19:03	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/20/22 19:03	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/20/22 19:03	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/20/22 19:03	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/20/22 19:03	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/20/22 19:03	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/20/22 19:03	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/20/22 19:03	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/20/22 19:03	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/20/22 19:03	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/20/22 19:03	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/20/22 19:03	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/20/22 19:03	1
Chloroethane	10	U Q J1	20	10	4.6	ug/L		10/20/22 19:03	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/20/22 19:03	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/20/22 19:03	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/20/22 19:03	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/20/22 19:03	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/20/22 19:03	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		10/20/22 19:03	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 19:03	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/20/22 19:03	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/20/22 19:03	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/20/22 19:03	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/20/22 19:03	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/20/22 19:03	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 19:03	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/20/22 19:03	1
cis-1,2-Dichloroethene	**0.31**	**J**	2.0	1.0	0.25	ug/L		10/20/22 19:03	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/20/22 19:03	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/20/22 19:03	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 19:03	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/20/22 19:03	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/20/22 19:03	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/20/22 19:03	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/20/22 19:03	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/20/22 19:03	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/20/22 19:03	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/20/22 19:03	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/20/22 19:03	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		10/20/22 19:03	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/20/22 19:03	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/20/22 19:03	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/20/22 19:03	1
4-Methyl-2-pentanone (MIBK)	10	U Q M	20	10	2.7	ug/L		10/20/22 19:03	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/20/22 19:03	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/20/22 19:03	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/20/22 19:03	1

Client Sample ID: MW-3-FAL22
Lab Sample ID: 680-222692-16
Date Collected: 10/06/22 14:20
Matrix: Water
Date Received: 10/08/22 10:30

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		10/20/22 19:03	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/20/22 19:03	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/20/22 19:03	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/20/22 19:03	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/20/22 19:03	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/20/22 19:03	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/20/22 19:03	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/20/22 19:03	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/20/22 19:03	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/20/22 19:03	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 19:03	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/20/22 19:03	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/20/22 19:03	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/20/22 19:03	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/20/22 19:03	1
Vinyl chloride	**0.40**	**J**	2.0	1.0	0.40	ug/L		10/20/22 19:03	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/20/22 19:03	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/20/22 19:03	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/20/22 19:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*89 - 112*		*10/20/22 19:03*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*81 - 118*		*10/20/22 19:03*	*1*
4-Bromofluorobenzene (Surr)	*103*		*85 - 114*		*10/20/22 19:03*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*10/20/22 19:03*	*1*

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**42000**	**J1**	100	50	20	ug/L		10/10/22 16:28	1
Manganese	**8200**	**J1**	10	5.0	1.3	ug/L		10/10/22 16:28	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		10/10/22 23:05	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: MW-7-FAL22
Lab Sample ID: 680-222692-17
Date Collected: 10/06/22 15:55
Matrix: Water
Date Received: 10/08/22 10:30

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		10/20/22 17:28	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/20/22 17:28	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/20/22 17:28	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/20/22 17:28	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/20/22 17:28	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/20/22 17:28	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/20/22 17:28	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/20/22 17:28	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/20/22 17:28	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/20/22 17:28	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/20/22 17:28	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/20/22 17:28	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/20/22 17:28	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/20/22 17:28	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/20/22 17:28	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/20/22 17:28	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/20/22 17:28	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/20/22 17:28	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/20/22 17:28	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/20/22 17:28	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		10/20/22 17:28	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 17:28	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/20/22 17:28	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/20/22 17:28	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/20/22 17:28	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/20/22 17:28	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/20/22 17:28	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 17:28	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/20/22 17:28	1
cis-1,2-Dichloroethene	**3.1**		2.0	1.0	0.25	ug/L		10/20/22 17:28	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/20/22 17:28	1
1,2-Dichloroethene, Total	**3.1**		2.0	1.0	0.37	ug/L		10/20/22 17:28	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 17:28	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/20/22 17:28	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/20/22 17:28	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/20/22 17:28	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/20/22 17:28	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/20/22 17:28	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/20/22 17:28	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/20/22 17:28	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/20/22 17:28	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		10/20/22 17:28	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/20/22 17:28	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/20/22 17:28	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/20/22 17:28	1
4-Methyl-2-pentanone (MIBK)	10	U Q	20	10	2.7	ug/L		10/20/22 17:28	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/20/22 17:28	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/20/22 17:28	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/20/22 17:28	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: MW-7-FAL22
Lab Sample ID: 680-222692-17
Date Collected: 10/06/22 15:55
Matrix: Water
Date Received: 10/08/22 10:30

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		10/20/22 17:28	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/20/22 17:28	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/20/22 17:28	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/20/22 17:28	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/20/22 17:28	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/20/22 17:28	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/20/22 17:28	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/20/22 17:28	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/20/22 17:28	1
Trichloroethene	**0.63**	**J**	1.0	0.50	0.20	ug/L		10/20/22 17:28	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 17:28	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/20/22 17:28	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/20/22 17:28	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/20/22 17:28	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/20/22 17:28	1
Vinyl chloride	**2.7**		2.0	1.0	0.40	ug/L		10/20/22 17:28	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/20/22 17:28	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/20/22 17:28	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/20/22 17:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*89 - 112*		*10/20/22 17:28*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*		*10/20/22 17:28*	*1*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*		*10/20/22 17:28*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 119*		*10/20/22 17:28*	*1*

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**8600**		100	50	20	ug/L		10/10/22 17:16	1
Manganese	**13000**		10	5.0	1.3	ug/L		10/10/22 17:16	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**130**		5.0	3.0	0.86	ug/L		10/10/22 23:57	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: XSA-12-95X-FAL22
Lab Sample ID: 680-222692-18
Date Collected: 10/06/22 13:21
Matrix: Water
Date Received: 10/08/22 10:30

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		10/20/22 15:53	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/20/22 15:53	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/20/22 15:53	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/20/22 15:53	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/20/22 15:53	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/20/22 15:53	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/20/22 15:53	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/20/22 15:53	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/20/22 15:53	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/20/22 15:53	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/20/22 15:53	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/20/22 15:53	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/20/22 15:53	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/20/22 15:53	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/20/22 15:53	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/20/22 15:53	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/20/22 15:53	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/20/22 15:53	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/20/22 15:53	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/20/22 15:53	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		10/20/22 15:53	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 15:53	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/20/22 15:53	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/20/22 15:53	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/20/22 15:53	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/20/22 15:53	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/20/22 15:53	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 15:53	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/20/22 15:53	1
cis-1,2-Dichloroethene	**1.5**	**J**	2.0	1.0	0.25	ug/L		10/20/22 15:53	1
trans-1,2-Dichloroethene	**0.65**	**J**	2.0	1.0	0.34	ug/L		10/20/22 15:53	1
1,2-Dichloroethene, Total	**2.2**		2.0	1.0	0.37	ug/L		10/20/22 15:53	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 15:53	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/20/22 15:53	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/20/22 15:53	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/20/22 15:53	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/20/22 15:53	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/20/22 15:53	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/20/22 15:53	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/20/22 15:53	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/20/22 15:53	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		10/20/22 15:53	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/20/22 15:53	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/20/22 15:53	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/20/22 15:53	1
4-Methyl-2-pentanone (MIBK)	10	U Q	20	10	2.7	ug/L		10/20/22 15:53	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/20/22 15:53	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/20/22 15:53	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/20/22 15:53	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: XSA-12-95X-FAL22
Lab Sample ID: 680-222692-18
Date Collected: 10/06/22 13:21
Matrix: Water
Date Received: 10/08/22 10:30

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		10/20/22 15:53	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/20/22 15:53	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/20/22 15:53	1
Tetrachloroethene	**0.63**	**J**	2.0	1.0	0.35	ug/L		10/20/22 15:53	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/20/22 15:53	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/20/22 15:53	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/20/22 15:53	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/20/22 15:53	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/20/22 15:53	1
Trichloroethene	**0.77**	**J**	1.0	0.50	0.20	ug/L		10/20/22 15:53	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 15:53	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/20/22 15:53	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/20/22 15:53	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/20/22 15:53	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/20/22 15:53	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/20/22 15:53	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/20/22 15:53	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/20/22 15:53	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/20/22 15:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*89 - 112*		*10/20/22 15:53*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*10/20/22 15:53*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*10/20/22 15:53*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*10/20/22 15:53*	*1*

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**1600**		100	50	20	ug/L		10/10/22 17:26	1
Manganese	**12000**		10	5.0	1.3	ug/L		10/10/22 17:26	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**1.9**	**J**	5.0	3.0	0.86	ug/L		10/11/22 00:09	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: AOC50-TB02-FAL22
Lab Sample ID: 680-222692-19
Date Collected: 10/05/22 00:00
Matrix: Water
Date Received: 10/08/22 10:30

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		10/17/22 14:42	1
Benzene	1.0	U M	2.0	1.0	0.27	ug/L		10/17/22 14:42	1
Bromobenzene	0.50	U Q	1.0	0.50	0.24	ug/L		10/17/22 14:42	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/17/22 14:42	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/17/22 14:42	1
Bromoform	2.0	U Q	2.5	2.0	0.59	ug/L		10/17/22 14:42	1
Bromomethane	10	U	20	10	3.7	ug/L		10/17/22 14:42	1
2-Butanone (MEK)	20	U Q	25	20	6.4	ug/L		10/17/22 14:42	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/17/22 14:42	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/17/22 14:42	1
tert-Butylbenzene	1.0	U Q	2.0	1.0	0.43	ug/L		10/17/22 14:42	1
Carbon disulfide	1.0	U Q	2.0	1.0	0.43	ug/L		10/17/22 14:42	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/17/22 14:42	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/17/22 14:42	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/17/22 14:42	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/17/22 14:42	1
Chloromethane	2.0	U Q	2.5	2.0	0.54	ug/L		10/17/22 14:42	1
2-Chlorotoluene	0.50	U Q	1.0	0.50	0.25	ug/L		10/17/22 14:42	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/17/22 14:42	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/17/22 14:42	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/17/22 14:42	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/17/22 14:42	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/17/22 14:42	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/17/22 14:42	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/17/22 14:42	1
1,4-Dichlorobenzene	1.0	U M	2.0	1.0	0.31	ug/L		10/17/22 14:42	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 14:42	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/17/22 14:42	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/17/22 14:42	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/17/22 14:42	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/17/22 14:42	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/17/22 14:42	1
1,1-Dichloroethene	1.0	U Q	2.0	1.0	0.33	ug/L		10/17/22 14:42	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/17/22 14:42	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 14:42	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/17/22 14:42	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/17/22 14:42	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/17/22 14:42	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/17/22 14:42	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/17/22 14:42	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/17/22 14:42	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/17/22 14:42	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/17/22 14:42	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/17/22 14:42	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/17/22 14:42	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/17/22 14:42	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/17/22 14:42	1
Naphthalene	5.0	U Q	10	5.0	2.4	ug/L		10/17/22 14:42	1
N-Propylbenzene	1.0	U Q	2.0	1.0	0.41	ug/L		10/17/22 14:42	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: AOC50-TB02-FAL22
Lab Sample ID: 680-222692-19
Date Collected: 10/05/22 00:00
Matrix: Water
Date Received: 10/08/22 10:30

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		10/17/22 14:42	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 14:42	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/17/22 14:42	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/17/22 14:42	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/17/22 14:42	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/17/22 14:42	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/17/22 14:42	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/17/22 14:42	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/17/22 14:42	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/17/22 14:42	1
Trichlorofluoromethane	1.0	U Q	2.0	1.0	0.33	ug/L		10/17/22 14:42	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/17/22 14:42	1
1,2,4-Trimethylbenzene	1.0	U Q	2.0	1.0	0.43	ug/L		10/17/22 14:42	1
1,3,5-Trimethylbenzene	1.0	U Q	2.0	1.0	0.28	ug/L		10/17/22 14:42	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/17/22 14:42	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/17/22 14:42	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/17/22 14:42	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/17/22 14:42	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/17/22 14:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*123*	*Q*	*89 - 112*		*10/17/22 14:42*	*1*
1,2-Dichloroethane-d4 (Surr)	*82*		*81 - 118*		*10/17/22 14:42*	*1*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*		*10/17/22 14:42*	*1*
Dibromofluoromethane (Surr)	*110*		*80 - 119*		*10/17/22 14:42*	*1*

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-07-01X-FAL22
Lab Sample ID: 680-222692-20
Date Collected: 10/07/22 13:15
Matrix: Water
Date Received: 10/08/22 10:30

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		10/20/22 14:56	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/20/22 14:56	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/20/22 14:56	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/20/22 14:56	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/20/22 14:56	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/20/22 14:56	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/20/22 14:56	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/20/22 14:56	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/20/22 14:56	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/20/22 14:56	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/20/22 14:56	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/20/22 14:56	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/20/22 14:56	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/20/22 14:56	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/20/22 14:56	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/20/22 14:56	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/20/22 14:56	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/20/22 14:56	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/20/22 14:56	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/20/22 14:56	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		10/20/22 14:56	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 14:56	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/20/22 14:56	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/20/22 14:56	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/20/22 14:56	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/20/22 14:56	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/20/22 14:56	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 14:56	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/20/22 14:56	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/20/22 14:56	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/20/22 14:56	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/20/22 14:56	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 14:56	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/20/22 14:56	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/20/22 14:56	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/20/22 14:56	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/20/22 14:56	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/20/22 14:56	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/20/22 14:56	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/20/22 14:56	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/20/22 14:56	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		10/20/22 14:56	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/20/22 14:56	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/20/22 14:56	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/20/22 14:56	1
4-Methyl-2-pentanone (MIBK)	10	U Q	20	10	2.7	ug/L		10/20/22 14:56	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/20/22 14:56	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/20/22 14:56	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/20/22 14:56	1

Client Sample ID: G6M-07-01X-FAL22
Lab Sample ID: 680-222692-20
Date Collected: 10/07/22 13:15
Matrix: Water
Date Received: 10/08/22 10:30

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		10/20/22 14:56	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/20/22 14:56	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/20/22 14:56	1
Tetrachloroethene	**14**		2.0	1.0	0.35	ug/L		10/20/22 14:56	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/20/22 14:56	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/20/22 14:56	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/20/22 14:56	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/20/22 14:56	1
1,1,2-Trichloroethane	1.0	U M	2.0	1.0	0.32	ug/L		10/20/22 14:56	1
Trichloroethene	**0.75**	**J**	1.0	0.50	0.20	ug/L		10/20/22 14:56	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 14:56	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/20/22 14:56	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/20/22 14:56	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/20/22 14:56	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/20/22 14:56	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/20/22 14:56	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/20/22 14:56	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/20/22 14:56	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/20/22 14:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*89 - 112*		*10/20/22 14:56*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*81 - 118*		*10/20/22 14:56*	*1*
4-Bromofluorobenzene (Surr)	*103*		*85 - 114*		*10/20/22 14:56*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*10/20/22 14:56*	*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		10/14/22 22:10	1
Ethylene	0.71	U	1.0	0.71	0.31	ug/L		10/14/22 22:10	1
Methane (TCD)	**730**		390	77	39	ug/L		10/14/22 22:10	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**11**		1.0	1.0	0.40	mg/L		10/22/22 01:27	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**44**	**J**	100	50	20	ug/L		10/10/22 17:28	1
Manganese	**50**		10	5.0	1.3	ug/L		10/10/22 17:28	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		10/11/22 00:11	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**34**		5.0	5.0	2.2	mg/L		10/12/22 17:27	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-2011)	**34**		5.0	5.0	5.0	mg/L		10/12/22 17:27	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-07-01X-FAL22
Lab Sample ID: 680-222692-20
Date Collected: 10/07/22 13:15
Matrix: Water
Date Received: 10/08/22 10:30

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Carbonate Alkalinity as CaCO3 (SM 2320B-2011)	5.0	U	5.0	5.0	5.0	mg/L		10/12/22 17:27	1
Hydroxide Alkalinity (SM 2320B-2011)	5.0	U	5.0	5.0	5.0	mg/L		10/12/22 17:27	1
Carbon Dioxide, Free (SM 2320B-2011)	**17**		5.0	5.0	5.0	mg/L		10/12/22 17:27	1
Phenolphthalein Alkalinity (SM 2320B-2011)	5.0	U	5.0	5.0	5.0	mg/L		10/12/22 17:27	1
Bicarbonate ion as HCO3 (SM 2320B-2011)	**42**		6.1	6.1	6.1	mg/L		10/12/22 17:27	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	**1.3**	**D**	0.50	0.25	0.10	mg/L		10/18/22 15:33	10
Sulfide (SW846 9034)	0.81	U	0.81	0.81	0.81	mg/L		10/11/22 09:23	1
Total Organic Carbon (SW846 9060)	**1.1**		1.0	1.0	0.50	mg/L		10/18/22 01:20	1
Total Organic Carbon - Quad (SW846 9060)	**1.1**		1.0	1.0	0.50	mg/L		10/18/22 01:20	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: XSA-12-96X-FAL22
Lab Sample ID: 680-222692-21
Date Collected: 10/07/22 10:49
Matrix: Water
Date Received: 10/08/22 10:30

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		10/21/22 15:34	1
Benzene	1.0	U M	2.0	1.0	0.27	ug/L		10/21/22 15:34	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/21/22 15:34	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 15:34	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 15:34	1
Bromoform	2.0	U M	2.5	2.0	0.59	ug/L		10/21/22 15:34	1
Bromomethane	10	U	20	10	3.7	ug/L		10/21/22 15:34	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/21/22 15:34	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/21/22 15:34	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/21/22 15:34	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 15:34	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 15:34	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/21/22 15:34	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/21/22 15:34	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/21/22 15:34	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 15:34	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/21/22 15:34	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/21/22 15:34	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 15:34	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/21/22 15:34	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/21/22 15:34	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 15:34	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 15:34	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 15:34	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 15:34	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 15:34	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 15:34	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 15:34	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/21/22 15:34	1
cis-1,2-Dichloroethene	**4.5**		2.0	1.0	0.25	ug/L		10/21/22 15:34	1
trans-1,2-Dichloroethene	**2.8**		2.0	1.0	0.34	ug/L		10/21/22 15:34	1
1,2-Dichloroethene, Total	**7.2**		2.0	1.0	0.37	ug/L		10/21/22 15:34	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 15:34	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/21/22 15:34	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 15:34	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 15:34	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 15:34	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 15:34	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/21/22 15:34	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 15:34	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/21/22 15:34	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/21/22 15:34	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 15:34	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/21/22 15:34	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/21/22 15:34	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/21/22 15:34	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 15:34	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/21/22 15:34	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 15:34	1

Client Sample ID: XSA-12-96X-FAL22
Lab Sample ID: 680-222692-21
Date Collected: 10/07/22 10:49
Matrix: Water
Date Received: 10/08/22 10:30

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		10/21/22 15:34	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 15:34	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 15:34	1
Tetrachloroethene	**1.4**	**J**	2.0	1.0	0.35	ug/L		10/21/22 15:34	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 15:34	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 15:34	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/21/22 15:34	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/21/22 15:34	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/21/22 15:34	1
Trichloroethene	**4.2**		1.0	0.50	0.20	ug/L		10/21/22 15:34	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 15:34	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/21/22 15:34	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 15:34	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 15:34	1
Vinyl acetate	2.0	U Q	2.5	2.0	0.69	ug/L		10/21/22 15:34	1
Vinyl chloride	**4.0**		2.0	1.0	0.40	ug/L		10/21/22 15:34	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 15:34	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 15:34	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 15:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*107*		*89 - 112*		*10/21/22 15:34*	*1*
1,2-Dichloroethane-d4 (Surr)	*97*		*81 - 118*		*10/21/22 15:34*	*1*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*		*10/21/22 15:34*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 119*		*10/21/22 15:34*	*1*

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**1900**		100	50	20	ug/L		10/10/22 17:31	1
Manganese	**5200**		10	5.0	1.3	ug/L		10/10/22 17:31	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**1.7**	**J**	5.0	3.0	0.86	ug/L		10/11/22 00:14	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: XSA-12-97X-FAL22
Lab Sample ID: 680-222692-22
Date Collected: 10/07/22 13:22
Matrix: Water
Date Received: 10/08/22 10:30

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		10/21/22 15:57	1
Benzene	**0.69**	**J**	2.0	1.0	0.27	ug/L		10/21/22 15:57	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/21/22 15:57	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 15:57	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 15:57	1
Bromoform	2.0	U M	2.5	2.0	0.59	ug/L		10/21/22 15:57	1
Bromomethane	10	U	20	10	3.7	ug/L		10/21/22 15:57	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/21/22 15:57	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/21/22 15:57	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/21/22 15:57	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 15:57	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 15:57	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/21/22 15:57	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/21/22 15:57	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/21/22 15:57	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 15:57	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/21/22 15:57	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/21/22 15:57	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 15:57	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/21/22 15:57	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/21/22 15:57	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 15:57	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 15:57	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 15:57	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 15:57	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 15:57	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 15:57	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 15:57	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/21/22 15:57	1
cis-1,2-Dichloroethene	**0.39**	**J**	2.0	1.0	0.25	ug/L		10/21/22 15:57	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 15:57	1
1,2-Dichloroethene, Total	**0.39**	**J**	2.0	1.0	0.37	ug/L		10/21/22 15:57	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 15:57	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/21/22 15:57	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 15:57	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 15:57	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 15:57	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 15:57	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/21/22 15:57	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 15:57	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/21/22 15:57	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/21/22 15:57	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 15:57	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/21/22 15:57	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/21/22 15:57	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/21/22 15:57	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 15:57	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/21/22 15:57	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 15:57	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: XSA-12-97X-FAL22
Lab Sample ID: 680-222692-22
Date Collected: 10/07/22 13:22
Matrix: Water
Date Received: 10/08/22 10:30

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		10/21/22 15:57	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 15:57	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 15:57	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 15:57	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 15:57	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 15:57	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/21/22 15:57	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/21/22 15:57	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/21/22 15:57	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 15:57	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 15:57	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/21/22 15:57	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 15:57	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 15:57	1
Vinyl acetate	2.0	U Q	2.5	2.0	0.69	ug/L		10/21/22 15:57	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 15:57	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 15:57	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 15:57	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 15:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*107*		*89 - 112*		*10/21/22 15:57*	*1*
1,2-Dichloroethane-d4 (Surr)	*97*		*81 - 118*		*10/21/22 15:57*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*10/21/22 15:57*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*10/21/22 15:57*	*1*

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**7600**		100	50	20	ug/L		10/10/22 17:38	1
Manganese	**10000**	**J1**	10	5.0	1.3	ug/L		10/10/22 17:38	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**200**	**J1**	5.0	3.0	0.86	ug/L		10/10/22 21:31	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: XSA-12-98X-FAL22
Lab Sample ID: 680-222692-23
Date Collected: 10/07/22 12:55
Matrix: Water
Date Received: 10/08/22 10:30

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		10/21/22 16:21	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 16:21	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/21/22 16:21	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 16:21	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 16:21	1
Bromoform	2.0	U M	2.5	2.0	0.59	ug/L		10/21/22 16:21	1
Bromomethane	10	U	20	10	3.7	ug/L		10/21/22 16:21	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/21/22 16:21	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/21/22 16:21	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/21/22 16:21	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 16:21	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 16:21	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/21/22 16:21	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/21/22 16:21	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/21/22 16:21	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 16:21	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/21/22 16:21	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/21/22 16:21	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 16:21	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/21/22 16:21	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/21/22 16:21	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 16:21	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 16:21	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 16:21	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 16:21	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 16:21	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 16:21	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 16:21	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/21/22 16:21	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 16:21	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 16:21	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/21/22 16:21	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 16:21	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/21/22 16:21	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 16:21	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 16:21	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 16:21	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 16:21	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/21/22 16:21	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 16:21	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/21/22 16:21	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/21/22 16:21	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 16:21	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/21/22 16:21	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/21/22 16:21	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/21/22 16:21	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 16:21	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/21/22 16:21	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 16:21	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: XSA-12-98X-FAL22
Lab Sample ID: 680-222692-23
Date Collected: 10/07/22 12:55
Matrix: Water
Date Received: 10/08/22 10:30

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		10/21/22 16:21	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 16:21	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 16:21	1
Tetrachloroethene	**3.4**		2.0	1.0	0.35	ug/L		10/21/22 16:21	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 16:21	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 16:21	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/21/22 16:21	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/21/22 16:21	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/21/22 16:21	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 16:21	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 16:21	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/21/22 16:21	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 16:21	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 16:21	1
Vinyl acetate	2.0	U Q	2.5	2.0	0.69	ug/L		10/21/22 16:21	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 16:21	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 16:21	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 16:21	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 16:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*106*		*89 - 112*		*10/21/22 16:21*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*		*10/21/22 16:21*	*1*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*		*10/21/22 16:21*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*10/21/22 16:21*	*1*

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**71**	**J**	100	50	20	ug/L		10/10/22 17:56	1
Manganese	**4.1**	**J**	10	5.0	1.3	ug/L		10/10/22 17:56	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		10/10/22 21:45	1

Client: Seres Engineering & Services LLC
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Job ID: 680-222692-1

Client Sample ID: AOC50-RB01-FAL22
Date Collected: 10/07/22 09:15
Date Received: 10/08/22 10:30

Lab Sample ID: 680-222692-24
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	12	J	25	10	3.7	ug/L		10/21/22 14:02	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 14:02	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/21/22 14:02	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 14:02	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 14:02	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/21/22 14:02	1
Bromomethane	10	U	20	10	3.7	ug/L		10/21/22 14:02	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/21/22 14:02	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/21/22 14:02	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/21/22 14:02	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 14:02	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 14:02	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/21/22 14:02	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/21/22 14:02	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/21/22 14:02	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 14:02	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/21/22 14:02	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/21/22 14:02	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 14:02	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/21/22 14:02	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/21/22 14:02	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 14:02	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 14:02	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 14:02	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 14:02	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 14:02	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 14:02	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 14:02	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/21/22 14:02	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 14:02	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 14:02	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/21/22 14:02	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 14:02	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/21/22 14:02	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 14:02	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 14:02	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 14:02	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 14:02	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/21/22 14:02	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 14:02	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/21/22 14:02	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/21/22 14:02	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 14:02	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/21/22 14:02	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/21/22 14:02	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/21/22 14:02	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 14:02	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/21/22 14:02	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 14:02	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: AOC50-RB01-FAL22
Lab Sample ID: 680-222692-24
Date Collected: 10/07/22 09:15
Matrix: Water
Date Received: 10/08/22 10:30

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		10/21/22 14:02	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 14:02	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 14:02	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 14:02	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 14:02	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 14:02	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/21/22 14:02	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/21/22 14:02	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/21/22 14:02	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 14:02	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 14:02	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/21/22 14:02	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 14:02	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 14:02	1
Vinyl acetate	2.0	U Q	2.5	2.0	0.69	ug/L		10/21/22 14:02	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 14:02	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 14:02	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 14:02	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 14:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*106*		*89 - 112*		*10/21/22 14:02*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*10/21/22 14:02*	*1*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*		*10/21/22 14:02*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 119*		*10/21/22 14:02*	*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		10/10/22 17:58	1
Manganese	5.0	U	10	5.0	1.3	ug/L		10/10/22 17:58	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		10/10/22 21:48	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: AOC50-TB03-FAL22
Lab Sample ID: 680-222692-25
Date Collected: 10/07/22 00:00
Matrix: Water
Date Received: 10/08/22 10:30

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		10/21/22 14:25	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 14:25	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/21/22 14:25	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 14:25	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 14:25	1
Bromoform	2.0	U M	2.5	2.0	0.59	ug/L		10/21/22 14:25	1
Bromomethane	10	U	20	10	3.7	ug/L		10/21/22 14:25	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/21/22 14:25	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/21/22 14:25	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/21/22 14:25	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 14:25	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 14:25	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/21/22 14:25	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/21/22 14:25	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/21/22 14:25	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 14:25	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/21/22 14:25	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/21/22 14:25	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 14:25	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/21/22 14:25	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/21/22 14:25	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 14:25	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 14:25	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 14:25	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 14:25	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 14:25	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 14:25	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 14:25	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/21/22 14:25	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 14:25	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 14:25	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/21/22 14:25	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 14:25	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/21/22 14:25	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 14:25	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 14:25	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 14:25	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 14:25	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/21/22 14:25	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 14:25	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/21/22 14:25	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/21/22 14:25	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 14:25	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/21/22 14:25	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/21/22 14:25	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/21/22 14:25	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 14:25	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/21/22 14:25	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 14:25	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: AOC50-TB03-FAL22
Lab Sample ID: 680-222692-25
Date Collected: 10/07/22 00:00
Matrix: Water
Date Received: 10/08/22 10:30

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		10/21/22 14:25	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 14:25	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 14:25	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 14:25	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 14:25	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 14:25	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/21/22 14:25	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/21/22 14:25	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/21/22 14:25	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 14:25	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 14:25	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/21/22 14:25	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 14:25	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 14:25	1
Vinyl acetate	2.0	U Q	2.5	2.0	0.69	ug/L		10/21/22 14:25	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 14:25	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 14:25	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 14:25	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 14:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*106*		*89 - 112*		*10/21/22 14:25*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*		*10/21/22 14:25*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*10/21/22 14:25*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 119*		*10/21/22 14:25*	*1*

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-02-01X-FAL22
Lab Sample ID: 680-222692-26
Date Collected: 10/07/22 10:45
Matrix: Water
Date Received: 10/08/22 10:30

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		10/21/22 16:44	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 16:44	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/21/22 16:44	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 16:44	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 16:44	1
Bromoform	2.0	U M	2.5	2.0	0.59	ug/L		10/21/22 16:44	1
Bromomethane	10	U	20	10	3.7	ug/L		10/21/22 16:44	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/21/22 16:44	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/21/22 16:44	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/21/22 16:44	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 16:44	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 16:44	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/21/22 16:44	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/21/22 16:44	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/21/22 16:44	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 16:44	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/21/22 16:44	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/21/22 16:44	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 16:44	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/21/22 16:44	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/21/22 16:44	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 16:44	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 16:44	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 16:44	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 16:44	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 16:44	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 16:44	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 16:44	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/21/22 16:44	1
cis-1,2-Dichloroethene	**3.7**		2.0	1.0	0.25	ug/L		10/21/22 16:44	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 16:44	1
1,2-Dichloroethene, Total	**3.7**		2.0	1.0	0.37	ug/L		10/21/22 16:44	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 16:44	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/21/22 16:44	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 16:44	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 16:44	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 16:44	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 16:44	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/21/22 16:44	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 16:44	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/21/22 16:44	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/21/22 16:44	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 16:44	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/21/22 16:44	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/21/22 16:44	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/21/22 16:44	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 16:44	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/21/22 16:44	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 16:44	1

Client Sample ID: G6M-02-01X-FAL22
Lab Sample ID: 680-222692-26
Date Collected: 10/07/22 10:45
Matrix: Water
Date Received: 10/08/22 10:30

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		10/21/22 16:44	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 16:44	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 16:44	1
Tetrachloroethene	**7.7**		2.0	1.0	0.35	ug/L		10/21/22 16:44	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 16:44	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 16:44	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/21/22 16:44	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/21/22 16:44	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/21/22 16:44	1
Trichloroethene	**23**		1.0	0.50	0.20	ug/L		10/21/22 16:44	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 16:44	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/21/22 16:44	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 16:44	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 16:44	1
Vinyl acetate	2.0	U Q	2.5	2.0	0.69	ug/L		10/21/22 16:44	1
Vinyl chloride	**2.4**		2.0	1.0	0.40	ug/L		10/21/22 16:44	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 16:44	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 16:44	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 16:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*107*		*89 - 112*		*10/21/22 16:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*81 - 118*		*10/21/22 16:44*	*1*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*		*10/21/22 16:44*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 119*		*10/21/22 16:44*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**1.1**		1.1	0.76	0.30	ug/L		10/14/22 22:23	1
Ethylene	**18**		1.0	0.71	0.31	ug/L		10/14/22 22:23	1
Methane (TCD)	**29000**		390	77	39	ug/L		10/14/22 22:23	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**8.3**		1.0	1.0	0.40	mg/L		10/22/22 01:40	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**18000**		100	50	20	ug/L		10/10/22 18:01	1
Manganese	**1600**		10	5.0	1.3	ug/L		10/10/22 18:01	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		10/10/22 21:51	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**110**		5.0	5.0	2.2	mg/L		10/12/22 15:35	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B-2011)	**110**		5.0	5.0	5.0	mg/L		10/12/22 15:35	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-02-01X-FAL22
Lab Sample ID: 680-222692-26
Date Collected: 10/07/22 10:45
Matrix: Water
Date Received: 10/08/22 10:30

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Carbonate Alkalinity as CaCO3 (SM 2320B-2011)	5.0	U	5.0	5.0	5.0	mg/L		10/12/22 15:35	1
Hydroxide Alkalinity (SM 2320B-2011)	5.0	U	5.0	5.0	5.0	mg/L		10/12/22 15:35	1
Carbon Dioxide, Free (SM 2320B-2011)	**64**		5.0	5.0	5.0	mg/L		10/12/22 15:35	1
Phenolphthalein Alkalinity (SM 2320B-2011)	5.0	U	5.0	5.0	5.0	mg/L		10/12/22 15:35	1
Bicarbonate ion as HCO3 (SM 2320B-2011)	**130**		6.1	6.1	6.1	mg/L		10/12/22 15:35	1
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	0.025	U	0.050	0.025	0.010	mg/L		10/18/22 14:56	1
Sulfide (SW846 9034)	0.83	U	0.83	0.83	0.83	mg/L		10/11/22 09:23	1
Total Organic Carbon (SW846 9060)	**2.4**		1.0	1.0	0.50	mg/L		10/18/22 01:38	1
Total Organic Carbon - Quad (SW846 9060)	**2.4**		1.0	1.0	0.50	mg/L		10/18/22 01:38	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-02-07X-FAL22
Lab Sample ID: 680-222692-27
Date Collected: 10/07/22 10:20
Matrix: Water
Date Received: 10/08/22 10:30

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		10/21/22 17:08	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 17:08	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/21/22 17:08	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 17:08	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 17:08	1
Bromoform	2.0	U M	2.5	2.0	0.59	ug/L		10/21/22 17:08	1
Bromomethane	10	U	20	10	3.7	ug/L		10/21/22 17:08	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/21/22 17:08	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/21/22 17:08	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/21/22 17:08	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 17:08	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 17:08	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/21/22 17:08	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/21/22 17:08	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/21/22 17:08	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 17:08	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/21/22 17:08	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/21/22 17:08	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 17:08	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/21/22 17:08	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/21/22 17:08	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 17:08	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 17:08	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 17:08	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 17:08	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 17:08	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 17:08	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 17:08	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/21/22 17:08	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 17:08	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 17:08	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/21/22 17:08	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 17:08	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/21/22 17:08	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 17:08	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 17:08	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 17:08	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 17:08	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/21/22 17:08	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 17:08	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/21/22 17:08	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/21/22 17:08	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 17:08	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/21/22 17:08	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/21/22 17:08	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/21/22 17:08	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 17:08	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/21/22 17:08	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 17:08	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-02-07X-FAL22
Lab Sample ID: 680-222692-27
Date Collected: 10/07/22 10:20
Matrix: Water
Date Received: 10/08/22 10:30

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		10/21/22 17:08	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 17:08	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 17:08	1
Tetrachloroethene	**2.0**		2.0	1.0	0.35	ug/L		10/21/22 17:08	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 17:08	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 17:08	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/21/22 17:08	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/21/22 17:08	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/21/22 17:08	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 17:08	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 17:08	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/21/22 17:08	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 17:08	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 17:08	1
Vinyl acetate	2.0	U Q	2.5	2.0	0.69	ug/L		10/21/22 17:08	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 17:08	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 17:08	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 17:08	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 17:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*105*		*89 - 112*		*10/21/22 17:08*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*81 - 118*		*10/21/22 17:08*	*1*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*		*10/21/22 17:08*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*10/21/22 17:08*	*1*

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**27000**		100	50	20	ug/L		10/10/22 18:03	1
Manganese	**1600**		10	5.0	1.3	ug/L		10/10/22 18:03	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**1.1**	**J**	5.0	3.0	0.86	ug/L		10/10/22 22:07	1

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-04-01X-FAL22
Lab Sample ID: 680-222692-28
Date Collected: 10/07/22 14:50
Matrix: Water
Date Received: 10/08/22 10:30

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		10/21/22 17:31	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 17:31	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/21/22 17:31	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 17:31	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 17:31	1
Bromoform	2.0	U M	2.5	2.0	0.59	ug/L		10/21/22 17:31	1
Bromomethane	10	U	20	10	3.7	ug/L		10/21/22 17:31	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/21/22 17:31	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/21/22 17:31	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/21/22 17:31	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 17:31	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 17:31	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/21/22 17:31	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/21/22 17:31	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/21/22 17:31	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 17:31	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/21/22 17:31	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/21/22 17:31	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 17:31	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/21/22 17:31	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/21/22 17:31	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 17:31	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 17:31	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 17:31	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 17:31	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 17:31	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 17:31	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 17:31	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/21/22 17:31	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 17:31	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 17:31	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/21/22 17:31	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 17:31	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/21/22 17:31	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 17:31	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 17:31	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 17:31	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 17:31	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/21/22 17:31	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 17:31	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/21/22 17:31	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/21/22 17:31	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 17:31	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/21/22 17:31	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/21/22 17:31	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/21/22 17:31	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 17:31	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/21/22 17:31	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 17:31	1

Client Sample ID: G6M-04-01X-FAL22
Lab Sample ID: 680-222692-28
Date Collected: 10/07/22 14:50
Matrix: Water
Date Received: 10/08/22 10:30

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		10/21/22 17:31	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 17:31	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 17:31	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 17:31	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 17:31	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 17:31	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/21/22 17:31	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/21/22 17:31	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/21/22 17:31	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 17:31	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 17:31	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/21/22 17:31	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 17:31	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 17:31	1
Vinyl acetate	2.0	U Q	2.5	2.0	0.69	ug/L		10/21/22 17:31	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 17:31	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 17:31	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 17:31	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 17:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*107*		*89 - 112*		*10/21/22 17:31*	*1*
1,2-Dichloroethane-d4 (Surr)	*97*		*81 - 118*		*10/21/22 17:31*	*1*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*		*10/21/22 17:31*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*10/21/22 17:31*	*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		10/10/22 18:06	1
Manganese	**3.4**	**J**	10	5.0	1.3	ug/L		10/10/22 18:06	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**650**		5.0	3.0	0.86	ug/L		10/10/22 22:10	1

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

Lab Sample ID: MB 680-745419/9
Matrix: Water
Analysis Batch: 745419

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		10/17/22 13:04	1
Benzene	1.0	U M	2.0	1.0	0.27	ug/L		10/17/22 13:04	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/17/22 13:04	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/17/22 13:04	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/17/22 13:04	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/17/22 13:04	1
Bromomethane	10	U	20	10	3.7	ug/L		10/17/22 13:04	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/17/22 13:04	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/17/22 13:04	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/17/22 13:04	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/17/22 13:04	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/17/22 13:04	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/17/22 13:04	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/17/22 13:04	1
Chloroethane	10	U	20	10	4.6	ug/L		10/17/22 13:04	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/17/22 13:04	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/17/22 13:04	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/17/22 13:04	1
4-Chlorotoluene	1.0	U M	2.0	1.0	0.41	ug/L		10/17/22 13:04	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/17/22 13:04	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/17/22 13:04	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/17/22 13:04	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/17/22 13:04	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/17/22 13:04	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/17/22 13:04	1
1,4-Dichlorobenzene	1.0	U M	2.0	1.0	0.31	ug/L		10/17/22 13:04	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 13:04	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/17/22 13:04	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/17/22 13:04	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/17/22 13:04	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/17/22 13:04	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/17/22 13:04	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/17/22 13:04	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/17/22 13:04	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 13:04	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/17/22 13:04	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/17/22 13:04	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/17/22 13:04	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/17/22 13:04	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/17/22 13:04	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/17/22 13:04	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/17/22 13:04	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/17/22 13:04	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/17/22 13:04	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/17/22 13:04	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/17/22 13:04	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/17/22 13:04	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/17/22 13:04	1

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

Lab Sample ID: MB 680-745419/9
Matrix: Water
Analysis Batch: 745419

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		10/17/22 13:04	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/17/22 13:04	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/17/22 13:04	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/17/22 13:04	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/17/22 13:04	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/17/22 13:04	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/17/22 13:04	1
1,2,4-Trichlorobenzene	1.97	J	5.0	2.0	0.53	ug/L		10/17/22 13:04	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/17/22 13:04	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/17/22 13:04	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/17/22 13:04	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/17/22 13:04	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/17/22 13:04	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/17/22 13:04	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/17/22 13:04	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/17/22 13:04	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/17/22 13:04	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/17/22 13:04	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/17/22 13:04	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/17/22 13:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*123*	*Q*	*89 - 112*		*10/17/22 13:04*	*1*
1,2-Dichloroethane-d4 (Surr)	*82*		*81 - 118*		*10/17/22 13:04*	*1*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*		*10/17/22 13:04*	*1*
Dibromofluoromethane (Surr)	*109*		*80 - 119*		*10/17/22 13:04*	*1*

Lab Sample ID: LCS 680-745419/5
Matrix: Water
Analysis Batch: 745419

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	52.8		ug/L		106	79 - 120
Bromobenzene	50.0	56.5		ug/L		113	80 - 120
Chlorobromomethane	50.0	52.1		ug/L		104	78 - 123
Dichlorobromomethane	50.0	51.8		ug/L		104	79 - 125
Bromoform	50.0	61.5		ug/L		123	66 - 130
Bromomethane	50.0	43.3		ug/L		87	53 - 141
2-Butanone (MEK)	250	200		ug/L		80	56 - 143
n-Butylbenzene	50.0	47.7		ug/L		95	75 - 128
sec-Butylbenzene	50.0	54.8		ug/L		110	77 - 126
tert-Butylbenzene	50.0	56.1		ug/L		112	78 - 124
Carbon disulfide	50.0	54.4		ug/L		109	64 - 133
Carbon tetrachloride	50.0	46.2		ug/L		92	72 - 136
Chlorobenzene	50.0	54.7		ug/L		109	82 - 118
Chloroethane	50.0	56.0		ug/L		112	60 - 138
Chloroform	50.0	49.0		ug/L		98	79 - 124

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

Lab Sample ID: LCS 680-745419/5
Matrix: Water
Analysis Batch: 745419

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	54.5		ug/L		109	79 - 122
4-Chlorotoluene	50.0	54.6		ug/L		109	78 - 122
Chlorodibromomethane	50.0	48.0		ug/L		96	74 - 126
1,2-Dibromo-3-Chloropropane	50.0	50.1		ug/L		100	62 - 128
Ethylene Dibromide	50.0	54.6		ug/L		109	75 - 127
Dibromomethane	50.0	49.6		ug/L		99	79 - 123
1,2-Dichlorobenzene	50.0	51.7		ug/L		103	80 - 119
1,3-Dichlorobenzene	50.0	52.0		ug/L		104	80 - 119
1,4-Dichlorobenzene	50.0	51.1		ug/L		102	79 - 118
Dichlorodifluoromethane	50.0	43.5		ug/L		87	32 - 152
1,1-Dichloroethane	50.0	51.6		ug/L		103	77 - 125
1,2-Dichloroethane	50.0	44.2		ug/L		88	73 - 128
cis-1,2-Dichloroethene	50.0	48.0		ug/L		96	78 - 123
trans-1,2-Dichloroethene	50.0	52.4		ug/L		105	75 - 124
1,2-Dichloroethene, Total	100	100		ug/L		100	79 - 121
1,1-Dichloroethene	50.0	51.9		ug/L		104	71 - 131
1,2-Dichloropropane	50.0	53.8		ug/L		108	78 - 122
1,3-Dichloropropane	50.0	52.9		ug/L		106	80 - 119
2,2-Dichloropropane	50.0	48.1		ug/L		96	60 - 139
1,1-Dichloropropene	50.0	53.1		ug/L		106	79 - 125
cis-1,3-Dichloropropene	50.0	55.9		ug/L		112	75 - 124
trans-1,3-Dichloropropene	50.0	50.5		ug/L		101	73 - 127
Ethylbenzene	50.0	54.6		ug/L		109	79 - 121
Hexachlorobutadiene	50.0	51.1		ug/L		102	66 - 134
2-Hexanone	250	247		ug/L		99	57 - 139
Isopropylbenzene	50.0	55.8		ug/L		112	72 - 131
4-Isopropyltoluene	50.0	53.6		ug/L		107	77 - 127
Methylene Chloride	50.0	54.1		ug/L		108	74 - 124
4-Methyl-2-pentanone (MIBK)	250	237		ug/L		95	67 - 130
Methyl tert-butyl ether	50.0	44.4		ug/L		89	71 - 124
Naphthalene	50.0	44.1		ug/L		88	61 - 128
N-Propylbenzene	50.0	55.4		ug/L		111	76 - 126
Styrene	50.0	57.7		ug/L		115	78 - 123
1,1,1,2-Tetrachloroethane	50.0	49.4		ug/L		99	78 - 124
1,1,2,2-Tetrachloroethane	50.0	53.0		ug/L		106	71 - 121
Tetrachloroethene	50.0	55.9		ug/L		112	74 - 129
Toluene	50.0	54.1		ug/L		108	80 - 121
1,2,3-Trichlorobenzene	50.0	50.4		ug/L		101	69 - 129
1,2,4-Trichlorobenzene	50.0	47.7		ug/L		95	69 - 130
1,1,1-Trichloroethane	50.0	50.5		ug/L		101	74 - 131
1,1,2-Trichloroethane	50.0	53.9		ug/L		108	80 - 119
Trichloroethene	50.0	53.1		ug/L		106	79 - 123
Trichlorofluoromethane	50.0	56.5	J1	ug/L		113	65 - 141
1,2,3-Trichloropropane	50.0	53.0		ug/L		106	73 - 122
1,2,4-Trimethylbenzene	50.0	56.8		ug/L		114	76 - 124
1,3,5-Trimethylbenzene	50.0	57.0		ug/L		114	75 - 124
Vinyl acetate	100	89.0		ug/L		89	54 - 146
Vinyl chloride	50.0	48.8		ug/L		98	58 - 137

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

Lab Sample ID: LCS 680-745419/5
Matrix: Water
Analysis Batch: 745419

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	55.6		ug/L		111	78 - 122		
m-Xylene & p-Xylene			50.0	54.4		ug/L		109	80 - 121		
Xylenes, Total			100	110		ug/L		110	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*105*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*
Dibromofluoromethane (Surr)	*101*		*80 - 119*

Lab Sample ID: LCSD 680-745419/6
Matrix: Water
Analysis Batch: 745419

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	220		ug/L		88	39 - 160	0	20
Benzene			50.0	52.7		ug/L		105	79 - 120	0	20
Bromobenzene			50.0	54.6		ug/L		109	80 - 120	3	20
Chlorobromomethane			50.0	52.6		ug/L		105	78 - 123	1	20
Dichlorobromomethane			50.0	52.3		ug/L		105	79 - 125	1	20
Bromoform			50.0	60.5		ug/L		121	66 - 130	2	20
Bromomethane			50.0	42.9		ug/L		86	53 - 141	1	20
2-Butanone (MEK)			250	202		ug/L		81	56 - 143	1	20
n-Butylbenzene			50.0	49.2		ug/L		98	75 - 128	3	20
sec-Butylbenzene			50.0	52.0		ug/L		104	77 - 126	5	20
tert-Butylbenzene			50.0	53.8		ug/L		108	78 - 124	4	20
Carbon disulfide			50.0	53.8		ug/L		108	64 - 133	1	20
Carbon tetrachloride			50.0	46.2		ug/L		92	72 - 136	0	20
Chlorobenzene			50.0	53.7		ug/L		107	82 - 118	2	20
Chloroethane			50.0	56.0		ug/L		112	60 - 138	0	20
Chloroform			50.0	49.2		ug/L		98	79 - 124	0	20
Chloromethane			50.0	53.3		ug/L		107	50 - 139	1	20
2-Chlorotoluene			50.0	53.2		ug/L		106	79 - 122	2	20
4-Chlorotoluene			50.0	52.0		ug/L		104	78 - 122	5	20
Chlorodibromomethane			50.0	47.7		ug/L		95	74 - 126	1	20
1,2-Dibromo-3-Chloropropane			50.0	51.8		ug/L		104	62 - 128	3	20
Ethylene Dibromide			50.0	55.0		ug/L		110	75 - 127	1	20
Dibromomethane			50.0	50.1		ug/L		100	79 - 123	1	20
1,2-Dichlorobenzene			50.0	53.7		ug/L		107	80 - 119	4	20
1,3-Dichlorobenzene			50.0	52.1		ug/L		104	80 - 119	0	20
1,4-Dichlorobenzene			50.0	51.4		ug/L		103	79 - 118	1	20
Dichlorodifluoromethane			50.0	43.0		ug/L		86	32 - 152	1	20
1,1-Dichloroethane			50.0	51.0		ug/L		102	77 - 125	1	20
1,2-Dichloroethane			50.0	44.6		ug/L		89	73 - 128	1	20
cis-1,2-Dichloroethene			50.0	47.6		ug/L		95	78 - 123	1	20
trans-1,2-Dichloroethene			50.0	51.3		ug/L		103	75 - 124	2	20
1,2-Dichloroethene, Total			100	98.9		ug/L		99	79 - 121	1	20
1,1-Dichloroethene			50.0	51.5		ug/L		103	71 - 131	1	20

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

Lab Sample ID: LCSD 680-745419/6
Matrix: Water
Analysis Batch: 745419

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	54.0		ug/L		108	78 - 122	0	20
1,3-Dichloropropane	50.0	52.8		ug/L		106	80 - 119	0	20
2,2-Dichloropropane	50.0	47.8		ug/L		96	60 - 139	1	20
1,1-Dichloropropene	50.0	52.8		ug/L		106	79 - 125	1	20
cis-1,3-Dichloropropene	50.0	56.1		ug/L		112	75 - 124	0	20
trans-1,3-Dichloropropene	50.0	50.2		ug/L		100	73 - 127	0	20
Ethylbenzene	50.0	53.6		ug/L		107	79 - 121	2	20
Hexachlorobutadiene	50.0	50.4		ug/L		101	66 - 134	1	20
2-Hexanone	250	250		ug/L		100	57 - 139	1	20
Isopropylbenzene	50.0	54.2		ug/L		108	72 - 131	3	20
4-Isopropyltoluene	50.0	53.3		ug/L		107	77 - 127	1	20
Methylene Chloride	50.0	54.1		ug/L		108	74 - 124	0	20
4-Methyl-2-pentanone (MIBK)	250	240		ug/L		96	67 - 130	1	20
Methyl tert-butyl ether	50.0	44.9		ug/L		90	71 - 124	1	20
Naphthalene	50.0	45.4		ug/L		91	61 - 128	3	20
N-Propylbenzene	50.0	53.3		ug/L		107	76 - 126	4	20
Styrene	50.0	55.9		ug/L		112	78 - 123	3	20
1,1,1,2-Tetrachloroethane	50.0	48.5		ug/L		97	78 - 124	2	20
1,1,2,2-Tetrachloroethane	50.0	51.3		ug/L		103	71 - 121	3	20
Tetrachloroethene	50.0	56.0		ug/L		112	74 - 129	0	20
Toluene	50.0	54.4		ug/L		109	80 - 121	0	20
1,2,3-Trichlorobenzene	50.0	52.0		ug/L		104	69 - 129	3	20
1,2,4-Trichlorobenzene	50.0	48.7		ug/L		97	69 - 130	2	20
1,1,1-Trichloroethane	50.0	49.7		ug/L		99	74 - 131	2	20
1,1,2-Trichloroethane	50.0	54.0		ug/L		108	80 - 119	0	20
Trichloroethene	50.0	52.7		ug/L		105	79 - 123	1	20
Trichlorofluoromethane	50.0	56.5	J1	ug/L		113	65 - 141	0	20
1,2,3-Trichloropropane	50.0	52.2		ug/L		104	73 - 122	2	20
1,2,4-Trimethylbenzene	50.0	55.6		ug/L		111	76 - 124	2	20
1,3,5-Trimethylbenzene	50.0	55.2		ug/L		110	75 - 124	3	20
Vinyl acetate	100	89.8		ug/L		90	54 - 146	1	20
Vinyl chloride	50.0	48.4		ug/L		97	58 - 137	1	20
o-Xylene	50.0	53.8		ug/L		108	78 - 122	3	20
m-Xylene & p-Xylene	50.0	53.5		ug/L		107	80 - 121	2	20
Xylenes, Total	100	107		ug/L		107	79 - 121	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*106*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*
Dibromofluoromethane (Surr)	*100*		*80 - 119*

Lab Sample ID: MB 680-746027/8
Matrix: Water
Analysis Batch: 746027

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		10/20/22 12:43	1

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

Lab Sample ID: MB 680-746027/8
Matrix: Water
Analysis Batch: 746027

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		10/20/22 12:43	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/20/22 12:43	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/20/22 12:43	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/20/22 12:43	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/20/22 12:43	1
Bromomethane	10	U	20	10	3.7	ug/L		10/20/22 12:43	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/20/22 12:43	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/20/22 12:43	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/20/22 12:43	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/20/22 12:43	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/20/22 12:43	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/20/22 12:43	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/20/22 12:43	1
Chloroethane	10	U	20	10	4.6	ug/L		10/20/22 12:43	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/20/22 12:43	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/20/22 12:43	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/20/22 12:43	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/20/22 12:43	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/20/22 12:43	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/20/22 12:43	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 12:43	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/20/22 12:43	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/20/22 12:43	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/20/22 12:43	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/20/22 12:43	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/20/22 12:43	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 12:43	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/20/22 12:43	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/20/22 12:43	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/20/22 12:43	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/20/22 12:43	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 12:43	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/20/22 12:43	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/20/22 12:43	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/20/22 12:43	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/20/22 12:43	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/20/22 12:43	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/20/22 12:43	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/20/22 12:43	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/20/22 12:43	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/20/22 12:43	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/20/22 12:43	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/20/22 12:43	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/20/22 12:43	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/20/22 12:43	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/20/22 12:43	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/20/22 12:43	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/20/22 12:43	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/20/22 12:43	1

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

Lab Sample ID: MB 680-746027/8
Matrix: Water
Analysis Batch: 746027

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		10/20/22 12:43	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/20/22 12:43	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/20/22 12:43	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/20/22 12:43	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/20/22 12:43	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/20/22 12:43	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/20/22 12:43	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/20/22 12:43	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/20/22 12:43	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/20/22 12:43	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/20/22 12:43	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/20/22 12:43	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/20/22 12:43	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/20/22 12:43	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/20/22 12:43	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/20/22 12:43	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/20/22 12:43	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/20/22 12:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*89 - 112*		*10/20/22 12:43*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*10/20/22 12:43*	*1*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*		*10/20/22 12:43*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*10/20/22 12:43*	*1*

Lab Sample ID: LCS 680-746027/4
Matrix: Water
Analysis Batch: 746027

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	250	193		ug/L		77	39 - 160
Benzene	50.0	44.8		ug/L		90	79 - 120
Bromobenzene	50.0	45.7		ug/L		91	80 - 120
Chlorobromomethane	50.0	47.2		ug/L		94	78 - 123
Dichlorobromomethane	50.0	47.0		ug/L		94	79 - 125
Bromoform	50.0	43.4		ug/L		87	66 - 130
Bromomethane	50.0	67.9		ug/L		136	53 - 141
2-Butanone (MEK)	250	211		ug/L		84	56 - 143
n-Butylbenzene	50.0	47.5		ug/L		95	75 - 128
sec-Butylbenzene	50.0	49.1		ug/L		98	77 - 126
tert-Butylbenzene	50.0	48.9		ug/L		98	78 - 124
Carbon disulfide	50.0	45.6		ug/L		91	64 - 133
Carbon tetrachloride	50.0	47.2		ug/L		94	72 - 136
Chlorobenzene	50.0	45.8		ug/L		92	82 - 118
Chloroethane	50.0	129	Q	ug/L		258	60 - 138
Chloroform	50.0	46.4		ug/L		93	79 - 124
Chloromethane	50.0	45.8		ug/L		92	50 - 139
2-Chlorotoluene	50.0	45.8		ug/L		92	79 - 122

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

Lab Sample ID: LCS 680-746027/4
Matrix: Water
Analysis Batch: 746027

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	48.0		ug/L		96	78 - 122
Chlorodibromomethane	50.0	47.1		ug/L		94	74 - 126
1,2-Dibromo-3-Chloropropane	50.0	39.0		ug/L		78	62 - 128
Ethylene Dibromide	50.0	46.9		ug/L		94	75 - 127
Dibromomethane	50.0	47.6		ug/L		95	79 - 123
1,2-Dichlorobenzene	50.0	46.5		ug/L		93	80 - 119
1,3-Dichlorobenzene	50.0	46.7		ug/L		93	80 - 119
1,4-Dichlorobenzene	50.0	45.4		ug/L		91	79 - 118
Dichlorodifluoromethane	50.0	44.7		ug/L		89	32 - 152
1,1-Dichloroethane	50.0	46.1		ug/L		92	77 - 125
1,2-Dichloroethane	50.0	48.7		ug/L		97	73 - 128
cis-1,2-Dichloroethene	50.0	46.2		ug/L		92	78 - 123
trans-1,2-Dichloroethene	50.0	46.7		ug/L		93	75 - 124
1,2-Dichloroethene, Total	100	92.9		ug/L		93	79 - 121
1,1-Dichloroethene	50.0	45.5		ug/L		91	71 - 131
1,2-Dichloropropane	50.0	44.5		ug/L		89	78 - 122
1,3-Dichloropropane	50.0	46.1		ug/L		92	80 - 119
2,2-Dichloropropane	50.0	43.6		ug/L		87	60 - 139
1,1-Dichloropropene	50.0	45.2		ug/L		90	79 - 125
cis-1,3-Dichloropropene	50.0	46.4		ug/L		93	75 - 124
trans-1,3-Dichloropropene	50.0	47.8		ug/L		96	73 - 127
Ethylbenzene	50.0	45.4		ug/L		91	79 - 121
Hexachlorobutadiene	50.0	44.5		ug/L		89	66 - 134
2-Hexanone	250	189		ug/L		75	57 - 139
Isopropylbenzene	50.0	45.4		ug/L		91	72 - 131
4-Isopropyltoluene	50.0	45.6		ug/L		91	77 - 127
Methylene Chloride	50.0	48.3		ug/L		97	74 - 124
4-Methyl-2-pentanone (MIBK)	250	187		ug/L		75	67 - 130
Methyl tert-butyl ether	50.0	45.3		ug/L		91	71 - 124
Naphthalene	50.0	43.0		ug/L		86	61 - 128
N-Propylbenzene	50.0	46.8		ug/L		94	76 - 126
Styrene	50.0	49.8		ug/L		100	78 - 123
1,1,1,2-Tetrachloroethane	50.0	46.2		ug/L		92	78 - 124
1,1,2,2-Tetrachloroethane	50.0	44.4		ug/L		89	71 - 121
Tetrachloroethene	50.0	44.1		ug/L		88	74 - 129
Toluene	50.0	44.7		ug/L		89	80 - 121
1,2,3-Trichlorobenzene	50.0	45.7		ug/L		91	69 - 129
1,2,4-Trichlorobenzene	50.0	47.1		ug/L		94	69 - 130
1,1,1-Trichloroethane	50.0	45.1		ug/L		90	74 - 131
1,1,2-Trichloroethane	50.0	43.6		ug/L		87	80 - 119
Trichloroethene	50.0	46.6		ug/L		93	79 - 123
Trichlorofluoromethane	50.0	51.9		ug/L		104	65 - 141
1,2,3-Trichloropropane	50.0	44.9		ug/L		90	73 - 122
1,2,4-Trimethylbenzene	50.0	45.7		ug/L		91	76 - 124
1,3,5-Trimethylbenzene	50.0	48.8		ug/L		98	75 - 124
Vinyl acetate	100	101		ug/L		101	54 - 146
Vinyl chloride	50.0	46.7		ug/L		93	58 - 137
o-Xylene	50.0	45.5		ug/L		91	78 - 122
m-Xylene & p-Xylene	50.0	45.9		ug/L		92	80 - 121

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

Lab Sample ID: LCS 680-746027/4
Matrix: Water
Analysis Batch: 746027

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	91.4		ug/L		91	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*99*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*97*		*81 - 118*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*
Dibromofluoromethane (Surr)	*100*		*80 - 119*

Lab Sample ID: LCSD 680-746027/5
Matrix: Water
Analysis Batch: 746027

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	192		ug/L		77	39 - 160	1	20
Benzene			50.0	45.0		ug/L		90	79 - 120	1	20
Bromobenzene			50.0	47.0		ug/L		94	80 - 120	3	20
Chlorobromomethane			50.0	47.2		ug/L		94	78 - 123	0	20
Dichlorobromomethane			50.0	46.9		ug/L		94	79 - 125	0	20
Bromoform			50.0	44.9		ug/L		90	66 - 130	4	20
Bromomethane			50.0	69.3		ug/L		139	53 - 141	2	20
2-Butanone (MEK)			250	213		ug/L		85	56 - 143	1	20
n-Butylbenzene			50.0	46.7		ug/L		93	75 - 128	2	20
sec-Butylbenzene			50.0	50.2		ug/L		100	77 - 126	2	20
tert-Butylbenzene			50.0	50.2		ug/L		100	78 - 124	3	20
Carbon disulfide			50.0	45.0		ug/L		90	64 - 133	1	20
Carbon tetrachloride			50.0	46.9		ug/L		94	72 - 136	0	20
Chlorobenzene			50.0	45.9		ug/L		92	82 - 118	0	20
Chloroethane			50.0	125	Q	ug/L		251	60 - 138	3	20
Chloroform			50.0	46.5		ug/L		93	79 - 124	0	20
Chloromethane			50.0	43.8		ug/L		88	50 - 139	4	20
2-Chlorotoluene			50.0	45.7		ug/L		91	79 - 122	0	20
4-Chlorotoluene			50.0	47.8		ug/L		96	78 - 122	0	20
Chlorodibromomethane			50.0	48.4		ug/L		97	74 - 126	3	20
1,2-Dibromo-3-Chloropropane			50.0	38.6		ug/L		77	62 - 128	1	20
Ethylene Dibromide			50.0	47.3		ug/L		95	75 - 127	1	20
Dibromomethane			50.0	47.5		ug/L		95	79 - 123	0	20
1,2-Dichlorobenzene			50.0	46.7		ug/L		93	80 - 119	0	20
1,3-Dichlorobenzene			50.0	47.1		ug/L		94	80 - 119	1	20
1,4-Dichlorobenzene			50.0	45.8		ug/L		92	79 - 118	1	20
Dichlorodifluoromethane			50.0	44.4		ug/L		89	32 - 152	1	20
1,1-Dichloroethane			50.0	45.1		ug/L		90	77 - 125	2	20
1,2-Dichloroethane			50.0	47.3		ug/L		95	73 - 128	3	20
cis-1,2-Dichloroethene			50.0	45.8		ug/L		92	78 - 123	1	20
trans-1,2-Dichloroethene			50.0	47.5		ug/L		95	75 - 124	2	20
1,2-Dichloroethene, Total			100	93.3		ug/L		93	79 - 121	0	20
1,1-Dichloroethene			50.0	44.8		ug/L		90	71 - 131	2	20
1,2-Dichloropropane			50.0	44.6		ug/L		89	78 - 122	0	20
1,3-Dichloropropane			50.0	45.9		ug/L		92	80 - 119	0	20

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

Lab Sample ID: LCSD 680-746027/5
Matrix: Water
Analysis Batch: 746027

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	43.9		ug/L		88	60 - 139	1	20
1,1-Dichloropropene			50.0	45.4		ug/L		91	79 - 125	0	20
cis-1,3-Dichloropropene			50.0	46.6		ug/L		93	75 - 124	0	20
trans-1,3-Dichloropropene			50.0	48.0		ug/L		96	73 - 127	0	20
Ethylbenzene			50.0	46.0		ug/L		92	79 - 121	1	20
Hexachlorobutadiene			50.0	44.6		ug/L		89	66 - 134	0	20
2-Hexanone			250	188		ug/L		75	57 - 139	0	20
Isopropylbenzene			50.0	46.3		ug/L		93	72 - 131	2	20
4-Isopropyltoluene			50.0	45.0		ug/L		90	77 - 127	1	20
Methylene Chloride			50.0	47.5		ug/L		95	74 - 124	2	20
4-Methyl-2-pentanone (MIBK)			250	187		ug/L		75	67 - 130	0	20
Methyl tert-butyl ether			50.0	45.1		ug/L		90	71 - 124	0	20
Naphthalene			50.0	43.4		ug/L		87	61 - 128	1	20
N-Propylbenzene			50.0	47.0		ug/L		94	76 - 126	1	20
Styrene			50.0	50.1		ug/L		100	78 - 123	1	20
1,1,1,2-Tetrachloroethane			50.0	47.6		ug/L		95	78 - 124	3	20
1,1,2,2-Tetrachloroethane			50.0	44.4		ug/L		89	71 - 121	0	20
Tetrachloroethene			50.0	43.9		ug/L		88	74 - 129	0	20
Toluene			50.0	45.2		ug/L		90	80 - 121	1	20
1,2,3-Trichlorobenzene			50.0	46.4		ug/L		93	69 - 129	2	20
1,2,4-Trichlorobenzene			50.0	47.5		ug/L		95	69 - 130	1	20
1,1,1-Trichloroethane			50.0	44.9		ug/L		90	74 - 131	0	20
1,1,2-Trichloroethane			50.0	43.4		ug/L		87	80 - 119	1	20
Trichloroethene			50.0	47.1		ug/L		94	79 - 123	1	20
Trichlorofluoromethane			50.0	51.5		ug/L		103	65 - 141	1	20
1,2,3-Trichloropropane			50.0	45.3		ug/L		91	73 - 122	1	20
1,2,4-Trimethylbenzene			50.0	46.7		ug/L		93	76 - 124	2	20
1,3,5-Trimethylbenzene			50.0	50.0		ug/L		100	75 - 124	2	20
Vinyl acetate			100	101		ug/L		101	54 - 146	0	20
Vinyl chloride			50.0	44.9		ug/L		90	58 - 137	4	20
o-Xylene			50.0	46.2		ug/L		92	78 - 122	2	20
m-Xylene & p-Xylene			50.0	46.3		ug/L		93	80 - 121	1	20
Xylenes, Total			100	92.5		ug/L		93	79 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*98*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*
Dibromofluoromethane (Surr)	*100*		*80 - 119*

Lab Sample ID: 680-222692-16 MS
Matrix: Water
Analysis Batch: 746027

Client Sample ID: MW-3-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	10	U Q	250	185		ug/L		74	39 - 160
Benzene	1.0	U	50.0	44.5		ug/L		89	79 - 120
Bromobenzene	0.50	U	50.0	46.8		ug/L		94	80 - 120

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

Lab Sample ID: 680-222692-16 MS
Matrix: Water
Analysis Batch: 746027

Client Sample ID: MW-3-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chlorobromomethane	1.0	U	50.0	46.4		ug/L		93	78 - 123
Dichlorobromomethane	1.0	U	50.0	46.5		ug/L		93	79 - 125
Bromoform	2.0	U	50.0	44.7		ug/L		89	66 - 130
Bromomethane	10	U Q	50.0	69.7		ug/L		139	53 - 141
2-Butanone (MEK)	20	U	250	213		ug/L		85	56 - 143
n-Butylbenzene	2.0	U	50.0	48.7		ug/L		97	75 - 128
sec-Butylbenzene	2.0	U	50.0	50.7		ug/L		101	77 - 126
tert-Butylbenzene	1.0	U	50.0	50.2		ug/L		100	78 - 124
Carbon disulfide	1.0	U	50.0	46.6		ug/L		93	64 - 133
Carbon tetrachloride	1.0	U	50.0	48.8		ug/L		98	72 - 136
Chlorobenzene	0.50	U	50.0	46.6		ug/L		93	82 - 118
Chloroethane	10	U Q J1	50.0	123	J1	ug/L		246	60 - 138
Chloroform	1.0	U	50.0	46.2		ug/L		92	79 - 124
Chloromethane	2.0	U	50.0	48.2		ug/L		96	50 - 139
2-Chlorotoluene	0.50	U	50.0	46.4		ug/L		93	79 - 122
4-Chlorotoluene	1.0	U	50.0	48.0		ug/L		96	78 - 122
Chlorodibromomethane	1.0	U	50.0	47.0		ug/L		94	74 - 126
1,2-Dibromo-3-Chloropropane	5.0	U Q	50.0	42.2		ug/L		84	62 - 128
Ethylene Dibromide	1.0	U	50.0	46.9		ug/L		94	75 - 127
Dibromomethane	1.0	U	50.0	46.4		ug/L		93	79 - 123
1,2-Dichlorobenzene	1.0	U	50.0	46.9		ug/L		94	80 - 119
1,3-Dichlorobenzene	1.0	U	50.0	47.6		ug/L		95	80 - 119
1,4-Dichlorobenzene	1.0	U	50.0	45.9		ug/L		92	79 - 118
Dichlorodifluoromethane	1.0	U	50.0	53.9		ug/L		108	32 - 152
1,1-Dichloroethane	1.0	U	50.0	45.6		ug/L		91	77 - 125
1,2-Dichloroethane	1.0	U M	50.0	46.9		ug/L		94	73 - 128
cis-1,2-Dichloroethene	0.31	J	50.0	45.5		ug/L		90	78 - 123
trans-1,2-Dichloroethene	1.0	U	50.0	47.3		ug/L		95	75 - 124
1,2-Dichloroethene, Total	1.0	U	100	92.8		ug/L		93	79 - 121
1,1-Dichloroethene	1.0	U	50.0	46.6		ug/L		93	71 - 131
1,2-Dichloropropane	0.50	U	50.0	43.7		ug/L		87	78 - 122
1,3-Dichloropropane	1.0	U	50.0	45.1		ug/L		90	80 - 119
2,2-Dichloropropane	1.0	U	50.0	40.3		ug/L		81	60 - 139
1,1-Dichloropropene	1.0	U	50.0	47.1		ug/L		94	79 - 125
cis-1,3-Dichloropropene	1.0	U	50.0	44.3		ug/L		89	75 - 124
trans-1,3-Dichloropropene	1.0	U	50.0	45.8		ug/L		92	73 - 127
Ethylbenzene	0.50	U	50.0	46.5		ug/L		93	79 - 121
Hexachlorobutadiene	1.0	U	50.0	45.9		ug/L		92	66 - 134
2-Hexanone	10	U Q	250	196		ug/L		78	57 - 139
Isopropylbenzene	1.0	U	50.0	47.0		ug/L		94	72 - 131
4-Isopropyltoluene	1.0	U	50.0	47.0		ug/L		94	77 - 127
Methylene Chloride	10	U	50.0	46.7		ug/L		93	74 - 124
4-Methyl-2-pentanone (MIBK)	10	U Q M	250	197		ug/L		79	67 - 130
Methyl tert-butyl ether	2.0	U	50.0	44.5		ug/L		89	71 - 124
Naphthalene	5.0	U	50.0	45.1		ug/L		90	61 - 128
N-Propylbenzene	1.0	U	50.0	47.7		ug/L		95	76 - 126
Styrene	1.0	U	50.0	49.6		ug/L		99	78 - 123
1,1,1,2-Tetrachloroethane	1.0	U	50.0	47.1		ug/L		94	78 - 124
1,1,2,2-Tetrachloroethane	1.0	U	50.0	45.5		ug/L		91	71 - 121

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

Lab Sample ID: 680-222692-16 MS
Matrix: Water
Analysis Batch: 746027

Client Sample ID: MW-3-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Tetrachloroethene	1.0	U	50.0	44.6		ug/L		89	74 - 129
Toluene	1.0	U	50.0	44.8		ug/L		90	80 - 121
1,2,3-Trichlorobenzene	2.0	U	50.0	46.2		ug/L		92	69 - 129
1,2,4-Trichlorobenzene	2.0	U	50.0	47.4		ug/L		95	69 - 130
1,1,1-Trichloroethane	0.50	U	50.0	46.1		ug/L		92	74 - 131
1,1,2-Trichloroethane	1.0	U	50.0	42.8		ug/L		86	80 - 119
Trichloroethene	0.50	U	50.0	46.8		ug/L		94	79 - 123
Trichlorofluoromethane	1.0	U	50.0	56.1		ug/L		112	65 - 141
1,2,3-Trichloropropane	1.0	U	50.0	45.9		ug/L		92	73 - 122
1,2,4-Trimethylbenzene	1.0	U	50.0	46.6		ug/L		93	76 - 124
1,3,5-Trimethylbenzene	1.0	U	50.0	49.9		ug/L		100	75 - 124
Vinyl acetate	2.0	U	100	98.6		ug/L		99	54 - 146
Vinyl chloride	0.40	J	50.0	51.1		ug/L		102	58 - 137
o-Xylene	1.0	U	50.0	46.0		ug/L		92	78 - 122
m-Xylene & p-Xylene	1.0	U	50.0	47.0		ug/L		94	80 - 121
Xylenes, Total	1.0	U	100	93.0		ug/L		93	79 - 121

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*99*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*
Dibromofluoromethane (Surr)	*97*		*80 - 119*

Lab Sample ID: 680-222692-16 MSD
Matrix: Water
Analysis Batch: 746027

Client Sample ID: MW-3-FAL22
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	250	193		ug/L		77	39 - 160	4	20
Benzene	1.0	U	50.0	45.7		ug/L		91	79 - 120	3	20
Bromobenzene	0.50	U	50.0	47.2		ug/L		94	80 - 120	1	20
Chlorobromomethane	1.0	U	50.0	47.8		ug/L		96	78 - 123	3	20
Dichlorobromomethane	1.0	U	50.0	48.1		ug/L		96	79 - 125	3	20
Bromoform	2.0	U	50.0	45.7		ug/L		91	66 - 130	2	20
Bromomethane	10	U Q	50.0	68.5		ug/L		137	53 - 141	2	20
2-Butanone (MEK)	20	U	250	218		ug/L		87	56 - 143	3	20
n-Butylbenzene	2.0	U	50.0	49.6		ug/L		99	75 - 128	2	20
sec-Butylbenzene	2.0	U	50.0	51.2		ug/L		102	77 - 126	1	20
tert-Butylbenzene	1.0	U	50.0	50.5		ug/L		101	78 - 124	1	20
Carbon disulfide	1.0	U	50.0	47.8		ug/L		96	64 - 133	2	20
Carbon tetrachloride	1.0	U	50.0	49.5		ug/L		99	72 - 136	1	20
Chlorobenzene	0.50	U	50.0	46.8		ug/L		94	82 - 118	0	20
Chloroethane	10	U Q J1	50.0	129	J1	ug/L		258	60 - 138	5	20
Chloroform	1.0	U	50.0	47.5		ug/L		95	79 - 124	3	20
Chloromethane	2.0	U	50.0	47.7		ug/L		95	50 - 139	1	20
2-Chlorotoluene	0.50	U	50.0	47.2		ug/L		94	79 - 122	2	20
4-Chlorotoluene	1.0	U	50.0	49.0		ug/L		98	78 - 122	2	20
Chlorodibromomethane	1.0	U	50.0	48.1		ug/L		96	74 - 126	2	20

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

Lab Sample ID: 680-222692-16 MSD
Client Sample ID: MW-3-FAL22
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 746027

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Dibromo-3-Chloropropane	5.0	U Q	50.0	42.8		ug/L		86	62 - 128	1	20
Ethylene Dibromide	1.0	U	50.0	47.6		ug/L		95	75 - 127	2	20
Dibromomethane	1.0	U	50.0	47.6		ug/L		95	79 - 123	3	20
1,2-Dichlorobenzene	1.0	U	50.0	47.4		ug/L		95	80 - 119	1	20
1,3-Dichlorobenzene	1.0	U	50.0	47.9		ug/L		96	80 - 119	1	20
1,4-Dichlorobenzene	1.0	U	50.0	47.1		ug/L		94	79 - 118	3	20
Dichlorodifluoromethane	1.0	U	50.0	51.9		ug/L		104	32 - 152	4	20
1,1-Dichloroethane	1.0	U	50.0	46.4		ug/L		93	77 - 125	2	20
1,2-Dichloroethane	1.0	U M	50.0	48.3		ug/L		97	73 - 128	3	20
cis-1,2-Dichloroethene	0.31	J	50.0	47.1		ug/L		94	78 - 123	3	20
trans-1,2-Dichloroethene	1.0	U	50.0	48.0		ug/L		96	75 - 124	1	20
1,2-Dichloroethene, Total	1.0	U	100	95.1		ug/L		95	79 - 121	2	20
1,1-Dichloroethene	1.0	U	50.0	47.3		ug/L		95	71 - 131	2	20
1,2-Dichloropropane	0.50	U	50.0	44.8		ug/L		90	78 - 122	3	20
1,3-Dichloropropane	1.0	U	50.0	46.4		ug/L		93	80 - 119	3	20
2,2-Dichloropropane	1.0	U	50.0	41.3		ug/L		83	60 - 139	2	20
1,1-Dichloropropene	1.0	U	50.0	47.3		ug/L		95	79 - 125	0	20
cis-1,3-Dichloropropene	1.0	U	50.0	46.5		ug/L		93	75 - 124	5	20
trans-1,3-Dichloropropene	1.0	U	50.0	47.4		ug/L		95	73 - 127	3	20
Ethylbenzene	0.50	U	50.0	47.1		ug/L		94	79 - 121	1	20
Hexachlorobutadiene	1.0	U	50.0	45.5		ug/L		91	66 - 134	1	20
2-Hexanone	10	U Q	250	200		ug/L		80	57 - 139	2	20
Isopropylbenzene	1.0	U	50.0	47.5		ug/L		95	72 - 131	1	20
4-Isopropyltoluene	1.0	U	50.0	47.2		ug/L		94	77 - 127	0	20
Methylene Chloride	10	U	50.0	48.5		ug/L		97	74 - 124	4	20
4-Methyl-2-pentanone (MIBK)	10	U Q M	250	201		ug/L		81	67 - 130	2	20
Methyl tert-butyl ether	2.0	U	50.0	45.7		ug/L		91	71 - 124	3	20
Naphthalene	5.0	U	50.0	45.8		ug/L		92	61 - 128	2	20
N-Propylbenzene	1.0	U	50.0	48.3		ug/L		97	76 - 126	1	20
Styrene	1.0	U	50.0	50.4		ug/L		101	78 - 123	2	20
1,1,1,2-Tetrachloroethane	1.0	U	50.0	47.8		ug/L		96	78 - 124	2	20
1,1,2,2-Tetrachloroethane	1.0	U	50.0	46.4		ug/L		93	71 - 121	2	20
Tetrachloroethene	1.0	U	50.0	44.7		ug/L		89	74 - 129	0	20
Toluene	1.0	U	50.0	46.0		ug/L		92	80 - 121	3	20
1,2,3-Trichlorobenzene	2.0	U	50.0	47.1		ug/L		94	69 - 129	2	20
1,2,4-Trichlorobenzene	2.0	U	50.0	47.6		ug/L		95	69 - 130	0	20
1,1,1-Trichloroethane	0.50	U	50.0	47.5		ug/L		95	74 - 131	3	20
1,1,2-Trichloroethane	1.0	U	50.0	44.1		ug/L		88	80 - 119	3	20
Trichloroethene	0.50	U	50.0	47.8		ug/L		96	79 - 123	2	20
Trichlorofluoromethane	1.0	U	50.0	55.1		ug/L		110	65 - 141	2	20
1,2,3-Trichloropropane	1.0	U	50.0	46.9		ug/L		94	73 - 122	2	20
1,2,4-Trimethylbenzene	1.0	U	50.0	46.7		ug/L		93	76 - 124	0	20
1,3,5-Trimethylbenzene	1.0	U	50.0	50.1		ug/L		100	75 - 124	0	20
Vinyl acetate	2.0	U	100	102		ug/L		102	54 - 146	4	20
Vinyl chloride	0.40	J	50.0	50.8		ug/L		102	58 - 137	0	20
o-Xylene	1.0	U	50.0	47.2		ug/L		94	78 - 122	2	20
m-Xylene & p-Xylene	1.0	U	50.0	47.4		ug/L		95	80 - 121	1	20
Xylenes, Total	1.0	U	100	94.6		ug/L		95	79 - 121	2	20

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

Lab Sample ID: 680-222692-16 MSD
Matrix: Water
Analysis Batch: 746027

Client Sample ID: MW-3-FAL22
Prep Type: Total/NA

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Toluene-d8 (Surr)	*101*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*97*		*81 - 118*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*
Dibromofluoromethane (Surr)	*100*		*80 - 119*

Lab Sample ID: MB 680-746246/9
Matrix: Water
Analysis Batch: 746246

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		10/21/22 13:39	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 13:39	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/21/22 13:39	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 13:39	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 13:39	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/21/22 13:39	1
Bromomethane	10	U	20	10	3.7	ug/L		10/21/22 13:39	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/21/22 13:39	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/21/22 13:39	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/21/22 13:39	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 13:39	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 13:39	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/21/22 13:39	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/21/22 13:39	1
Chloroethane	10	U	20	10	4.6	ug/L		10/21/22 13:39	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 13:39	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/21/22 13:39	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/21/22 13:39	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 13:39	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/21/22 13:39	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/21/22 13:39	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 13:39	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 13:39	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 13:39	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 13:39	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 13:39	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 13:39	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 13:39	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/21/22 13:39	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 13:39	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 13:39	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/21/22 13:39	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 13:39	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/21/22 13:39	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 13:39	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 13:39	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 13:39	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 13:39	1

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

Lab Sample ID: MB 680-746246/9
Matrix: Water
Analysis Batch: 746246

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		10/21/22 13:39	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 13:39	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/21/22 13:39	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/21/22 13:39	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 13:39	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/21/22 13:39	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/21/22 13:39	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/21/22 13:39	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 13:39	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/21/22 13:39	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 13:39	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 13:39	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 13:39	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 13:39	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 13:39	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 13:39	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 13:39	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/21/22 13:39	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/21/22 13:39	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/21/22 13:39	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 13:39	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 13:39	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/21/22 13:39	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 13:39	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 13:39	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/21/22 13:39	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 13:39	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 13:39	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 13:39	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 13:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*107*		*89 - 112*		*10/21/22 13:39*	*1*
1,2-Dichloroethane-d4 (Surr)	*91*		*81 - 118*		*10/21/22 13:39*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*10/21/22 13:39*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 119*		*10/21/22 13:39*	*1*

Lab Sample ID: LCS 680-746246/5
Matrix: Water
Analysis Batch: 746246

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	250	248		ug/L		99	39 - 160
Benzene	50.0	50.2		ug/L		100	79 - 120
Bromobenzene	50.0	48.5		ug/L		97	80 - 120
Chlorobromomethane	50.0	52.2		ug/L		104	78 - 123
Dichlorobromomethane	50.0	53.8		ug/L		108	79 - 125
Bromoform	50.0	51.2	J1	ug/L		102	66 - 130

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

Lab Sample ID: LCS 680-746246/5
Matrix: Water
Analysis Batch: 746246

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	55.5		ug/L		111	53 - 141
2-Butanone (MEK)	250	240		ug/L		96	56 - 143
n-Butylbenzene	50.0	53.9		ug/L		108	75 - 128
sec-Butylbenzene	50.0	49.0		ug/L		98	77 - 126
tert-Butylbenzene	50.0	48.4		ug/L		97	78 - 124
Carbon disulfide	50.0	58.4		ug/L		117	64 - 133
Carbon tetrachloride	50.0	53.7		ug/L		107	72 - 136
Chlorobenzene	50.0	50.5		ug/L		101	82 - 118
Chloroethane	50.0	80.3	Q	ug/L		161	60 - 138
Chloroform	50.0	51.7		ug/L		103	79 - 124
Chloromethane	50.0	52.3		ug/L		105	50 - 139
2-Chlorotoluene	50.0	47.7		ug/L		95	79 - 122
4-Chlorotoluene	50.0	47.0		ug/L		94	78 - 122
Chlorodibromomethane	50.0	57.8		ug/L		116	74 - 126
1,2-Dibromo-3-Chloropropane	50.0	52.6		ug/L		105	62 - 128
Ethylene Dibromide	50.0	49.3		ug/L		99	75 - 127
Dibromomethane	50.0	51.3		ug/L		103	79 - 123
1,2-Dichlorobenzene	50.0	49.6		ug/L		99	80 - 119
1,3-Dichlorobenzene	50.0	50.1		ug/L		100	80 - 119
1,4-Dichlorobenzene	50.0	49.1		ug/L		98	79 - 118
Dichlorodifluoromethane	50.0	45.3		ug/L		91	32 - 152
1,1-Dichloroethane	50.0	51.2		ug/L		102	77 - 125
1,2-Dichloroethane	50.0	50.1		ug/L		100	73 - 128
cis-1,2-Dichloroethene	50.0	50.3		ug/L		101	78 - 123
trans-1,2-Dichloroethene	50.0	51.3		ug/L		103	75 - 124
1,2-Dichloroethene, Total	100	102		ug/L		102	79 - 121
1,1-Dichloroethene	50.0	53.4		ug/L		107	71 - 131
1,2-Dichloropropane	50.0	52.3		ug/L		105	78 - 122
1,3-Dichloropropane	50.0	48.5		ug/L		97	80 - 119
2,2-Dichloropropane	50.0	51.7		ug/L		103	60 - 139
1,1-Dichloropropene	50.0	51.6		ug/L		103	79 - 125
cis-1,3-Dichloropropene	50.0	53.2		ug/L		106	75 - 124
trans-1,3-Dichloropropene	50.0	53.9		ug/L		108	73 - 127
Ethylbenzene	50.0	51.5		ug/L		103	79 - 121
Hexachlorobutadiene	50.0	55.9		ug/L		112	66 - 134
2-Hexanone	250	222		ug/L		89	57 - 139
Isopropylbenzene	50.0	49.5		ug/L		99	72 - 131
4-Isopropyltoluene	50.0	52.1		ug/L		104	77 - 127
Methylene Chloride	50.0	51.7		ug/L		103	74 - 124
4-Methyl-2-pentanone (MIBK)	250	232		ug/L		93	67 - 130
Methyl tert-butyl ether	50.0	49.7		ug/L		99	71 - 124
Naphthalene	50.0	53.2		ug/L		106	61 - 128
N-Propylbenzene	50.0	49.5		ug/L		99	76 - 126
Styrene	50.0	50.4		ug/L		101	78 - 123
1,1,1,2-Tetrachloroethane	50.0	52.9		ug/L		106	78 - 124
1,1,2,2-Tetrachloroethane	50.0	45.1		ug/L		90	71 - 121
Tetrachloroethene	50.0	49.5		ug/L		99	74 - 129
Toluene	50.0	51.1		ug/L		102	80 - 121
1,2,3-Trichlorobenzene	50.0	52.3		ug/L		105	69 - 129

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

Lab Sample ID: LCS 680-746246/5
Matrix: Water
Analysis Batch: 746246

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	51.2		ug/L		102	69 - 130
1,1,1-Trichloroethane	50.0	53.0		ug/L		106	74 - 131
1,1,2-Trichloroethane	50.0	49.2		ug/L		98	80 - 119
Trichloroethene	50.0	53.0		ug/L		106	79 - 123
Trichlorofluoromethane	50.0	53.5		ug/L		107	65 - 141
1,2,3-Trichloropropane	50.0	47.1		ug/L		94	73 - 122
1,2,4-Trimethylbenzene	50.0	50.3		ug/L		101	76 - 124
1,3,5-Trimethylbenzene	50.0	50.1		ug/L		100	75 - 124
Vinyl acetate	100	89.0		ug/L		89	54 - 146
Vinyl chloride	50.0	48.4		ug/L		97	58 - 137
o-Xylene	50.0	50.3		ug/L		101	78 - 122
m-Xylene & p-Xylene	50.0	49.9		ug/L		100	80 - 121
Xylenes, Total	100	100		ug/L		100	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*106*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*100*		*81 - 118*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*
Dibromofluoromethane (Surr)	*103*		*80 - 119*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-745195/37
Matrix: Water
Analysis Batch: 745195

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		10/14/22 18:15	1
Ethylene	0.71	U	1.0	0.71	0.31	ug/L		10/14/22 18:15	1
Methane	1.2	U	1.2	1.2	0.57	ug/L		10/14/22 18:15	1

Lab Sample ID: LCS 680-745195/33
Matrix: Water
Analysis Batch: 745195

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	1830		ug/L		95	73 - 125

Lab Sample ID: LCS 680-745195/35
Matrix: Water
Analysis Batch: 745195

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethane	361	347		ug/L		96	74 - 131
Ethylene	337	315		ug/L		94	72 - 133
Methane	192	184		ug/L		96	73 - 125

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

Lab Sample ID: LCSD 680-745195/34
Matrix: Water
Analysis Batch: 745195

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	1820		ug/L		95	73 - 125	0	30

Lab Sample ID: LCSD 680-745195/36
Matrix: Water
Analysis Batch: 745195

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	1	30
Ethylene			337	310		ug/L		92	72 - 133	1	30
Methane			192	183		ug/L		95	73 - 125	1	30

Lab Sample ID: MB 680-745320/68
Matrix: Water
Analysis Batch: 745320

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		10/15/22 10:54	1
Ethylene	0.71	U	1.0	0.71	0.31	ug/L		10/15/22 10:54	1
Methane	1.2	U	1.2	1.2	0.57	ug/L		10/15/22 10:54	1

Lab Sample ID: LCS 680-745320/64
Matrix: Water
Analysis Batch: 745320

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	1800		ug/L		94	73 - 125		

Lab Sample ID: LCS 680-745320/66
Matrix: Water
Analysis Batch: 745320

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Ethane			361	355		ug/L		98	74 - 131		
Ethylene			337	321		ug/L		95	72 - 133		
Methane			192	190		ug/L		99	73 - 125		

Lab Sample ID: LCSD 680-745320/65
Matrix: Water
Analysis Batch: 745320

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	1890		ug/L		98	73 - 125	5	30

Lab Sample ID: LCSD 680-745320/67
Matrix: Water
Analysis Batch: 745320

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	1	30
Ethylene			337	323		ug/L		96	72 - 133	1	30

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

Lab Sample ID: LCSD 680-745320/67
Matrix: Water
Analysis Batch: 745320

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	192		ug/L		100	73 - 125	1	30

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-746328/33
Matrix: Water
Analysis Batch: 746328

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		10/21/22 21:00	1

Lab Sample ID: LCS 680-746328/34
Matrix: Water
Analysis Batch: 746328

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	9.77		mg/L		98	87 - 112		

Lab Sample ID: LCSD 680-746328/35
Matrix: Water
Analysis Batch: 746328

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	9.82		mg/L		98	87 - 112	0	15

Lab Sample ID: 680-222692-9 MS
Matrix: Water
Analysis Batch: 746328

Client Sample ID: G6M-04-02X-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Sulfate	5.0		10.0	14.8		mg/L		98	87 - 112		

Lab Sample ID: 680-222692-9 MSD
Matrix: Water
Analysis Batch: 746328

Client Sample ID: G6M-04-02X-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	5.0		10.0	14.9		mg/L		99	87 - 112	1	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-744343/1-A
Matrix: Water
Analysis Batch: 744590

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 744343

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/10/22 16:23	1
Manganese	5.0	U	10	5.0	1.3	ug/L		10/10/22 16:23	1

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

Lab Sample ID: LCS 680-744343/2-A
Matrix: Water
Analysis Batch: 744590

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 744343

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Iron			5000	4800		ug/L		96	87 - 115		
Manganese			400	385		ug/L		96	90 - 114		

Lab Sample ID: MB 680-744345/1-A
Matrix: Water
Analysis Batch: 744590

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 744345

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/10/22 17:33	1
Manganese	5.0	U	10	5.0	1.3	ug/L		10/10/22 17:33	1

Lab Sample ID: LCS 680-744345/2-A
Matrix: Water
Analysis Batch: 744590

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 744345

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Iron			5000	4570		ug/L		91	87 - 115		
Manganese			400	369		ug/L		92	90 - 114		

Lab Sample ID: MB 680-745539/1-A
Matrix: Water
Analysis Batch: 745803

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 745539

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/18/22 18:13	1
Manganese	5.0	U	10	5.0	1.3	ug/L		10/18/22 18:13	1

Lab Sample ID: LCS 680-745539/2-A
Matrix: Water
Analysis Batch: 745803

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 745539

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Iron			5000	4480		ug/L		90	87 - 115		
Manganese			400	371		ug/L		93	90 - 114		

Lab Sample ID: 680-222692-16 MS
Matrix: Water
Analysis Batch: 744590

Client Sample ID: MW-3-FAL22
Prep Type: Dissolved
Prep Batch: 744343

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Iron	42000	J1	5000	43500	4	ug/L		35	87 - 115		
Manganese	8200	J1	400	8000	4	ug/L		-59	90 - 114		

Lab Sample ID: 680-222692-16 MSD
Matrix: Water
Analysis Batch: 744590

Client Sample ID: MW-3-FAL22
Prep Type: Dissolved
Prep Batch: 744343

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	42000	J1	5000	46700	4	ug/L		99	87 - 115	7	20
Manganese	8200	J1	400	8730	4	ug/L		125	90 - 114	9	20

Method: 6010C - Metals (ICP)

Lab Sample ID: 680-222692-22 MS
Client Sample ID: XSA-12-97X-FAL22
Matrix: Water
Prep Type: Dissolved
Analysis Batch: 744590
Prep Batch: 744345

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	7600		5000	12300		ug/L		93	87 - 115
Manganese	10000	J1	400	10500	4	ug/L		18	90 - 114

Lab Sample ID: 680-222692-22 MSD
Client Sample ID: XSA-12-97X-FAL22
Matrix: Water
Prep Type: Dissolved
Analysis Batch: 744590
Prep Batch: 744345

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	7600		5000	12000		ug/L		87	87 - 115	3	20
Manganese	10000	J1	400	10300	4	ug/L		-55	90 - 114	3	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-744344/1-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total Recoverable
Analysis Batch: 744603
Prep Batch: 744344

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		10/10/22 23:00	1

Lab Sample ID: LCS 680-744344/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total Recoverable
Analysis Batch: 744603
Prep Batch: 744344

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	109		ug/L		109	84 - 116

Lab Sample ID: MB 680-744346/1-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total Recoverable
Analysis Batch: 744603
Prep Batch: 744346

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		10/10/22 21:26	1

Lab Sample ID: LCS 680-744346/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total Recoverable
Analysis Batch: 744603
Prep Batch: 744346

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	112		ug/L		112	84 - 116

Lab Sample ID: MB 680-745541/1-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total Recoverable
Analysis Batch: 745805
Prep Batch: 745541

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		10/18/22 18:00	1

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

Lab Sample ID: LCS 680-745541/2-A
Matrix: Water
Analysis Batch: 745805

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 745541

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic			100	100		ug/L		100	84 - 116		

Lab Sample ID: 680-222692-16 MS
Matrix: Water
Analysis Batch: 744603

Client Sample ID: MW-3-FAL22
Prep Type: Dissolved
Prep Batch: 744344

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic	650	J1	100	733	4	ug/L		87	84 - 116		

Lab Sample ID: 680-222692-16 MSD
Matrix: Water
Analysis Batch: 744603

Client Sample ID: MW-3-FAL22
Prep Type: Dissolved
Prep Batch: 744344

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	650	J1	100	706	4	ug/L		59	84 - 116	4	20

Lab Sample ID: 680-222692-22 MS
Matrix: Water
Analysis Batch: 744603

Client Sample ID: XSA-12-97X-FAL22
Prep Type: Dissolved
Prep Batch: 744346

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic	200	J1	100	301		ug/L		99	84 - 116		

Lab Sample ID: 680-222692-22 MSD
Matrix: Water
Analysis Batch: 744603

Client Sample ID: XSA-12-97X-FAL22
Prep Type: Dissolved
Prep Batch: 744346

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	200	J1	100	321	J1	ug/L		118	84 - 116	6	20

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 680-744956/4
Matrix: Water
Analysis Batch: 744956

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		10/12/22 15:09	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	5.0	5.0	mg/L		10/12/22 15:09	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	5.0	5.0	mg/L		10/12/22 15:09	1
Hydroxide Alkalinity	5.0	U	5.0	5.0	5.0	mg/L		10/12/22 15:09	1
Carbon Dioxide, Free	5.0	U	5.0	5.0	5.0	mg/L		10/12/22 15:09	1
Phenolphthalein Alkalinity	5.0	U	5.0	5.0	5.0	mg/L		10/12/22 15:09	1
Bicarbonate ion as HCO3	6.1	U	6.1	6.1	6.1	mg/L		10/12/22 15:09	1

Method: 2320B-2011 - Alkalinity, Total (Continued)

Lab Sample ID: LCS 680-744956/6
Matrix: Water
Analysis Batch: 744956

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Alkalinity			250	247		mg/L		99	90 - 112		

Lab Sample ID: LCSD 680-744956/31
Matrix: Water
Analysis Batch: 744956

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	250		mg/L		100	90 - 112	1	30

Lab Sample ID: 680-222692-26 DU
Matrix: Water
Analysis Batch: 744956

Client Sample ID: G6M-02-01X-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Alkalinity	110			110		mg/L				0.3	30
Bicarbonate Alkalinity as CaCO3	110			110		mg/L				0.3	30
Carbonate Alkalinity as CaCO3	5.0	U		5.0	U	mg/L				NC	30
Hydroxide Alkalinity	5.0	U		5.0	U	mg/L				NC	30
Carbon Dioxide, Free	64			46.1	J1	mg/L				32	30
Phenolphthalein Alkalinity	5.0	U		5.0	U	mg/L				NC	30
Bicarbonate ion as HCO3	130			134		mg/L				0.3	30

Method: 353.2-1993 R2.0 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 680-744680/14
Matrix: Water
Analysis Batch: 744680

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	0.0179	J	0.050	0.025	0.010	mg/L		10/11/22 15:02	1

Lab Sample ID: LCS 680-744680/17
Matrix: Water
Analysis Batch: 744680

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	1.01		mg/L		101	90 - 110		

Lab Sample ID: MB 680-745689/14
Matrix: Water
Analysis Batch: 745689

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	0.050	0.025	0.010	mg/L		10/18/22 14:47	1

Method: 353.2-1993 R2.0 - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: LCS 680-745689/17
Matrix: Water
Analysis Batch: 745689

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: 680-222692-20 MS
Matrix: Water
Analysis Batch: 745689

Client Sample ID: G6M-07-01X-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Nitrate Nitrite as N	1.3	D	10.0	12.0	D	mg/L		107	90 - 110		

Lab Sample ID: 680-222692-20 MSD
Matrix: Water
Analysis Batch: 745689

Client Sample ID: G6M-07-01X-FAL22
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	1.3	D	10.0	12.2	D	mg/L		109	90 - 110	2	10

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 680-744573/1
Matrix: Water
Analysis Batch: 744573

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		10/11/22 09:18	1

Lab Sample ID: LCS 680-744573/2
Matrix: Water
Analysis Batch: 744573

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	8.82		mg/L		88	75 - 125		

Lab Sample ID: LCSD 680-744573/3
Matrix: Water
Analysis Batch: 744573

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	8.93		mg/L		89	75 - 125	1	30

Lab Sample ID: 680-222692-7 MS
Matrix: Water
Analysis Batch: 744573

Client Sample ID: G6M-03-07X-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Sulfide	0.86	U J1	6.94	4.79	J1	mg/L		69	75 - 125		

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric) (Continued)

Lab Sample ID: 680-222692-7 MSD
Client Sample ID: G6M-03-07X-FAL22
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 744573

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	0.86	U J1	6.94	4.79	J1	mg/L		69	75 - 125	0	30

Lab Sample ID: 680-222692-2 DU
Client Sample ID: AOC50-DUP02-FAL22
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 744573

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfide	0.89	U	0.89	U	mg/L		NC	30

Method: 9060 - Organic Carbon, Total (TOC)

Lab Sample ID: MB 680-745623/2
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 745623

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon	1.0	U	1.0	1.0	0.50	mg/L		10/17/22 20:29	1
Total Organic Carbon - Quad	1.0	U	1.0	1.0	0.50	mg/L		10/17/22 20:29	1

Lab Sample ID: LCS 680-745623/3
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 745623

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	20.0	20.7		mg/L		104	80 - 120
TOC Result 1	20.0	20.7		mg/L		103	80 - 120
TOC Result 2	20.0	20.6		mg/L		103	80 - 120
TOC Result 3	20.0	20.9		mg/L		105	80 - 120
TOC Result 4	20.0	20.6		mg/L		103	80 - 120
Total Organic Carbon - Quad	20.0	20.7		mg/L		104	80 - 120

Lab Sample ID: LCSD 680-745623/4
Client Sample ID: Lab Control Sample Dup
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 745623

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Organic Carbon	20.0	20.7		mg/L		104	80 - 120	0	25
TOC Result 1	20.0	20.8		mg/L		104	80 - 120	0	25
TOC Result 2	20.0	20.9		mg/L		105	80 - 120	1	25
TOC Result 3	20.0	20.5		mg/L		103	80 - 120	2	25
TOC Result 4	20.0	20.6		mg/L		103	80 - 120	0	25
Total Organic Carbon - Quad	20.0	20.7		mg/L		104	80 - 120	0	25

GC/MS VOA

Analysis Batch: 745419

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222692-1	AOC50-DUP01-FAL22	Total/NA	Water	8260D	
680-222692-2	AOC50-DUP02-FAL22	Total/NA	Water	8260D	
680-222692-6	G6M-02-13X-FAL22	Total/NA	Water	8260D	
680-222692-7	G6M-03-07X-FAL22	Total/NA	Water	8260D	
680-222692-9	G6M-04-02X-FAL22	Total/NA	Water	8260D	
680-222692-10	G6M-04-04X-FAL22	Total/NA	Water	8260D	
680-222692-12	G6M-04-07X-FAL22	Total/NA	Water	8260D	
680-222692-13	G6M-04-11X-FAL22	Total/NA	Water	8260D	
680-222692-14	G6M-07-02X-FAL22	Total/NA	Water	8260D	
680-222692-19	AOC50-TB02-FAL22	Total/NA	Water	8260D	
MB 680-745419/9	Method Blank	Total/NA	Water	8260D	
LCS 680-745419/5	Lab Control Sample	Total/NA	Water	8260D	
LCSD 680-745419/6	Lab Control Sample Dup	Total/NA	Water	8260D	

Analysis Batch: 746027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222692-3	G6M-02-04X-FAL22	Total/NA	Water	8260D	
680-222692-4	G6M-02-06X-FAL22	Total/NA	Water	8260D	
680-222692-5	G6M-02-11X-FAL22	Total/NA	Water	8260D	
680-222692-8	G6M-03-10X-FAL22	Total/NA	Water	8260D	
680-222692-11	G6M-04-06X-FAL22	Total/NA	Water	8260D	
680-222692-16	MW-3-FAL22	Total/NA	Water	8260D	
680-222692-17	MW-7-FAL22	Total/NA	Water	8260D	
680-222692-18	XSA-12-95X-FAL22	Total/NA	Water	8260D	
680-222692-20	G6M-07-01X-FAL22	Total/NA	Water	8260D	
MB 680-746027/8	Method Blank	Total/NA	Water	8260D	
LCS 680-746027/4	Lab Control Sample	Total/NA	Water	8260D	
LCSD 680-746027/5	Lab Control Sample Dup	Total/NA	Water	8260D	
680-222692-16 MS	MW-3-FAL22	Total/NA	Water	8260D	
680-222692-16 MSD	MW-3-FAL22	Total/NA	Water	8260D	

Analysis Batch: 746246

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222692-21	XSA-12-96X-FAL22	Total/NA	Water	8260D	
680-222692-22	XSA-12-97X-FAL22	Total/NA	Water	8260D	
680-222692-23	XSA-12-98X-FAL22	Total/NA	Water	8260D	
680-222692-24	AOC50-RB01-FAL22	Total/NA	Water	8260D	
680-222692-25	AOC50-TB03-FAL22	Total/NA	Water	8260D	
680-222692-26	G6M-02-01X-FAL22	Total/NA	Water	8260D	
680-222692-27	G6M-02-07X-FAL22	Total/NA	Water	8260D	
680-222692-28	G6M-04-01X-FAL22	Total/NA	Water	8260D	
MB 680-746246/9	Method Blank	Total/NA	Water	8260D	
LCS 680-746246/5	Lab Control Sample	Total/NA	Water	8260D	

GC VOA

Analysis Batch: 745195

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222692-2	AOC50-DUP02-FAL22	Total/NA	Water	RSK-175	
680-222692-7	G6M-03-07X-FAL22	Total/NA	Water	RSK-175	
680-222692-12	G6M-04-07X-FAL22	Total/NA	Water	RSK-175	

GC VOA (Continued)

Analysis Batch: 745195 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222692-14	G6M-07-02X-FAL22	Total/NA	Water	RSK-175	
680-222692-20	G6M-07-01X-FAL22	Total/NA	Water	RSK-175	
680-222692-26	G6M-02-01X-FAL22	Total/NA	Water	RSK-175	
MB 680-745195/37	Method Blank	Total/NA	Water	RSK-175	
LCS 680-745195/33	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-745195/35	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-745195/34	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-745195/36	Lab Control Sample Dup	Total/NA	Water	RSK-175	

Analysis Batch: 745320

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222692-9	G6M-04-02X-FAL22	Total/NA	Water	RSK-175	
MB 680-745320/68	Method Blank	Total/NA	Water	RSK-175	
LCS 680-745320/64	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-745320/66	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-745320/65	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-745320/67	Lab Control Sample Dup	Total/NA	Water	RSK-175	

HPLC/IC

Analysis Batch: 746328

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222692-2	AOC50-DUP02-FAL22	Total/NA	Water	9056A	
680-222692-7	G6M-03-07X-FAL22	Total/NA	Water	9056A	
680-222692-9	G6M-04-02X-FAL22	Total/NA	Water	9056A	
680-222692-12	G6M-04-07X-FAL22	Total/NA	Water	9056A	
680-222692-14	G6M-07-02X-FAL22	Total/NA	Water	9056A	
680-222692-20	G6M-07-01X-FAL22	Total/NA	Water	9056A	
680-222692-26	G6M-02-01X-FAL22	Total/NA	Water	9056A	
MB 680-746328/33	Method Blank	Total/NA	Water	9056A	
LCS 680-746328/34	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-746328/35	Lab Control Sample Dup	Total/NA	Water	9056A	
680-222692-9 MS	G6M-04-02X-FAL22	Total/NA	Water	9056A	
680-222692-9 MSD	G6M-04-02X-FAL22	Total/NA	Water	9056A	

Metals

Prep Batch: 744343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222692-1	AOC50-DUP01-FAL22	Dissolved	Water	3005A	
680-222692-2	AOC50-DUP02-FAL22	Dissolved	Water	3005A	
680-222692-3	G6M-02-04X-FAL22	Dissolved	Water	3005A	
680-222692-4	G6M-02-06X-FAL22	Dissolved	Water	3005A	
680-222692-5	G6M-02-11X-FAL22	Dissolved	Water	3005A	
680-222692-6	G6M-02-13X-FAL22	Dissolved	Water	3005A	
680-222692-7	G6M-03-07X-FAL22	Dissolved	Water	3005A	
680-222692-9	G6M-04-02X-FAL22	Dissolved	Water	3005A	
680-222692-10	G6M-04-04X-FAL22	Dissolved	Water	3005A	
680-222692-11	G6M-04-06X-FAL22	Dissolved	Water	3005A	
680-222692-12	G6M-04-07X-FAL22	Dissolved	Water	3005A	
680-222692-14	G6M-07-02X-FAL22	Dissolved	Water	3005A	
680-222692-15	G6M-97-28X-FAL22	Dissolved	Water	3005A	

Metals (Continued)

Prep Batch: 744343 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222692-16	MW-3-FAL22	Dissolved	Water	3005A	
680-222692-17	MW-7-FAL22	Dissolved	Water	3005A	
680-222692-18	XSA-12-95X-FAL22	Dissolved	Water	3005A	
680-222692-20	G6M-07-01X-FAL22	Dissolved	Water	3005A	
680-222692-21	XSA-12-96X-FAL22	Dissolved	Water	3005A	
MB 680-744343/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-744343/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-222692-16 MS	MW-3-FAL22	Dissolved	Water	3005A	
680-222692-16 MSD	MW-3-FAL22	Dissolved	Water	3005A	

Prep Batch: 744344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222692-1	AOC50-DUP01-FAL22	Dissolved	Water	3005A	
680-222692-2	AOC50-DUP02-FAL22	Dissolved	Water	3005A	
680-222692-3	G6M-02-04X-FAL22	Dissolved	Water	3005A	
680-222692-4	G6M-02-06X-FAL22	Dissolved	Water	3005A	
680-222692-5	G6M-02-11X-FAL22	Dissolved	Water	3005A	
680-222692-6	G6M-02-13X-FAL22	Dissolved	Water	3005A	
680-222692-7	G6M-03-07X-FAL22	Dissolved	Water	3005A	
680-222692-9	G6M-04-02X-FAL22	Dissolved	Water	3005A	
680-222692-10	G6M-04-04X-FAL22	Dissolved	Water	3005A	
680-222692-11	G6M-04-06X-FAL22	Dissolved	Water	3005A	
680-222692-12	G6M-04-07X-FAL22	Dissolved	Water	3005A	
680-222692-14	G6M-07-02X-FAL22	Dissolved	Water	3005A	
680-222692-15	G6M-97-28X-FAL22	Dissolved	Water	3005A	
680-222692-16	MW-3-FAL22	Dissolved	Water	3005A	
680-222692-17	MW-7-FAL22	Dissolved	Water	3005A	
680-222692-18	XSA-12-95X-FAL22	Dissolved	Water	3005A	
680-222692-20	G6M-07-01X-FAL22	Dissolved	Water	3005A	
680-222692-21	XSA-12-96X-FAL22	Dissolved	Water	3005A	
MB 680-744344/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-744344/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-222692-16 MS	MW-3-FAL22	Dissolved	Water	3005A	
680-222692-16 MSD	MW-3-FAL22	Dissolved	Water	3005A	

Prep Batch: 744345

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222692-22	XSA-12-97X-FAL22	Dissolved	Water	3005A	
680-222692-23	XSA-12-98X-FAL22	Dissolved	Water	3005A	
680-222692-24	AOC50-RB01-FAL22	Dissolved	Water	3005A	
680-222692-26	G6M-02-01X-FAL22	Dissolved	Water	3005A	
680-222692-27	G6M-02-07X-FAL22	Dissolved	Water	3005A	
680-222692-28	G6M-04-01X-FAL22	Dissolved	Water	3005A	
MB 680-744345/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-744345/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-222692-22 MS	XSA-12-97X-FAL22	Dissolved	Water	3005A	
680-222692-22 MSD	XSA-12-97X-FAL22	Dissolved	Water	3005A	

Prep Batch: 744346

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222692-22	XSA-12-97X-FAL22	Dissolved	Water	3005A	

Metals (Continued)

Prep Batch: 744346 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222692-23	XSA-12-98X-FAL22	Dissolved	Water	3005A	
680-222692-24	AOC50-RB01-FAL22	Dissolved	Water	3005A	
680-222692-26	G6M-02-01X-FAL22	Dissolved	Water	3005A	
680-222692-27	G6M-02-07X-FAL22	Dissolved	Water	3005A	
680-222692-28	G6M-04-01X-FAL22	Dissolved	Water	3005A	
MB 680-744346/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-744346/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-222692-22 MS	XSA-12-97X-FAL22	Dissolved	Water	3005A	
680-222692-22 MSD	XSA-12-97X-FAL22	Dissolved	Water	3005A	

Analysis Batch: 744590

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222692-1	AOC50-DUP01-FAL22	Dissolved	Water	6010C	744343
680-222692-2	AOC50-DUP02-FAL22	Dissolved	Water	6010C	744343
680-222692-3	G6M-02-04X-FAL22	Dissolved	Water	6010C	744343
680-222692-4	G6M-02-06X-FAL22	Dissolved	Water	6010C	744343
680-222692-5	G6M-02-11X-FAL22	Dissolved	Water	6010C	744343
680-222692-6	G6M-02-13X-FAL22	Dissolved	Water	6010C	744343
680-222692-7	G6M-03-07X-FAL22	Dissolved	Water	6010C	744343
680-222692-9	G6M-04-02X-FAL22	Dissolved	Water	6010C	744343
680-222692-10	G6M-04-04X-FAL22	Dissolved	Water	6010C	744343
680-222692-11	G6M-04-06X-FAL22	Dissolved	Water	6010C	744343
680-222692-12	G6M-04-07X-FAL22	Dissolved	Water	6010C	744343
680-222692-14	G6M-07-02X-FAL22	Dissolved	Water	6010C	744343
680-222692-15	G6M-97-28X-FAL22	Dissolved	Water	6010C	744343
680-222692-16	MW-3-FAL22	Dissolved	Water	6010C	744343
680-222692-17	MW-7-FAL22	Dissolved	Water	6010C	744343
680-222692-18	XSA-12-95X-FAL22	Dissolved	Water	6010C	744343
680-222692-20	G6M-07-01X-FAL22	Dissolved	Water	6010C	744343
680-222692-21	XSA-12-96X-FAL22	Dissolved	Water	6010C	744343
680-222692-22	XSA-12-97X-FAL22	Dissolved	Water	6010C	744345
680-222692-23	XSA-12-98X-FAL22	Dissolved	Water	6010C	744345
680-222692-24	AOC50-RB01-FAL22	Dissolved	Water	6010C	744345
680-222692-26	G6M-02-01X-FAL22	Dissolved	Water	6010C	744345
680-222692-27	G6M-02-07X-FAL22	Dissolved	Water	6010C	744345
680-222692-28	G6M-04-01X-FAL22	Dissolved	Water	6010C	744345
MB 680-744343/1-A	Method Blank	Total Recoverable	Water	6010C	744343
MB 680-744345/1-A	Method Blank	Total Recoverable	Water	6010C	744345
LCS 680-744343/2-A	Lab Control Sample	Total Recoverable	Water	6010C	744343
LCS 680-744345/2-A	Lab Control Sample	Total Recoverable	Water	6010C	744345
680-222692-16 MS	MW-3-FAL22	Dissolved	Water	6010C	744343
680-222692-16 MSD	MW-3-FAL22	Dissolved	Water	6010C	744343
680-222692-22 MS	XSA-12-97X-FAL22	Dissolved	Water	6010C	744345
680-222692-22 MSD	XSA-12-97X-FAL22	Dissolved	Water	6010C	744345

Analysis Batch: 744603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222692-1	AOC50-DUP01-FAL22	Dissolved	Water	6020A	744344
680-222692-2	AOC50-DUP02-FAL22	Dissolved	Water	6020A	744344
680-222692-3	G6M-02-04X-FAL22	Dissolved	Water	6020A	744344
680-222692-4	G6M-02-06X-FAL22	Dissolved	Water	6020A	744344

Metals (Continued)

Analysis Batch: 744603 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222692-5	G6M-02-11X-FAL22	Dissolved	Water	6020A	744344
680-222692-6	G6M-02-13X-FAL22	Dissolved	Water	6020A	744344
680-222692-7	G6M-03-07X-FAL22	Dissolved	Water	6020A	744344
680-222692-9	G6M-04-02X-FAL22	Dissolved	Water	6020A	744344
680-222692-10	G6M-04-04X-FAL22	Dissolved	Water	6020A	744344
680-222692-11	G6M-04-06X-FAL22	Dissolved	Water	6020A	744344
680-222692-12	G6M-04-07X-FAL22	Dissolved	Water	6020A	744344
680-222692-14	G6M-07-02X-FAL22	Dissolved	Water	6020A	744344
680-222692-15	G6M-97-28X-FAL22	Dissolved	Water	6020A	744344
680-222692-16	MW-3-FAL22	Dissolved	Water	6020A	744344
680-222692-17	MW-7-FAL22	Dissolved	Water	6020A	744344
680-222692-18	XSA-12-95X-FAL22	Dissolved	Water	6020A	744344
680-222692-20	G6M-07-01X-FAL22	Dissolved	Water	6020A	744344
680-222692-21	XSA-12-96X-FAL22	Dissolved	Water	6020A	744344
680-222692-22	XSA-12-97X-FAL22	Dissolved	Water	6020A	744346
680-222692-23	XSA-12-98X-FAL22	Dissolved	Water	6020A	744346
680-222692-24	AOC50-RB01-FAL22	Dissolved	Water	6020A	744346
680-222692-26	G6M-02-01X-FAL22	Dissolved	Water	6020A	744346
680-222692-27	G6M-02-07X-FAL22	Dissolved	Water	6020A	744346
680-222692-28	G6M-04-01X-FAL22	Dissolved	Water	6020A	744346
MB 680-744344/1-A	Method Blank	Total Recoverable	Water	6020A	744344
MB 680-744346/1-A	Method Blank	Total Recoverable	Water	6020A	744346
LCS 680-744344/2-A	Lab Control Sample	Total Recoverable	Water	6020A	744344
LCS 680-744346/2-A	Lab Control Sample	Total Recoverable	Water	6020A	744346
680-222692-16 MS	MW-3-FAL22	Dissolved	Water	6020A	744344
680-222692-16 MSD	MW-3-FAL22	Dissolved	Water	6020A	744344
680-222692-22 MS	XSA-12-97X-FAL22	Dissolved	Water	6020A	744346
680-222692-22 MSD	XSA-12-97X-FAL22	Dissolved	Water	6020A	744346

Prep Batch: 745539

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222692-8	G6M-03-10X-FAL22	Dissolved	Water	3005A	
680-222692-13	G6M-04-11X-FAL22	Dissolved	Water	3005A	
MB 680-745539/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-745539/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 745541

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222692-8	G6M-03-10X-FAL22	Dissolved	Water	3005A	
680-222692-13	G6M-04-11X-FAL22	Dissolved	Water	3005A	
MB 680-745541/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-745541/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 745803

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222692-8	G6M-03-10X-FAL22	Dissolved	Water	6010C	745539
680-222692-13	G6M-04-11X-FAL22	Dissolved	Water	6010C	745539
MB 680-745539/1-A	Method Blank	Total Recoverable	Water	6010C	745539
LCS 680-745539/2-A	Lab Control Sample	Total Recoverable	Water	6010C	745539

Metals

Analysis Batch: 745805

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222692-8	G6M-03-10X-FAL22	Dissolved	Water	6020A	745541
680-222692-13	G6M-04-11X-FAL22	Dissolved	Water	6020A	745541
MB 680-745541/1-A	Method Blank	Total Recoverable	Water	6020A	745541
LCS 680-745541/2-A	Lab Control Sample	Total Recoverable	Water	6020A	745541

General Chemistry

Analysis Batch: 744573

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222692-2	AOC50-DUP02-FAL22	Total/NA	Water	9034	
680-222692-7	G6M-03-07X-FAL22	Total/NA	Water	9034	
680-222692-9	G6M-04-02X-FAL22	Total/NA	Water	9034	
680-222692-12	G6M-04-07X-FAL22	Total/NA	Water	9034	
680-222692-14	G6M-07-02X-FAL22	Total/NA	Water	9034	
680-222692-20	G6M-07-01X-FAL22	Total/NA	Water	9034	
680-222692-26	G6M-02-01X-FAL22	Total/NA	Water	9034	
MB 680-744573/1	Method Blank	Total/NA	Water	9034	
LCS 680-744573/2	Lab Control Sample	Total/NA	Water	9034	
LCSD 680-744573/3	Lab Control Sample Dup	Total/NA	Water	9034	
680-222692-7 MS	G6M-03-07X-FAL22	Total/NA	Water	9034	
680-222692-7 MSD	G6M-03-07X-FAL22	Total/NA	Water	9034	
680-222692-2 DU	AOC50-DUP02-FAL22	Total/NA	Water	9034	

Analysis Batch: 744680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222692-2	AOC50-DUP02-FAL22	Total/NA	Water	353.2-1993 R2.0	
680-222692-7	G6M-03-07X-FAL22	Total/NA	Water	353.2-1993 R2.0	
680-222692-9	G6M-04-02X-FAL22	Total/NA	Water	353.2-1993 R2.0	
680-222692-12	G6M-04-07X-FAL22	Total/NA	Water	353.2-1993 R2.0	
680-222692-14	G6M-07-02X-FAL22	Total/NA	Water	353.2-1993 R2.0	
MB 680-744680/14	Method Blank	Total/NA	Water	353.2-1993 R2.0	
LCS 680-744680/17	Lab Control Sample	Total/NA	Water	353.2-1993 R2.0	

Analysis Batch: 744956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222692-2	AOC50-DUP02-FAL22	Total/NA	Water	2320B-2011	
680-222692-7	G6M-03-07X-FAL22	Total/NA	Water	2320B-2011	
680-222692-9	G6M-04-02X-FAL22	Total/NA	Water	2320B-2011	
680-222692-12	G6M-04-07X-FAL22	Total/NA	Water	2320B-2011	
680-222692-14	G6M-07-02X-FAL22	Total/NA	Water	2320B-2011	
680-222692-20	G6M-07-01X-FAL22	Total/NA	Water	2320B-2011	
680-222692-26	G6M-02-01X-FAL22	Total/NA	Water	2320B-2011	
MB 680-744956/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-744956/6	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-744956/31	Lab Control Sample Dup	Total/NA	Water	2320B-2011	
680-222692-26 DU	G6M-02-01X-FAL22	Total/NA	Water	2320B-2011	

Analysis Batch: 745623

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222692-2	AOC50-DUP02-FAL22	Total/NA	Water	9060	
680-222692-7	G6M-03-07X-FAL22	Total/NA	Water	9060	

General Chemistry (Continued)

Analysis Batch: 745623 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222692-9	G6M-04-02X-FAL22	Total/NA	Water	9060	
680-222692-12	G6M-04-07X-FAL22	Total/NA	Water	9060	
680-222692-14	G6M-07-02X-FAL22	Total/NA	Water	9060	
680-222692-20	G6M-07-01X-FAL22	Total/NA	Water	9060	
680-222692-26	G6M-02-01X-FAL22	Total/NA	Water	9060	
MB 680-745623/2	Method Blank	Total/NA	Water	9060	
LCS 680-745623/3	Lab Control Sample	Total/NA	Water	9060	
LCSD 680-745623/4	Lab Control Sample Dup	Total/NA	Water	9060	

Analysis Batch: 745689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-222692-20	G6M-07-01X-FAL22	Total/NA	Water	353.2-1993 R2.0	
680-222692-26	G6M-02-01X-FAL22	Total/NA	Water	353.2-1993 R2.0	
MB 680-745689/14	Method Blank	Total/NA	Water	353.2-1993 R2.0	
LCS 680-745689/17	Lab Control Sample	Total/NA	Water	353.2-1993 R2.0	
680-222692-20 MS	G6M-07-01X-FAL22	Total/NA	Water	353.2-1993 R2.0	
680-222692-20 MSD	G6M-07-01X-FAL22	Total/NA	Water	353.2-1993 R2.0	

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: AOC50-DUP01-FAL22
Lab Sample ID: 680-222692-1
Date Collected: 10/05/22 10:00
Matrix: Water
Date Received: 10/08/22 10:30

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	745419	10/17/22 16:18	Y1S	EET SAV
	Instrument ID: CMSC									
Dissolved	Prep	3005A			50 mL	50 mL	744343	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6010C		1			744590	10/10/22 16:41	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	744344	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6020A		1			744603	10/10/22 23:19	BJB	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: AOC50-DUP02-FAL22
Lab Sample ID: 680-222692-2
Date Collected: 10/05/22 10:35
Matrix: Water
Date Received: 10/08/22 10:30

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	745419	10/17/22 16:37	Y1S	EET SAV
	Instrument ID: CMSC									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	745195	10/14/22 20:33	JCK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	746328	10/21/22 23:27	AF	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	744343	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6010C		1			744590	10/10/22 16:43	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	744344	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6020A		1			744603	10/10/22 23:22	BJB	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			744956	10/12/22 16:39	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	744680	10/11/22 15:35	MB	EET SAV
	Instrument ID: LACHAT2									
Total/NA	Analysis	9034		1	280 mL	280 mL	744573	10/11/22 09:23	JAS	EET SAV
	Instrument ID: NoEquip									
Total/NA	Analysis	9060		5	40 mL	40 mL	745623	10/17/22 23:16	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: G6M-02-04X-FAL22
Lab Sample ID: 680-222692-3
Date Collected: 10/06/22 12:00
Matrix: Water
Date Received: 10/08/22 10:30

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	746027	10/20/22 16:12	P1C	EET SAV
	Instrument ID: CMSU									
Dissolved	Prep	3005A			50 mL	50 mL	744343	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6010C		1			744590	10/10/22 16:46	BCB	EET SAV
	Instrument ID: ICPH									

Client Sample ID: G6M-02-04X-FAL22
Lab Sample ID: 680-222692-3

Date Collected: 10/06/22 12:00
Matrix: Water
Date Received: 10/08/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			50 mL	250 mL	744344	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6020A		1			744603	10/10/22 23:24	BJB	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-02-06X-FAL22
Lab Sample ID: 680-222692-4

Date Collected: 10/06/22 11:20
Matrix: Water
Date Received: 10/08/22 10:30

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	746027	10/20/22 15:34	P1C	EET SAV
	Instrument ID: CMSU									
Dissolved	Prep	3005A			50 mL	50 mL	744343	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6010C		1			744590	10/10/22 16:53	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	744344	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6020A		1			744603	10/10/22 23:33	BJB	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-02-11X-FAL22
Lab Sample ID: 680-222692-5

Date Collected: 10/06/22 15:50
Matrix: Water
Date Received: 10/08/22 10:30

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	746027	10/20/22 15:15	P1C	EET SAV
	Instrument ID: CMSU									
Dissolved	Prep	3005A			50 mL	50 mL	744343	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6010C		1			744590	10/10/22 16:56	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	744344	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6020A		1			744603	10/10/22 23:35	BJB	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-02-13X-FAL22
Lab Sample ID: 680-222692-6

Date Collected: 10/05/22 10:52
Matrix: Water
Date Received: 10/08/22 10:30

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	745419	10/17/22 16:56	Y1S	EET SAV
	Instrument ID: CMSC									
Dissolved	Prep	3005A			50 mL	50 mL	744343	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6010C		1			744590	10/10/22 16:58	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	744344	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6020A		1			744603	10/10/22 23:38	BJB	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-03-07X-FAL22

Lab Sample ID: 680-222692-7

Date Collected: 10/05/22 12:40

Matrix: Water

Date Received: 10/08/22 10:30

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	745419	10/17/22 17:15	Y1S	EET SAV
	Instrument ID: CMSC									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	745195	10/14/22 21:18	JCK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	746328	10/21/22 23:40	AF	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	744343	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6010C		1			744590	10/10/22 17:01	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	744344	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6020A		1			744603	10/10/22 23:41	BJB	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			744956	10/12/22 16:50	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	744680	10/11/22 15:36	MB	EET SAV
	Instrument ID: LACHAT2									
Total/NA	Analysis	9034		1	290 mL	290 mL	744573	10/11/22 09:23	JAS	EET SAV
	Instrument ID: NoEquip									
Total/NA	Analysis	9060		1	40 mL	40 mL	745623	10/17/22 23:35	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: G6M-03-10X-FAL22

Lab Sample ID: 680-222692-8

Date Collected: 10/06/22 14:40

Matrix: Water

Date Received: 10/08/22 10:30

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	746027	10/20/22 16:31	P1C	EET SAV
	Instrument ID: CMSU									
Dissolved	Prep	3005A			50 mL	50 mL	745539	10/18/22 05:24	RR	EET SAV
Dissolved	Analysis	6010C		1			745803	10/18/22 18:28	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745541	10/18/22 05:24	RR	EET SAV
Dissolved	Analysis	6020A		1			745805	10/18/22 18:32	BWR	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-04-02X-FAL22

Lab Sample ID: 680-222692-9

Date Collected: 10/05/22 14:55

Matrix: Water

Date Received: 10/08/22 10:30

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	745419	10/17/22 17:34	Y1S	EET SAV
	Instrument ID: CMSC									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	745320	10/15/22 11:14	JCK	EET SAV
	Instrument ID: CVGU									

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-04-02X-FAL22
Lab Sample ID: 680-222692-9
Date Collected: 10/05/22 14:55
Matrix: Water
Date Received: 10/08/22 10:30

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	746328	10/22/22 00:47	AF	EET SAV
Dissolved	Prep	3005A			50 mL	50 mL	744343	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6010C		1			744590	10/10/22 17:03	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	744344	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6020A		1			744603	10/10/22 23:44	BJB	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			744956	10/12/22 16:59	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	744680	10/11/22 15:37	MB	EET SAV
	Instrument ID: LACHAT2									
Total/NA	Analysis	9034		1	300 mL	300 mL	744573	10/11/22 09:23	JAS	EET SAV
	Instrument ID: NoEquip									
Total/NA	Analysis	9060		1	40 mL	40 mL	745623	10/17/22 23:53	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: G6M-04-04X-FAL22
Lab Sample ID: 680-222692-10
Date Collected: 10/05/22 10:00
Matrix: Water
Date Received: 10/08/22 10:30

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	745419	10/17/22 17:53	Y1S	EET SAV
	Instrument ID: CMSC									
Dissolved	Prep	3005A			50 mL	50 mL	744343	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6010C		1			744590	10/10/22 17:06	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	744344	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6020A		1			744603	10/10/22 23:46	BJB	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-04-06X-FAL22
Lab Sample ID: 680-222692-11
Date Collected: 10/06/22 10:22
Matrix: Water
Date Received: 10/08/22 10:30

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	746027	10/20/22 17:09	P1C	EET SAV
	Instrument ID: CMSU									
Dissolved	Prep	3005A			50 mL	50 mL	744343	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6010C		1			744590	10/10/22 17:08	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	744344	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6020A		1			744603	10/10/22 23:49	BJB	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-04-07X-FAL22

Lab Sample ID: 680-222692-12

Date Collected: 10/05/22 13:31

Matrix: Water

Date Received: 10/08/22 10:30

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	745419	10/17/22 18:12	Y1S	EET SAV
	Instrument ID: CMSC									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	745195	10/14/22 21:44	JCK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	746328	10/21/22 23:54	AF	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	744343	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6010C		1			744590	10/10/22 17:13	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	744344	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6020A		1			744603	10/10/22 23:55	BJB	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			744956	10/12/22 17:10	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	744680	10/11/22 15:38	MB	EET SAV
	Instrument ID: LACHAT2									
Total/NA	Analysis	9034		1	300 mL	300 mL	744573	10/11/22 09:23	JAS	EET SAV
	Instrument ID: NoEquip									
Total/NA	Analysis	9060		1	40 mL	40 mL	745623	10/18/22 00:11	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: G6M-04-11X-FAL22

Lab Sample ID: 680-222692-13

Date Collected: 10/05/22 13:40

Matrix: Water

Date Received: 10/08/22 10:30

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	745419	10/17/22 18:32	Y1S	EET SAV
	Instrument ID: CMSC									
Dissolved	Prep	3005A			50 mL	50 mL	745539	10/18/22 05:24	RR	EET SAV
Dissolved	Analysis	6010C		1			745803	10/18/22 18:38	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745541	10/18/22 05:24	RR	EET SAV
Dissolved	Analysis	6020A		1			745805	10/18/22 18:35	BWR	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-07-02X-FAL22

Lab Sample ID: 680-222692-14

Date Collected: 10/05/22 10:00

Matrix: Water

Date Received: 10/08/22 10:30

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	745419	10/17/22 18:51	Y1S	EET SAV
	Instrument ID: CMSC									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	745195	10/14/22 21:57	JCK	EET SAV
	Instrument ID: CVGU									

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-07-02X-FAL22
Lab Sample ID: 680-222692-14
Date Collected: 10/05/22 10:00
Matrix: Water
Date Received: 10/08/22 10:30

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	746328	10/22/22 00:07	AF	EET SAV
Dissolved	Prep	3005A			50 mL	50 mL	744343	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6010C		1			744590	10/10/22 17:11	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	744344	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6020A		1			744603	10/10/22 23:52	BJB	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			744956	10/12/22 17:18	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	744680	10/11/22 15:40	MB	EET SAV
	Instrument ID: LACHAT2									
Total/NA	Analysis	9034		1	290 mL	290 mL	744573	10/11/22 09:23	JAS	EET SAV
	Instrument ID: NoEquip									
Total/NA	Analysis	9060		5	40 mL	40 mL	745623	10/18/22 01:02	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: G6M-97-28X-FAL22
Lab Sample ID: 680-222692-15
Date Collected: 10/06/22 10:25
Matrix: Water
Date Received: 10/08/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			50 mL	50 mL	744343	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6010C		1			744590	10/10/22 17:23	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	744344	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6020A		1			744603	10/11/22 00:06	BJB	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: MW-3-FAL22
Lab Sample ID: 680-222692-16
Date Collected: 10/06/22 14:20
Matrix: Water
Date Received: 10/08/22 10:30

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	746027	10/20/22 19:03	P1C	EET SAV
	Instrument ID: CMSU									
Dissolved	Prep	3005A			50 mL	50 mL	744343	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6010C		1			744590	10/10/22 16:28	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	744344	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6020A		1			744603	10/10/22 23:05	BJB	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: MW-7-FAL22
Lab Sample ID: 680-222692-17

Date Collected: 10/06/22 15:55
Matrix: Water
Date Received: 10/08/22 10:30

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	746027	10/20/22 17:28	P1C	EET SAV
	Instrument ID: CMSU									
Dissolved	Prep	3005A			50 mL	50 mL	744343	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6010C		1			744590	10/10/22 17:16	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	744344	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6020A		1			744603	10/10/22 23:57	BJB	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: XSA-12-95X-FAL22
Lab Sample ID: 680-222692-18

Date Collected: 10/06/22 13:21
Matrix: Water
Date Received: 10/08/22 10:30

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	746027	10/20/22 15:53	P1C	EET SAV
	Instrument ID: CMSU									
Dissolved	Prep	3005A			50 mL	50 mL	744343	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6010C		1			744590	10/10/22 17:26	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	744344	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6020A		1			744603	10/11/22 00:09	BJB	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: AOC50-TB02-FAL22
Lab Sample ID: 680-222692-19

Date Collected: 10/05/22 00:00
Matrix: Water
Date Received: 10/08/22 10:30

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	745419	10/17/22 14:42	Y1S	EET SAV
	Instrument ID: CMSC									

Client Sample ID: G6M-07-01X-FAL22
Lab Sample ID: 680-222692-20

Date Collected: 10/07/22 13:15
Matrix: Water
Date Received: 10/08/22 10:30

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	746027	10/20/22 14:56	P1C	EET SAV
	Instrument ID: CMSU									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	745195	10/14/22 22:10	JCK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	746328	10/22/22 01:27	AF	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	744343	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6010C		1			744590	10/10/22 17:28	BCB	EET SAV
	Instrument ID: ICPH									

Client Sample ID: G6M-07-01X-FAL22

Lab Sample ID: 680-222692-20

Date Collected: 10/07/22 13:15
Matrix: Water
Date Received: 10/08/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			50 mL	250 mL	744344	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6020A		1			744603	10/11/22 00:11	BJB	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			744956	10/12/22 17:27	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		10	2 mL	2 mL	745689	10/18/22 15:33	MB	EET SAV
	Instrument ID: LACHAT2									
Total/NA	Analysis	9034		1	310 mL	310 mL	744573	10/11/22 09:23	JAS	EET SAV
	Instrument ID: NoEquip									
Total/NA	Analysis	9060		1	40 mL	40 mL	745623	10/18/22 01:20	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: XSA-12-96X-FAL22

Lab Sample ID: 680-222692-21

Date Collected: 10/07/22 10:49
Matrix: Water
Date Received: 10/08/22 10:30

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	746246	10/21/22 15:34	SMP	EET SAV
	Instrument ID: CMSO2									
Dissolved	Prep	3005A			50 mL	50 mL	744343	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6010C		1			744590	10/10/22 17:31	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	744344	10/10/22 06:35	RR	EET SAV
Dissolved	Analysis	6020A		1			744603	10/11/22 00:14	BJB	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: XSA-12-97X-FAL22

Lab Sample ID: 680-222692-22

Date Collected: 10/07/22 13:22
Matrix: Water
Date Received: 10/08/22 10:30

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	746246	10/21/22 15:57	SMP	EET SAV
	Instrument ID: CMSO2									
Dissolved	Prep	3005A			50 mL	50 mL	744345	10/10/22 07:03	RR	EET SAV
Dissolved	Analysis	6010C		1			744590	10/10/22 17:38	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	744346	10/10/22 07:03	RR	EET SAV
Dissolved	Analysis	6020A		1			744603	10/10/22 21:31	BJB	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: XSA-12-98X-FAL22
Lab Sample ID: 680-222692-23

Date Collected: 10/07/22 12:55
Matrix: Water
Date Received: 10/08/22 10:30

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	746246	10/21/22 16:21	SMP	EET SAV
	Instrument ID: CMSO2									
Dissolved	Prep	3005A			50 mL	50 mL	744345	10/10/22 07:03	RR	EET SAV
Dissolved	Analysis	6010C		1			744590	10/10/22 17:56	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	744346	10/10/22 07:03	RR	EET SAV
Dissolved	Analysis	6020A		1			744603	10/10/22 21:45	BJB	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: AOC50-RB01-FAL22
Lab Sample ID: 680-222692-24

Date Collected: 10/07/22 09:15
Matrix: Water
Date Received: 10/08/22 10:30

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	746246	10/21/22 14:02	SMP	EET SAV
	Instrument ID: CMSO2									
Dissolved	Prep	3005A			50 mL	50 mL	744345	10/10/22 07:03	RR	EET SAV
Dissolved	Analysis	6010C		1			744590	10/10/22 17:58	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	744346	10/10/22 07:03	RR	EET SAV
Dissolved	Analysis	6020A		1			744603	10/10/22 21:48	BJB	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: AOC50-TB03-FAL22
Lab Sample ID: 680-222692-25

Date Collected: 10/07/22 00:00
Matrix: Water
Date Received: 10/08/22 10:30

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	746246	10/21/22 14:25	SMP	EET SAV
	Instrument ID: CMSO2									

Client Sample ID: G6M-02-01X-FAL22
Lab Sample ID: 680-222692-26

Date Collected: 10/07/22 10:45
Matrix: Water
Date Received: 10/08/22 10:30

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	746246	10/21/22 16:44	SMP	EET SAV
	Instrument ID: CMSO2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	745195	10/14/22 22:23	JCK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	746328	10/22/22 01:40	AF	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	744345	10/10/22 07:03	RR	EET SAV
Dissolved	Analysis	6010C		1			744590	10/10/22 18:01	BCB	EET SAV
	Instrument ID: ICPH									

Lab Chronicle

Client: Seres Engineering & Services LLC
Job ID: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

Client Sample ID: G6M-02-01X-FAL22
Lab Sample ID: 680-222692-26
Date Collected: 10/07/22 10:45
Matrix: Water
Date Received: 10/08/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			50 mL	250 mL	744346	10/10/22 07:03	RR	EET SAV
Dissolved	Analysis	6020A		1			744603	10/10/22 21:51	BJB	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			744956	10/12/22 15:35	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	745689	10/18/22 14:56	MB	EET SAV
	Instrument ID: LACHAT2									
Total/NA	Analysis	9034		1	300 mL	300 mL	744573	10/11/22 09:23	JAS	EET SAV
	Instrument ID: NoEquip									
Total/NA	Analysis	9060		1	40 mL	40 mL	745623	10/18/22 01:38	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: G6M-02-07X-FAL22
Lab Sample ID: 680-222692-27
Date Collected: 10/07/22 10:20
Matrix: Water
Date Received: 10/08/22 10:30

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	746246	10/21/22 17:08	SMP	EET SAV
	Instrument ID: CMSO2									
Dissolved	Prep	3005A			50 mL	50 mL	744345	10/10/22 07:03	RR	EET SAV
Dissolved	Analysis	6010C		1			744590	10/10/22 18:03	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	744346	10/10/22 07:03	RR	EET SAV
Dissolved	Analysis	6020A		1			744603	10/10/22 22:07	BJB	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-04-01X-FAL22
Lab Sample ID: 680-222692-28
Date Collected: 10/07/22 14:50
Matrix: Water
Date Received: 10/08/22 10:30

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	746246	10/21/22 17:31	SMP	EET SAV
	Instrument ID: CMSO2									
Dissolved	Prep	3005A			50 mL	50 mL	744345	10/10/22 07:03	RR	EET SAV
Dissolved	Analysis	6010C		1			744590	10/10/22 18:06	BCB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	744346	10/10/22 07:03	RR	EET SAV
Dissolved	Analysis	6020A		1			744603	10/10/22 22:10	BJB	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: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

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: 680-222692-1
Project/Site: Seres-Arcadis JV, LTM, AOC 50, Fall 2022

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

Seres-Arcadis JV
Nathan Mullens
669 Marina Drive, Suite B7 Charleston, SC 29492
(843) 478 0336, jennifer.singer@arcadis.com

COC # AOC50_FAL22

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, Fall 2022
Project Number: 30130800	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 2022

						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								
	Sample ID	Matrix	Date	Time	Samp Init.												Location ID	Type	Top	Bottom	Cooler	Comments
1	AOC50-DUP01-FAL22	WG	10.5.22	1000	DC					X	X	X					G6M-04-04X	FD1	94 00	104.00	1	
2	AOC50-DUP02-FAL22	WG	10.5.22	1035	GS	X	X	X	X	X	X	X	X	X			G6M-07-02X	FD1	22.50	27.50	1	
3	AOC50-DUP03-FAL22	WG				X	X	X	X	X	X	X	X	X			G6M-13-02X	FD1	115.00	125 00	1	
4	AOC50-DUP04-FAL22	WG							X	X	X						G6M-95-20X	FD1	18.00	23.00	1	
5	G6M-02-01X-FAL22	WG				X	X	X	X	X	X	X	X	X			G6M-02-01X	N1	80 00	95.00	1	
6	G6M-02-04X-FAL22	WG	10.6.22	1200	DC				X	X	X						G6M-02-04X	N1	90 00	105 00	1	
7	G6M-02-06X-FAL22	WG	10.6.22	1120	GS				X	X	X						G6M-02-06X	N1	55 00	65.00	1	
8	G6M-02-07X-FAL22	WG							X	X	X						G6M-02-07X	N1	30 00	40 00	1	
9	G6M-02-08X-FAL22	WG				X	X	X	X	X	X	X	X	X			G6M-02-08X	N1	60 00	70.00	1	
10	G6M-02-11X-FAL22	WG	10.6.22	1550	GS				X	X	X						G6M-02-11X	N1	125 00	135.00	1	
11	G6M-02-12X-FAL22	WG							X	X	X						G6M-02-12X	N1	125 00	135 00	1	
12	G6M-02-13X-FAL22	WG	10.5.22	1052	SG				X	X	X						G6M-02-13X	N1	110 00	120.00	1	
13	G6M-03-07X-FAL22	WG	10.5 22	1240	DC	X	X	X	X	X	X	X	X	X			G6M-03-07X	N1	80 00	90.00	1	
14	G6M-03-08X-FAL22	WG							X	X	X						G6M-03-08X	N1	125 00	140 00	1	
15	G6M-03-10X-FAL22	WG	10.6.22	14.40	GS				X	X	X						G6M-03-10X	N1	120.00			
16	G6M-04-01X-FAL22	WG							X	X	X						G6M-04-01X	N1	82.00			
17	G6M-04-02X-FAL22	WG	10.5.22	1455	DC	X	X	X	X	X	X	X	X	X			G6M-04-02X	N1	80.00			
18	G6M-04-03X-FAL22	WG							X	X	X						G6M-04-03X	N1	85.00			
19	G6M-04-04X-FAL22	WG	10.5.22	1000	DC				X	X	X						G6M-04-04X	N1	94.00			
20	G6M-04-05X-FAL22	WG									X						G6M-04-05X	N1	100 00			

680-222692 Chain of Custody

Relinquished by: (Signature) Grace Kher
Date 10/6/22
Time 5:30
Received by: (Signature)

Received by Laboratory: (Signature)
Date 10/7/22 1790
Time 10-8-22 1030

1.4/1.4 4.7/4.7 4.9/4.9

Page 113 of 119

10/25/2022

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Nathan Mullens
669 Marina Drive, Suite B7 Charleston, SC 29492
(843) 478 0336, jennifer.singer@arcadis.com

COC # AOC50_FAL22

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, Fall 2022
Project Number: 30130800	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 2022

	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-04-06X-FAL22	WG	10.6.22	1022	SG				X	X	X				G6M-04-06X	N1	95 00	136 00	1	
22	G6M-04-07X-FAL22	WG	10-5-22	1331	SG	X	X	X	X	X	X	X	X	X	G6M-04-07X	N1	120 00	130.00	1	
23	G6M-04-09X-FAL22	WG				X	X	X	X	X	X	X	X	X	G6M-04-09X	N1	55 00	65.00	1	
24	G6M-04-10A-FAL22	WG				X	X	X	X	X	X	X	X	X	G6M-04-10A	MS1	30 00	40 00	1	
25	G6M-04-10A-FAL22	WG				X	X	X	X	X	X	X	X	X	G6M-04-10A	N1	30.00	40.00	1	
26	G6M-04-10A-FAL22	WG				X	X	X	X	X	X	X	X	X	G6M-04-10A	SD1	30 00	40 00	1	
27	G6M-04-10X-FAL22	WG									X				G6M-04-10X	N1	52.00	62.00	1	
28	G6M-04-11X-FAL22	WG	10-5-22	1340	GS				X	X	X				G6M-04-11X	N1	35.00	45.00	1	
29	G6M-04-13X-FAL22	WG									X				G6M-04-13X	N1	30 00	40.00	1	
30	G6M-04-14X-FAL22	WG							X	X	X				G6M-04-14X	N1	80.00	90 00	1	
31	G6M-04-15X-FAL22	WG							X	X	X				G6M-04-15X	N1	70 00	80 00	1	
32	G6M-04-22X-FAL22	WG							X	X	X				G6M-04-22X	N1	74.00	84 00	1	
33	G6M-04-31X-FAL22	WG							X	X	X				G6M-04-31X	N1	68.00	78.00	1	
34	G6M-07-01X-FAL22	WG				X	X	X	X	X	X	X	X	X	G6M-07-01X	N1	78 00	98 00	1	
35	G6M-07-02X-FAL22	WG	10.5.22	1000	GS	X	X	X	X	X	X	X	X	X	G6M-07-02X	N1	22.50	27.50	1	
36	G6M-13-01X-FAL22	WG				X	X	X	X	X	X	X	X	X	G6M-13-01X	N1	125.00	135.00	1	
37	G6M-13-02X-FAL22	WG				X	X	X	X	X	X	X	X	X	G6M-13-02X	N1	115.00	125 00	1	
38	G6M-13-03X-FAL22	WG									X				G6M-13-03X	N1	80 00	90.00	1	
39	G6M-13-04X-FAL22	WG							X	X	X				G6M-13-04X	N1	125.00	135 00	1	
40	G6M-13-05X-FAL22	WG				X	X	X	X	X	X	X	X	X	G6M-13-05X	N1	45 00	55.00	1	

Relinquished by: (Signature) Steve Allen
Date 10/6/22
Time 5:30
Received by: (Signature)

10/7/22 1200

Received by Laboratory: (Signature)
Date
Time TA 10-8-22 1030

10/25/2022

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Nathan Mullens
669 Marina Drive, Suite B7 Charleston SC 29492
(843) 478.0336 jennifer.singer@arcadis.com

COC # AOC50_FAL22

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, Fall 2022
Project Number: 30130800	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 2022

	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						
41	G6M-13-06X-FAL22	WG				X	X	X	X	X	X	X	X	X	G6M-13-06X	N1	50 00	60.00	1	
42	G6M-95-19X-FAL22	WG									X				G6M-95-19X	N1	48 00	58 00	1	
43	G6M-95-20X-FAL22	WG							X	X	X				G6M-95-20X	N1	18.00	23 00	1	
44	G6M-97-05B-FAL22	WG				X	X	X	X	X	X	X	X	X	G6M-97-05B	N1	130 00	135 00	1	
45	G6M-97-28X-FAL22	WG	10.6.22	1025	DC				X	X					G6M-97-28X	N1	100 00	105 00	1	
46	MW-3-FAL22	WG	10.6.22	1420	DC				X	X	X				MW-3	MS1	126.00	137.00	1	
47	MW-3-FAL22	WG	10.6.22	1420	DC				X	X	X				MW-3	N1	126.00	137 00	1	
48	MW-3-FAL22	WG	10.6.22	1420	DC				X	X	X				MW-3	SD1	126 00	137 00	1	
49	MW-7-FAL22	WG	10.6.22	1555	DC				X	X	X				MW-7	N1	6.58	135 00	1	
50	XSA-12-95X-FAL22	WG	10.6.22	1321	SG				X	X	X				XSA-12-95X	N1	120 00	130.00	1	
51	XSA-12-96X-FAL22	WG							X	X	X				XSA-12-96X	N1	120 00	130 00	1	
52	XSA-12-97X-FAL22	WG							X	X	X				XSA-12-97X	N1	120 00	130 00	1	
53	XSA-12-98X-FAL22	WG							X	X	X				XSA-12-98X	N1	60.00	70 00	1	
54	AOC50-TB-Fal22	Lab water trip Blank									X									
55																				
56																				
57																				
58																				

Turnaround Time: Standard

10/7/22 1100

Relinquished by: (Signature) [signature]
Date 10/6/22
Time 5:30
Received by: (Signature)

Received by Laboratory: (Signature)
Date
Time

[signature] TA 10-8-22 1030

10/25/2022

Boston #215

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Nathan Mullens
669 Marina Drive, Suite B7 Charleston, SC 29492
(843) 478 0336, jennifer.singer@arcadis.com

COC # AOC50_FAL22

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 2022
Project Number: 30130800	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 2022

						Analytical Test Method	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			Depth (ft bgs)		
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Top	Bottom	Cooler	Comments
21	G6M-04-06X-FAL22	WG								X	X	X				G6M-04-06X	N1	95 00	136 00	1	
22	G6M-04-07X-FAL22	WG					X	X	X	X	X	X	X	X	X	G6M-04-07X	N1	120 00	130 00	1	
23	G6M-04-09X-FAL22	WG					X	X	X	X	X	X	X	X	X	G6M-04-09X	N1	55 00	65 00	1	
24	G6M-04-10A-FAL22	WG					X	X	X	X	X	X	X	X	X	G6M-04-10A	MS1	30.00	40 00	1	
25	G6M-04-10A-FAL22	WG					X	X	X	X	X	X	X	X	X	G6M-04-10A	N1	30 00	40 00	1	
26	G6M-04-10A-FAL22	WG					X	X	X	X	X	X	X	X	X	G6M-04-10A	SD1	30.00	40 00	1	
27	G6M-04-10X-FAL22	WG										X				G6M-04-10X	N1	52.00	62.00	1	
28	G6M-04-11X-FAL22	WG								X	X	X				G6M-04-11X	N1	35.00	45.00	1	
29	G6M-04-13X-FAL22	WG										X				G6M-04-13X	N1	30.00	40 00	1	
30	G6M-04-14X-FAL22	WG								X	X	X				G6M-04-14X	N1	80 00	90 00	1	
31	G6M-04-15X-FAL22	WG								X	X	X				G6M-04-15X	N1	70 00	80 00	1	
32	G6M-04-22X-FAL22	WG								X	X	X				G6M-04-22X	N1	74 00	84 00	1	
33	G6M-04-31X-FAL22	WG								X	X	X				G6M-04-31X	N1	68 00	78.00	1	
34	G6M-07-01X-FAL22	WG	10-7-22	1315	DC		X	X	X	X	X	X	X	X	X	G6M-07-01X	N1	78 00	98 00	1	
35	G6M-07-02X-FAL22	WG					X	X	X	X	X	X	X	X	X	G6M-07-02X	N1	22.50	27.50	1	
36	G6M-13-01X-FAL22	WG					X	X	X	X	X	X	X	X	X	G6M-13-01X	N1	125 00	135.00	1	
37	G6M-13-02X-FAL22	WG					X	X	X	X	X	X	X	X	X	G6M-13-02X	N1	115.00	125 00	1	
38	G6M-13-03X-FAL22	WG										X				G6M-13-03X	N1	80 00	90 00	1	
39	G6M-13-04X-FAL22	WG								X	X	X				G6M-13-04X	N1	125.00	135 00	1	
40	G6M-13-05X-FAL22	WG					X	X	X	X	X	X	X	X	X	G6M-13-05X	N1	45 00	55.00	1	

Relinquished by: (Signature) Diane Singer
Date 10-7-22
Time 1545
Received by: (Signature) [signature] 10-7-22 1545

Received by Laboratory: (Signature) [signature] 10/7/22 1700
Date
Time

10/25/2022

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Nathan Mullens
669 Marina Drive, Suite B7, Charleston, SC 29492
(843) 478 0336, jennifer.singer@arcadis.com

COC # AOC50_FAL22

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, Fall 2022
Project Number: 30130800	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 2022

						Analytical Test Method	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	
41	G6M-13-06X-FAL22	WG					X	X	X	X	X	X	X	X	X	G6M-13-06X	N1	50 00	60.00	1		
42	G6M-95-19X-FAL22	WG										X				G6M-95-19X	N1	48 00	58 00	1		
43	G6M-95-20X-FAL22	WG								X	X	X				G6M-95-20X	N1	18.00	23.00	1		
44	G6M-97-05B-FAL22	WG					X	X	X	X	X	X	X	X	X	G6M-97-05B	N1	130 00	135 00	1		
45	G6M-97-28X-FAL22	WG								X	X					G6M-97-28X	N1	100 00	105.00	1		
46	MW-3-FAL22	WG								X	X	X				MW-3	MS1	126 00	137 00	1		
47	MW-3-FAL22	WG								X	X	X				MW-3	N1	126.00	137.00	1		
48	MW-3-FAL22	WG								X	X	X				MW-3	SD1	126.00	137 00	1		
49	MW-7-FAL22	WG								X	X	X				MW-7	N1	6.58	135 00	1		
50	XSA-12-95X-FAL22	WG								X	X	X				XSA-12-95X	N1	120 00	130 00	1		
51	XSA-12-96X-FAL22	WG	10/7/22	1049	SG					X	X	X				XSA-12-96X	N1	120 00	130.00	1		
52	XSA-12-97X-FAL22	WG	10/7/22	1322	SG					X	X	X				XSA-12-97X	N1	120.00	130.00	1		
53	XSA-12-98X-FAL22	WG	10/7/22	1255	GS					X	X	X				XSA-12-98X	N1	60.00	70.00	1		
54	AOC50-RB01-FAL22		10/7/22	915	DI					X	X	X				Rinse Blank						
55	AOC50-TB-Fal22	lab water			—							X										
56																						
57																						
58																						

Turnaround Time: Standard

Relinquished by: (Signature) Jennifer Singer
Date 10/7/22
Time 1545
Received by: (Signature) 10/7/22 1545

10/7/22 1700

Received by Laboratory: (Signature) TA
Date 10-8-22
Time 1030

X

10/25/2022

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Nathan Mullens
669 Marina Drive, Suite B7 Charleston, SC 29492
(843) 478 0336, jennifer.singer@arcadis.com

COC # AOC50_FAL22

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, Fall 2022
Project Number: 30130800	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 2022

	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						
1	AOC50-DUP01-FAL22	WG							X	X	X				G6M-04-04X	FD1	94 00	104.00	1	
2	AOC50-DUP02-FAL22	WG				X	X	X	X	X	X	X	X	X	G6M-07-02X	FD1	22.50	27.50	1	
3	AOC50-DUP03-FAL22	WG				X	X	X	X	X	X	X	X	X	G6M-13-02X	FD1	115.00	125.00	1	
4	AOC50-DUP04-FAL22	WG							X	X	X				G6M-95-20X	FD1	18 00	23 00	1	
5	G6M-02-01X-FAL22	WG	10.7.22	1045	DC	X	X	X	X	X	X	X	X	X	G6M-02-01X	N1	80 00	95.00	1	
6	G6M-02-04X-FAL22	WG							X	X	X				G6M-02-04X	N1	90 00	105 00	1	
7	G6M-02-06X-FAL22	WG							X	X	X				G6M-02-06X	N1	55 00	65.00	1	
8	G6M-02-07X-FAL22	WG	10.7.22	1020	GS				X	X	X				G6M-02-07X	N1	30 00	40 00	1	
9	G6M-02-08X-FAL22	WG				X	X	X	X	X	X	X	X	X	G6M-02-08X	N1	60 00	70 00	1	
10	G6M-02-11X-FAL22	WG							X	X	X				G6M-02-11X	N1	125 00	135.00	1	
11	G6M-02-12X-FAL22	WG							X	X	X				G6M-02-12X	N1	125 00	135.00	1	
12	G6M-02-13X-FAL22	WG							X	X	X				G6M-02-13X	N1	110 00	120 00	1	
13	G6M-03-07X-FAL22	WG				X	X	X	X	X	X	X	X	X	G6M-03-07X	N1	80 00	90.00	1	
14	G6M-03-08X-FAL22	WG							X	X	X				G6M-03-08X	N1	125 00	140.00	1	
15	G6M-03-10X-FAL22	WG							X	X	X				G6M-03-10X	N1	120 00	135 00	1	
16	G6M-04-01X-FAL22	WG	10.7.22	1450	DC				X	X	X				G6M-04-01X	N1	82.00	92.00	1	
17	G6M-04-02X-FAL22	WG				X	X	X	X	X	X	X	X	X	G6M-04-02X	N1	80 00	90.00	1	
18	G6M-04-03X-FAL22	WG							X	X	X				G6M-04-03X	N1	85.00	95 00	1	
19	G6M-04-04X-FAL22	WG							X	X	X				G6M-04-04X	N1	94.00	104 00	1	
20	G6M-04-05X-FAL22	WG									X				G6M-04-05X	N1	100 00	110.00	1	

10/7/22 1705

Relinquished by: (Signature) [signature]
Date 10/7/22
Time 1545
Received by: (Signature) [signature] 10/7/22 1545

Received by Laboratory: (Signature) [signature] TA
Date 10-8-22
Time 1030

X

10/25/2022

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-222692-1

Login Number: 222692

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.	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

Eurofins Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

Laboratory Job ID: 680-223156-1
Client Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

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

Attn: Jennifer Singer

Jerry Lanier

Authorized for release by:
11/11/2022 6:13:30 PM

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

LINKS

Review your project results through my EOL

Have a Question? Ask The Expert

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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 {0} Project Manager.

Definitions/Glossary

Client: Seres Engineering & Services LLC
Job ID: 680-223156-1
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Qualifiers

GC/MS VOA

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

Metals

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.

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
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

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-223156-1	AOC50-DUP03-FAL22	Water	10/10/22 14:10	10/13/22 10:00
680-223156-2	G6M-03-08X-FAL22	Water	10/10/22 13:54	10/13/22 10:00
680-223156-3	G6M-04-05X-FAL22	Water	10/10/22 15:14	10/13/22 10:00
680-223156-4	G6M-04-22X-FAL22	Water	10/10/22 15:05	10/13/22 10:00
680-223156-5	G6M-04-31X-FAL22	Water	10/10/22 13:45	10/13/22 10:00
680-223156-6	G6M-13-02X-FAL22	Water	10/10/22 14:10	10/13/22 10:00
680-223156-7	G6M-13-03X-FAL22	Water	10/10/22 11:35	10/13/22 10:00
680-223156-8	G6M-97-05B-FAL22	Water	10/10/22 10:50	10/13/22 10:00
680-223156-9	AOC50-RB02-FAL22	Water	10/10/22 12:00	10/13/22 10:00
680-223156-10	AOC50-TB-FAL22	Water	10/10/22 00:00	10/13/22 10:00
680-223156-11	G6M-02-12X-FAL22	Water	10/12/22 11:02	10/13/22 10:00
680-223156-12	G6M-04-03X-FAL22	Water	10/12/22 09:45	10/13/22 10:00
680-223156-13	G6M-04-09X-FAL22	Water	10/12/22 12:55	10/13/22 10:00
680-223156-14	G6M-04-15X-FAL22	Water	10/12/22 10:55	10/13/22 10:00
680-223156-15	G6M-13-01X-FAL22	Water	10/12/22 14:04	10/13/22 10:00
680-223156-16	G6M-13-04X-FAL22	Water	10/12/22 13:10	10/13/22 10:00
680-223156-17	AOC50-TB-FAL22	Water	10/12/22 00:00	10/13/22 10:00
680-223156-18	AOC50-RB-FAL22	Water	10/12/22 10:55	10/13/22 10:00

Job ID: 680-223156-1

Laboratory: Eurofins Savannah

Narrative

Job Narrative
680-223156-1

Receipt
The samples were received on 10/13/2022 10:00 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 2.6°C and 4.2°C

GC/MS VOA
Method 8260D_DOD5: Toluene-d8 surrogate recovery was <1% outside of the upper control limit, all other surrogates are within control limits, data has been reported. (LCS 680-746224/5)

Method 8260D_DOD5: The continuing calibration verification (CCV) analyzed in batch 680-746224 was outside the method criteria for the following analyte(s): 2-Hexanone, Chloroethane, 4-Methyl-2-pentanone, 1,2-Dibromo-3-Chloropropane and Bromomethane. 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 continuing calibration verification (CCVC) analyzed in batch 680-746224 was outside the method criteria for the following analyte(s): Chloroethane. 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 continuing calibration verification (CCV) associated with batch 680-746807 recovered above the upper control limit for Chloroethane, 1,2,3-Trichlorobenzene 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 continuing calibration verification (CCV) analyzed in batch 680-746246 was outside the method criteria for the following analyte(s): Chloroethane, 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.

Method 8260D_DOD5: The closing continuing calibration verification (CCVC) associated with batch 680-746807 recovered above the upper control limit for 4-Isopropylbenzene 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 closing continuing calibration verification (CCVC) analyzed in batch 746807 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 680-746813 recovered above the upper control limit for Chloroethane and Bromomethane.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 680-746813 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 680-747044 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) analyzed in batch 747044 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.

Job ID: 680-223156-1 (Continued)

Laboratory: Eurofins Savannah (Continued)

Method 8260D_DOD5: The continuing calibration verification (CCV) associated with batch 680-747044 recovered above the upper control limit for Carbon disulfide, Chloroethane, 1,2,3-Trichlorobenzene, Naphthalene, Trichlorofluoromethane and Hexachlorobutadiene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8260D_DOD5: The method blank associated with analytical batch 680-746807 contained Isopropylbenzene greater than one-half the reporting limit (RL). The samples could not be re-analyzed because not detected. The sample results have been qualified and reported.

Method 8260D_DOD5: The method blank associated with analytical batch 680-747044 contained 4-Isopropyltoluene greater than one-half the reporting limit (RL). The samples could not be re-analyzed because not detected. The sample results have been qualified and reported.

Method 8260D_DOD5: The laboratory control sample (LCS) for analytical batch 680-746224 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 (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 680-746246 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 (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 680-746807 recovered outside control limits for the following analytes: Chloroethane, 1,2,3-Trichlorobenzene and Napthalene. 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 (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 680-746813 recovered outside control limits for the following analytes: Chloroethane and Bromomethane. 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 (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 680-747044 recovered outside control limits for the following analytes: Chloroethane, 1,2,3-Trichlorobenzene and Naphthalene. 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 680-746807.

Method 8260D_DOD5: Bromoform is reported with an E flag in the batch QC because the top two points were dropped from the ICAL. The sample associated with the QC was non detect for bromomethane. The data has been qualified and reported.

Method 8260D_DOD5: The method requirement for no headspace was not met. The following volatile samples were analyzed with headspace in the sample container(s): G6M-04-09X-FAL22 (680-223156-13) and G6M-04-15X-FAL22 (680-223156-14).

Method 8260D_DOD5: Bromoform is reported with an E flag in the batch QC because the top two points were dropped from the ICAL. The sample associated with the QC was non detect for bromomethane. The data has been qualified and 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 sample was diluted due to color and appearance: G6M-04-09X-FAL22 (680-223156-13).

Job ID: 680-223156-1 (Continued)

Laboratory: Eurofins Savannah (Continued)

Elevated reporting limits (RL) are provided.

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 2320B: The sample duplicate precision for the following sample associated with analytical batch 680-745809 was outside control limits: (680-223156-I-15 DU). The associated Laboratory Control Sample / Laboratory Control Sample Duplicate (LCS/LCSD) precision met acceptance criteria.

Method 9034: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 680-745487 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: AOC50-DUP03-FAL22
Date Collected: 10/10/22 14:10
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-1
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		10/21/22 19:45	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 19:45	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/21/22 19:45	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 19:45	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 19:45	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/21/22 19:45	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/21/22 19:45	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/21/22 19:45	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/21/22 19:45	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/21/22 19:45	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 19:45	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 19:45	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/21/22 19:45	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/21/22 19:45	1
Chloroethane	10	U Q M	20	10	4.6	ug/L		10/21/22 19:45	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 19:45	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/21/22 19:45	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/21/22 19:45	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 19:45	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/21/22 19:45	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		10/21/22 19:45	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 19:45	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 19:45	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 19:45	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 19:45	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 19:45	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 19:45	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 19:45	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/21/22 19:45	1
cis-1,2-Dichloroethene	**3.8**		2.0	1.0	0.25	ug/L		10/21/22 19:45	1
trans-1,2-Dichloroethene	**0.68**	**J**	2.0	1.0	0.34	ug/L		10/21/22 19:45	1
1,2-Dichloroethene, Total	**4.5**		2.0	1.0	0.37	ug/L		10/21/22 19:45	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 19:45	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/21/22 19:45	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 19:45	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 19:45	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 19:45	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 19:45	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/21/22 19:45	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 19:45	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/21/22 19:45	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		10/21/22 19:45	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 19:45	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/21/22 19:45	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/21/22 19:45	1
4-Methyl-2-pentanone (MIBK)	10	U Q	20	10	2.7	ug/L		10/21/22 19:45	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 19:45	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/21/22 19:45	1

Client Sample ID: AOC50-DUP03-FAL22
Lab Sample ID: 680-223156-1

Date Collected: 10/10/22 14:10
Matrix: Water
Date Received: 10/13/22 10:00

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 19:45	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 19:45	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 19:45	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 19:45	1
Tetrachloroethene	**1.4**	**J**	2.0	1.0	0.35	ug/L		10/21/22 19:45	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 19:45	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 19:45	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/21/22 19:45	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/21/22 19:45	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/21/22 19:45	1
Trichloroethene	**3.0**		1.0	0.50	0.20	ug/L		10/21/22 19:45	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 19:45	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/21/22 19:45	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 19:45	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 19:45	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/21/22 19:45	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 19:45	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 19:45	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 19:45	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 19:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*89 - 112*		*10/21/22 19:45*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*		*10/21/22 19:45*	*1*
4-Bromofluorobenzene (Surr)	*103*		*85 - 114*		*10/21/22 19:45*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 119*		*10/21/22 19:45*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**0.33**	**J**	1.1	0.76	0.30	ug/L		10/24/22 18:14	1
Ethylene	0.71	U	1.0	0.71	0.31	ug/L		10/24/22 18:14	1
Methane (TCD)	**5400**		390	77	39	ug/L		10/24/22 18:14	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**6.3**		1.0	1.0	0.40	mg/L		10/29/22 18:36	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**700**	**J1**	100	50	20	ug/L		10/17/22 17:39	1
Manganese	**11000**	**J1**	10	5.0	1.3	ug/L		10/17/22 17:39	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**8.8**		5.0	3.0	0.86	ug/L		10/17/22 12:44	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**110**		5.0	5.0	2.2	mg/L		10/18/22 20:08	1

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: AOC50-DUP03-FAL22
Date Collected: 10/10/22 14:10
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-1
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	0.025	U	0.050	0.025	0.010	mg/L		10/20/22 13:25	1
Sulfide (SW846 9034)	1.7	U	2.5	1.7	0.83	mg/L		10/17/22 13:48	1
Total Organic Carbon (SW846 9060)	**2.1**		1.0	1.0	0.50	mg/L		10/23/22 05:04	1
Total Organic Carbon - Quad (SW846 9060)	**2.1**		1.0	1.0	0.50	mg/L		10/23/22 05:04	1

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: G6M-03-08X-FAL22
Date Collected: 10/10/22 13:54
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-2
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		10/21/22 17:32	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 17:32	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/21/22 17:32	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 17:32	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 17:32	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/21/22 17:32	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/21/22 17:32	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/21/22 17:32	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/21/22 17:32	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/21/22 17:32	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 17:32	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 17:32	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/21/22 17:32	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/21/22 17:32	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/21/22 17:32	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 17:32	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/21/22 17:32	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/21/22 17:32	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 17:32	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/21/22 17:32	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		10/21/22 17:32	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 17:32	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 17:32	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 17:32	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 17:32	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 17:32	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 17:32	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 17:32	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/21/22 17:32	1
cis-1,2-Dichloroethene	**0.34**	**J**	2.0	1.0	0.25	ug/L		10/21/22 17:32	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 17:32	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/21/22 17:32	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 17:32	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/21/22 17:32	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 17:32	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 17:32	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 17:32	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 17:32	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/21/22 17:32	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 17:32	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/21/22 17:32	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		10/21/22 17:32	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 17:32	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/21/22 17:32	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/21/22 17:32	1
4-Methyl-2-pentanone (MIBK)	10	U Q	20	10	2.7	ug/L		10/21/22 17:32	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 17:32	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/21/22 17:32	1

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: G6M-03-08X-FAL22

Date Collected: 10/10/22 13:54
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-2

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 17:32	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 17:32	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 17:32	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 17:32	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 17:32	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 17:32	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 17:32	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/21/22 17:32	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/21/22 17:32	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/21/22 17:32	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 17:32	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 17:32	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/21/22 17:32	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 17:32	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 17:32	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/21/22 17:32	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 17:32	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 17:32	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 17:32	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 17:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*89 - 112*		*10/21/22 17:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*		*10/21/22 17:32*	*1*
4-Bromofluorobenzene (Surr)	*103*		*85 - 114*		*10/21/22 17:32*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*10/21/22 17:32*	*1*

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**2600**		100	50	20	ug/L		10/17/22 17:54	1
Manganese	**8800**		10	5.0	1.3	ug/L		10/17/22 17:54	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**270**		5.0	3.0	0.86	ug/L		10/17/22 12:47	1

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: G6M-04-05X-FAL22
Date Collected: 10/10/22 15:14
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-3
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		10/21/22 17:51	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 17:51	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/21/22 17:51	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 17:51	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 17:51	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/21/22 17:51	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/21/22 17:51	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/21/22 17:51	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/21/22 17:51	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/21/22 17:51	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 17:51	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 17:51	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/21/22 17:51	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/21/22 17:51	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/21/22 17:51	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 17:51	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/21/22 17:51	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/21/22 17:51	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 17:51	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/21/22 17:51	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		10/21/22 17:51	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 17:51	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 17:51	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 17:51	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 17:51	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 17:51	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 17:51	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 17:51	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/21/22 17:51	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 17:51	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 17:51	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/21/22 17:51	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 17:51	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/21/22 17:51	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 17:51	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 17:51	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 17:51	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 17:51	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/21/22 17:51	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 17:51	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/21/22 17:51	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		10/21/22 17:51	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 17:51	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/21/22 17:51	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/21/22 17:51	1
4-Methyl-2-pentanone (MIBK)	10	U Q	20	10	2.7	ug/L		10/21/22 17:51	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 17:51	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/21/22 17:51	1

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: G6M-04-05X-FAL22
Date Collected: 10/10/22 15:14
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-3
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 17:51	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 17:51	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 17:51	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 17:51	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 17:51	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 17:51	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 17:51	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/21/22 17:51	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/21/22 17:51	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/21/22 17:51	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 17:51	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 17:51	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/21/22 17:51	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 17:51	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 17:51	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/21/22 17:51	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 17:51	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 17:51	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 17:51	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 17:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*89 - 112*		*10/21/22 17:51*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*		*10/21/22 17:51*	*1*
4-Bromofluorobenzene (Surr)	*103*		*85 - 114*		*10/21/22 17:51*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*10/21/22 17:51*	*1*

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: G6M-04-22X-FAL22

Date Collected: 10/10/22 15:05
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-4

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		10/21/22 18:10	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 18:10	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/21/22 18:10	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 18:10	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 18:10	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/21/22 18:10	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/21/22 18:10	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/21/22 18:10	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/21/22 18:10	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/21/22 18:10	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 18:10	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 18:10	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/21/22 18:10	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/21/22 18:10	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/21/22 18:10	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 18:10	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/21/22 18:10	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/21/22 18:10	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 18:10	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/21/22 18:10	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		10/21/22 18:10	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 18:10	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 18:10	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 18:10	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 18:10	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 18:10	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 18:10	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 18:10	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/21/22 18:10	1
cis-1,2-Dichloroethene	**1.4**	**J**	2.0	1.0	0.25	ug/L		10/21/22 18:10	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 18:10	1
1,2-Dichloroethene, Total	**1.4**	**J**	2.0	1.0	0.37	ug/L		10/21/22 18:10	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 18:10	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/21/22 18:10	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 18:10	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 18:10	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 18:10	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 18:10	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/21/22 18:10	1
Ethylbenzene	**0.55**	**J**	1.0	0.50	0.20	ug/L		10/21/22 18:10	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/21/22 18:10	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		10/21/22 18:10	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 18:10	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/21/22 18:10	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/21/22 18:10	1
4-Methyl-2-pentanone (MIBK)	10	U Q	20	10	2.7	ug/L		10/21/22 18:10	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 18:10	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/21/22 18:10	1

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: G6M-04-22X-FAL22

Date Collected: 10/10/22 15:05
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-4

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 18:10	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 18:10	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 18:10	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 18:10	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 18:10	1
Toluene	**7.5**		2.0	1.0	0.25	ug/L		10/21/22 18:10	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 18:10	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/21/22 18:10	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/21/22 18:10	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/21/22 18:10	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 18:10	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 18:10	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/21/22 18:10	1
1,2,4-Trimethylbenzene	**0.55**	**J**	2.0	1.0	0.43	ug/L		10/21/22 18:10	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 18:10	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/21/22 18:10	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 18:10	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 18:10	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 18:10	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 18:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*89 - 112*		*10/21/22 18:10*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*		*10/21/22 18:10*	*1*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*		*10/21/22 18:10*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 119*		*10/21/22 18:10*	*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		10/17/22 17:57	1
Manganese	**920**		10	5.0	1.3	ug/L		10/17/22 17:57	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**720**		5.0	3.0	0.86	ug/L		10/17/22 12:50	1

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: G6M-04-31X-FAL22
Date Collected: 10/10/22 13:45
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-5
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		10/21/22 18:29	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 18:29	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/21/22 18:29	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 18:29	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 18:29	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/21/22 18:29	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/21/22 18:29	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/21/22 18:29	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/21/22 18:29	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/21/22 18:29	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 18:29	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 18:29	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/21/22 18:29	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/21/22 18:29	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/21/22 18:29	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 18:29	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/21/22 18:29	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/21/22 18:29	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 18:29	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/21/22 18:29	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		10/21/22 18:29	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 18:29	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 18:29	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 18:29	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 18:29	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 18:29	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 18:29	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 18:29	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/21/22 18:29	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 18:29	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 18:29	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/21/22 18:29	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 18:29	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/21/22 18:29	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 18:29	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 18:29	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 18:29	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 18:29	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/21/22 18:29	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 18:29	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/21/22 18:29	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		10/21/22 18:29	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 18:29	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/21/22 18:29	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/21/22 18:29	1
4-Methyl-2-pentanone (MIBK)	10	U Q M	20	10	2.7	ug/L		10/21/22 18:29	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 18:29	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/21/22 18:29	1

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: G6M-04-31X-FAL22

Date Collected: 10/10/22 13:45
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-5

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 18:29	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 18:29	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 18:29	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 18:29	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 18:29	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 18:29	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 18:29	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/21/22 18:29	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/21/22 18:29	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/21/22 18:29	1
Trichloroethene	**0.23**	**J M**	1.0	0.50	0.20	ug/L		10/21/22 18:29	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 18:29	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/21/22 18:29	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 18:29	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 18:29	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/21/22 18:29	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 18:29	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 18:29	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 18:29	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 18:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*89 - 112*		*10/21/22 18:29*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*10/21/22 18:29*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*10/21/22 18:29*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 119*		*10/21/22 18:29*	*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		10/17/22 18:00	1
Manganese	**5200**		10	5.0	1.3	ug/L		10/17/22 18:00	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**330**		5.0	3.0	0.86	ug/L		10/17/22 12:58	1

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: G6M-13-02X-FAL22
Date Collected: 10/10/22 14:10
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-6
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		10/21/22 18:48	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 18:48	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/21/22 18:48	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 18:48	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 18:48	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/21/22 18:48	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/21/22 18:48	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/21/22 18:48	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/21/22 18:48	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/21/22 18:48	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 18:48	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 18:48	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/21/22 18:48	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/21/22 18:48	1
Chloroethane	10	U Q M	20	10	4.6	ug/L		10/21/22 18:48	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 18:48	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/21/22 18:48	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/21/22 18:48	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 18:48	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/21/22 18:48	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		10/21/22 18:48	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 18:48	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 18:48	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 18:48	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 18:48	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 18:48	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 18:48	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 18:48	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/21/22 18:48	1
cis-1,2-Dichloroethene	**3.9**		2.0	1.0	0.25	ug/L		10/21/22 18:48	1
trans-1,2-Dichloroethene	**0.70**	**J**	2.0	1.0	0.34	ug/L		10/21/22 18:48	1
1,2-Dichloroethene, Total	**4.6**		2.0	1.0	0.37	ug/L		10/21/22 18:48	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 18:48	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/21/22 18:48	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 18:48	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 18:48	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 18:48	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 18:48	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/21/22 18:48	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 18:48	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/21/22 18:48	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		10/21/22 18:48	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 18:48	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/21/22 18:48	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/21/22 18:48	1
4-Methyl-2-pentanone (MIBK)	10	U Q	20	10	2.7	ug/L		10/21/22 18:48	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 18:48	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/21/22 18:48	1

Client Sample ID: G6M-13-02X-FAL22

Date Collected: 10/10/22 14:10
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-6

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 18:48	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 18:48	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 18:48	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 18:48	1
Tetrachloroethene	**1.5**	**J**	2.0	1.0	0.35	ug/L		10/21/22 18:48	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 18:48	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 18:48	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/21/22 18:48	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/21/22 18:48	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/21/22 18:48	1
Trichloroethene	**3.1**		1.0	0.50	0.20	ug/L		10/21/22 18:48	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 18:48	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/21/22 18:48	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 18:48	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 18:48	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/21/22 18:48	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 18:48	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 18:48	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 18:48	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 18:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*89 - 112*		*10/21/22 18:48*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*		*10/21/22 18:48*	*1*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*		*10/21/22 18:48*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 119*		*10/21/22 18:48*	*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		10/24/22 18:27	1
Ethylene	0.71	U	1.0	0.71	0.31	ug/L		10/24/22 18:27	1
Methane (TCD)	**5200**		390	77	39	ug/L		10/24/22 18:27	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**6.3**		1.0	1.0	0.40	mg/L		10/29/22 19:15	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**720**		100	50	20	ug/L		10/17/22 18:03	1
Manganese	**11000**		10	5.0	1.3	ug/L		10/17/22 18:03	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**9.3**		5.0	3.0	0.86	ug/L		10/17/22 13:01	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**100**		5.0	5.0	2.2	mg/L		10/18/22 20:18	1

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: G6M-13-02X-FAL22
Date Collected: 10/10/22 14:10
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-6
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	**0.028**	**J**	0.050	0.025	0.010	mg/L		10/20/22 13:26	1
Sulfide (SW846 9034)	1.7	U J1	2.5	1.7	0.83	mg/L		10/17/22 13:48	1
Total Organic Carbon (SW846 9060)	**2.1**		1.0	1.0	0.50	mg/L		10/23/22 05:22	1
Total Organic Carbon - Quad (SW846 9060)	**2.1**		1.0	1.0	0.50	mg/L		10/23/22 05:22	1

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: G6M-13-03X-FAL22
Date Collected: 10/10/22 11:35
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-7
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	25	10	3.7	ug/L		10/21/22 19:07	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 19:07	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/21/22 19:07	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 19:07	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 19:07	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/21/22 19:07	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/21/22 19:07	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/21/22 19:07	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/21/22 19:07	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/21/22 19:07	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 19:07	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 19:07	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/21/22 19:07	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/21/22 19:07	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/21/22 19:07	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 19:07	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/21/22 19:07	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/21/22 19:07	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 19:07	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/21/22 19:07	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		10/21/22 19:07	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 19:07	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 19:07	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 19:07	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 19:07	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 19:07	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 19:07	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 19:07	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/21/22 19:07	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 19:07	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 19:07	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/21/22 19:07	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 19:07	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/21/22 19:07	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 19:07	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 19:07	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 19:07	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 19:07	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/21/22 19:07	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 19:07	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/21/22 19:07	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		10/21/22 19:07	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 19:07	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/21/22 19:07	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/21/22 19:07	1
4-Methyl-2-pentanone (MIBK)	10	U Q	20	10	2.7	ug/L		10/21/22 19:07	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 19:07	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/21/22 19:07	1

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: G6M-13-03X-FAL22
Date Collected: 10/10/22 11:35
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-7
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 19:07	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 19:07	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 19:07	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 19:07	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 19:07	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 19:07	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 19:07	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/21/22 19:07	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/21/22 19:07	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/21/22 19:07	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 19:07	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 19:07	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/21/22 19:07	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 19:07	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 19:07	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/21/22 19:07	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 19:07	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 19:07	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 19:07	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 19:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*89 - 112*		*10/21/22 19:07*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*10/21/22 19:07*	*1*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*		*10/21/22 19:07*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*10/21/22 19:07*	*1*

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: G6M-97-05B-FAL22
Date Collected: 10/10/22 10:50
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-8
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		10/21/22 19:26	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 19:26	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/21/22 19:26	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 19:26	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 19:26	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/21/22 19:26	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/21/22 19:26	1
2-Butanone (MEK)	20	U M	25	20	6.4	ug/L		10/21/22 19:26	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/21/22 19:26	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/21/22 19:26	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 19:26	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 19:26	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/21/22 19:26	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/21/22 19:26	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/21/22 19:26	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 19:26	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/21/22 19:26	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/21/22 19:26	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 19:26	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/21/22 19:26	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		10/21/22 19:26	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 19:26	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 19:26	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 19:26	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 19:26	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 19:26	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 19:26	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 19:26	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/21/22 19:26	1
cis-1,2-Dichloroethene	**1.1**	**J**	2.0	1.0	0.25	ug/L		10/21/22 19:26	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 19:26	1
1,2-Dichloroethene, Total	**1.1**	**J**	2.0	1.0	0.37	ug/L		10/21/22 19:26	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 19:26	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/21/22 19:26	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 19:26	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 19:26	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 19:26	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 19:26	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/21/22 19:26	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 19:26	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/21/22 19:26	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		10/21/22 19:26	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 19:26	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/21/22 19:26	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/21/22 19:26	1
4-Methyl-2-pentanone (MIBK)	10	U Q	20	10	2.7	ug/L		10/21/22 19:26	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 19:26	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/21/22 19:26	1

Client Sample ID: G6M-97-05B-FAL22
Lab Sample ID: 680-223156-8

Date Collected: 10/10/22 10:50
Matrix: Water
Date Received: 10/13/22 10:00

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 19:26	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 19:26	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 19:26	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 19:26	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 19:26	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 19:26	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 19:26	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/21/22 19:26	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/21/22 19:26	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/21/22 19:26	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 19:26	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 19:26	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/21/22 19:26	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 19:26	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 19:26	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/21/22 19:26	1
Vinyl chloride	**0.62**	**J**	2.0	1.0	0.40	ug/L		10/21/22 19:26	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 19:26	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 19:26	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 19:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*89 - 112*		*10/21/22 19:26*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*		*10/21/22 19:26*	*1*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*		*10/21/22 19:26*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 119*		*10/21/22 19:26*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**19**		1.1	0.76	0.30	ug/L		10/24/22 18:39	1
Ethylene	**9.0**		1.0	0.71	0.31	ug/L		10/24/22 18:39	1
Methane (TCD)	**26000**		390	77	39	ug/L		10/24/22 18:39	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		10/29/22 17:56	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		10/17/22 18:06	1
Manganese	**11000**		10	5.0	1.3	ug/L		10/17/22 18:06	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**270**		5.0	3.0	0.86	ug/L		10/17/22 13:03	1

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		10/18/22 22:50	1

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: G6M-97-05B-FAL22
Date Collected: 10/10/22 10:50
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-8
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	0.025	U	0.050	0.025	0.010	mg/L		10/20/22 13:27	1
Sulfide (SW846 9034)	1.9	U	2.9	1.9	0.96	mg/L		10/17/22 13:48	1
Total Organic Carbon (SW846 9060)	**20**		1.0	1.0	0.50	mg/L		10/23/22 05:38	1
Total Organic Carbon - Quad (SW846 9060)	**20**		1.0	1.0	0.50	mg/L		10/23/22 05:38	1

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: AOC50-RB02-FAL22
Date Collected: 10/10/22 12:00
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-9
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	15	J	25	10	3.7	ug/L		10/21/22 15:11	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 15:11	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/21/22 15:11	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 15:11	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 15:11	1
Bromoform	2.0	U M	2.5	2.0	0.59	ug/L		10/21/22 15:11	1
Bromomethane	10	U	20	10	3.7	ug/L		10/21/22 15:11	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/21/22 15:11	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/21/22 15:11	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/21/22 15:11	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 15:11	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 15:11	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/21/22 15:11	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/21/22 15:11	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/21/22 15:11	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 15:11	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/21/22 15:11	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/21/22 15:11	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 15:11	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/21/22 15:11	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/21/22 15:11	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 15:11	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 15:11	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 15:11	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 15:11	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 15:11	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 15:11	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 15:11	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/21/22 15:11	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 15:11	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 15:11	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/21/22 15:11	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 15:11	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/21/22 15:11	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 15:11	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 15:11	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 15:11	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 15:11	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/21/22 15:11	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 15:11	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/21/22 15:11	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/21/22 15:11	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 15:11	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/21/22 15:11	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/21/22 15:11	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/21/22 15:11	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 15:11	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/21/22 15:11	1

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: AOC50-RB02-FAL22

Date Collected: 10/10/22 12:00
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-9

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 15:11	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 15:11	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 15:11	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 15:11	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 15:11	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 15:11	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 15:11	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/21/22 15:11	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/21/22 15:11	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/21/22 15:11	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 15:11	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 15:11	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/21/22 15:11	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 15:11	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 15:11	1
Vinyl acetate	2.0	U Q	2.5	2.0	0.69	ug/L		10/21/22 15:11	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 15:11	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 15:11	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 15:11	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 15:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*107*		*89 - 112*		*10/21/22 15:11*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*		*10/21/22 15:11*	*1*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*		*10/21/22 15:11*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*10/21/22 15:11*	*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		10/17/22 18:15	1
Manganese	5.0	U	10	5.0	1.3	ug/L		10/17/22 18:15	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		10/17/22 13:06	1

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: AOC50-TB-FAL22
Date Collected: 10/10/22 00:00
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-10
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		10/21/22 14:22	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 14:22	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/21/22 14:22	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 14:22	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 14:22	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/21/22 14:22	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/21/22 14:22	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/21/22 14:22	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/21/22 14:22	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/21/22 14:22	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 14:22	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 14:22	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/21/22 14:22	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/21/22 14:22	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/21/22 14:22	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 14:22	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/21/22 14:22	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/21/22 14:22	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 14:22	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/21/22 14:22	1
1,2-Dibromo-3-Chloropropane	5.0	U Q	10	5.0	1.8	ug/L		10/21/22 14:22	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 14:22	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 14:22	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 14:22	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 14:22	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 14:22	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 14:22	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 14:22	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/21/22 14:22	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 14:22	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 14:22	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/21/22 14:22	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 14:22	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/21/22 14:22	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 14:22	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 14:22	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 14:22	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 14:22	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/21/22 14:22	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 14:22	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/21/22 14:22	1
2-Hexanone	10	U Q	20	10	3.2	ug/L		10/21/22 14:22	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 14:22	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/21/22 14:22	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/21/22 14:22	1
4-Methyl-2-pentanone (MIBK)	10	U Q	20	10	2.7	ug/L		10/21/22 14:22	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 14:22	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/21/22 14:22	1

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: AOC50-TB-FAL22
Date Collected: 10/10/22 00:00
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-10
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 14:22	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 14:22	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 14:22	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 14:22	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 14:22	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 14:22	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 14:22	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/21/22 14:22	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/21/22 14:22	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/21/22 14:22	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 14:22	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 14:22	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/21/22 14:22	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 14:22	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 14:22	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/21/22 14:22	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 14:22	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 14:22	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 14:22	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 14:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*89 - 112*		*10/21/22 14:22*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*10/21/22 14:22*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*10/21/22 14:22*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*10/21/22 14:22*	*1*

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: G6M-02-12X-FAL22
Date Collected: 10/12/22 11:02
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-11
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		10/25/22 16:55	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/25/22 16:55	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/25/22 16:55	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/25/22 16:55	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/25/22 16:55	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/25/22 16:55	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/25/22 16:55	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/25/22 16:55	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/25/22 16:55	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/25/22 16:55	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/25/22 16:55	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/25/22 16:55	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/25/22 16:55	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/25/22 16:55	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/25/22 16:55	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/25/22 16:55	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/25/22 16:55	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/25/22 16:55	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/25/22 16:55	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/25/22 16:55	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/25/22 16:55	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 16:55	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/25/22 16:55	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/25/22 16:55	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/25/22 16:55	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/25/22 16:55	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/25/22 16:55	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 16:55	1
1,2-Dichloroethane	1.0	U	2.0	1.0	0.25	ug/L		10/25/22 16:55	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/25/22 16:55	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/25/22 16:55	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/25/22 16:55	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 16:55	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/25/22 16:55	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/25/22 16:55	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/25/22 16:55	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/25/22 16:55	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/25/22 16:55	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/25/22 16:55	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/25/22 16:55	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/25/22 16:55	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/25/22 16:55	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/25/22 16:55	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/25/22 16:55	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/25/22 16:55	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/25/22 16:55	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/25/22 16:55	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/25/22 16:55	1

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: G6M-02-12X-FAL22

Date Collected: 10/12/22 11:02
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-11

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/25/22 16:55	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/25/22 16:55	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/25/22 16:55	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/25/22 16:55	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/25/22 16:55	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/25/22 16:55	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/25/22 16:55	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/25/22 16:55	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/25/22 16:55	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/25/22 16:55	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/25/22 16:55	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 16:55	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/25/22 16:55	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/25/22 16:55	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/25/22 16:55	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/25/22 16:55	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/25/22 16:55	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/25/22 16:55	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/25/22 16:55	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/25/22 16:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*89 - 112*		*10/25/22 16:55*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*		*10/25/22 16:55*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*10/25/22 16:55*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 119*		*10/25/22 16:55*	*1*

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**39000**		100	50	20	ug/L		10/17/22 18:24	1
Manganese	**6900**		10	5.0	1.3	ug/L		10/17/22 18:24	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**660**		5.0	3.0	0.86	ug/L		10/17/22 13:09	1

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: G6M-04-03X-FAL22

Date Collected: 10/12/22 09:45
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-12

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		10/25/22 18:30	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/25/22 18:30	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/25/22 18:30	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/25/22 18:30	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/25/22 18:30	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/25/22 18:30	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/25/22 18:30	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/25/22 18:30	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/25/22 18:30	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/25/22 18:30	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/25/22 18:30	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/25/22 18:30	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/25/22 18:30	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/25/22 18:30	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/25/22 18:30	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/25/22 18:30	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/25/22 18:30	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/25/22 18:30	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/25/22 18:30	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/25/22 18:30	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/25/22 18:30	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 18:30	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/25/22 18:30	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/25/22 18:30	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/25/22 18:30	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/25/22 18:30	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/25/22 18:30	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 18:30	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/25/22 18:30	1
cis-1,2-Dichloroethene	**0.65**	**J**	2.0	1.0	0.25	ug/L		10/25/22 18:30	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/25/22 18:30	1
1,2-Dichloroethene, Total	**0.65**	**J**	2.0	1.0	0.37	ug/L		10/25/22 18:30	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 18:30	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/25/22 18:30	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/25/22 18:30	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/25/22 18:30	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/25/22 18:30	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/25/22 18:30	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/25/22 18:30	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/25/22 18:30	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/25/22 18:30	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/25/22 18:30	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/25/22 18:30	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/25/22 18:30	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/25/22 18:30	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/25/22 18:30	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/25/22 18:30	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/25/22 18:30	1

Client Sample ID: G6M-04-03X-FAL22
Lab Sample ID: 680-223156-12

Date Collected: 10/12/22 09:45
Matrix: Water
Date Received: 10/13/22 10:00

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/25/22 18:30	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/25/22 18:30	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/25/22 18:30	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/25/22 18:30	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/25/22 18:30	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/25/22 18:30	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/25/22 18:30	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/25/22 18:30	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/25/22 18:30	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/25/22 18:30	1
Trichloroethene	**1.7**		1.0	0.50	0.20	ug/L		10/25/22 18:30	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 18:30	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/25/22 18:30	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/25/22 18:30	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/25/22 18:30	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/25/22 18:30	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/25/22 18:30	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/25/22 18:30	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/25/22 18:30	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/25/22 18:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*89 - 112*		*10/25/22 18:30*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*		*10/25/22 18:30*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*10/25/22 18:30*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 119*		*10/25/22 18:30*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**2.0**		1.1	0.76	0.30	ug/L		10/26/22 16:06	1
Ethylene	0.71	U	1.0	0.71	0.31	ug/L		10/26/22 16:06	1
Methane (TCD)	**20000**		390	77	39	ug/L		10/26/22 16:06	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**0.44**	**J**	1.0	1.0	0.40	mg/L		10/29/22 17:13	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**9900**		100	50	20	ug/L		10/17/22 18:27	1
Manganese	**1200**		10	5.0	1.3	ug/L		10/17/22 18:27	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**190**		5.0	3.0	0.86	ug/L		10/17/22 13:12	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**240**		5.0	5.0	2.2	mg/L		10/18/22 19:50	1

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: G6M-04-03X-FAL22
Date Collected: 10/12/22 09:45
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-12
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	0.025	U	0.050	0.025	0.010	mg/L		10/20/22 13:29	1
Sulfide (SW846 9034)	1.6	U	2.4	1.6	0.81	mg/L		10/17/22 13:48	1
Total Organic Carbon (SW846 9060)	**6.5**		1.0	1.0	0.50	mg/L		10/23/22 05:57	1
Total Organic Carbon - Quad (SW846 9060)	**6.5**		1.0	1.0	0.50	mg/L		10/23/22 05:57	1

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: G6M-04-09X-FAL22
Date Collected: 10/12/22 12:55
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-13
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		10/25/22 18:49	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/25/22 18:49	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/25/22 18:49	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/25/22 18:49	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/25/22 18:49	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/25/22 18:49	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/25/22 18:49	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/25/22 18:49	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/25/22 18:49	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/25/22 18:49	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/25/22 18:49	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/25/22 18:49	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/25/22 18:49	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/25/22 18:49	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/25/22 18:49	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/25/22 18:49	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/25/22 18:49	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/25/22 18:49	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/25/22 18:49	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/25/22 18:49	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/25/22 18:49	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 18:49	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/25/22 18:49	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/25/22 18:49	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/25/22 18:49	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/25/22 18:49	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/25/22 18:49	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 18:49	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/25/22 18:49	1
cis-1,2-Dichloroethene	**0.94**	**J**	2.0	1.0	0.25	ug/L		10/25/22 18:49	1
trans-1,2-Dichloroethene	**0.98**	**J**	2.0	1.0	0.34	ug/L		10/25/22 18:49	1
1,2-Dichloroethene, Total	**1.9**	**J**	2.0	1.0	0.37	ug/L		10/25/22 18:49	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 18:49	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/25/22 18:49	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/25/22 18:49	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/25/22 18:49	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/25/22 18:49	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/25/22 18:49	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/25/22 18:49	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/25/22 18:49	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/25/22 18:49	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/25/22 18:49	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/25/22 18:49	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/25/22 18:49	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/25/22 18:49	1
4-Methyl-2-pentanone (MIBK)	10	U M	20	10	2.7	ug/L		10/25/22 18:49	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/25/22 18:49	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/25/22 18:49	1

Client Sample ID: G6M-04-09X-FAL22
Lab Sample ID: 680-223156-13

Date Collected: 10/12/22 12:55
Matrix: Water
Date Received: 10/13/22 10:00

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/25/22 18:49	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/25/22 18:49	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/25/22 18:49	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/25/22 18:49	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/25/22 18:49	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/25/22 18:49	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/25/22 18:49	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/25/22 18:49	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/25/22 18:49	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/25/22 18:49	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/25/22 18:49	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 18:49	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/25/22 18:49	1
1,2,4-Trimethylbenzene	**0.54**	**J**	2.0	1.0	0.43	ug/L		10/25/22 18:49	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/25/22 18:49	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/25/22 18:49	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/25/22 18:49	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/25/22 18:49	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/25/22 18:49	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/25/22 18:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*89 - 112*		*10/25/22 18:49*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*10/25/22 18:49*	*1*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*		*10/25/22 18:49*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 119*		*10/25/22 18:49*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**3.3**		1.1	0.76	0.30	ug/L		10/26/22 16:54	1
Ethylene	**3.0**		1.0	0.71	0.31	ug/L		10/26/22 16:54	1
Methane (TCD)	**15000**		390	77	39	ug/L		10/26/22 16:54	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	5.0	U	5.0	5.0	2.0	mg/L		10/29/22 17:27	5

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**43000**		100	50	20	ug/L		10/17/22 18:30	1
Manganese	**1900**		10	5.0	1.3	ug/L		10/17/22 18:30	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**280**		5.0	3.0	0.86	ug/L		10/17/22 13:14	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**98**		5.0	5.0	2.2	mg/L		10/18/22 19:59	1

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: G6M-04-09X-FAL22

Date Collected: 10/12/22 12:55
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-13

Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	**0.029**	**J**	0.050	0.025	0.010	mg/L		10/20/22 13:30	1
Sulfide (SW846 9034)	1.9	U	2.9	1.9	0.96	mg/L		10/17/22 13:48	1
Total Organic Carbon (SW846 9060)	**7.1**		1.0	1.0	0.50	mg/L		10/23/22 06:16	1
Total Organic Carbon - Quad (SW846 9060)	**7.1**		1.0	1.0	0.50	mg/L		10/23/22 06:16	1

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: G6M-04-15X-FAL22

Date Collected: 10/12/22 10:55
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-14

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		10/25/22 19:08	1
Benzene	**0.38**	**J**	2.0	1.0	0.27	ug/L		10/25/22 19:08	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/25/22 19:08	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/25/22 19:08	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/25/22 19:08	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/25/22 19:08	1
Bromomethane	10	U Q	20	10	3.7	ug/L		10/25/22 19:08	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/25/22 19:08	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/25/22 19:08	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/25/22 19:08	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/25/22 19:08	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/25/22 19:08	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/25/22 19:08	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/25/22 19:08	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/25/22 19:08	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/25/22 19:08	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/25/22 19:08	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/25/22 19:08	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/25/22 19:08	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/25/22 19:08	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/25/22 19:08	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 19:08	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/25/22 19:08	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/25/22 19:08	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/25/22 19:08	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/25/22 19:08	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/25/22 19:08	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 19:08	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/25/22 19:08	1
cis-1,2-Dichloroethene	**1.2**	**J**	2.0	1.0	0.25	ug/L		10/25/22 19:08	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/25/22 19:08	1
1,2-Dichloroethene, Total	**1.2**	**J**	2.0	1.0	0.37	ug/L		10/25/22 19:08	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 19:08	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/25/22 19:08	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/25/22 19:08	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/25/22 19:08	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/25/22 19:08	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/25/22 19:08	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/25/22 19:08	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/25/22 19:08	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/25/22 19:08	1
2-Hexanone	10	U M	20	10	3.2	ug/L		10/25/22 19:08	1
Isopropylbenzene	**0.56**	**J**	2.0	1.0	0.26	ug/L		10/25/22 19:08	1
4-Isopropyltoluene	1.0	U M	2.0	1.0	0.44	ug/L		10/25/22 19:08	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/25/22 19:08	1
4-Methyl-2-pentanone (MIBK)	10	U M	20	10	2.7	ug/L		10/25/22 19:08	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/25/22 19:08	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/25/22 19:08	1

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: G6M-04-15X-FAL22

Date Collected: 10/12/22 10:55
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-14

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/25/22 19:08	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/25/22 19:08	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/25/22 19:08	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/25/22 19:08	1
Tetrachloroethene	**0.43**	**J**	2.0	1.0	0.35	ug/L		10/25/22 19:08	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/25/22 19:08	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/25/22 19:08	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/25/22 19:08	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/25/22 19:08	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/25/22 19:08	1
Trichloroethene	**0.70**	**J**	1.0	0.50	0.20	ug/L		10/25/22 19:08	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 19:08	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/25/22 19:08	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/25/22 19:08	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/25/22 19:08	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/25/22 19:08	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/25/22 19:08	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/25/22 19:08	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/25/22 19:08	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/25/22 19:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*89 - 112*		*10/25/22 19:08*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*10/25/22 19:08*	*1*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*		*10/25/22 19:08*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 119*		*10/25/22 19:08*	*1*

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**7200**		100	50	20	ug/L		10/17/22 18:33	1
Manganese	**1000**		10	5.0	1.3	ug/L		10/17/22 18:33	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**95**		5.0	3.0	0.86	ug/L		10/17/22 13:17	1

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: G6M-13-01X-FAL22
Date Collected: 10/12/22 14:04
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-15
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		10/26/22 16:17	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/26/22 16:17	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/26/22 16:17	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/26/22 16:17	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/26/22 16:17	1
Bromoform	2.0	U M	2.5	2.0	0.59	ug/L		10/26/22 16:17	1
Bromomethane	10	U	20	10	3.7	ug/L		10/26/22 16:17	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/26/22 16:17	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/26/22 16:17	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/26/22 16:17	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/26/22 16:17	1
Carbon disulfide	1.0	U Q	2.0	1.0	0.43	ug/L		10/26/22 16:17	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/26/22 16:17	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/26/22 16:17	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/26/22 16:17	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/26/22 16:17	1
Chloromethane	2.0	U Q	2.5	2.0	0.54	ug/L		10/26/22 16:17	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/26/22 16:17	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/26/22 16:17	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/26/22 16:17	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/26/22 16:17	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/26/22 16:17	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/26/22 16:17	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/26/22 16:17	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/26/22 16:17	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/26/22 16:17	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/26/22 16:17	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/26/22 16:17	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/26/22 16:17	1
cis-1,2-Dichloroethene	**10**		2.0	1.0	0.25	ug/L		10/26/22 16:17	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/26/22 16:17	1
1,2-Dichloroethene, Total	**10**		2.0	1.0	0.37	ug/L		10/26/22 16:17	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/26/22 16:17	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/26/22 16:17	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/26/22 16:17	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/26/22 16:17	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/26/22 16:17	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/26/22 16:17	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/26/22 16:17	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/26/22 16:17	1
Hexachlorobutadiene	1.0	U Q	5.0	1.0	0.22	ug/L		10/26/22 16:17	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/26/22 16:17	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/26/22 16:17	1
4-Isopropyltoluene	**0.60**	**J**	2.0	1.0	0.44	ug/L		10/26/22 16:17	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/26/22 16:17	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/26/22 16:17	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/26/22 16:17	1
Naphthalene	5.0	U Q	10	5.0	2.4	ug/L		10/26/22 16:17	1

Client Sample ID: G6M-13-01X-FAL22
Lab Sample ID: 680-223156-15

Date Collected: 10/12/22 14:04
Matrix: Water
Date Received: 10/13/22 10:00

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/26/22 16:17	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/26/22 16:17	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/26/22 16:17	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/26/22 16:17	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/26/22 16:17	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/26/22 16:17	1
1,2,3-Trichlorobenzene	2.0	U Q	5.0	2.0	0.81	ug/L		10/26/22 16:17	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/26/22 16:17	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/26/22 16:17	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/26/22 16:17	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/26/22 16:17	1
Trichlorofluoromethane	1.0	U Q	2.0	1.0	0.33	ug/L		10/26/22 16:17	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/26/22 16:17	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/26/22 16:17	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/26/22 16:17	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/26/22 16:17	1
Vinyl chloride	**3.8**		2.0	1.0	0.40	ug/L		10/26/22 16:17	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/26/22 16:17	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/26/22 16:17	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/26/22 16:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*106*		*89 - 112*		*10/26/22 16:17*	*1*
1,2-Dichloroethane-d4 (Surr)	*113*		*81 - 118*		*10/26/22 16:17*	*1*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*		*10/26/22 16:17*	*1*
Dibromofluoromethane (Surr)	*110*		*80 - 119*		*10/26/22 16:17*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**0.57**	**J**	1.1	0.76	0.30	ug/L		10/26/22 17:07	1
Ethylene	**2.7**		1.0	0.71	0.31	ug/L		10/26/22 17:07	1
Methane (TCD)	**910**		390	77	39	ug/L		10/26/22 17:07	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**7.1**		1.0	1.0	0.40	mg/L		10/29/22 17:40	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**8000**		100	50	20	ug/L		10/17/22 16:14	1
Manganese	**8500**	**J1**	10	5.0	1.3	ug/L		10/17/22 16:14	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		10/17/22 15:11	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity (SM 2320B-2011)	**180**		5.0	5.0	2.2	mg/L		10/18/22 22:30	1

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: G6M-13-01X-FAL22
Date Collected: 10/12/22 14:04
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-15
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N (MCAWW 353.2-1993 R2.0)	0.025	U	0.050	0.025	0.010	mg/L		10/20/22 13:31	1
Sulfide (SW846 9034)	1.8	U	2.7	1.8	0.89	mg/L		10/17/22 13:48	1
Total Organic Carbon (SW846 9060)	**1.9**		1.0	1.0	0.50	mg/L		10/26/22 21:37	1
Total Organic Carbon - Quad (SW846 9060)	**1.9**		1.0	1.0	0.50	mg/L		10/26/22 21:37	1

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: G6M-13-04X-FAL22

Date Collected: 10/12/22 13:10
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-16

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		10/25/22 15:44	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/25/22 15:44	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/25/22 15:44	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/25/22 15:44	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/25/22 15:44	1
Bromoform	2.0	U M	2.5	2.0	0.59	ug/L		10/25/22 15:44	1
Bromomethane	10	U	20	10	3.7	ug/L		10/25/22 15:44	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/25/22 15:44	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/25/22 15:44	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/25/22 15:44	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/25/22 15:44	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/25/22 15:44	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/25/22 15:44	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/25/22 15:44	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/25/22 15:44	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/25/22 15:44	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/25/22 15:44	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/25/22 15:44	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/25/22 15:44	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/25/22 15:44	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/25/22 15:44	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 15:44	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/25/22 15:44	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/25/22 15:44	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/25/22 15:44	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/25/22 15:44	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/25/22 15:44	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 15:44	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/25/22 15:44	1
cis-1,2-Dichloroethene	**1.2**	**J**	2.0	1.0	0.25	ug/L		10/25/22 15:44	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/25/22 15:44	1
1,2-Dichloroethene, Total	**1.2**	**J**	2.0	1.0	0.37	ug/L		10/25/22 15:44	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 15:44	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/25/22 15:44	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/25/22 15:44	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/25/22 15:44	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/25/22 15:44	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/25/22 15:44	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/25/22 15:44	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/25/22 15:44	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/25/22 15:44	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/25/22 15:44	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/25/22 15:44	1
4-Isopropyltoluene	1.0	U Q	2.0	1.0	0.44	ug/L		10/25/22 15:44	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/25/22 15:44	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/25/22 15:44	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/25/22 15:44	1
Naphthalene	5.0	U Q	10	5.0	2.4	ug/L		10/25/22 15:44	1

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: G6M-13-04X-FAL22

Date Collected: 10/12/22 13:10
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-16

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/25/22 15:44	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/25/22 15:44	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/25/22 15:44	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/25/22 15:44	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/25/22 15:44	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/25/22 15:44	1
1,2,3-Trichlorobenzene	2.0	U Q	5.0	2.0	0.81	ug/L		10/25/22 15:44	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/25/22 15:44	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/25/22 15:44	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/25/22 15:44	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/25/22 15:44	1
Trichlorofluoromethane	1.0	U Q	2.0	1.0	0.33	ug/L		10/25/22 15:44	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/25/22 15:44	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/25/22 15:44	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/25/22 15:44	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/25/22 15:44	1
Vinyl chloride	**0.83**	**J**	2.0	1.0	0.40	ug/L		10/25/22 15:44	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/25/22 15:44	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/25/22 15:44	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/25/22 15:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*111*		*89 - 112*		*10/25/22 15:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*81 - 118*		*10/25/22 15:44*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*10/25/22 15:44*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 119*		*10/25/22 15:44*	*1*

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**68000**		100	50	20	ug/L		10/17/22 16:23	1
Manganese	**8100**		10	5.0	1.3	ug/L		10/17/22 16:23	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**580**		5.0	3.0	0.86	ug/L		10/17/22 15:15	1

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: AOC50-TB-FAL22
Date Collected: 10/12/22 00:00
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-17
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		10/25/22 14:07	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/25/22 14:07	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/25/22 14:07	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/25/22 14:07	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/25/22 14:07	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/25/22 14:07	1
Bromomethane	10	U	20	10	3.7	ug/L		10/25/22 14:07	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/25/22 14:07	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/25/22 14:07	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/25/22 14:07	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/25/22 14:07	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/25/22 14:07	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/25/22 14:07	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/25/22 14:07	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/25/22 14:07	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/25/22 14:07	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/25/22 14:07	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/25/22 14:07	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/25/22 14:07	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/25/22 14:07	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/25/22 14:07	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 14:07	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/25/22 14:07	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/25/22 14:07	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/25/22 14:07	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/25/22 14:07	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/25/22 14:07	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 14:07	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/25/22 14:07	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/25/22 14:07	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/25/22 14:07	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/25/22 14:07	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 14:07	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/25/22 14:07	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/25/22 14:07	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/25/22 14:07	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/25/22 14:07	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/25/22 14:07	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/25/22 14:07	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/25/22 14:07	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/25/22 14:07	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/25/22 14:07	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/25/22 14:07	1
4-Isopropyltoluene	1.0	U Q	2.0	1.0	0.44	ug/L		10/25/22 14:07	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/25/22 14:07	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/25/22 14:07	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/25/22 14:07	1
Naphthalene	5.0	U Q	10	5.0	2.4	ug/L		10/25/22 14:07	1

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: AOC50-TB-FAL22
Date Collected: 10/12/22 00:00
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-17
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/25/22 14:07	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/25/22 14:07	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/25/22 14:07	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/25/22 14:07	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/25/22 14:07	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/25/22 14:07	1
1,2,3-Trichlorobenzene	2.0	U Q	5.0	2.0	0.81	ug/L		10/25/22 14:07	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/25/22 14:07	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/25/22 14:07	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/25/22 14:07	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/25/22 14:07	1
Trichlorofluoromethane	1.0	U Q	2.0	1.0	0.33	ug/L		10/25/22 14:07	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/25/22 14:07	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/25/22 14:07	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/25/22 14:07	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/25/22 14:07	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/25/22 14:07	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/25/22 14:07	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/25/22 14:07	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/25/22 14:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*110*		*89 - 112*		*10/25/22 14:07*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*81 - 118*		*10/25/22 14:07*	*1*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*		*10/25/22 14:07*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 119*		*10/25/22 14:07*	*1*

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: AOC50-RB-FAL22

Date Collected: 10/12/22 10:55
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-18

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	21	J	25	10	3.7	ug/L		10/25/22 14:32	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/25/22 14:32	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/25/22 14:32	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/25/22 14:32	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/25/22 14:32	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/25/22 14:32	1
Bromomethane	10	U	20	10	3.7	ug/L		10/25/22 14:32	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/25/22 14:32	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/25/22 14:32	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/25/22 14:32	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/25/22 14:32	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/25/22 14:32	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/25/22 14:32	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/25/22 14:32	1
Chloroethane	10	U Q	20	10	4.6	ug/L		10/25/22 14:32	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/25/22 14:32	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/25/22 14:32	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/25/22 14:32	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/25/22 14:32	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/25/22 14:32	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/25/22 14:32	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 14:32	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/25/22 14:32	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/25/22 14:32	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/25/22 14:32	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/25/22 14:32	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/25/22 14:32	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 14:32	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/25/22 14:32	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/25/22 14:32	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/25/22 14:32	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/25/22 14:32	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 14:32	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/25/22 14:32	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/25/22 14:32	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/25/22 14:32	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/25/22 14:32	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/25/22 14:32	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/25/22 14:32	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/25/22 14:32	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/25/22 14:32	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/25/22 14:32	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/25/22 14:32	1
4-Isopropyltoluene	1.0	U Q	2.0	1.0	0.44	ug/L		10/25/22 14:32	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/25/22 14:32	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/25/22 14:32	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/25/22 14:32	1
Naphthalene	5.0	U Q	10	5.0	2.4	ug/L		10/25/22 14:32	1

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: AOC50-RB-FAL22

Date Collected: 10/12/22 10:55
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-18

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/25/22 14:32	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/25/22 14:32	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/25/22 14:32	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/25/22 14:32	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/25/22 14:32	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/25/22 14:32	1
1,2,3-Trichlorobenzene	2.0	U Q	5.0	2.0	0.81	ug/L		10/25/22 14:32	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/25/22 14:32	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/25/22 14:32	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/25/22 14:32	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/25/22 14:32	1
Trichlorofluoromethane	1.0	U Q	2.0	1.0	0.33	ug/L		10/25/22 14:32	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/25/22 14:32	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/25/22 14:32	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/25/22 14:32	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/25/22 14:32	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/25/22 14:32	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/25/22 14:32	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/25/22 14:32	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/25/22 14:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*109*		*89 - 112*		*10/25/22 14:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*81 - 118*		*10/25/22 14:32*	*1*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*		*10/25/22 14:32*	*1*
Dibromofluoromethane (Surr)	*109*		*80 - 119*		*10/25/22 14:32*	*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		10/17/22 16:26	1
Manganese	5.0	U	10	5.0	1.3	ug/L		10/17/22 16:26	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		10/17/22 15:18	1

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

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

Lab Sample ID: MB 680-746224/8
Matrix: Water
Analysis Batch: 746224

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		10/21/22 12:56	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 12:56	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/21/22 12:56	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 12:56	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 12:56	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/21/22 12:56	1
Bromomethane	10	U	20	10	3.7	ug/L		10/21/22 12:56	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/21/22 12:56	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/21/22 12:56	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/21/22 12:56	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 12:56	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 12:56	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/21/22 12:56	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/21/22 12:56	1
Chloroethane	10	U	20	10	4.6	ug/L		10/21/22 12:56	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 12:56	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/21/22 12:56	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/21/22 12:56	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 12:56	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/21/22 12:56	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/21/22 12:56	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 12:56	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 12:56	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 12:56	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 12:56	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 12:56	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 12:56	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 12:56	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/21/22 12:56	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 12:56	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 12:56	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/21/22 12:56	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 12:56	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/21/22 12:56	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 12:56	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 12:56	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 12:56	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 12:56	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/21/22 12:56	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 12:56	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/21/22 12:56	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/21/22 12:56	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 12:56	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/21/22 12:56	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/21/22 12:56	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/21/22 12:56	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 12:56	1

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

Lab Sample ID: MB 680-746224/8
Matrix: Water
Analysis Batch: 746224

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/21/22 12:56	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 12:56	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 12:56	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 12:56	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 12:56	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 12:56	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 12:56	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 12:56	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/21/22 12:56	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/21/22 12:56	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/21/22 12:56	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 12:56	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 12:56	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/21/22 12:56	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 12:56	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 12:56	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/21/22 12:56	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 12:56	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 12:56	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 12:56	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 12:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*89 - 112*		*10/21/22 12:56*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*10/21/22 12:56*	*1*
4-Bromofluorobenzene (Surr)	*103*		*85 - 114*		*10/21/22 12:56*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*10/21/22 12:56*	*1*

Lab Sample ID: LCS 680-746224/5
Matrix: Water
Analysis Batch: 746224

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	250	225		ug/L		90	39 - 160
Benzene	50.0	50.9		ug/L		102	79 - 120
Bromobenzene	50.0	49.3		ug/L		99	80 - 120
Chlorobromomethane	50.0	55.2		ug/L		110	78 - 123
Dichlorobromomethane	50.0	54.2		ug/L		108	79 - 125
Bromoform	50.0	48.2		ug/L		96	66 - 130
Bromomethane	50.0	69.9		ug/L		140	53 - 141
2-Butanone (MEK)	250	245		ug/L		98	56 - 143
n-Butylbenzene	50.0	49.2		ug/L		98	75 - 128
sec-Butylbenzene	50.0	52.0		ug/L		104	77 - 126
tert-Butylbenzene	50.0	52.4		ug/L		105	78 - 124
Carbon disulfide	50.0	51.1		ug/L		102	64 - 133
Carbon tetrachloride	50.0	53.2		ug/L		106	72 - 136
Chlorobenzene	50.0	49.0		ug/L		98	82 - 118

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

Lab Sample ID: LCS 680-746224/5
Matrix: Water
Analysis Batch: 746224

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloroethane	50.0	139	Q	ug/L		277	60 - 138
Chloroform	50.0	53.4		ug/L		107	79 - 124
Chloromethane	50.0	51.3		ug/L		103	50 - 139
2-Chlorotoluene	50.0	48.7		ug/L		97	79 - 122
4-Chlorotoluene	50.0	51.5		ug/L		103	78 - 122
Chlorodibromomethane	50.0	54.8		ug/L		110	74 - 126
1,2-Dibromo-3-Chloropropane	50.0	42.7		ug/L		85	62 - 128
Ethylene Dibromide	50.0	53.6		ug/L		107	75 - 127
Dibromomethane	50.0	55.1		ug/L		110	79 - 123
1,2-Dichlorobenzene	50.0	48.7		ug/L		97	80 - 119
1,3-Dichlorobenzene	50.0	48.3		ug/L		97	80 - 119
1,4-Dichlorobenzene	50.0	47.4		ug/L		95	79 - 118
Dichlorodifluoromethane	50.0	50.7		ug/L		101	32 - 152
1,1-Dichloroethane	50.0	51.8		ug/L		104	77 - 125
1,2-Dichloroethane	50.0	55.6		ug/L		111	73 - 128
cis-1,2-Dichloroethene	50.0	52.1		ug/L		104	78 - 123
trans-1,2-Dichloroethene	50.0	53.9		ug/L		108	75 - 124
1,2-Dichloroethene, Total	100	106		ug/L		106	79 - 121
1,1-Dichloroethene	50.0	50.7		ug/L		101	71 - 131
1,2-Dichloropropane	50.0	50.7		ug/L		101	78 - 122
1,3-Dichloropropane	50.0	52.7		ug/L		105	80 - 119
2,2-Dichloropropane	50.0	48.9		ug/L		98	60 - 139
1,1-Dichloropropene	50.0	51.7		ug/L		103	79 - 125
cis-1,3-Dichloropropene	50.0	53.3		ug/L		107	75 - 124
trans-1,3-Dichloropropene	50.0	54.8		ug/L		110	73 - 127
Ethylbenzene	50.0	48.8		ug/L		98	79 - 121
Hexachlorobutadiene	50.0	45.9		ug/L		92	66 - 134
2-Hexanone	250	220		ug/L		88	57 - 139
Isopropylbenzene	50.0	48.8		ug/L		98	72 - 131
4-Isopropyltoluene	50.0	46.8		ug/L		94	77 - 127
Methylene Chloride	50.0	54.2		ug/L		108	74 - 124
4-Methyl-2-pentanone (MIBK)	250	217		ug/L		87	67 - 130
Methyl tert-butyl ether	50.0	52.5		ug/L		105	71 - 124
Naphthalene	50.0	45.4		ug/L		91	61 - 128
N-Propylbenzene	50.0	49.5		ug/L		99	76 - 126
Styrene	50.0	53.3		ug/L		107	78 - 123
1,1,1,2-Tetrachloroethane	50.0	49.9		ug/L		100	78 - 124
1,1,2,2-Tetrachloroethane	50.0	48.3		ug/L		97	71 - 121
Tetrachloroethene	50.0	49.9		ug/L		100	74 - 129
Toluene	50.0	50.4		ug/L		101	80 - 121
1,2,3-Trichlorobenzene	50.0	48.3		ug/L		97	69 - 129
1,2,4-Trichlorobenzene	50.0	48.1		ug/L		96	69 - 130
1,1,1-Trichloroethane	50.0	50.7		ug/L		101	74 - 131
1,1,2-Trichloroethane	50.0	50.0		ug/L		100	80 - 119
Trichloroethene	50.0	53.6		ug/L		107	79 - 123
Trichlorofluoromethane	50.0	58.1		ug/L		116	65 - 141
1,2,3-Trichloropropane	50.0	49.0		ug/L		98	73 - 122
1,2,4-Trimethylbenzene	50.0	48.9		ug/L		98	76 - 124

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

Lab Sample ID: LCS 680-746224/5
Matrix: Water
Analysis Batch: 746224

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,3,5-Trimethylbenzene	50.0	52.2		ug/L		104	75 - 124
Vinyl acetate	100	121		ug/L		121	54 - 146
Vinyl chloride	50.0	52.1		ug/L		104	58 - 137
o-Xylene	50.0	49.2		ug/L		98	78 - 122
m-Xylene & p-Xylene	50.0	49.3		ug/L		99	80 - 121
Xylenes, Total	100	98.5		ug/L		99	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*113*	*Q*	*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*110*		*81 - 118*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*
Dibromofluoromethane (Surr)	*113*		*80 - 119*

Lab Sample ID: MB 680-746246/9
Matrix: Water
Analysis Batch: 746246

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		10/21/22 13:39	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 13:39	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/21/22 13:39	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 13:39	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 13:39	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/21/22 13:39	1
Bromomethane	10	U	20	10	3.7	ug/L		10/21/22 13:39	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/21/22 13:39	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/21/22 13:39	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/21/22 13:39	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 13:39	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 13:39	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/21/22 13:39	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/21/22 13:39	1
Chloroethane	10	U	20	10	4.6	ug/L		10/21/22 13:39	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 13:39	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/21/22 13:39	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/21/22 13:39	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 13:39	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/21/22 13:39	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/21/22 13:39	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 13:39	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 13:39	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 13:39	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 13:39	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/21/22 13:39	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 13:39	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 13:39	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/21/22 13:39	1

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

Lab Sample ID: MB 680-746246/9
Matrix: Water
Analysis Batch: 746246

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 13:39	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/21/22 13:39	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/21/22 13:39	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 13:39	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/21/22 13:39	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 13:39	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 13:39	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 13:39	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 13:39	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/21/22 13:39	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 13:39	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/21/22 13:39	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/21/22 13:39	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 13:39	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/21/22 13:39	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/21/22 13:39	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/21/22 13:39	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 13:39	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/21/22 13:39	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/21/22 13:39	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/21/22 13:39	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/21/22 13:39	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 13:39	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/21/22 13:39	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/21/22 13:39	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/21/22 13:39	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/21/22 13:39	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/21/22 13:39	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/21/22 13:39	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/21/22 13:39	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/21/22 13:39	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/21/22 13:39	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/21/22 13:39	1
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/21/22 13:39	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/21/22 13:39	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/21/22 13:39	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/21/22 13:39	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 13:39	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/21/22 13:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*107*		*89 - 112*		*10/21/22 13:39*	*1*
1,2-Dichloroethane-d4 (Surr)	*91*		*81 - 118*		*10/21/22 13:39*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*10/21/22 13:39*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 119*		*10/21/22 13:39*	*1*

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

Lab Sample ID: LCS 680-746246/5
Matrix: Water
Analysis Batch: 746246

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	250	248		ug/L		99	39 - 160
Benzene	50.0	50.2		ug/L		100	79 - 120
Bromobenzene	50.0	48.5		ug/L		97	80 - 120
Chlorobromomethane	50.0	52.2		ug/L		104	78 - 123
Dichlorobromomethane	50.0	53.8		ug/L		108	79 - 125
Bromoform	50.0	51.2	J1	ug/L		102	66 - 130
Bromomethane	50.0	55.5		ug/L		111	53 - 141
2-Butanone (MEK)	250	240		ug/L		96	56 - 143
n-Butylbenzene	50.0	53.9		ug/L		108	75 - 128
sec-Butylbenzene	50.0	49.0		ug/L		98	77 - 126
tert-Butylbenzene	50.0	48.4		ug/L		97	78 - 124
Carbon disulfide	50.0	58.4		ug/L		117	64 - 133
Carbon tetrachloride	50.0	53.7		ug/L		107	72 - 136
Chlorobenzene	50.0	50.5		ug/L		101	82 - 118
Chloroethane	50.0	80.3	Q	ug/L		161	60 - 138
Chloroform	50.0	51.7		ug/L		103	79 - 124
Chloromethane	50.0	52.3		ug/L		105	50 - 139
2-Chlorotoluene	50.0	47.7		ug/L		95	79 - 122
4-Chlorotoluene	50.0	47.0		ug/L		94	78 - 122
Chlorodibromomethane	50.0	57.8		ug/L		116	74 - 126
1,2-Dibromo-3-Chloropropane	50.0	52.6		ug/L		105	62 - 128
Ethylene Dibromide	50.0	49.3		ug/L		99	75 - 127
Dibromomethane	50.0	51.3		ug/L		103	79 - 123
1,2-Dichlorobenzene	50.0	49.6		ug/L		99	80 - 119
1,3-Dichlorobenzene	50.0	50.1		ug/L		100	80 - 119
1,4-Dichlorobenzene	50.0	49.1		ug/L		98	79 - 118
Dichlorodifluoromethane	50.0	45.3		ug/L		91	32 - 152
1,1-Dichloroethane	50.0	51.2		ug/L		102	77 - 125
1,2-Dichloroethane	50.0	50.1		ug/L		100	73 - 128
cis-1,2-Dichloroethene	50.0	50.3		ug/L		101	78 - 123
trans-1,2-Dichloroethene	50.0	51.3		ug/L		103	75 - 124
1,2-Dichloroethene, Total	100	102		ug/L		102	79 - 121
1,1-Dichloroethene	50.0	53.4		ug/L		107	71 - 131
1,2-Dichloropropane	50.0	52.3		ug/L		105	78 - 122
1,3-Dichloropropane	50.0	48.5		ug/L		97	80 - 119
2,2-Dichloropropane	50.0	51.7		ug/L		103	60 - 139
1,1-Dichloropropene	50.0	51.6		ug/L		103	79 - 125
cis-1,3-Dichloropropene	50.0	53.2		ug/L		106	75 - 124
trans-1,3-Dichloropropene	50.0	53.9		ug/L		108	73 - 127
Ethylbenzene	50.0	51.5		ug/L		103	79 - 121
Hexachlorobutadiene	50.0	55.9		ug/L		112	66 - 134
2-Hexanone	250	222		ug/L		89	57 - 139
Isopropylbenzene	50.0	49.5		ug/L		99	72 - 131
4-Isopropyltoluene	50.0	52.1		ug/L		104	77 - 127
Methylene Chloride	50.0	51.7		ug/L		103	74 - 124
4-Methyl-2-pentanone (MIBK)	250	232		ug/L		93	67 - 130
Methyl tert-butyl ether	50.0	49.7		ug/L		99	71 - 124

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

Lab Sample ID: LCS 680-746246/5
Matrix: Water
Analysis Batch: 746246

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Naphthalene	50.0	53.2		ug/L		106	61 - 128
N-Propylbenzene	50.0	49.5		ug/L		99	76 - 126
Styrene	50.0	50.4		ug/L		101	78 - 123
1,1,1,2-Tetrachloroethane	50.0	52.9		ug/L		106	78 - 124
1,1,2,2-Tetrachloroethane	50.0	45.1		ug/L		90	71 - 121
Tetrachloroethene	50.0	49.5		ug/L		99	74 - 129
Toluene	50.0	51.1		ug/L		102	80 - 121
1,2,3-Trichlorobenzene	50.0	52.3		ug/L		105	69 - 129
1,2,4-Trichlorobenzene	50.0	51.2		ug/L		102	69 - 130
1,1,1-Trichloroethane	50.0	53.0		ug/L		106	74 - 131
1,1,2-Trichloroethane	50.0	49.2		ug/L		98	80 - 119
Trichloroethene	50.0	53.0		ug/L		106	79 - 123
Trichlorofluoromethane	50.0	53.5		ug/L		107	65 - 141
1,2,3-Trichloropropane	50.0	47.1		ug/L		94	73 - 122
1,2,4-Trimethylbenzene	50.0	50.3		ug/L		101	76 - 124
1,3,5-Trimethylbenzene	50.0	50.1		ug/L		100	75 - 124
Vinyl acetate	100	89.0		ug/L		89	54 - 146
Vinyl chloride	50.0	48.4		ug/L		97	58 - 137
o-Xylene	50.0	50.3		ug/L		101	78 - 122
m-Xylene & p-Xylene	50.0	49.9		ug/L		100	80 - 121
Xylenes, Total	100	100		ug/L		100	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*106*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*100*		*81 - 118*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*
Dibromofluoromethane (Surr)	*103*		*80 - 119*

Lab Sample ID: MB 680-746807/9
Matrix: Water
Analysis Batch: 746807

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		10/25/22 13:43	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/25/22 13:43	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/25/22 13:43	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/25/22 13:43	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/25/22 13:43	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/25/22 13:43	1
Bromomethane	10	U	20	10	3.7	ug/L		10/25/22 13:43	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/25/22 13:43	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/25/22 13:43	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/25/22 13:43	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/25/22 13:43	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/25/22 13:43	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/25/22 13:43	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/25/22 13:43	1

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

Lab Sample ID: MB 680-746807/9
Matrix: Water
Analysis Batch: 746807

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloroethane	10	U	20	10	4.6	ug/L		10/25/22 13:43	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/25/22 13:43	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/25/22 13:43	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/25/22 13:43	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/25/22 13:43	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/25/22 13:43	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/25/22 13:43	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 13:43	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/25/22 13:43	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/25/22 13:43	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/25/22 13:43	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/25/22 13:43	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/25/22 13:43	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 13:43	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/25/22 13:43	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/25/22 13:43	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/25/22 13:43	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/25/22 13:43	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 13:43	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/25/22 13:43	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/25/22 13:43	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/25/22 13:43	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/25/22 13:43	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/25/22 13:43	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/25/22 13:43	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/25/22 13:43	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/25/22 13:43	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/25/22 13:43	1
Isopropylbenzene	0.338	J	2.0	1.0	0.26	ug/L		10/25/22 13:43	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/25/22 13:43	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/25/22 13:43	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/25/22 13:43	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/25/22 13:43	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/25/22 13:43	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/25/22 13:43	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/25/22 13:43	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/25/22 13:43	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/25/22 13:43	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/25/22 13:43	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/25/22 13:43	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/25/22 13:43	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/25/22 13:43	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/25/22 13:43	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/25/22 13:43	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/25/22 13:43	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 13:43	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/25/22 13:43	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/25/22 13:43	1

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

Lab Sample ID: MB 680-746807/9
Matrix: Water
Analysis Batch: 746807

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/25/22 13:43	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/25/22 13:43	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/25/22 13:43	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/25/22 13:43	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/25/22 13:43	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/25/22 13:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*109*		*89 - 112*		*10/25/22 13:43*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*81 - 118*		*10/25/22 13:43*	*1*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*		*10/25/22 13:43*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*10/25/22 13:43*	*1*

Lab Sample ID: LCS 680-746807/5
Matrix: Water
Analysis Batch: 746807

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	250	278		ug/L		111	39 - 160
Benzene	50.0	49.3		ug/L		99	79 - 120
Bromobenzene	50.0	49.9		ug/L		100	80 - 120
Chlorobromomethane	50.0	53.4		ug/L		107	78 - 123
Dichlorobromomethane	50.0	54.7		ug/L		109	79 - 125
Bromoform	50.0	53.2	J1	ug/L		106	66 - 130
Bromomethane	50.0	62.5		ug/L		125	53 - 141
2-Butanone (MEK)	250	262		ug/L		105	56 - 143
n-Butylbenzene	50.0	51.3		ug/L		103	75 - 128
sec-Butylbenzene	50.0	49.5		ug/L		99	77 - 126
tert-Butylbenzene	50.0	50.1		ug/L		100	78 - 124
Carbon disulfide	50.0	56.8		ug/L		114	64 - 133
Carbon tetrachloride	50.0	57.9		ug/L		116	72 - 136
Chlorobenzene	50.0	49.0		ug/L		98	82 - 118
Chloroethane	50.0	91.4	Q	ug/L		183	60 - 138
Chloroform	50.0	53.1		ug/L		106	79 - 124
Chloromethane	50.0	47.1		ug/L		94	50 - 139
2-Chlorotoluene	50.0	47.5		ug/L		95	79 - 122
4-Chlorotoluene	50.0	47.0		ug/L		94	78 - 122
Chlorodibromomethane	50.0	59.3		ug/L		119	74 - 126
1,2-Dibromo-3-Chloropropane	50.0	58.3		ug/L		117	62 - 128
Ethylene Dibromide	50.0	50.4		ug/L		101	75 - 127
Dibromomethane	50.0	51.9		ug/L		104	79 - 123
1,2-Dichlorobenzene	50.0	49.2		ug/L		98	80 - 119
1,3-Dichlorobenzene	50.0	48.6		ug/L		97	80 - 119
1,4-Dichlorobenzene	50.0	47.9		ug/L		96	79 - 118
Dichlorodifluoromethane	50.0	48.9		ug/L		98	32 - 152
1,1-Dichloroethane	50.0	52.7		ug/L		105	77 - 125
1,2-Dichloroethane	50.0	53.1		ug/L		106	73 - 128

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

Lab Sample ID: LCS 680-746807/5
Matrix: Water
Analysis Batch: 746807

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
cis-1,2-Dichloroethene	50.0	52.0		ug/L		104	78 - 123
trans-1,2-Dichloroethene	50.0	53.2		ug/L		106	75 - 124
1,2-Dichloroethene, Total	100	105		ug/L		105	79 - 121
1,1-Dichloroethene	50.0	54.8		ug/L		110	71 - 131
1,2-Dichloropropane	50.0	50.1		ug/L		100	78 - 122
1,3-Dichloropropane	50.0	48.5		ug/L		97	80 - 119
2,2-Dichloropropane	50.0	53.2		ug/L		106	60 - 139
1,1-Dichloropropene	50.0	52.3		ug/L		105	79 - 125
cis-1,3-Dichloropropene	50.0	52.8		ug/L		106	75 - 124
trans-1,3-Dichloropropene	50.0	54.4		ug/L		109	73 - 127
Ethylbenzene	50.0	50.4		ug/L		101	79 - 121
Hexachlorobutadiene	50.0	58.5		ug/L		117	66 - 134
2-Hexanone	250	257		ug/L		103	57 - 139
Isopropylbenzene	50.0	50.6		ug/L		101	72 - 131
4-Isopropyltoluene	50.0	50.6		ug/L		101	77 - 127
Methylene Chloride	50.0	51.1		ug/L		102	74 - 124
4-Methyl-2-pentanone (MIBK)	250	259		ug/L		103	67 - 130
Methyl tert-butyl ether	50.0	52.9		ug/L		106	71 - 124
Naphthalene	50.0	64.3	Q	ug/L		129	61 - 128
N-Propylbenzene	50.0	50.1		ug/L		100	76 - 126
Styrene	50.0	50.7		ug/L		101	78 - 123
1,1,1,2-Tetrachloroethane	50.0	52.8		ug/L		106	78 - 124
1,1,2,2-Tetrachloroethane	50.0	47.8		ug/L		96	71 - 121
Tetrachloroethene	50.0	50.8		ug/L		102	74 - 129
Toluene	50.0	50.4		ug/L		101	80 - 121
1,2,3-Trichlorobenzene	50.0	67.7	Q	ug/L		135	69 - 129
1,2,4-Trichlorobenzene	50.0	57.5		ug/L		115	69 - 130
1,1,1-Trichloroethane	50.0	56.2		ug/L		112	74 - 131
1,1,2-Trichloroethane	50.0	48.5		ug/L		97	80 - 119
Trichloroethene	50.0	52.5		ug/L		105	79 - 123
Trichlorofluoromethane	50.0	63.8		ug/L		128	65 - 141
1,2,3-Trichloropropane	50.0	49.8		ug/L		100	73 - 122
1,2,4-Trimethylbenzene	50.0	51.8		ug/L		104	76 - 124
1,3,5-Trimethylbenzene	50.0	51.1		ug/L		102	75 - 124
Vinyl acetate	100	107		ug/L		107	54 - 146
Vinyl chloride	50.0	55.5		ug/L		111	58 - 137
o-Xylene	50.0	49.5		ug/L		99	78 - 122
m-Xylene & p-Xylene	50.0	49.1		ug/L		98	80 - 121
Xylenes, Total	100	98.6		ug/L		99	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*103*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*107*		*81 - 118*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*
Dibromofluoromethane (Surr)	*106*		*80 - 119*

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

Lab Sample ID: LCSD 680-746807/6
Matrix: Water
Analysis Batch: 746807

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	286		ug/L		114	39 - 160	3	20
Benzene			50.0	51.2		ug/L		102	79 - 120	4	20
Bromobenzene			50.0	50.4		ug/L		101	80 - 120	1	20
Chlorobromomethane			50.0	55.0		ug/L		110	78 - 123	3	20
Dichlorobromomethane			50.0	57.3		ug/L		115	79 - 125	5	20
Bromoform			50.0	55.5	J1	ug/L		111	66 - 130	4	20
Bromomethane			50.0	63.8		ug/L		128	53 - 141	2	20
2-Butanone (MEK)			250	265		ug/L		106	56 - 143	1	20
n-Butylbenzene			50.0	54.3		ug/L		109	75 - 128	6	20
sec-Butylbenzene			50.0	50.3		ug/L		101	77 - 126	2	20
tert-Butylbenzene			50.0	49.8		ug/L		100	78 - 124	1	20
Carbon disulfide			50.0	58.2		ug/L		116	64 - 133	3	20
Carbon tetrachloride			50.0	59.9		ug/L		120	72 - 136	3	20
Chlorobenzene			50.0	49.9		ug/L		100	82 - 118	2	20
Chloroethane			50.0	90.4	Q	ug/L		181	60 - 138	1	20
Chloroform			50.0	55.6		ug/L		111	79 - 124	5	20
Chloromethane			50.0	45.6		ug/L		91	50 - 139	3	20
2-Chlorotoluene			50.0	48.3		ug/L		97	79 - 122	2	20
4-Chlorotoluene			50.0	48.7		ug/L		97	78 - 122	3	20
Chlorodibromomethane			50.0	61.3		ug/L		123	74 - 126	3	20
1,2-Dibromo-3-Chloropropane			50.0	61.3		ug/L		123	62 - 128	5	20
Ethylene Dibromide			50.0	52.5		ug/L		105	75 - 127	4	20
Dibromomethane			50.0	54.0		ug/L		108	79 - 123	4	20
1,2-Dichlorobenzene			50.0	51.3		ug/L		103	80 - 119	4	20
1,3-Dichlorobenzene			50.0	50.8		ug/L		102	80 - 119	4	20
1,4-Dichlorobenzene			50.0	50.2		ug/L		100	79 - 118	5	20
Dichlorodifluoromethane			50.0	48.6		ug/L		97	32 - 152	1	20
1,1-Dichloroethane			50.0	54.8		ug/L		110	77 - 125	4	20
1,2-Dichloroethane			50.0	56.1		ug/L		112	73 - 128	5	20
cis-1,2-Dichloroethene			50.0	53.1		ug/L		106	78 - 123	2	20
trans-1,2-Dichloroethene			50.0	54.0		ug/L		108	75 - 124	1	20
1,2-Dichloroethene, Total			100	107		ug/L		107	79 - 121	2	20
1,1-Dichloroethene			50.0	58.5		ug/L		117	71 - 131	7	20
1,2-Dichloropropane			50.0	52.2		ug/L		104	78 - 122	4	20
1,3-Dichloropropane			50.0	50.7		ug/L		101	80 - 119	4	20
2,2-Dichloropropane			50.0	54.8		ug/L		110	60 - 139	3	20
1,1-Dichloropropene			50.0	53.9		ug/L		108	79 - 125	3	20
cis-1,3-Dichloropropene			50.0	54.8		ug/L		110	75 - 124	4	20
trans-1,3-Dichloropropene			50.0	55.9		ug/L		112	73 - 127	3	20
Ethylbenzene			50.0	51.7		ug/L		103	79 - 121	3	20
Hexachlorobutadiene			50.0	58.7		ug/L		117	66 - 134	0	20
2-Hexanone			250	265		ug/L		106	57 - 139	3	20
Isopropylbenzene			50.0	51.1		ug/L		102	72 - 131	1	20
4-Isopropyltoluene			50.0	52.7		ug/L		105	77 - 127	4	20
Methylene Chloride			50.0	54.9		ug/L		110	74 - 124	7	20
4-Methyl-2-pentanone (MIBK)			250	269		ug/L		107	67 - 130	4	20
Methyl tert-butyl ether			50.0	55.7		ug/L		111	71 - 124	5	20

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

Lab Sample ID: LCSD 680-746807/6
Matrix: Water
Analysis Batch: 746807

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
Naphthalene			50.0	70.3	Q	ug/L		141	61 - 128	9	20
N-Propylbenzene			50.0	50.6		ug/L		101	76 - 126	1	20
Styrene			50.0	51.3		ug/L		103	78 - 123	1	20
1,1,1,2-Tetrachloroethane			50.0	55.8		ug/L		112	78 - 124	6	20
1,1,2,2-Tetrachloroethane			50.0	49.1		ug/L		98	71 - 121	3	20
Tetrachloroethene			50.0	52.0		ug/L		104	74 - 129	2	20
Toluene			50.0	51.7		ug/L		103	80 - 121	2	20
1,2,3-Trichlorobenzene			50.0	71.3	Q	ug/L		143	69 - 129	5	20
1,2,4-Trichlorobenzene			50.0	62.7		ug/L		125	69 - 130	9	20
1,1,1-Trichloroethane			50.0	58.5		ug/L		117	74 - 131	4	20
1,1,2-Trichloroethane			50.0	50.7		ug/L		101	80 - 119	4	20
Trichloroethene			50.0	53.8		ug/L		108	79 - 123	2	20
Trichlorofluoromethane			50.0	63.4		ug/L		127	65 - 141	1	20
1,2,3-Trichloropropane			50.0	51.9		ug/L		104	73 - 122	4	20
1,2,4-Trimethylbenzene			50.0	52.8		ug/L		106	76 - 124	2	20
1,3,5-Trimethylbenzene			50.0	52.3		ug/L		105	75 - 124	2	20
Vinyl acetate			100	110		ug/L		110	54 - 146	3	20
Vinyl chloride			50.0	54.4		ug/L		109	58 - 137	2	20
o-Xylene			50.0	51.1		ug/L		102	78 - 122	3	20
m-Xylene & p-Xylene			50.0	51.0		ug/L		102	80 - 121	4	20
Xylenes, Total			100	102		ug/L		102	79 - 121	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*106*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*113*		*81 - 118*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*
Dibromofluoromethane (Surr)	*112*		*80 - 119*

Lab Sample ID: MB 680-746813/8
Matrix: Water
Analysis Batch: 746813

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		10/25/22 13:05	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/25/22 13:05	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/25/22 13:05	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/25/22 13:05	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/25/22 13:05	1
Bromoform	2.0	U	2.5	2.0	0.59	ug/L		10/25/22 13:05	1
Bromomethane	10	U	20	10	3.7	ug/L		10/25/22 13:05	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/25/22 13:05	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/25/22 13:05	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/25/22 13:05	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/25/22 13:05	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/25/22 13:05	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/25/22 13:05	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/25/22 13:05	1

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

Lab Sample ID: MB 680-746813/8
Matrix: Water
Analysis Batch: 746813

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloroethane	10	U	20	10	4.6	ug/L		10/25/22 13:05	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/25/22 13:05	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/25/22 13:05	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/25/22 13:05	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/25/22 13:05	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/25/22 13:05	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/25/22 13:05	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 13:05	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/25/22 13:05	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/25/22 13:05	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/25/22 13:05	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/25/22 13:05	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/25/22 13:05	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 13:05	1
1,2-Dichloroethane	1.0	U	2.0	1.0	0.25	ug/L		10/25/22 13:05	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/25/22 13:05	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/25/22 13:05	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/25/22 13:05	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 13:05	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/25/22 13:05	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/25/22 13:05	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/25/22 13:05	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/25/22 13:05	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/25/22 13:05	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/25/22 13:05	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/25/22 13:05	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/25/22 13:05	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/25/22 13:05	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/25/22 13:05	1
4-Isopropyltoluene	1.0	U	2.0	1.0	0.44	ug/L		10/25/22 13:05	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/25/22 13:05	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/25/22 13:05	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/25/22 13:05	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/25/22 13:05	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/25/22 13:05	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/25/22 13:05	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/25/22 13:05	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/25/22 13:05	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/25/22 13:05	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/25/22 13:05	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/25/22 13:05	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/25/22 13:05	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/25/22 13:05	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/25/22 13:05	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/25/22 13:05	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/25/22 13:05	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/25/22 13:05	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/25/22 13:05	1

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

Lab Sample ID: MB 680-746813/8
Matrix: Water
Analysis Batch: 746813

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/25/22 13:05	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/25/22 13:05	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/25/22 13:05	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/25/22 13:05	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/25/22 13:05	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/25/22 13:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*89 - 112*		*10/25/22 13:05*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*10/25/22 13:05*	*1*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*		*10/25/22 13:05*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*10/25/22 13:05*	*1*

Lab Sample ID: LCS 680-746813/4
Matrix: Water
Analysis Batch: 746813

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	250	227		ug/L		91	39 - 160
Benzene	50.0	45.0		ug/L		90	79 - 120
Bromobenzene	50.0	47.8		ug/L		96	80 - 120
Chlorobromomethane	50.0	49.2		ug/L		98	78 - 123
Dichlorobromomethane	50.0	47.9		ug/L		96	79 - 125
Bromoform	50.0	47.2		ug/L		94	66 - 130
Bromomethane	50.0	73.8	Q	ug/L		148	53 - 141
2-Butanone (MEK)	250	247		ug/L		99	56 - 143
n-Butylbenzene	50.0	45.8		ug/L		92	75 - 128
sec-Butylbenzene	50.0	48.6		ug/L		97	77 - 126
tert-Butylbenzene	50.0	48.6		ug/L		97	78 - 124
Carbon disulfide	50.0	45.0		ug/L		90	64 - 133
Carbon tetrachloride	50.0	46.6		ug/L		93	72 - 136
Chlorobenzene	50.0	47.0		ug/L		94	82 - 118
Chloroethane	50.0	132	Q	ug/L		263	60 - 138
Chloroform	50.0	47.5		ug/L		95	79 - 124
Chloromethane	50.0	46.6		ug/L		93	50 - 139
2-Chlorotoluene	50.0	46.6		ug/L		93	79 - 122
4-Chlorotoluene	50.0	48.2		ug/L		96	78 - 122
Chlorodibromomethane	50.0	50.9		ug/L		102	74 - 126
1,2-Dibromo-3-Chloropropane	50.0	43.5		ug/L		87	62 - 128
Ethylene Dibromide	50.0	49.4		ug/L		99	75 - 127
Dibromomethane	50.0	49.6		ug/L		99	79 - 123
1,2-Dichlorobenzene	50.0	47.2		ug/L		94	80 - 119
1,3-Dichlorobenzene	50.0	47.1		ug/L		94	80 - 119
1,4-Dichlorobenzene	50.0	46.1		ug/L		92	79 - 118
Dichlorodifluoromethane	50.0	41.0		ug/L		82	32 - 152
1,1-Dichloroethane	50.0	45.9		ug/L		92	77 - 125
1,2-Dichloroethane	50.0	49.1		ug/L		98	73 - 128

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

Lab Sample ID: LCS 680-746813/4
Matrix: Water
Analysis Batch: 746813

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
cis-1,2-Dichloroethene	50.0	45.8		ug/L		92	78 - 123
trans-1,2-Dichloroethene	50.0	47.3		ug/L		95	75 - 124
1,2-Dichloroethene, Total	100	93.1		ug/L		93	79 - 121
1,1-Dichloroethene	50.0	45.2		ug/L		90	71 - 131
1,2-Dichloropropane	50.0	45.1		ug/L		90	78 - 122
1,3-Dichloropropane	50.0	47.6		ug/L		95	80 - 119
2,2-Dichloropropane	50.0	43.5		ug/L		87	60 - 139
1,1-Dichloropropene	50.0	44.7		ug/L		89	79 - 125
cis-1,3-Dichloropropene	50.0	47.4		ug/L		95	75 - 124
trans-1,3-Dichloropropene	50.0	49.1		ug/L		98	73 - 127
Ethylbenzene	50.0	46.2		ug/L		92	79 - 121
Hexachlorobutadiene	50.0	41.8		ug/L		84	66 - 134
2-Hexanone	250	211		ug/L		84	57 - 139
Isopropylbenzene	50.0	46.2		ug/L		92	72 - 131
4-Isopropyltoluene	50.0	44.4		ug/L		89	77 - 127
Methylene Chloride	50.0	48.9		ug/L		98	74 - 124
4-Methyl-2-pentanone (MIBK)	250	208		ug/L		83	67 - 130
Methyl tert-butyl ether	50.0	47.7		ug/L		95	71 - 124
Naphthalene	50.0	45.7		ug/L		91	61 - 128
N-Propylbenzene	50.0	46.8		ug/L		94	76 - 126
Styrene	50.0	50.3		ug/L		101	78 - 123
1,1,1,2-Tetrachloroethane	50.0	47.5		ug/L		95	78 - 124
1,1,2,2-Tetrachloroethane	50.0	48.6		ug/L		97	71 - 121
Tetrachloroethene	50.0	44.5		ug/L		89	74 - 129
Toluene	50.0	45.5		ug/L		91	80 - 121
1,2,3-Trichlorobenzene	50.0	45.8		ug/L		92	69 - 129
1,2,4-Trichlorobenzene	50.0	46.1		ug/L		92	69 - 130
1,1,1-Trichloroethane	50.0	44.9		ug/L		90	74 - 131
1,1,2-Trichloroethane	50.0	46.1		ug/L		92	80 - 119
Trichloroethene	50.0	47.1		ug/L		94	79 - 123
Trichlorofluoromethane	50.0	51.4		ug/L		103	65 - 141
1,2,3-Trichloropropane	50.0	49.5		ug/L		99	73 - 122
1,2,4-Trimethylbenzene	50.0	46.0		ug/L		92	76 - 124
1,3,5-Trimethylbenzene	50.0	49.0		ug/L		98	75 - 124
Vinyl acetate	100	110		ug/L		110	54 - 146
Vinyl chloride	50.0	51.4		ug/L		103	58 - 137
o-Xylene	50.0	46.4		ug/L		93	78 - 122
m-Xylene & p-Xylene	50.0	46.6		ug/L		93	80 - 121
Xylenes, Total	100	93.0		ug/L		93	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*101*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*99*		*81 - 118*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*
Dibromofluoromethane (Surr)	*103*		*80 - 119*

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

Lab Sample ID: LCSD 680-746813/5
Matrix: Water
Analysis Batch: 746813

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	223		ug/L		89	39 - 160	2	20
Benzene			50.0	45.1		ug/L		90	79 - 120	0	20
Bromobenzene			50.0	48.3		ug/L		97	80 - 120	1	20
Chlorobromomethane			50.0	48.9		ug/L		98	78 - 123	1	20
Dichlorobromomethane			50.0	48.5		ug/L		97	79 - 125	1	20
Bromoform			50.0	47.4		ug/L		95	66 - 130	0	20
Bromomethane			50.0	71.9	Q	ug/L		144	53 - 141	3	20
2-Butanone (MEK)			250	246		ug/L		98	56 - 143	0	20
n-Butylbenzene			50.0	46.5		ug/L		93	75 - 128	2	20
sec-Butylbenzene			50.0	48.9		ug/L		98	77 - 126	1	20
tert-Butylbenzene			50.0	48.7		ug/L		97	78 - 124	0	20
Carbon disulfide			50.0	45.4		ug/L		91	64 - 133	1	20
Carbon tetrachloride			50.0	47.6		ug/L		95	72 - 136	2	20
Chlorobenzene			50.0	47.0		ug/L		94	82 - 118	0	20
Chloroethane			50.0	134	Q	ug/L		268	60 - 138	2	20
Chloroform			50.0	47.4		ug/L		95	79 - 124	0	20
Chloromethane			50.0	47.1		ug/L		94	50 - 139	1	20
2-Chlorotoluene			50.0	46.0		ug/L		92	79 - 122	1	20
4-Chlorotoluene			50.0	47.6		ug/L		95	78 - 122	1	20
Chlorodibromomethane			50.0	50.1		ug/L		100	74 - 126	2	20
1,2-Dibromo-3-Chloropropane			50.0	44.3		ug/L		89	62 - 128	2	20
Ethylene Dibromide			50.0	49.1		ug/L		98	75 - 127	1	20
Dibromomethane			50.0	49.7		ug/L		99	79 - 123	0	20
1,2-Dichlorobenzene			50.0	46.9		ug/L		94	80 - 119	1	20
1,3-Dichlorobenzene			50.0	46.6		ug/L		93	80 - 119	1	20
1,4-Dichlorobenzene			50.0	45.8		ug/L		92	79 - 118	1	20
Dichlorodifluoromethane			50.0	44.2		ug/L		88	32 - 152	8	20
1,1-Dichloroethane			50.0	46.1		ug/L		92	77 - 125	1	20
1,2-Dichloroethane			50.0	49.1		ug/L		98	73 - 128	0	20
cis-1,2-Dichloroethene			50.0	46.6		ug/L		93	78 - 123	2	20
trans-1,2-Dichloroethene			50.0	48.0		ug/L		96	75 - 124	2	20
1,2-Dichloroethene, Total			100	94.6		ug/L		95	79 - 121	2	20
1,1-Dichloroethene			50.0	45.2		ug/L		90	71 - 131	0	20
1,2-Dichloropropane			50.0	44.7		ug/L		89	78 - 122	1	20
1,3-Dichloropropane			50.0	47.4		ug/L		95	80 - 119	1	20
2,2-Dichloropropane			50.0	44.0		ug/L		88	60 - 139	1	20
1,1-Dichloropropene			50.0	46.1		ug/L		92	79 - 125	3	20
cis-1,3-Dichloropropene			50.0	47.8		ug/L		96	75 - 124	1	20
trans-1,3-Dichloropropene			50.0	48.7		ug/L		97	73 - 127	1	20
Ethylbenzene			50.0	46.3		ug/L		93	79 - 121	0	20
Hexachlorobutadiene			50.0	41.9		ug/L		84	66 - 134	0	20
2-Hexanone			250	210		ug/L		84	57 - 139	0	20
Isopropylbenzene			50.0	46.2		ug/L		92	72 - 131	0	20
4-Isopropyltoluene			50.0	44.4		ug/L		89	77 - 127	0	20
Methylene Chloride			50.0	48.2		ug/L		96	74 - 124	1	20
4-Methyl-2-pentanone (MIBK)			250	207		ug/L		83	67 - 130	1	20
Methyl tert-butyl ether			50.0	47.1		ug/L		94	71 - 124	1	20

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

Lab Sample ID: LCSD 680-746813/5
Matrix: Water
Analysis Batch: 746813

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
Naphthalene			50.0	45.1		ug/L		90	61 - 128	1	20
N-Propylbenzene			50.0	47.2		ug/L		94	76 - 126	1	20
Styrene			50.0	51.1		ug/L		102	78 - 123	2	20
1,1,1,2-Tetrachloroethane			50.0	48.1		ug/L		96	78 - 124	1	20
1,1,2,2-Tetrachloroethane			50.0	48.8		ug/L		98	71 - 121	1	20
Tetrachloroethene			50.0	44.6		ug/L		89	74 - 129	0	20
Toluene			50.0	45.5		ug/L		91	80 - 121	0	20
1,2,3-Trichlorobenzene			50.0	46.0		ug/L		92	69 - 129	0	20
1,2,4-Trichlorobenzene			50.0	45.7		ug/L		91	69 - 130	1	20
1,1,1-Trichloroethane			50.0	45.4		ug/L		91	74 - 131	1	20
1,1,2-Trichloroethane			50.0	45.6		ug/L		91	80 - 119	1	20
Trichloroethene			50.0	47.1		ug/L		94	79 - 123	0	20
Trichlorofluoromethane			50.0	55.0		ug/L		110	65 - 141	7	20
1,2,3-Trichloropropane			50.0	50.2		ug/L		100	73 - 122	1	20
1,2,4-Trimethylbenzene			50.0	46.0		ug/L		92	76 - 124	0	20
1,3,5-Trimethylbenzene			50.0	49.3		ug/L		99	75 - 124	1	20
Vinyl acetate			100	110		ug/L		110	54 - 146	0	20
Vinyl chloride			50.0	52.8		ug/L		106	58 - 137	3	20
o-Xylene			50.0	46.5		ug/L		93	78 - 122	0	20
m-Xylene & p-Xylene			50.0	46.7		ug/L		93	80 - 121	0	20
Xylenes, Total			100	93.2		ug/L		93	79 - 121	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*99*		*81 - 118*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*
Dibromofluoromethane (Surr)	*103*		*80 - 119*

Lab Sample ID: MB 680-747044/10
Matrix: Water
Analysis Batch: 747044

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		10/26/22 14:37	1
Benzene	1.0	U	2.0	1.0	0.27	ug/L		10/26/22 14:37	1
Bromobenzene	0.50	U	1.0	0.50	0.24	ug/L		10/26/22 14:37	1
Chlorobromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/26/22 14:37	1
Dichlorobromomethane	1.0	U	2.0	1.0	0.25	ug/L		10/26/22 14:37	1
Bromoform	2.0	U M	2.5	2.0	0.59	ug/L		10/26/22 14:37	1
Bromomethane	10	U	20	10	3.7	ug/L		10/26/22 14:37	1
2-Butanone (MEK)	20	U	25	20	6.4	ug/L		10/26/22 14:37	1
n-Butylbenzene	2.0	U	2.5	2.0	0.52	ug/L		10/26/22 14:37	1
sec-Butylbenzene	2.0	U	2.5	2.0	0.53	ug/L		10/26/22 14:37	1
tert-Butylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/26/22 14:37	1
Carbon disulfide	1.0	U	2.0	1.0	0.43	ug/L		10/26/22 14:37	1
Carbon tetrachloride	1.0	U	2.0	1.0	0.30	ug/L		10/26/22 14:37	1
Chlorobenzene	0.50	U	1.0	0.50	0.15	ug/L		10/26/22 14:37	1

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

Lab Sample ID: MB 680-747044/10
Matrix: Water
Analysis Batch: 747044

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloroethane	10	U	20	10	4.6	ug/L		10/26/22 14:37	1
Chloroform	1.0	U	2.0	1.0	0.27	ug/L		10/26/22 14:37	1
Chloromethane	2.0	U	2.5	2.0	0.54	ug/L		10/26/22 14:37	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.25	ug/L		10/26/22 14:37	1
4-Chlorotoluene	1.0	U	2.0	1.0	0.41	ug/L		10/26/22 14:37	1
Chlorodibromomethane	1.0	U	2.0	1.0	0.39	ug/L		10/26/22 14:37	1
1,2-Dibromo-3-Chloropropane	5.0	U	10	5.0	1.8	ug/L		10/26/22 14:37	1
Ethylene Dibromide	1.0	U	2.0	1.0	0.33	ug/L		10/26/22 14:37	1
Dibromomethane	1.0	U	2.0	1.0	0.34	ug/L		10/26/22 14:37	1
1,2-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/26/22 14:37	1
1,3-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/26/22 14:37	1
1,4-Dichlorobenzene	1.0	U	2.0	1.0	0.31	ug/L		10/26/22 14:37	1
Dichlorodifluoromethane	1.0	U	2.0	1.0	0.36	ug/L		10/26/22 14:37	1
1,1-Dichloroethane	1.0	U	2.0	1.0	0.33	ug/L		10/26/22 14:37	1
1,2-Dichloroethane	1.0	U M	2.0	1.0	0.25	ug/L		10/26/22 14:37	1
cis-1,2-Dichloroethene	1.0	U	2.0	1.0	0.25	ug/L		10/26/22 14:37	1
trans-1,2-Dichloroethene	1.0	U	2.0	1.0	0.34	ug/L		10/26/22 14:37	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.37	ug/L		10/26/22 14:37	1
1,1-Dichloroethene	1.0	U	2.0	1.0	0.33	ug/L		10/26/22 14:37	1
1,2-Dichloropropane	0.50	U	1.0	0.50	0.22	ug/L		10/26/22 14:37	1
1,3-Dichloropropane	1.0	U	2.0	1.0	0.36	ug/L		10/26/22 14:37	1
2,2-Dichloropropane	1.0	U	2.0	1.0	0.35	ug/L		10/26/22 14:37	1
1,1-Dichloropropene	1.0	U	2.0	1.0	0.28	ug/L		10/26/22 14:37	1
cis-1,3-Dichloropropene	1.0	U	2.0	1.0	0.26	ug/L		10/26/22 14:37	1
trans-1,3-Dichloropropene	1.0	U	2.0	1.0	0.23	ug/L		10/26/22 14:37	1
Ethylbenzene	0.50	U	1.0	0.50	0.20	ug/L		10/26/22 14:37	1
Hexachlorobutadiene	1.0	U	5.0	1.0	0.22	ug/L		10/26/22 14:37	1
2-Hexanone	10	U	20	10	3.2	ug/L		10/26/22 14:37	1
Isopropylbenzene	1.0	U	2.0	1.0	0.26	ug/L		10/26/22 14:37	1
4-Isopropyltoluene	0.696	J	2.0	1.0	0.44	ug/L		10/26/22 14:37	1
Methylene Chloride	10	U	20	10	3.2	ug/L		10/26/22 14:37	1
4-Methyl-2-pentanone (MIBK)	10	U	20	10	2.7	ug/L		10/26/22 14:37	1
Methyl tert-butyl ether	2.0	U	5.0	2.0	0.81	ug/L		10/26/22 14:37	1
Naphthalene	5.0	U	10	5.0	2.4	ug/L		10/26/22 14:37	1
N-Propylbenzene	1.0	U	2.0	1.0	0.41	ug/L		10/26/22 14:37	1
Styrene	1.0	U	2.0	1.0	0.27	ug/L		10/26/22 14:37	1
1,1,1,2-Tetrachloroethane	1.0	U	2.0	1.0	0.36	ug/L		10/26/22 14:37	1
1,1,2,2-Tetrachloroethane	1.0	U	2.0	1.0	0.40	ug/L		10/26/22 14:37	1
Tetrachloroethene	1.0	U	2.0	1.0	0.35	ug/L		10/26/22 14:37	1
Toluene	1.0	U	2.0	1.0	0.25	ug/L		10/26/22 14:37	1
1,2,3-Trichlorobenzene	2.0	U	5.0	2.0	0.81	ug/L		10/26/22 14:37	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	0.53	ug/L		10/26/22 14:37	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	0.21	ug/L		10/26/22 14:37	1
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.32	ug/L		10/26/22 14:37	1
Trichloroethene	0.50	U	1.0	0.50	0.20	ug/L		10/26/22 14:37	1
Trichlorofluoromethane	1.0	U	2.0	1.0	0.33	ug/L		10/26/22 14:37	1
1,2,3-Trichloropropane	1.0	U	2.0	1.0	0.48	ug/L		10/26/22 14:37	1
1,2,4-Trimethylbenzene	1.0	U	2.0	1.0	0.43	ug/L		10/26/22 14:37	1

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

Lab Sample ID: MB 680-747044/10
Matrix: Water
Analysis Batch: 747044

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.28	ug/L		10/26/22 14:37	1
Vinyl acetate	2.0	U	2.5	2.0	0.69	ug/L		10/26/22 14:37	1
Vinyl chloride	1.0	U	2.0	1.0	0.40	ug/L		10/26/22 14:37	1
o-Xylene	1.0	U	2.0	1.0	0.26	ug/L		10/26/22 14:37	1
m-Xylene & p-Xylene	1.0	U	2.0	1.0	0.49	ug/L		10/26/22 14:37	1
Xylenes, Total	1.0	U	2.0	1.0	0.49	ug/L		10/26/22 14:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*106*		*89 - 112*		*10/26/22 14:37*	*1*
1,2-Dichloroethane-d4 (Surr)	*111*		*81 - 118*		*10/26/22 14:37*	*1*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*		*10/26/22 14:37*	*1*
Dibromofluoromethane (Surr)	*110*		*80 - 119*		*10/26/22 14:37*	*1*

Lab Sample ID: LCS 680-747044/5
Matrix: Water
Analysis Batch: 747044

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	250	275		ug/L		110	39 - 160
Benzene	50.0	51.9		ug/L		104	79 - 120
Bromobenzene	50.0	50.7		ug/L		101	80 - 120
Chlorobromomethane	50.0	56.2		ug/L		112	78 - 123
Dichlorobromomethane	50.0	56.5		ug/L		113	79 - 125
Bromoform	50.0	53.2	J1	ug/L		106	66 - 130
Bromomethane	50.0	60.6		ug/L		121	53 - 141
2-Butanone (MEK)	250	254		ug/L		102	56 - 143
n-Butylbenzene	50.0	54.7		ug/L		109	75 - 128
sec-Butylbenzene	50.0	50.6		ug/L		101	77 - 126
tert-Butylbenzene	50.0	50.6		ug/L		101	78 - 124
Carbon disulfide	50.0	63.1		ug/L		126	64 - 133
Carbon tetrachloride	50.0	60.4		ug/L		121	72 - 136
Chlorobenzene	50.0	51.4		ug/L		103	82 - 118
Chloroethane	50.0	87.8	Q	ug/L		176	60 - 138
Chloroform	50.0	54.7		ug/L		109	79 - 124
Chloromethane	50.0	51.4	M	ug/L		103	50 - 139
2-Chlorotoluene	50.0	49.7		ug/L		99	79 - 122
4-Chlorotoluene	50.0	50.0		ug/L		100	78 - 122
Chlorodibromomethane	50.0	59.2		ug/L		118	74 - 126
1,2-Dibromo-3-Chloropropane	50.0	53.0		ug/L		106	62 - 128
Ethylene Dibromide	50.0	51.9		ug/L		104	75 - 127
Dibromomethane	50.0	54.3		ug/L		109	79 - 123
1,2-Dichlorobenzene	50.0	50.6		ug/L		101	80 - 119
1,3-Dichlorobenzene	50.0	50.3		ug/L		101	80 - 119
1,4-Dichlorobenzene	50.0	49.6		ug/L		99	79 - 118
Dichlorodifluoromethane	50.0	46.4		ug/L		93	32 - 152
1,1-Dichloroethane	50.0	53.1		ug/L		106	77 - 125
1,2-Dichloroethane	50.0	55.4		ug/L		111	73 - 128

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

Lab Sample ID: LCS 680-747044/5
Matrix: Water
Analysis Batch: 747044

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
cis-1,2-Dichloroethene	50.0	52.3		ug/L		105	78 - 123
trans-1,2-Dichloroethene	50.0	54.4		ug/L		109	75 - 124
1,2-Dichloroethene, Total	100	107		ug/L		107	79 - 121
1,1-Dichloroethene	50.0	60.2		ug/L		120	71 - 131
1,2-Dichloropropane	50.0	52.0		ug/L		104	78 - 122
1,3-Dichloropropane	50.0	49.5		ug/L		99	80 - 119
2,2-Dichloropropane	50.0	53.8		ug/L		108	60 - 139
1,1-Dichloropropene	50.0	53.7		ug/L		107	79 - 125
cis-1,3-Dichloropropene	50.0	52.4		ug/L		105	75 - 124
trans-1,3-Dichloropropene	50.0	55.9		ug/L		112	73 - 127
Ethylbenzene	50.0	52.3		ug/L		105	79 - 121
Hexachlorobutadiene	50.0	63.6		ug/L		127	66 - 134
2-Hexanone	250	246		ug/L		98	57 - 139
Isopropylbenzene	50.0	52.4		ug/L		105	72 - 131
4-Isopropyltoluene	50.0	54.1		ug/L		108	77 - 127
Methylene Chloride	50.0	53.8		ug/L		108	74 - 124
4-Methyl-2-pentanone (MIBK)	250	248		ug/L		99	67 - 130
Methyl tert-butyl ether	50.0	53.6		ug/L		107	71 - 124
Naphthalene	50.0	68.0	Q	ug/L		136	61 - 128
N-Propylbenzene	50.0	51.1		ug/L		102	76 - 126
Styrene	50.0	51.9		ug/L		104	78 - 123
1,1,1,2-Tetrachloroethane	50.0	55.7		ug/L		111	78 - 124
1,1,2,2-Tetrachloroethane	50.0	46.9		ug/L		94	71 - 121
Tetrachloroethene	50.0	55.8		ug/L		112	74 - 129
Toluene	50.0	52.6		ug/L		105	80 - 121
1,2,3-Trichlorobenzene	50.0	72.5	Q	ug/L		145	69 - 129
1,2,4-Trichlorobenzene	50.0	62.4		ug/L		125	69 - 130
1,1,1-Trichloroethane	50.0	59.4		ug/L		119	74 - 131
1,1,2-Trichloroethane	50.0	49.4		ug/L		99	80 - 119
Trichloroethene	50.0	54.5		ug/L		109	79 - 123
Trichlorofluoromethane	50.0	62.0		ug/L		124	65 - 141
1,2,3-Trichloropropane	50.0	50.5		ug/L		101	73 - 122
1,2,4-Trimethylbenzene	50.0	54.6		ug/L		109	76 - 124
1,3,5-Trimethylbenzene	50.0	53.3		ug/L		107	75 - 124
Vinyl acetate	100	96.3		ug/L		96	54 - 146
Vinyl chloride	50.0	55.6		ug/L		111	58 - 137
o-Xylene	50.0	51.3		ug/L		103	78 - 122
m-Xylene & p-Xylene	50.0	51.6		ug/L		103	80 - 121
Xylenes, Total	100	103		ug/L		103	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*104*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*114*		*81 - 118*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*
Dibromofluoromethane (Surr)	*109*		*80 - 119*

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

Lab Sample ID: LCSD 680-747044/6
Matrix: Water
Analysis Batch: 747044

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	275		ug/L		110	39 - 160	0	20
Benzene			50.0	52.1		ug/L		104	79 - 120	0	20
Bromobenzene			50.0	50.6		ug/L		101	80 - 120	0	20
Chlorobromomethane			50.0	55.2		ug/L		110	78 - 123	2	20
Dichlorobromomethane			50.0	55.4		ug/L		111	79 - 125	2	20
Bromoform			50.0	53.9	J1	ug/L		108	66 - 130	1	20
Bromomethane			50.0	64.6		ug/L		129	53 - 141	6	20
2-Butanone (MEK)			250	253		ug/L		101	56 - 143	0	20
n-Butylbenzene			50.0	54.1		ug/L		108	75 - 128	1	20
sec-Butylbenzene			50.0	50.3		ug/L		101	77 - 126	1	20
tert-Butylbenzene			50.0	49.9		ug/L		100	78 - 124	2	20
Carbon disulfide			50.0	64.5		ug/L		129	64 - 133	2	20
Carbon tetrachloride			50.0	60.9		ug/L		122	72 - 136	1	20
Chlorobenzene			50.0	50.1		ug/L		100	82 - 118	2	20
Chloroethane			50.0	88.3	Q	ug/L		177	60 - 138	0	20
Chloroform			50.0	55.3		ug/L		111	79 - 124	1	20
Chloromethane			50.0	57.1		ug/L		114	50 - 139	11	20
2-Chlorotoluene			50.0	48.5		ug/L		97	79 - 122	3	20
4-Chlorotoluene			50.0	48.6		ug/L		97	78 - 122	3	20
Chlorodibromomethane			50.0	60.1		ug/L		120	74 - 126	2	20
1,2-Dibromo-3-Chloropropane			50.0	56.2		ug/L		112	62 - 128	6	20
Ethylene Dibromide			50.0	52.8		ug/L		106	75 - 127	2	20
Dibromomethane			50.0	54.2		ug/L		108	79 - 123	0	20
1,2-Dichlorobenzene			50.0	51.4		ug/L		103	80 - 119	2	20
1,3-Dichlorobenzene			50.0	50.9		ug/L		102	80 - 119	1	20
1,4-Dichlorobenzene			50.0	49.8		ug/L		100	79 - 118	0	20
Dichlorodifluoromethane			50.0	47.3		ug/L		95	32 - 152	2	20
1,1-Dichloroethane			50.0	53.9		ug/L		108	77 - 125	1	20
1,2-Dichloroethane			50.0	55.4		ug/L		111	73 - 128	0	20
cis-1,2-Dichloroethene			50.0	53.0		ug/L		106	78 - 123	1	20
trans-1,2-Dichloroethene			50.0	56.1		ug/L		112	75 - 124	3	20
1,2-Dichloroethene, Total			100	109		ug/L		109	79 - 121	2	20
1,1-Dichloroethene			50.0	60.9		ug/L		122	71 - 131	1	20
1,2-Dichloropropane			50.0	51.9		ug/L		104	78 - 122	0	20
1,3-Dichloropropane			50.0	49.9		ug/L		100	80 - 119	1	20
2,2-Dichloropropane			50.0	53.7		ug/L		107	60 - 139	0	20
1,1-Dichloropropene			50.0	53.9		ug/L		108	79 - 125	0	20
cis-1,3-Dichloropropene			50.0	52.8		ug/L		106	75 - 124	1	20
trans-1,3-Dichloropropene			50.0	55.4		ug/L		111	73 - 127	1	20
Ethylbenzene			50.0	51.7		ug/L		103	79 - 121	1	20
Hexachlorobutadiene			50.0	65.3		ug/L		131	66 - 134	3	20
2-Hexanone			250	248		ug/L		99	57 - 139	1	20
Isopropylbenzene			50.0	51.6		ug/L		103	72 - 131	2	20
4-Isopropyltoluene			50.0	54.3		ug/L		109	77 - 127	0	20
Methylene Chloride			50.0	52.7		ug/L		105	74 - 124	2	20
4-Methyl-2-pentanone (MIBK)			250	252		ug/L		101	67 - 130	2	20
Methyl tert-butyl ether			50.0	53.7		ug/L		107	71 - 124	0	20

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

Lab Sample ID: LCSD 680-747044/6
Matrix: Water
Analysis Batch: 747044

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
Naphthalene			50.0	69.0	Q	ug/L		138	61 - 128	1	20
N-Propylbenzene			50.0	50.3		ug/L		101	76 - 126	2	20
Styrene			50.0	50.7		ug/L		101	78 - 123	2	20
1,1,1,2-Tetrachloroethane			50.0	54.5		ug/L		109	78 - 124	2	20
1,1,2,2-Tetrachloroethane			50.0	47.2		ug/L		94	71 - 121	1	20
Tetrachloroethene			50.0	54.3		ug/L		109	74 - 129	3	20
Toluene			50.0	53.3		ug/L		107	80 - 121	1	20
1,2,3-Trichlorobenzene			50.0	71.8	Q	ug/L		144	69 - 129	1	20
1,2,4-Trichlorobenzene			50.0	61.3		ug/L		123	69 - 130	2	20
1,1,1-Trichloroethane			50.0	60.5		ug/L		121	74 - 131	2	20
1,1,2-Trichloroethane			50.0	50.1		ug/L		100	80 - 119	2	20
Trichloroethene			50.0	56.4		ug/L		113	79 - 123	3	20
Trichlorofluoromethane			50.0	64.6		ug/L		129	65 - 141	4	20
1,2,3-Trichloropropane			50.0	49.9		ug/L		100	73 - 122	1	20
1,2,4-Trimethylbenzene			50.0	53.5		ug/L		107	76 - 124	2	20
1,3,5-Trimethylbenzene			50.0	52.4		ug/L		105	75 - 124	2	20
Vinyl acetate			100	95.2		ug/L		95	54 - 146	1	20
Vinyl chloride			50.0	55.1		ug/L		110	58 - 137	1	20
o-Xylene			50.0	50.9		ug/L		102	78 - 122	1	20
m-Xylene & p-Xylene			50.0	51.1		ug/L		102	80 - 121	1	20
Xylenes, Total			100	102		ug/L		102	79 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*105*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*113*		*81 - 118*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*
Dibromofluoromethane (Surr)	*111*		*80 - 119*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-746681/8
Matrix: Water
Analysis Batch: 746681

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		10/24/22 16:23	1
Ethylene	0.71	U	1.0	0.71	0.31	ug/L		10/24/22 16:23	1
Methane	1.2	U	1.2	1.2	0.57	ug/L		10/24/22 16:23	1

Lab Sample ID: LCS 680-746681/3
Matrix: Water
Analysis Batch: 746681

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	1700		ug/L		88	73 - 125		

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

Lab Sample ID: LCS 680-746681/6
Matrix: Water
Analysis Batch: 746681

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethane	361	323		ug/L		90	74 - 131
Ethylene	337	289		ug/L		86	72 - 133
Methane	192	170		ug/L		88	73 - 125

Lab Sample ID: LCSD 680-746681/4
Matrix: Water
Analysis Batch: 746681

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	1610		ug/L		84	73 - 125	5	30

Lab Sample ID: LCSD 680-746681/7
Matrix: Water
Analysis Batch: 746681

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	339		ug/L		94	74 - 131	5	30
Ethylene	337	308		ug/L		92	72 - 133	6	30
Methane	192	183		ug/L		95	73 - 125	7	30

Lab Sample ID: MB 680-747094/8
Matrix: Water
Analysis Batch: 747094

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		10/26/22 13:43	1
Ethylene	0.71	U	1.0	0.71	0.31	ug/L		10/26/22 13:43	1
Methane	1.2	U	1.2	1.2	0.57	ug/L		10/26/22 13:43	1

Lab Sample ID: LCS 680-747094/3
Matrix: Water
Analysis Batch: 747094

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	1920		ug/L		100	73 - 125

Lab Sample ID: LCS 680-747094/6
Matrix: Water
Analysis Batch: 747094

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethane	361	365		ug/L		101	74 - 131
Ethylene	337	338		ug/L		100	72 - 133
Methane	192	194		ug/L		101	73 - 125

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

Lab Sample ID: LCSD 680-747094/4
Matrix: Water
Analysis Batch: 747094

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	1840		ug/L		96	73 - 125	4	30

Lab Sample ID: LCSD 680-747094/7
Matrix: Water
Analysis Batch: 747094

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	351		ug/L		97	74 - 131	4	30
Ethylene	337	326		ug/L		97	72 - 133	4	30
Methane	192	186		ug/L		96	73 - 125	4	30

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-747712/2
Matrix: Water
Analysis Batch: 747712

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		10/29/22 12:17	1

Lab Sample ID: LCS 680-747712/3
Matrix: Water
Analysis Batch: 747712

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	10.0		mg/L		100	87 - 112		

Lab Sample ID: LCSD 680-747712/4
Matrix: Water
Analysis Batch: 747712

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	10.0		mg/L		100	87 - 112	0	15

Lab Sample ID: MB 680-747713/2
Matrix: Water
Analysis Batch: 747713

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		10/29/22 12:13	1

Lab Sample ID: LCS 680-747713/3
Matrix: Water
Analysis Batch: 747713

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	9.32		mg/L		93	87 - 112		

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

Lab Sample ID: LCSD 680-747713/4
Matrix: Water
Analysis Batch: 747713

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	9.33		mg/L		93	87 - 112	0	15

Lab Sample ID: 680-223156-1 MS
Matrix: Water
Analysis Batch: 747713

Client Sample ID: AOC50-DUP03-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Sulfate	6.3		10.0	16.2		mg/L		99	87 - 112		

Lab Sample ID: 680-223156-1 MSD
Matrix: Water
Analysis Batch: 747713

Client Sample ID: AOC50-DUP03-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	6.3		10.0	16.2		mg/L		98	87 - 112	0	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-745253/1-A
Matrix: Water
Analysis Batch: 745559

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 745253

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/17/22 16:59	1
Manganese	5.0	U	10	5.0	1.3	ug/L		10/17/22 16:59	1

Lab Sample ID: LCS 680-745253/2-A
Matrix: Water
Analysis Batch: 745559

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 745253

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Iron			5000	5120		ug/L		102	87 - 115		
Manganese			400	429		ug/L		107	90 - 114		

Lab Sample ID: MB 680-745387/1-A
Matrix: Water
Analysis Batch: 745559

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 745387

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	100	50	20	ug/L		10/17/22 15:59	1
Manganese	5.0	U	10	5.0	1.3	ug/L		10/17/22 15:59	1

Lab Sample ID: LCS 680-745387/2-A
Matrix: Water
Analysis Batch: 745559

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 745387

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Iron			5000	5040		ug/L		101	87 - 115		
Manganese			400	422		ug/L		106	90 - 114		

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-745255/1-A
Matrix: Water
Analysis Batch: 745563

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 745255

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		10/17/22 12:25	1

Lab Sample ID: LCS 680-745255/2-A
Matrix: Water
Analysis Batch: 745563

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 745255

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	112		ug/L		112	84 - 116

Lab Sample ID: MB 680-745388/1-A
Matrix: Water
Analysis Batch: 745561

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 745388

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		10/17/22 14:13	1

Lab Sample ID: LCS 680-745388/2-A
Matrix: Water
Analysis Batch: 745561

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 745388

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	100	108		ug/L		108	84 - 116

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 680-745806/4
Matrix: Water
Analysis Batch: 745806

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		10/18/22 15:09	1

Lab Sample ID: LCS 680-745806/6
Matrix: Water
Analysis Batch: 745806

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	250	247		mg/L		99	90 - 112

Lab Sample ID: LCSD 680-745806/31
Matrix: Water
Analysis Batch: 745806

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	253		mg/L		101	90 - 112	2	30

Method: 2320B-2011 - Alkalinity, Total (Continued)

Lab Sample ID: MB 680-745809/4
Matrix: Water
Analysis Batch: 745809

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		10/18/22 22:01	1

Lab Sample ID: LCS 680-745809/6
Matrix: Water
Analysis Batch: 745809

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	250	252		mg/L		101	90 - 112

Lab Sample ID: LCSD 680-745809/31
Matrix: Water
Analysis Batch: 745809

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	250		mg/L		100	90 - 112	1	30

Lab Sample ID: 680-223156-15 DU
Matrix: Water
Analysis Batch: 745809

Client Sample ID: G6M-13-01X-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity	180		178		mg/L		1	30

Method: 353.2-1993 R2.0 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 680-746114/14
Matrix: Water
Analysis Batch: 746114

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	0.050	0.025	0.010	mg/L		10/20/22 12:54	1

Lab Sample ID: LCS 680-746114/17
Matrix: Water
Analysis Batch: 746114

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: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 680-745487/1
Matrix: Water
Analysis Batch: 745487

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		10/17/22 13:48	1

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric) (Continued)

Lab Sample ID: LCS 680-745487/2
Matrix: Water
Analysis Batch: 745487

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 680-745487/3
Matrix: Water
Analysis Batch: 745487

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	9.41		mg/L		94	75 - 125	3	30

Lab Sample ID: 680-223156-6 MS
Matrix: Water
Analysis Batch: 745487

Client Sample ID: G6M-13-02X-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Sulfide	1.7	U J1	6.94	3.81	J1	mg/L		55	75 - 125		

Lab Sample ID: 680-223156-6 MSD
Matrix: Water
Analysis Batch: 745487

Client Sample ID: G6M-13-02X-FAL22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	1.7	U J1	6.94	3.81	J1	mg/L		55	75 - 125	0	30

Method: 9060 - Organic Carbon, Total (TOC)

Lab Sample ID: MB 680-746842/2
Matrix: Water
Analysis Batch: 746842

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	1.0	1.0	0.50	mg/L		10/23/22 03:08	1
Total Organic Carbon - Quad	1.0	U	1.0	1.0	0.50	mg/L		10/23/22 03:08	1

Lab Sample ID: LCS 680-746842/3
Matrix: Water
Analysis Batch: 746842

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	19.5		mg/L		98	80 - 120		
TOC Result 1			20.0	19.3		mg/L		96	80 - 120		
TOC Result 2			20.0	19.6		mg/L		98	80 - 120		
TOC Result 3			20.0	19.6		mg/L		98	80 - 120		
TOC Result 4			20.0	19.7		mg/L		98	80 - 120		
Total Organic Carbon - Quad			20.0	19.5		mg/L		98	80 - 120		

Method: 9060 - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: LCSD 680-746842/4
Matrix: Water
Analysis Batch: 746842

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	19.6		mg/L		98	80 - 120	0	25
TOC Result 1			20.0	19.7		mg/L		98	80 - 120	2	25
TOC Result 2			20.0	19.4		mg/L		97	80 - 120	1	25
TOC Result 3			20.0	19.6		mg/L		98	80 - 120	0	25
TOC Result 4			20.0	19.6		mg/L		98	80 - 120	0	25
Total Organic Carbon - Quad			20.0	19.6		mg/L		98	80 - 120	0	25

Lab Sample ID: MB 680-747395/2
Matrix: Water
Analysis Batch: 747395

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	1.0	1.0	0.50	mg/L		10/26/22 20:32	1
Total Organic Carbon - Quad	1.0	U	1.0	1.0	0.50	mg/L		10/26/22 20:32	1

Lab Sample ID: LCS 680-747395/3
Matrix: Water
Analysis Batch: 747395

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	19.6		mg/L		98	80 - 120		
TOC Result 1			20.0	19.6		mg/L		98	80 - 120		
TOC Result 2			20.0	19.3		mg/L		97	80 - 120		
TOC Result 3			20.0	19.9		mg/L		100	80 - 120		
TOC Result 4			20.0	19.5		mg/L		98	80 - 120		
Total Organic Carbon - Quad			20.0	19.6		mg/L		98	80 - 120		

Lab Sample ID: LCSD 680-747395/4
Matrix: Water
Analysis Batch: 747395

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	19.5		mg/L		98	80 - 120	0	25
TOC Result 1			20.0	19.5		mg/L		97	80 - 120	1	25
TOC Result 2			20.0	19.3		mg/L		97	80 - 120	0	25
TOC Result 3			20.0	19.8		mg/L		99	80 - 120	1	25
TOC Result 4			20.0	19.5		mg/L		98	80 - 120	0	25
Total Organic Carbon - Quad			20.0	19.5		mg/L		98	80 - 120	0	25

GC/MS VOA

Analysis Batch: 746224

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223156-1	AOC50-DUP03-FAL22	Total/NA	Water	8260D	
680-223156-2	G6M-03-08X-FAL22	Total/NA	Water	8260D	
680-223156-3	G6M-04-05X-FAL22	Total/NA	Water	8260D	
680-223156-4	G6M-04-22X-FAL22	Total/NA	Water	8260D	
680-223156-5	G6M-04-31X-FAL22	Total/NA	Water	8260D	
680-223156-6	G6M-13-02X-FAL22	Total/NA	Water	8260D	
680-223156-7	G6M-13-03X-FAL22	Total/NA	Water	8260D	
680-223156-8	G6M-97-05B-FAL22	Total/NA	Water	8260D	
680-223156-10	AOC50-TB-FAL22	Total/NA	Water	8260D	
MB 680-746224/8	Method Blank	Total/NA	Water	8260D	
LCS 680-746224/5	Lab Control Sample	Total/NA	Water	8260D	

Analysis Batch: 746246

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223156-9	AOC50-RB02-FAL22	Total/NA	Water	8260D	
MB 680-746246/9	Method Blank	Total/NA	Water	8260D	
LCS 680-746246/5	Lab Control Sample	Total/NA	Water	8260D	

Analysis Batch: 746807

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223156-16	G6M-13-04X-FAL22	Total/NA	Water	8260D	
680-223156-17	AOC50-TB-FAL22	Total/NA	Water	8260D	
680-223156-18	AOC50-RB-FAL22	Total/NA	Water	8260D	
MB 680-746807/9	Method Blank	Total/NA	Water	8260D	
LCS 680-746807/5	Lab Control Sample	Total/NA	Water	8260D	
LCSD 680-746807/6	Lab Control Sample Dup	Total/NA	Water	8260D	

Analysis Batch: 746813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223156-11	G6M-02-12X-FAL22	Total/NA	Water	8260D	
680-223156-12	G6M-04-03X-FAL22	Total/NA	Water	8260D	
680-223156-13	G6M-04-09X-FAL22	Total/NA	Water	8260D	
680-223156-14	G6M-04-15X-FAL22	Total/NA	Water	8260D	
MB 680-746813/8	Method Blank	Total/NA	Water	8260D	
LCS 680-746813/4	Lab Control Sample	Total/NA	Water	8260D	
LCSD 680-746813/5	Lab Control Sample Dup	Total/NA	Water	8260D	

Analysis Batch: 747044

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223156-15	G6M-13-01X-FAL22	Total/NA	Water	8260D	
MB 680-747044/10	Method Blank	Total/NA	Water	8260D	
LCS 680-747044/5	Lab Control Sample	Total/NA	Water	8260D	
LCSD 680-747044/6	Lab Control Sample Dup	Total/NA	Water	8260D	

GC VOA

Analysis Batch: 746681

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223156-1	AOC50-DUP03-FAL22	Total/NA	Water	RSK-175	
680-223156-6	G6M-13-02X-FAL22	Total/NA	Water	RSK-175	

GC VOA (Continued)

Analysis Batch: 746681 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223156-8	G6M-97-05B-FAL22	Total/NA	Water	RSK-175	
MB 680-746681/8	Method Blank	Total/NA	Water	RSK-175	
LCS 680-746681/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-746681/6	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-746681/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-746681/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	

Analysis Batch: 747094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223156-12	G6M-04-03X-FAL22	Total/NA	Water	RSK-175	
680-223156-13	G6M-04-09X-FAL22	Total/NA	Water	RSK-175	
680-223156-15	G6M-13-01X-FAL22	Total/NA	Water	RSK-175	
MB 680-747094/8	Method Blank	Total/NA	Water	RSK-175	
LCS 680-747094/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-747094/6	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-747094/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-747094/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	

HPLC/IC

Analysis Batch: 747712

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223156-12	G6M-04-03X-FAL22	Total/NA	Water	9056A	
680-223156-13	G6M-04-09X-FAL22	Total/NA	Water	9056A	
680-223156-15	G6M-13-01X-FAL22	Total/NA	Water	9056A	
MB 680-747712/2	Method Blank	Total/NA	Water	9056A	
LCS 680-747712/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-747712/4	Lab Control Sample Dup	Total/NA	Water	9056A	

Analysis Batch: 747713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223156-1	AOC50-DUP03-FAL22	Total/NA	Water	9056A	
680-223156-6	G6M-13-02X-FAL22	Total/NA	Water	9056A	
680-223156-8	G6M-97-05B-FAL22	Total/NA	Water	9056A	
MB 680-747713/2	Method Blank	Total/NA	Water	9056A	
LCS 680-747713/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-747713/4	Lab Control Sample Dup	Total/NA	Water	9056A	
680-223156-1 MS	AOC50-DUP03-FAL22	Total/NA	Water	9056A	
680-223156-1 MSD	AOC50-DUP03-FAL22	Total/NA	Water	9056A	

Metals

Prep Batch: 745253

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223156-1	AOC50-DUP03-FAL22	Dissolved	Water	3005A	
680-223156-2	G6M-03-08X-FAL22	Dissolved	Water	3005A	
680-223156-4	G6M-04-22X-FAL22	Dissolved	Water	3005A	
680-223156-5	G6M-04-31X-FAL22	Dissolved	Water	3005A	
680-223156-6	G6M-13-02X-FAL22	Dissolved	Water	3005A	
680-223156-8	G6M-97-05B-FAL22	Dissolved	Water	3005A	
680-223156-9	AOC50-RB02-FAL22	Dissolved	Water	3005A	

Metals (Continued)

Prep Batch: 745253 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223156-11	G6M-02-12X-FAL22	Dissolved	Water	3005A	
680-223156-12	G6M-04-03X-FAL22	Dissolved	Water	3005A	
680-223156-13	G6M-04-09X-FAL22	Dissolved	Water	3005A	
680-223156-14	G6M-04-15X-FAL22	Dissolved	Water	3005A	
MB 680-745253/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-745253/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 745255

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223156-1	AOC50-DUP03-FAL22	Dissolved	Water	3005A	
680-223156-2	G6M-03-08X-FAL22	Dissolved	Water	3005A	
680-223156-4	G6M-04-22X-FAL22	Dissolved	Water	3005A	
680-223156-5	G6M-04-31X-FAL22	Dissolved	Water	3005A	
680-223156-6	G6M-13-02X-FAL22	Dissolved	Water	3005A	
680-223156-8	G6M-97-05B-FAL22	Dissolved	Water	3005A	
680-223156-9	AOC50-RB02-FAL22	Dissolved	Water	3005A	
680-223156-11	G6M-02-12X-FAL22	Dissolved	Water	3005A	
680-223156-12	G6M-04-03X-FAL22	Dissolved	Water	3005A	
680-223156-13	G6M-04-09X-FAL22	Dissolved	Water	3005A	
680-223156-14	G6M-04-15X-FAL22	Dissolved	Water	3005A	
MB 680-745255/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-745255/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 745387

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223156-15	G6M-13-01X-FAL22	Dissolved	Water	3005A	
680-223156-16	G6M-13-04X-FAL22	Dissolved	Water	3005A	
680-223156-18	AOC50-RB-FAL22	Dissolved	Water	3005A	
MB 680-745387/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-745387/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 745388

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223156-15	G6M-13-01X-FAL22	Dissolved	Water	3005A	
680-223156-16	G6M-13-04X-FAL22	Dissolved	Water	3005A	
680-223156-18	AOC50-RB-FAL22	Dissolved	Water	3005A	
MB 680-745388/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-745388/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 745559

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223156-1	AOC50-DUP03-FAL22	Dissolved	Water	6010C	745253
680-223156-2	G6M-03-08X-FAL22	Dissolved	Water	6010C	745253
680-223156-4	G6M-04-22X-FAL22	Dissolved	Water	6010C	745253
680-223156-5	G6M-04-31X-FAL22	Dissolved	Water	6010C	745253
680-223156-6	G6M-13-02X-FAL22	Dissolved	Water	6010C	745253
680-223156-8	G6M-97-05B-FAL22	Dissolved	Water	6010C	745253
680-223156-9	AOC50-RB02-FAL22	Dissolved	Water	6010C	745253
680-223156-11	G6M-02-12X-FAL22	Dissolved	Water	6010C	745253
680-223156-12	G6M-04-03X-FAL22	Dissolved	Water	6010C	745253

Metals (Continued)

Analysis Batch: 745559 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223156-13	G6M-04-09X-FAL22	Dissolved	Water	6010C	745253
680-223156-14	G6M-04-15X-FAL22	Dissolved	Water	6010C	745253
680-223156-15	G6M-13-01X-FAL22	Dissolved	Water	6010C	745387
680-223156-16	G6M-13-04X-FAL22	Dissolved	Water	6010C	745387
680-223156-18	AOC50-RB-FAL22	Dissolved	Water	6010C	745387
MB 680-745253/1-A	Method Blank	Total Recoverable	Water	6010C	745253
MB 680-745387/1-A	Method Blank	Total Recoverable	Water	6010C	745387
LCS 680-745253/2-A	Lab Control Sample	Total Recoverable	Water	6010C	745253
LCS 680-745387/2-A	Lab Control Sample	Total Recoverable	Water	6010C	745387

Analysis Batch: 745561

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223156-15	G6M-13-01X-FAL22	Dissolved	Water	6020A	745388
680-223156-16	G6M-13-04X-FAL22	Dissolved	Water	6020A	745388
680-223156-18	AOC50-RB-FAL22	Dissolved	Water	6020A	745388
MB 680-745388/1-A	Method Blank	Total Recoverable	Water	6020A	745388
LCS 680-745388/2-A	Lab Control Sample	Total Recoverable	Water	6020A	745388

Analysis Batch: 745563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223156-1	AOC50-DUP03-FAL22	Dissolved	Water	6020A	745255
680-223156-2	G6M-03-08X-FAL22	Dissolved	Water	6020A	745255
680-223156-4	G6M-04-22X-FAL22	Dissolved	Water	6020A	745255
680-223156-5	G6M-04-31X-FAL22	Dissolved	Water	6020A	745255
680-223156-6	G6M-13-02X-FAL22	Dissolved	Water	6020A	745255
680-223156-8	G6M-97-05B-FAL22	Dissolved	Water	6020A	745255
680-223156-9	AOC50-RB02-FAL22	Dissolved	Water	6020A	745255
680-223156-11	G6M-02-12X-FAL22	Dissolved	Water	6020A	745255
680-223156-12	G6M-04-03X-FAL22	Dissolved	Water	6020A	745255
680-223156-13	G6M-04-09X-FAL22	Dissolved	Water	6020A	745255
680-223156-14	G6M-04-15X-FAL22	Dissolved	Water	6020A	745255
MB 680-745255/1-A	Method Blank	Total Recoverable	Water	6020A	745255
LCS 680-745255/2-A	Lab Control Sample	Total Recoverable	Water	6020A	745255

General Chemistry

Analysis Batch: 745487

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223156-1	AOC50-DUP03-FAL22	Total/NA	Water	9034	
680-223156-6	G6M-13-02X-FAL22	Total/NA	Water	9034	
680-223156-8	G6M-97-05B-FAL22	Total/NA	Water	9034	
680-223156-12	G6M-04-03X-FAL22	Total/NA	Water	9034	
680-223156-13	G6M-04-09X-FAL22	Total/NA	Water	9034	
680-223156-15	G6M-13-01X-FAL22	Total/NA	Water	9034	
MB 680-745487/1	Method Blank	Total/NA	Water	9034	
LCS 680-745487/2	Lab Control Sample	Total/NA	Water	9034	
LCSD 680-745487/3	Lab Control Sample Dup	Total/NA	Water	9034	
680-223156-6 MS	G6M-13-02X-FAL22	Total/NA	Water	9034	
680-223156-6 MSD	G6M-13-02X-FAL22	Total/NA	Water	9034	

General Chemistry

Analysis Batch: 745806

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223156-1	AOC50-DUP03-FAL22	Total/NA	Water	2320B-2011	
680-223156-6	G6M-13-02X-FAL22	Total/NA	Water	2320B-2011	
680-223156-12	G6M-04-03X-FAL22	Total/NA	Water	2320B-2011	
680-223156-13	G6M-04-09X-FAL22	Total/NA	Water	2320B-2011	
MB 680-745806/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-745806/6	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-745806/31	Lab Control Sample Dup	Total/NA	Water	2320B-2011	

Analysis Batch: 745809

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223156-8	G6M-97-05B-FAL22	Total/NA	Water	2320B-2011	
680-223156-15	G6M-13-01X-FAL22	Total/NA	Water	2320B-2011	
MB 680-745809/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 680-745809/6	Lab Control Sample	Total/NA	Water	2320B-2011	
LCSD 680-745809/31	Lab Control Sample Dup	Total/NA	Water	2320B-2011	
680-223156-15 DU	G6M-13-01X-FAL22	Total/NA	Water	2320B-2011	

Analysis Batch: 746114

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223156-1	AOC50-DUP03-FAL22	Total/NA	Water	353.2-1993 R2.0	
680-223156-6	G6M-13-02X-FAL22	Total/NA	Water	353.2-1993 R2.0	
680-223156-8	G6M-97-05B-FAL22	Total/NA	Water	353.2-1993 R2.0	
680-223156-12	G6M-04-03X-FAL22	Total/NA	Water	353.2-1993 R2.0	
680-223156-13	G6M-04-09X-FAL22	Total/NA	Water	353.2-1993 R2.0	
680-223156-15	G6M-13-01X-FAL22	Total/NA	Water	353.2-1993 R2.0	
MB 680-746114/14	Method Blank	Total/NA	Water	353.2-1993 R2.0	
LCS 680-746114/17	Lab Control Sample	Total/NA	Water	353.2-1993 R2.0	

Analysis Batch: 746842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223156-1	AOC50-DUP03-FAL22	Total/NA	Water	9060	
680-223156-6	G6M-13-02X-FAL22	Total/NA	Water	9060	
680-223156-8	G6M-97-05B-FAL22	Total/NA	Water	9060	
680-223156-12	G6M-04-03X-FAL22	Total/NA	Water	9060	
680-223156-13	G6M-04-09X-FAL22	Total/NA	Water	9060	
MB 680-746842/2	Method Blank	Total/NA	Water	9060	
LCS 680-746842/3	Lab Control Sample	Total/NA	Water	9060	
LCSD 680-746842/4	Lab Control Sample Dup	Total/NA	Water	9060	

Analysis Batch: 747395

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-223156-15	G6M-13-01X-FAL22	Total/NA	Water	9060	
MB 680-747395/2	Method Blank	Total/NA	Water	9060	
LCS 680-747395/3	Lab Control Sample	Total/NA	Water	9060	
LCSD 680-747395/4	Lab Control Sample Dup	Total/NA	Water	9060	

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: AOC50-DUP03-FAL22

Date Collected: 10/10/22 14:10
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-1

Matrix: Water

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	746224	10/21/22 19:45	P1C	EET SAV
	Instrument ID: CMSU									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	746681	10/24/22 18:14	OK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	747713	10/29/22 18:36	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	745253	10/14/22 14:25	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 17:39	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745255	10/14/22 14:25	RR	EET SAV
Dissolved	Analysis	6020A		1			745563	10/17/22 12:44	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			745806	10/18/22 20:08	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	746114	10/20/22 13:25	MB	EET SAV
	Instrument ID: LACHAT2									
Total/NA	Analysis	9034		1	300 mL	300 mL	745487	10/17/22 13:48	JAS	EET SAV
	Instrument ID: NoEquip									
Total/NA	Analysis	9060		1	40 mL	40 mL	746842	10/23/22 05:04	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: G6M-03-08X-FAL22

Date Collected: 10/10/22 13:54
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-2

Matrix: Water

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	746224	10/21/22 17:32	P1C	EET SAV
	Instrument ID: CMSU									
Dissolved	Prep	3005A			50 mL	50 mL	745253	10/14/22 14:25	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 17:54	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745255	10/14/22 14:25	RR	EET SAV
Dissolved	Analysis	6020A		1			745563	10/17/22 12:47	BWR	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-04-05X-FAL22

Date Collected: 10/10/22 15:14
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-3

Matrix: Water

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	746224	10/21/22 17:51	P1C	EET SAV
	Instrument ID: CMSU									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: G6M-04-22X-FAL22

Date Collected: 10/10/22 15:05
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-4

Matrix: Water

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	746224	10/21/22 18:10	P1C	EET SAV
	Instrument ID: CMSU									
Dissolved	Prep	3005A			50 mL	50 mL	745253	10/14/22 14:25	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 17:57	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745255	10/14/22 14:25	RR	EET SAV
Dissolved	Analysis	6020A		1			745563	10/17/22 12:50	BWR	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-04-31X-FAL22

Date Collected: 10/10/22 13:45
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-5

Matrix: Water

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	746224	10/21/22 18:29	P1C	EET SAV
	Instrument ID: CMSU									
Dissolved	Prep	3005A			50 mL	50 mL	745253	10/14/22 14:25	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 18:00	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745255	10/14/22 14:25	RR	EET SAV
Dissolved	Analysis	6020A		1			745563	10/17/22 12:58	BWR	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-13-02X-FAL22

Date Collected: 10/10/22 14:10
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-6

Matrix: Water

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	746224	10/21/22 18:48	P1C	EET SAV
	Instrument ID: CMSU									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	746681	10/24/22 18:27	OK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	747713	10/29/22 19:15	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	745253	10/14/22 14:25	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 18:03	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745255	10/14/22 14:25	RR	EET SAV
Dissolved	Analysis	6020A		1			745563	10/17/22 13:01	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			745806	10/18/22 20:18	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	746114	10/20/22 13:26	MB	EET SAV
	Instrument ID: LACHAT2									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: G6M-13-02X-FAL22

Lab Sample ID: 680-223156-6
Date Collected: 10/10/22 14:10
Matrix: Water
Date Received: 10/13/22 10:00

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	300 mL	300 mL	745487	10/17/22 13:48	JAS	EET SAV
Total/NA	Analysis	9060		1	40 mL	40 mL	746842	10/23/22 05:22	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: G6M-13-03X-FAL22

Lab Sample ID: 680-223156-7
Date Collected: 10/10/22 11:35
Matrix: Water
Date Received: 10/13/22 10:00

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	746224	10/21/22 19:07	P1C	EET SAV
	Instrument ID: CMSU									

Client Sample ID: G6M-97-05B-FAL22

Lab Sample ID: 680-223156-8
Date Collected: 10/10/22 10:50
Matrix: Water
Date Received: 10/13/22 10:00

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	746224	10/21/22 19:26	P1C	EET SAV
	Instrument ID: CMSU									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	746681	10/24/22 18:39	OK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	747713	10/29/22 17:56	UI	EET SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	745253	10/14/22 14:25	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 18:06	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745255	10/14/22 14:25	RR	EET SAV
Dissolved	Analysis	6020A		1			745563	10/17/22 13:03	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			745809	10/18/22 22:50	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	746114	10/20/22 13:27	MB	EET SAV
	Instrument ID: LACHAT2									
Total/NA	Analysis	9034		1	260 mL	260 mL	745487	10/17/22 13:48	JAS	EET SAV
	Instrument ID: NoEquip									
Total/NA	Analysis	9060		1	40 mL	40 mL	746842	10/23/22 05:38	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: AOC50-RB02-FAL22

Lab Sample ID: 680-223156-9

Date Collected: 10/10/22 12:00
Matrix: Water
Date Received: 10/13/22 10:00

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	746246	10/21/22 15:11	SMP	EET SAV
	Instrument ID: CMSO2									
Dissolved	Prep	3005A			50 mL	50 mL	745253	10/14/22 14:25	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 18:15	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745255	10/14/22 14:25	RR	EET SAV
Dissolved	Analysis	6020A		1			745563	10/17/22 13:06	BWR	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: AOC50-TB-FAL22

Lab Sample ID: 680-223156-10

Date Collected: 10/10/22 00:00
Matrix: Water
Date Received: 10/13/22 10:00

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	746224	10/21/22 14:22	P1C	EET SAV
	Instrument ID: CMSU									

Client Sample ID: G6M-02-12X-FAL22

Lab Sample ID: 680-223156-11

Date Collected: 10/12/22 11:02
Matrix: Water
Date Received: 10/13/22 10:00

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	746813	10/25/22 16:55	P1C	EET SAV
	Instrument ID: CMSU									
Dissolved	Prep	3005A			50 mL	50 mL	745253	10/14/22 14:25	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 18:24	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745255	10/14/22 14:25	RR	EET SAV
Dissolved	Analysis	6020A		1			745563	10/17/22 13:09	BWR	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-04-03X-FAL22

Lab Sample ID: 680-223156-12

Date Collected: 10/12/22 09:45
Matrix: Water
Date Received: 10/13/22 10:00

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	746813	10/25/22 18:30	P1C	EET SAV
	Instrument ID: CMSU									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	747094	10/26/22 16:06	JCK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	747712	10/29/22 17:13	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	745253	10/14/22 14:25	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 18:27	BJB	EET SAV
	Instrument ID: ICPH									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: G6M-04-03X-FAL22

Date Collected: 10/12/22 09:45
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			50 mL	250 mL	745255	10/14/22 14:25	RR	EET SAV
Dissolved	Analysis	6020A		1			745563	10/17/22 13:12	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			745806	10/18/22 19:50	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	746114	10/20/22 13:29	MB	EET SAV
	Instrument ID: LACHAT2									
Total/NA	Analysis	9034		1	310 mL	310 mL	745487	10/17/22 13:48	JAS	EET SAV
	Instrument ID: NoEquip									
Total/NA	Analysis	9060		1	40 mL	40 mL	746842	10/23/22 05:57	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: G6M-04-09X-FAL22

Date Collected: 10/12/22 12:55
Date Received: 10/13/22 10:00

Lab Sample ID: 680-223156-13

Matrix: Water

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	746813	10/25/22 18:49	P1C	EET SAV
	Instrument ID: CMSU									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	747094	10/26/22 16:54	JCK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		5	5 mL	5 mL	747712	10/29/22 17:27	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	745253	10/14/22 14:25	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 18:30	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745255	10/14/22 14:25	RR	EET SAV
Dissolved	Analysis	6020A		1			745563	10/17/22 13:14	BWR	EET SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	2320B-2011		1			745806	10/18/22 19:59	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	746114	10/20/22 13:30	MB	EET SAV
	Instrument ID: LACHAT2									
Total/NA	Analysis	9034		1	260 mL	260 mL	745487	10/17/22 13:48	JAS	EET SAV
	Instrument ID: NoEquip									
Total/NA	Analysis	9060		1	40 mL	40 mL	746842	10/23/22 06:16	JU	EET SAV
	Instrument ID: TOC8									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: G6M-04-15X-FAL22

Lab Sample ID: 680-223156-14
Date Collected: 10/12/22 10:55
Matrix: Water
Date Received: 10/13/22 10:00

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	746813	10/25/22 19:08	P1C	EET SAV
	Instrument ID: CMSU									
Dissolved	Prep	3005A			50 mL	50 mL	745253	10/14/22 14:25	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 18:33	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745255	10/14/22 14:25	RR	EET SAV
Dissolved	Analysis	6020A		1			745563	10/17/22 13:17	BWR	EET SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-13-01X-FAL22

Lab Sample ID: 680-223156-15
Date Collected: 10/12/22 14:04
Matrix: Water
Date Received: 10/13/22 10:00

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	747044	10/26/22 16:17	P1C	EET SAV
	Instrument ID: CMSO2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	747094	10/26/22 17:07	JCK	EET SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	747712	10/29/22 17:40	UI	EET SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	745387	10/16/22 10:51	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 16:14	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745388	10/16/22 10:51	RR	EET SAV
Dissolved	Analysis	6020A		1			745561	10/17/22 15:11	BWR	EET SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	2320B-2011		1			745809	10/18/22 22:30	PG	EET SAV
	Instrument ID: MANTECH 2									
Total/NA	Analysis	353.2-1993 R2.0		1	2 mL	2 mL	746114	10/20/22 13:31	MB	EET SAV
	Instrument ID: LACHAT2									
Total/NA	Analysis	9034		1	280 mL	280 mL	745487	10/17/22 13:48	JAS	EET SAV
	Instrument ID: NoEquip									
Total/NA	Analysis	9060		1	40 mL	40 mL	747395	10/26/22 21:37	JU	EET SAV
	Instrument ID: TOC8									

Client Sample ID: G6M-13-04X-FAL22

Lab Sample ID: 680-223156-16
Date Collected: 10/12/22 13:10
Matrix: Water
Date Received: 10/13/22 10:00

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	746807	10/25/22 15:44	P1C	EET SAV
	Instrument ID: CMSO2									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

Client Sample ID: G6M-13-04X-FAL22

Lab Sample ID: 680-223156-16
Matrix: Water
Date Collected: 10/12/22 13:10
Date Received: 10/13/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			50 mL	50 mL	745387	10/16/22 10:51	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 16:23	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745388	10/16/22 10:51	RR	EET SAV
Dissolved	Analysis	6020A		1			745561	10/17/22 15:15	BWR	EET SAV
	Instrument ID: ICPMSC									

Client Sample ID: AOC50-TB-FAL22

Lab Sample ID: 680-223156-17
Matrix: Water
Date Collected: 10/12/22 00:00
Date Received: 10/13/22 10:00

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	746807	10/25/22 14:07	P1C	EET SAV
	Instrument ID: CMSO2									

Client Sample ID: AOC50-RB-FAL22

Lab Sample ID: 680-223156-18
Matrix: Water
Date Collected: 10/12/22 10:55
Date Received: 10/13/22 10:00

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	746807	10/25/22 14:32	P1C	EET SAV
	Instrument ID: CMSO2									
Dissolved	Prep	3005A			50 mL	50 mL	745387	10/16/22 10:51	RR	EET SAV
Dissolved	Analysis	6010C		1			745559	10/17/22 16:26	BJB	EET SAV
	Instrument ID: ICPH									
Dissolved	Prep	3005A			50 mL	250 mL	745388	10/16/22 10:51	RR	EET SAV
Dissolved	Analysis	6020A		1			745561	10/17/22 15:18	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: 680-223156-1
Project/Site: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

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: 30130800-Seres-Arcadis JV LTM, AOC50, Fall 2022

Job ID: 680-223156-1

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

Seres-Arcadis JV
Nathan Mullens
669 Marina Drive, Suite B7 Charleston, SC 29492
(843) 478.0336, jennifer.singer@arcadis.com

COC # AOC50_FAL22

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 2022
Project Number: 30130800	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

Bostor #215

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 2022	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-FAL22	WG				G6M-04-04X	FD1	94 00	104 00	1	
2	AOC50-DUP02-FAL22	WG				G6M-07-02X	FD1	22.50	27.50	1	
3	AOC50-DUP03-FAL22	WG	10.10.22	1410	DC	G6M-13-02X	FD1	115 00	125 00	1	
4	AOC50-DUP04-FAL22	WG				G6M-95-20X	FD1	18.00	23.00	1	
5	G6M-02-01X-FAL22	WG				G6M-02-01X	N1	80.00	95 00	1	
6	G6M-02-04X-FAL22	WG				G6M-02-04X	N1	90 00	105.00	1	
7	G6M-02-06X-FAL22	WG				G6M-02-06X	N1	55.00	65.00	1	
8	G6M-02-07X-FAL22	WG				G6M-02-07X	N1	30 00	40.00	1	
9	G6M-02-08X-FAL22	WG				G6M-02-08X	N1	60.00	70.00	1	
10	G6M-02-11X-FAL22	WG				G6M-02-11X	N1	125.00	135.00	1	
11	G6M-02-12X-FAL22	WG				G6M-02-12X	N1	125.00	135 00	1	
12	G6M-02-13X-FAL22	WG				G6M-02-13X	N1	110.00	120 00	1	
13	G6M-03-07X-FAL22	WG				G6M-03-07X	N1	80 00	90 00	1	
14	G6M-03-08X-FAL22	WG	10.10.22	1354	SG	G6M-03-08X	N1	125.00	140.00	1	
15	G6M-03-10X-FAL22	WG				G6M-03-10X	N1	120 00	135 00	1	
16	G6M-04-01X-FAL22	WG				G6M-04-01X	N1	82 00	92.00	1	
17	G6M-04-02X-FAL22	WG				G6M-04-02X	N1	80 00	90 00	1	
18	G6M-04-03X-FAL22	WG				G6M-04-03X	N1	85 00	95.00	1	
19	G6M-04-04X-FAL22	WG				G6M-04-04X	N1	94 00	104.00	1	
20	G6M-04-05X-FAL22	WG	10.10.22	1514	SG	G6M-04-05X	N1	100.00	110.00	1	

680-223156 Chain of Custody

Relinquished by: (Signature) Lisa Shea
Date ~~10/11/22~~ 10/11/22
Time ~~4:10~~ 4:30
Received by: (Signature) 10/11/22 1630

10/12/22 1100
Received by Laboratory: (Signature)
Date
Time

ap 10/13/22 10:07 am ✓
26 / 4.2
2.6 / 4.2

11/11/2022

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Nathan Mullens
669 Marina Drive, Suite B7, Charleston, SC 29492
(843) 478 0336, jennifer.singer@arcadis.com

COC # AOC50_FAL22

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 2022
Project Number: 30130800	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

Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2022

						Analytical Test Method	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
21	G6M-04-06X-FAL22	WG								X	X	X				G6M-04-06X	N1	95.00	136.00	1	
22	G6M-04-07X-FAL22	WG				X	X	X	X	X	X	X	X	X		G6M-04-07X	N1	120.00	130.00	1	
23	G6M-04-09X-FAL22	WG				X	X	X	X	X	X	X	X	X		G6M-04-09X	N1	55 00	65.00	1	
24	G6M-04-10A-FAL22	WG				X	X	X	X	X	X	X	X	X		G6M-04-10A	MS1	30 00	40 00	1	
25	G6M-04-10A-FAL22	WG				X	X	X	X	X	X	X	X	X		G6M-04-10A	N1	30.00	40.00	1	
26	G6M-04-10A-FAL22	WG				X	X	X	X	X	X	X	X	X		G6M-04-10A	SD1	30 00	40 00	1	
27	G6M-04-10X-FAL22	WG										X				G6M-04-10X	N1	52.00	62 00	1	
28	G6M-04-11X-FAL22	WG								X	X	X				G6M-04-11X	N1	35.00	45.00	1	
29	G6M-04-13X-FAL22	WG										X				G6M-04-13X	N1	30 00	40.00	1	
30	G6M-04-14X-FAL22	WG								X	X	X				G6M-04-14X	N1	80 00	90 00	1	
31	G6M-04-15X-FAL22	WG								X	X	X				G6M-04-15X	N1	70 00	80.00	1	
32	G6M-04-22X-FAL22	WG	10.10.22	1505	GS					X	X	X				G6M-04-22X	N1	74.00	84 00	1	
33	G6M-04-31X-FAL22	WG	10.10.22	1345	GS					X	X	X				G6M-04-31X	N1	68.00	78.00	1	
34	G6M-07-01X-FAL22	WG				X	X	X	X	X	X	X	X	X		G6M-07-01X	N1	78 00	98.00	1	
35	G6M-07-02X-FAL22	WG				X	X	X	X	X	X	X	X	X		G6M-07-02X	N1	22.50	27.50	1	
36	G6M-13-01X-FAL22	WG				X	X	X	X	X	X	X	X	X		G6M-13-01X	N1	125.00	135.00	1	
37	G6M-13-02X-FAL22	WG	10.10.22	1410	DC	X	X	X	X	X	X	X	X	X		G6M-13-02X	N1	115.00	125 00	1	
38	G6M-13-03X-FAL22	WG	10.10.22	1135	DC							X				G6M-13-03X	N1	80 00	90.00	1	
39	G6M-13-04X-FAL22	WG								X	X	X				G6M-13-04X	N1	125.00	135 00	1	
40	G6M-13-05X-FAL22	WG				X	X	X	X	X	X	X	X	X		G6M-13-05X	N1	45.00	55.00	1	

Relinquished by: (Signature)
Date 10/11/22
Time 4:30
Received by: (Signature) 10/11/22 1630

Received by Laboratory: (Signature) 10/12/22 1000
Date 10/13/22
Time 10:00

11/11/2022

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Nathan Mullens
669 Marina Drive, Suite B7 Charleston, SC 29492
(843) 478 0336, jennifer.singer@arcadis.com

COC # AOC50_FAL22

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 2022
Project Number: 30130800	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

Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2022

						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)			
	Sample ID	Matrix	Date	Time	Samp Init.		46	47	8	9	9	29	7	5	10		Location ID	Type	Top	Bottom	Cooler	Comments
41	G6M-13-06X-FAL22	WG					X	X	X	X	X	X	X	X	X		G6M-13-06X	N1	50 00	60 00	1	
42	G6M-95-19X-FAL22	WG										X					G6M-95-19X	N1	48.00	58 00	1	
43	G6M-95-20X-FAL22	WG								X	X	X					G6M-95-20X	N1	18 00	23 00	1	
44	G6M-97-05B-FAL22	WG	10.10.22	1050	GS		X	X	X	X	X	X	X	X	X		G6M-97-05B	N1	130 00	135.00	1	
45	G6M-97-28X-FAL22	WG								X	X						G6M-97-28X	N1	100.00	105.00	1	
46	MW-3-FAL22	WG								X	X	X					MW-3	MS1	126 00	137 00	1	
47	MW-3-FAL22	WG								X	X	X					MW-3	N1	126 00	137 00	1	
48	MW-3-FAL22	WG								X	X	X					MW-3	SD1	126.00	137 00	1	
49	MW-7-FAL22	WG								X	X	X					MW-7	N1	6 58	135 00	1	
50	XSA-12-95X-FAL22	WG								X	X	X					XSA-12-95X	N1	120 00	130.00	1	
51	XSA-12-96X-FAL22	WG								X	X	X					XSA-12-96X	N1	120 00	130.00	1	
52	XSA-12-97X-FAL22	WG								X	X	X					XSA-12-97X	N1	120.00	130 00	1	
53	XSA-12-98X-FAL22	WG								X	X	X					XSA-12-98X	N1	60 00	70 00	1	
54	AOC50-RB02-Fal22	Lab water	10/10/22	1200	DC					K	K	K					Rinse Blank					
55																						
56	AOC50-TB-Fal22	Lab Water	—									K					Trip Blank					
57																						
58																						

Turnaround Time: Standard

Relinquished by: (Signature)
Date ~~10/11/22~~ 10/11/22
Time ~~4:10~~ 4:30
Received by (Signature)

10/11/22 1630

Received by Laboratory: (Signature)
Date
Time

10/12/22 1109

ap 10/13/22 1000am

Page 95 of 99

11/11/2022

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Nathan Mullens
669 Marina Drive, Suite B7, Charleston, SC 29492
(843) 478.0336, jennifer.singer@arcadis.com

COC # AOC50_FAL22

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 2022
Project Number: 30130800	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

Bostor #215

						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)			
	Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2022						46	47	8	9	9	29	7	5	10							
	Sample ID	Matrix	Date	Time	Samp Init.												Location ID	Type	Top	Bottom	Cooler	Comments
1	AOC50-DUP01-FAL22	WG								X	X	X					G6M-04-04X	FD1	94.00	104.00	1	
2	AOC50-DUP02-FAL22	WG					X	X	X	X	X	X	X	X	X		G6M-07-02X	FD1	22.50	27.50	1	
3	AOC50-DUP03-FAL22	WG					X	X	X	X	X	X	X	X	X		G6M-13-02X	FD1	115.00	125 00	1	
4	AOC50-DUP04-FAL22	WG								X	X	X					G6M-95-20X	FD1	18.00	23.00	1	
5	G6M-02-01X-FAL22	WG					X	X	X	X	X	X	X	X	X		G6M-02-01X	N1	80 00	95.00	1	
6	G6M-02-04X-FAL22	WG								X	X	X					G6M-02-04X	N1	90 00	105.00	1	
7	G6M-02-06X-FAL22	WG								X	X	X					G6M-02-06X	N1	55 00	65 00	1	
8	G6M-02-07X-FAL22	WG								X	X	X					G6M-02-07X	N1	30 00	40.00	1	
9	G6M-02-08X-FAL22	WG					X	X	X	X	X	X	X	X	X		G6M-02-08X	N1	60 00	70.00	1	
10	G6M-02-11X-FAL22	WG								X	X	X					G6M-02-11X	N1	125.00	135 00	1	
11	G6M-02-12X-FAL22	WG	10.12.22	1102	SG					X	X	X					G6M-02-12X	N1	125.00	135.00	1	
12	G6M-02-13X-FAL22	WG								X	X	X					G6M-02-13X	N1	110 00	120 00	1	
13	G6M-03-07X-FAL22	WG					X	X	X	X	X	X	X	X	X		G6M-03-07X	N1	80.00	90.00	1	
14	G6M-03-08X-FAL22	WG								X	X	X					G6M-03-08X	N1	125.00	140 00	1	
15	G6M-03-10X-FAL22	WG								X	X	X					G6M-03-10X	N1	120 00	135.00	1	
16	G6M-04-01X-FAL22	WG								X	X	X					G6M-04-01X	N1	82.00	92.00	1	
17	G6M-04-02X-FAL22	WG					X	X	X	X	X	X	X	X	X		G6M-04-02X	N1	80.00	90 00	1	
18	G6M-04-03X-FAL22	WG	10.12.22	945	DC		X	X	X	X	X	X	X	X	X		G6M-04-03X	N1	85.00	95 00	1	
19	G6M-04-04X-FAL22	WG								X	X	X					G6M-04-04X	N1	94.00	104 00	1	
20	G6M-04-05X-FAL22	WG										X					G6M-04-05X	N1	100 00	110.00	1	

Relinquished by: (Signature) Dana Shue
Date 10/12/22
Time 4 15
Received by: (Signature)

Received by Laboratory: (Signature) 10/12/22 1100
Date
Time

ap 10/13/22 10:00

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Nathan Mullens
669 Marina Drive, Suite B7 Charleston, SC 29492
(843) 478.0336, jennifer.singer@arcadis.com

COC # AOC50_FAL22

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 2022
Project Number: 30130800	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

Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2022

						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)			
	Sample ID	Matrix	Date	Time	Samp Init.		46	47	8	9	9	29	7	5	10		Location ID	Type	Top	Bottom	Cooler	Comments
21	G6M-04-06X-FAL22	WG								X	X	X					G6M-04-06X	N1	95.00	136.00	1	
22	G6M-04-07X-FAL22	WG					X	X	X	X	X	X	X	X	X		G6M-04-07X	N1	120 00	130.00	1	
23	G6M-04-09X-FAL22	WG	10-12-22	1255	GS		X	X	X	X	X	X	X	X	X		G6M-04-09X	N1	55 00	65 00	1	
24	G6M-04-10A-FAL22	WG					X	X	X	X	X	X	X	X	X		G6M-04-10A	MS1	30 00	40.00	1	
25	G6M-04-10A-FAL22	WG					X	X	X	X	X	X	X	X	X		G6M-04-10A	N1	30 00	40.00	1	
26	G6M-04-10A-FAL22	WG					X	X	X	X	X	X	X	X	X		G6M-04-10A	SD1	30 00	40.00	1	
27	G6M-04-10X-FAL22	WG										X					G6M-04-10X	N1	52.00	62.00	1	
28	G6M-04-11X-FAL22	WG								X	X	X					G6M-04-11X	N1	35.00	45 00	1	
29	G6M-04-13X-FAL22	WG										X					G6M-04-13X	N1	30 00	40 00	1	
30	G6M-04-14X-FAL22	WG								X	X	X					G6M-04-14X	N1	80 00	90.00	1	
31	G6M-04-15X-FAL22	WG	10-12-22	1055	GS					X	X	X					G6M-04-15X	N1	70.00	80.00	1	
32	G6M-04-22X-FAL22	WG								X	X	X					G6M-04-22X	N1	74 00	84.00	1	
33	G6M-04-31X-FAL22	WG								X	X	X					G6M-04-31X	N1	68.00	78.00	1	
34	G6M-07-01X-FAL22	WG					X	X	X	X	X	X	X	X	X		G6M-07-01X	N1	78 00	98 00	1	
35	G6M-07-02X-FAL22	WG					X	X	X	X	X	X	X	X	X		G6M-07-02X	N1	22.50	27 50	1	
36	G6M-13-01X-FAL22	WG	10-12-22	1404	SG		X	X	X	X	X	X	X	X	X		G6M-13-01X	N1	125 00	135 00	1	
37	G6M-13-02X-FAL22	WG					X	X	X	X	X	X	X	X	X		G6M-13-02X	N1	115.00	125 00	1	
38	G6M-13-03X-FAL22	WG										X					G6M-13-03X	N1	80 00	90 00	1	
39	G6M-13-04X-FAL22	WG	10-12-22	1310	DC					X	X	X					G6M-13-04X	N1	125.00	135.00	1	
40	G6M-13-05X-FAL22	WG					X	X	X	X	X	X	X	X	X		G6M-13-05X	N1	45 00	55.00	1	

Relinquished by: (Signature) Gina Oliver
Date 10/12/22
Time 4 15
Received by: (Signature)

10/12/22
1700
Received by Laboratory: (Signature)
Date
Time

ap 10/13/22 10:00

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Nathan Mullens
669 Marina Drive, Suite B7 Charleston SC 29492
(843) 478 0336, jennifer.singer@arcadis.com

COC # AOC50_FAL22

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 2022
Project Number: 30130800	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

Bostor #215

Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2022

						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							
	Sample ID	Matrix	Date	Time	Samp Init.												Location ID	Type	Top - Bottom		Cooler	Comments
41	G6M-13-06X-FAL22	WG					X	X	X	X	X	X	X	X	X		G6M-13-06X	N1	50 00	60 00	1	
42	G6M-95-19X-FAL22	WG										X					G6M-95-19X	N1	48 00	58 00	1	
43	G6M-95-20X-FAL22	WG								X	X	X					G6M-95-20X	N1	18.00	23 00	1	
44	G6M-97-05B-FAL22	WG					X	X	X	X	X	X	X	X	X		G6M-97-05B	N1	130.00	135 00	1	
45	G6M-97-28X-FAL22	WG								X	X						G6M-97-28X	N1	100.00	105 00	1	
46	MW-3-FAL22	WG								X	X	X					MW-3	MS1	126 00	137.00	1	
47	MW-3-FAL22	WG								X	X	X					MW-3	N1	126.00	137 00	1	
48	MW-3-FAL22	WG								X	X	X					MW-3	SD1	126 00	137 00	1	
49	MW-7-FAL22	WG								X	X	X					MW-7	N1	6.58	135 00	1	
50	XSA-12-95X-FAL22	WG								X	X	X					XSA-12-95X	N1	120 00	130 00	1	
51	XSA-12-96X-FAL22	WG								X	X	X					XSA-12-96X	N1	120 00	130 00	1	
52	XSA-12-97X-FAL22	WG								X	X	X					XSA-12-97X	N1	120.00	130 00	1	
53	XSA-12-98X-FAL22	WG								X	X	X					XSA-12-98X	N1	60 00	70 00	1	
54	AOC50-TB-Fal22	Lab water	10.12.22	Trip Blank								X					Trip Blank					
55	AOC50-RB-Fal22	Lab water	10.12.22	1055	DC					X	X	X					Rinse blank					
56																						
57																						
58																						

Turnaround Time: Standard

Relinquished by: (Signature) [signature]
Date 10/12/22
Time 415
Received by: (Signature) [signature]

10/12/22 1709

Received by Laboratory: (Signature)
Date
Time

ap 10/13/22 10:00

11/11/2022

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-223156-1

Login Number: 223156
List Number: 1
Creator: Padayao, Abigail

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.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Appendix C

Summary of Quality Control Exceedances and Data Validation Reports

Spring 2022

- The volatile organic compound (VOC) analysis of sample G6M-04-10A-SPR22 was analyzed outside of the method-specified 14-day holding time (analysis: 15 days). The results for all VOCs in sample G6M-04-10A-SPR22 were qualified as estimated (UJ/J) with a potential for low bias in the reported results.
- The matrix spike/matrix spike duplicate (MS/MSD) performed using sample G6M-04-10A-SPR22 exhibited MS and MSD recoveries for nitrate-nitrite (as nitrogen), sulfide, and 2,2-dichloropropane below the acceptance criteria and MS recovery for dissolved arsenic above the acceptance criteria. The non-detect results of nitrate-nitrite (as nitrogen), sulfide, and 2,2-dichloropropane in the sample were qualified as estimated (UJ) with a potential for low bias in the reported results. The dissolved arsenic result in the sample was qualified as estimated (J) with a potential for high bias in the reported result.
- The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) associated with dissolved gases analysis exhibited relative percent differences between the LCS/LCSD recoveries above the acceptance criteria for methane. The methane results in samples AOC50-DUP01-SPR22, G6M-04-02X-SPR22, G6M-04-07X-SPR22, G6M-04-10A-SPR22, G6M-07-02X-SPR22, G6M-13-01X-SPR22, G6M-13-05X-SPR22, G6M-97-05B-SPR22, and G6M-13-02X-SPR22 were qualified as estimated (J).
- The LCS/LCSD associated with VOC analysis exhibited recoveries of 2,2-dichloropropane below the acceptance criteria. The non-detected results of 2,2-dichloropropane in samples G6M-04-10A-SPR22 and G6M-13-02X-SPR22 were qualified as estimated (UJ) with a potential for low bias in the reported result.
- The recovery of the VOC surrogate compound toluene-d8 exhibited a recovery above the acceptance criteria for sample G6M-13-01X-SPR22. The detected VOCs in the sample were qualified as estimated (J) with a potential for high bias in the reported results.
- The continuing calibration verification (CCV) associated with VOC analysis exhibited results for chloromethane and dichlorodifluoromethane below the acceptance criteria. Vinyl acetate exhibited a result below the acceptance criteria in the closing CCV. The non-detect results of chloromethane, dichlorodifluoromethane, and vinyl acetate in samples AOC50-DUP01-SPR22, G6M-04-02X-SPR22, G6M04-07X-SPR22, G6M-07-02X-SPR22, G6M-97-05B-SPR22, and XSA-12-96X-SPR22 were qualified as estimated (UJ).
- The CCV associated with VOC analysis exhibited results for 2,2-dichloropropane, chloromethane, and vinyl acetate below the acceptance criteria. The non-detect results of 2,2-dichloropropane, chloromethane, and vinyl acetate in the samples G6M-04-10A-SPR22 and G6M-13-02X-SPR22 were qualified as estimated (UJ).
- The CCV associated with VOC analysis exhibited result for dichlorodifluoromethane below the acceptance criteria. The dichlorodifluoromethane result in sample G6M-13-01X-SPR22 was qualified as estimated (UJ).

Fall 2022

- The VOC analysis of samples AOC50-DUP01-FAL22, AOC50-DUP02-FAL22, G6M-03-10X-FAL22, G6M-01X-FAL22, G6M-04-04X-FAL22, G6M-04-09X-FAL22, and G6M-04-15X-FAL22 were noted to be analyzed using containers with headspace. The results for all VOCs in these samples were qualified as estimated (UJ/J) with a potential for low bias in the reported results.
- The MS/MSD performed using sample G6M-04-10A-FAL22 exhibited recoveries for dissolved manganese and sulfate below the acceptance criteria. In addition, the MS recovery for dissolved arsenic was below the acceptance criteria and the MSD recovery for dissolved arsenic was above the acceptance criteria. The dissolved manganese and sulfate results in the sample were qualified as estimated (J) with a potential for low bias in the reported results. The dissolved arsenic result in the sample was qualified as estimated (J) with an unknown bias in the reported result.
- The MS/MSD performed using samples G6M-03-07X-FAL22 and G6M-13-02X-FAL22 exhibited recoveries for sulfide below the acceptance criteria. The sulfide results in the samples were qualified as estimated (UJ) with a potential for low bias in the reported result.
- The recoveries of the VOC surrogate compound toluene-d8 exhibited recoveries above the acceptance criteria for samples AOC50-DUP01-FAL22, AOC50-DUP02-FAL22, G6M-02-13X-FAL22, G6M-03-07X-FAL22, G6M-04-02X-FAL22, G6M-04-04X-FAL22, G6M-04-07X-FAL22, and G6M-04-11X-FAL22. The detected VOCs in these samples were qualified as estimated (J) with a potential for high bias in the reported results.
- The recoveries of the VOC surrogate compounds toluene-d8 and dibromofluoromethane exhibited recoveries above the acceptance criteria for sample G6M-07-02X-FAL22. The detected VOCs in this sample were qualified as estimated (J) with a potential for high bias in the reported results.
- The CCV associated with VOC analysis exhibited results for chloromethane below the acceptance criteria. Vinyl acetate also exhibited a result below the acceptance criteria in the closing CCV. The non-detect results of chloromethane and vinyl acetate in samples AOC50-RB01-FAL22, AOC50-TB03-FAL22, G6M-02-01X-FAL22, G6M-02-07X-FAL22, G6M-04-01X-FAL22, XSA-12-96X-FAL22, XSA-12-97X-FAL22, XSA-12-98X-FAL22, and AOC50-RB02-FAL22 were qualified as estimated (UJ).
- The CCV associated with VOC analysis exhibited results for 1,2-dibromo-3-chloropropane, 2-hexanone, 4-methyl-2-pentanone, and acetone below the acceptance criteria. The non-detect results of 1,2-dibromo-3-chloropropane, 2-hexanone, 4-methyl-2-pentanone, and acetone in samples G6M-02-04X-FAL22, G6M-02-06X-FAL22, G6M-02-11X-FAL22, G6M-03-10X-FAL22, G6M-04-06X-FAL22, G6M-07-01X-FAL22, MW-3-FAL22, MW-7-FAL22, and XSA-12-95X-FAL22 were qualified as estimated (UJ).
- The CCV associated with VOC analysis exhibited results for 1,2-dibromo-3-chloropropane, 2-hexane, 4-methyl-2-pentanone, and bromomethane below the acceptance criteria. The non-detect results of 1,2-dibromo-3-chloropropane, 2-hexane, 4-methyl-2-pentanone, and bromomethane in sample AOC50-DUP03-FAL22, AOC50-TB04-FAL22, G6M-03-08X-FAL, G6M-04-05X-FAL22, G6M-04-22X-FAL22, G6M-04-31X-FAL22, G6M-13-02X-FAL22, G6M-13-03X-FAL22, and G6M-97-05B-FAL22 were qualified as estimated (UJ).
- Low-level calibration blank and/or method blank detections of nitrate-nitrite (as nitrogen) resulted in qualification of samples G6M-04-10A-FAL22, G6M-13-06X-FAL22, AOC50-DUP02-FAL22, and G6M-

03-07X-FAL22 as not detected (U) and G6M-07-01X-FAL22 as estimated (J) with a potential for high bias in the reported result.

- Due to a detection of acetone in the associated equipment blank AOC50-RB01-FAL22, acetone results in samples AOC50-DUP02-FAL22, G6M-04-02X-FAL22, and G6M-07-02X-FAL22 were qualified as not detected (U).
- Low-level method blank detection of p-isopropyltoluene resulted in qualification of sample G6M-13-01X-FAL22 as not detected (U).

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 2, 2022

SUBJECT: Fort Devens - Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on July 13, 2022. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #54432 A:

SDG #	Fraction
680-214942-1	Volatile, Dissolved Metals, Alkalinity, Nitrate/Nitrite-N, Sulfate, Sulfide, TOC, Methane, Ethane & Ethene

The data validation was performed under Stage 2B guidelines. The analyses were validated using the following documents and variances, 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
Project Manager/Senior Chemist
pgeng@lab-data.com

129 pages-ADV

Attachment 1

Stage 2B EQUIS EDD

LDC# 54432 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	VOA (8260B)		3 D.Met. (6010C/ 6020A)		Methane Ethane Ethene		Alk (2320B)		NO_3 /NO_2-N (353.2)		SO_4 (9056A)		S= (9034)		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	W	S
A	680-214942-1	07/13/22	07/27/22	9	0	9	0	8	0	8	0	8	0	8	0	8	0	8	0																		
B	680-214970-1	07/13/22	07/27/22	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0																		
C	680-215075-1	07/13/22	07/27/22	-	-	4	0	-	-	-	-	-	-	-	-	-	-	-	-																		
Total	T/PG			10	0	14	0	9	0	9	0	9	0	9	0	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	78

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

V:\LOGIN\Arcadis\Fort Devens\54432ST.wpd

Data Validation Report for 6802149421

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, AOC 50, Spring 2022
SDG:	6802149421
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
Prime Contractor:	Seres-Arcadis JV
Project Manager:	Jennifer Singer
Contract Laboratory(ies):	Eurofins Environment Testing TestAmerica, Arvada, CO | 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:	July 29, 2022

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	E353.2	RSK175	SW6010C - Dissolved	SW6020A - Dissolved	SW8260B	SW9034	SW9056A	SW9060
AOC50-DUP01-SPR22	680-214942-7	Water	Field Duplicate/FD	X	X	X	X	X	X	X	X	X
G6M-04-02X-SPR22	680-214942-1	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-04-07X-SPR22	680-214942-2	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-04-10A-SPR22	680-214942-3	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-07-02X-SPR22	680-214942-6	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-13-01X-SPR22	680-214942-8	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-13-05X-SPR22	680-214942-9	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-97-05B-SPR22	680-214942-10	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
XSA-12-96X-SPR22	680-214942-11	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 JV; analyses were performed by Eurofins Environment Testing TestAmerica, Arvada, CO | Eurofins Environment Testing TestAmerica, Savannah, GA and were reported under sample delivery group (SDG) 6802149421. 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
- Lab Replicate RPD
- 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 101 results (14.37%) out of the 703 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.
SW8260B	No additional comments; see Checklist for detail.
SW9034	No additional comments; see Checklist for detail.
SW9056A	No additional comments; see Checklist for detail.



July 29, 2022

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.

August 02, 2022

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-SPR22 (MS)	Nitrate-Nitrite (as N)	73.00	90 - 110	10 - 110	percent	J/UJ	M	
G6M-04-10A-SPR22 (SD)	Nitrate-Nitrite (as N)	73.00	90 - 110	10 - 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-SPR22 680-214942-3	N	Nitrate-Nitrite (as N)	0.100	0.0500 U J1	0.0500 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.

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
LCSD68072037434 (BD)	Methane	163.1	< 30	< 30	rpd	J/None	Z	
LCSD68072037436 (BD)	Methane	158.7	< 30	< 30	rpd	J/None	Z	
LCSD6807209784 (BD)	Methane	165.7	< 30	< 30	rpd	J/None	Z	
LCSD6807209787 (BD)	Methane	166.1	< 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
AOC50-DUP01-SPR22 680-214942-7	FD	Methane	390	18000	18000 J		ug/l	Z
G6M-04-02X-SPR22 680-214942-1	N	Methane	390	26000	26000 J		ug/l	Z
G6M-04-07X-SPR22 680-214942-2	N	Methane	1.20	280	280 J		ug/l	Z
G6M-04-10A-SPR22 680-214942-3	N	Methane	390	19000 J1	19000 J		ug/l	Z
G6M-07-02X-SPR22 680-214942-6	N	Methane	390	16000	16000 J		ug/l	Z
G6M-13-01X-SPR22 680-214942-8	N	Methane	390	1400	1400 J		ug/l	Z
G6M-13-05X-SPR22 680-214942-9	N	Methane	390	21000	21000 J		ug/l	Z
G6M-97-05B-SPR22 680-214942-10	N	Methane	390	27000	27000 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 (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

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-SPR22 (MS)	Methane	-1000	75 - 125	10 - 125	percent	J/X	M	Spike amount Insignificant
G6M-04-10A-SPR22 (SD)	Methane	-2050	75 - 125	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 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-SPR22 (SD)	Iron	70.00	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-SPR22 (MS)	Arsenic	121.0	84 - 116	10 - 125	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 SW6020A, Dissolved

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-10A-SPR22 680-214942-3	N	Arsenic	5.00	290	290 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 (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260B, 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
CCVIS6807205874 (CV)	Chloromethane	77.00	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6807205874 (CV)	Dichlorodifluoromethane	78.00	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6807207123 (CV)	Bromomethane	124.0	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807207123 (CV)	Dichlorodifluoromethane	66.00	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS68072104938 (CV)	2,2-Dichloropropane	57.00	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS68072104938 (CV)	Chloromethane	79.00	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS68072104938 (CV)	Vinyl acetate	78.00	80 - 120	80 - 120	percent	J/UJ	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 SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP01-SPR22 680-214942-7	FD	Chloromethane	2.50	2.00 U Q	2.00 UJ		ug/l	V2
AOC50-DUP01-SPR22 680-214942-7	FD	Dichlorodifluoromethane	2.00	1.00 U Q	1.00 UJ		ug/l	V2
G6M-04-02X-SPR22 680-214942-1	N	Chloromethane	2.50	2.00 U Q	2.00 UJ		ug/l	V2
G6M-04-02X-SPR22 680-214942-1	N	Dichlorodifluoromethane	2.00	1.00 U Q	1.00 UJ		ug/l	V2
G6M-04-07X-SPR22 680-214942-2	N	Chloromethane	2.50	2.00 U Q	2.00 UJ		ug/l	V2
G6M-04-07X-SPR22 680-214942-2	N	Dichlorodifluoromethane	2.00	1.00 U Q	1.00 UJ		ug/l	V2
G6M-04-10A-SPR22 680-214942-3	N	2,2-Dichloropropane	2.00	1.00 UHQJ1	1.00 UJ		ug/l	V2/H1/P/C/M
G6M-04-10A-SPR22 680-214942-3	N	Chloromethane	2.50	2.00 UHQJ1	2.00 UJ		ug/l	V2/H1/P
G6M-04-10A-SPR22 680-214942-3	N	Vinyl acetate	2.50	2.00 U H Q	2.00 UJ		ug/l	V2/H1/P
G6M-07-02X-SPR22 680-214942-6	N	Chloromethane	2.50	2.00 U Q	2.00 UJ		ug/l	V2
G6M-07-02X-SPR22 680-214942-6	N	Dichlorodifluoromethane	2.00	1.00 U Q	1.00 UJ		ug/l	V2
G6M-13-01X-SPR22 680-214942-8	N	Dichlorodifluoromethane	2.00	1.00 U Q	1.00 UJ		ug/l	V2
G6M-97-05B-SPR22 680-214942-10	N	Chloromethane	2.50	2.00 U Q	2.00 UJ		ug/l	V2
G6M-97-05B-SPR22 680-214942-10	N	Dichlorodifluoromethane	2.00	1.00 U Q	1.00 UJ		ug/l	V2
XSA-12-96X-SPR22 680-214942-11	N	Chloromethane	2.50	2.00 U Q	2.00 UJ		ug/l	V2

Qualified Results associated with the Continuing Calibration Verification for SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
XSA-12-96X-SPR22 680-214942-11	N	Dichlorodifluoromethane	2.00	1.00 U Q	1.00 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 (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260B, 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
CCVC68072058733 (EV)	Vinyl acetate	44.00	50 - 150	50 - 150	percent	J/UJ	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 SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP01-SPR22 680-214942-7	FD	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5
G6M-04-02X-SPR22 680-214942-1	N	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5
G6M-04-07X-SPR22 680-214942-2	N	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5
G6M-07-02X-SPR22 680-214942-6	N	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5
G6M-97-05B-SPR22 680-214942-10	N	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5
XSA-12-96X-SPR22 680-214942-11	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 (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260B, 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
LCS68072104939 (BS)	2,2-Dichloropropane	57.00	60 - 139	10 - 139	percent	J/UJ	C	
LCSD68072104940 (BD)	2,2-Dichloropropane	55.00	60 - 139	10 - 139	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 SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-10A-SPR22 680-214942-3	N	2,2-Dichloropropane	2.00	1.00 UHQJ1	1.00 UJ		ug/l	V2/H1/P/C/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.

Quality Control Outliers for test method SW8260B, 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
LCSD68072104940 (BD)	Vinyl acetate	44.86	< 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 SW8260B, 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-SPR22 (MS)	2,2-Dichloropropane	39.00	60 - 139	10 - 139	percent	J/UJ	M	
G6M-04-10A-SPR22 (SD)	2,2-Dichloropropane	41.00	60 - 139	10 - 139	percent	J/UJ	M	
G6M-04-10A-SPR22 (MS)	Chloromethane	153.0	50 - 139	10 - 139	percent	J/None	M	
G6M-04-10A-SPR22 (SD)	Chloromethane	164.0	50 - 139	10 - 139	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 SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-10A-SPR22 680-214942-3	N	2,2-Dichloropropane	2.00	1.00 UHQJ1	1.00 UJ		ug/l	V2/H1/P/C/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.

Quality Control Outliers for test method SW8260B, 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-13-01X-SPR22 (N)	Toluene-d8	134.0	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 SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-13-01X-SPR22 680-214942-8	N	1,2-Dichloroethene	2.00	0.730 J	0.730 J	+	ug/l	I/TR
G6M-13-01X-SPR22 680-214942-8	N	cis-1,2-Dichloroethene	2.00	0.730 J	0.730 J	+	ug/l	I/TR
G6M-13-01X-SPR22 680-214942-8	N	Trichloroethene (TCE)	1.00	0.500 J	0.500 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 (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260B, 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-SPR22 (N)		15.00	< 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 SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-10A-SPR22 680-214942-3	N	1,1,1,2-Tetrachloroethane	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,1,1-Trichloroethane	1.00	0.500 U H	0.500 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,1,2,2-Tetrachloroethane	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,1,2-Trichloroethane	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,1-Dichloroethane	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,1-Dichloroethene	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,1-Dichloropropene	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,2,3-Trichlorobenzene	5.00	2.00 U H	2.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,2,3-Trichloropropane	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,2,4-Trichlorobenzene	5.00	2.00 U H	2.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,2,4-Trimethylbenzene	2.00	1.70 J H	1.70 J	-	ug/l	H1/TR
G6M-04-10A-SPR22 680-214942-3	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U H	5.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,2-Dibromoethane (EDB)	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,2-Dichlorobenzene	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,2-Dichloroethane	2.00	1.00 U M H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,2-Dichloroethene	2.00	3.40 H	3.40 J	-	ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,2-Dichloropropane	1.00	0.500 U H	0.500 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,3,5-Trimethylbenzene	2.00	0.960 J M H	0.960 J	-	ug/l	H1/TR/P
G6M-04-10A-SPR22 680-214942-3	N	1,3-Dichlorobenzene	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,3-Dichloropropane	2.00	1.00 U H	1.00 UJ		ug/l	H1/P

Qualified Results associated with the Test Hold Time for SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-10A-SPR22 680-214942-3	N	1,4-Dichlorobenzene	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	2,2-Dichloropropane	2.00	1.00 UHQJ1	1.00 UJ		ug/l	V2/H1/P/C/M
G6M-04-10A-SPR22 680-214942-3	N	2-Butanone (MEK)	25.0	20.0 U H	20.0 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	2-Chlorotoluene	1.00	0.500 U H	0.500 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	2-Hexanone	20.0	10.0 U H	10.0 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	4-Chlorotoluene	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U H Q	10.0 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Acetone	25.0	10.0 U H	10.0 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Benzene	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Bromobenzene	1.00	0.500 U H	0.500 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Bromochloromethane	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Bromodichloromethane	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Bromoform	2.50	2.00 U H	2.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Bromomethane	20.0	10.0 U H	10.0 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Carbon disulfide	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Carbon Tetrachloride	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Chlorobenzene	1.00	0.500 U H	0.500 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Chloroethane	20.0	10.0 U H	10.0 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Chloroform	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Chloromethane	2.50	2.00 UHQJ1	2.00 UJ		ug/l	V2/H1/P
G6M-04-10A-SPR22 680-214942-3	N	cis-1,2-Dichloroethene	2.00	2.30 H	2.30 J	-	ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	cis-1,3-Dichloropropene	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Cumene	2.00	0.260 J H	0.260 J	-	ug/l	H1/TR/P
G6M-04-10A-SPR22 680-214942-3	N	Dibromochloromethane	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Dibromomethane	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Dichlorodifluoromethane	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Ethylbenzene	1.00	0.500 U M H	0.500 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Hexachlorobutadiene	5.00	1.00 U H	1.00 UJ		ug/l	H1/P

Qualified Results associated with the Test Hold Time for SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-10A-SPR22 680-214942-3	N	m,p-Xylene	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Methyl tert-butyl ether (MTBE)	5.00	2.00 U H	2.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Methylene chloride	20.0	10.0 U H	10.0 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Naphthalene	10.0	5.00 U H	5.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	n-Butylbenzene	2.50	2.00 U H	2.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	n-Propylbenzene	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	o-Xylene	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	p-Cymene (p-Isopropyltoluene)	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	sec-Butylbenzene	2.50	2.00 U H	2.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Styrene	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	tert-Butylbenzene	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Tetrachloroethene (PCE)	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Toluene	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	trans-1,2-Dichloroethene	2.00	1.00 J H	1.00 J	-	ug/l	H1/TR/P
G6M-04-10A-SPR22 680-214942-3	N	trans-1,3-Dichloropropene	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Trichloroethene (TCE)	1.00	0.240 J H	0.240 J	-	ug/l	H1/TR/P
G6M-04-10A-SPR22 680-214942-3	N	Trichlorofluoromethane	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Vinyl acetate	2.50	2.00 U H Q	2.00 UJ		ug/l	V2/H1/P
G6M-04-10A-SPR22 680-214942-3	N	Vinyl chloride	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Xylenes, Total	2.00	1.00 U H	1.00 UJ		ug/l	H1/P

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.

Quality Control Outliers for test method SW9034, 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-SPR22 (MS)	Sulfide	71.00	75 - 125	10 - 125	percent	J/UJ	M	
G6M-04-10A-SPR22 (SD)	Sulfide	71.00	75 - 125	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 SW9034

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-10A-SPR22 680-214942-3	N	Sulfide	1.80	1.30 U J1	1.30 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.

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-SPR22 680-214942-3	N	Nitrate-Nitrite (as N)	0.100	0.0500 U J1	0.0500 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-DUP01-SPR22 680-214942-7	FD	Methane	390	18000	18000 J		ug/l	Z
G6M-04-02X-SPR22 680-214942-1	N	Methane	390	26000	26000 J		ug/l	Z
G6M-04-07X-SPR22 680-214942-2	N	Methane	1.20	280	280 J		ug/l	Z
G6M-04-10A-SPR22 680-214942-3	N	Methane	390	19000 J1	19000 J		ug/l	Z
G6M-07-02X-SPR22 680-214942-6	N	Methane	390	16000	16000 J		ug/l	Z
G6M-13-01X-SPR22 680-214942-8	N	Methane	390	1400	1400 J		ug/l	Z
G6M-13-05X-SPR22 680-214942-9	N	Methane	390	21000	21000 J		ug/l	Z
G6M-97-05B-SPR22 680-214942-10	N	Methane	390	27000	27000 J		ug/l	Z

Test Method: SW6020A		Extraction Method: FLDFLT						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-10A-SPR22 680-214942-3	N	Arsenic	5.00	290	290 J	+	ug/l	M

Test Method: SW8260B		Extraction Method: SW5030B						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP01-SPR22 680-214942-7	FD	Chloromethane	2.50	2.00 U Q	2.00 UJ		ug/l	V2
AOC50-DUP01-SPR22 680-214942-7	FD	Dichlorodifluoromethane	2.00	1.00 U Q	1.00 UJ		ug/l	V2
AOC50-DUP01-SPR22 680-214942-7	FD	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5
G6M-04-02X-SPR22 680-214942-1	N	Chloromethane	2.50	2.00 U Q	2.00 UJ		ug/l	V2
G6M-04-02X-SPR22 680-214942-1	N	Dichlorodifluoromethane	2.00	1.00 U Q	1.00 UJ		ug/l	V2
G6M-04-02X-SPR22 680-214942-1	N	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5
G6M-04-07X-SPR22 680-214942-2	N	Chloromethane	2.50	2.00 U Q	2.00 UJ		ug/l	V2
G6M-04-07X-SPR22 680-214942-2	N	Dichlorodifluoromethane	2.00	1.00 U Q	1.00 UJ		ug/l	V2
G6M-04-07X-SPR22 680-214942-2	N	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5
G6M-04-10A-SPR22 680-214942-3	N	1,1,1,2-Tetrachloroethane	2.00	1.00 U H	1.00 UJ		ug/l	H1/P

Table of All Qualified Results

Test Method: SW8260B		Extraction Method: SW5030B						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-10A-SPR22 680-214942-3	N	1,1,1-Trichloroethane	1.00	0.500 U H	0.500 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,1,2,2-Tetrachloroethane	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,1,2-Trichloroethane	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,1-Dichloroethane	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,1-Dichloroethene	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,1-Dichloropropene	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,2,3-Trichlorobenzene	5.00	2.00 U H	2.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,2,3-Trichloropropane	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,2,4-Trichlorobenzene	5.00	2.00 U H	2.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,2,4-Trimethylbenzene	2.00	1.70 J H	1.70 J	-	ug/l	H1/TR
G6M-04-10A-SPR22 680-214942-3	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U H	5.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,2-Dibromoethane (EDB)	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,2-Dichlorobenzene	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,2-Dichloroethane	2.00	1.00 U M H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,2-Dichloroethene	2.00	3.40 H	3.40 J	-	ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,2-Dichloropropane	1.00	0.500 U H	0.500 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,3,5-Trimethylbenzene	2.00	0.960 J M H	0.960 J	-	ug/l	H1/TR/P
G6M-04-10A-SPR22 680-214942-3	N	1,3-Dichlorobenzene	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,3-Dichloropropane	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,4-Dichlorobenzene	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	2,2-Dichloropropane	2.00	1.00 UHQJ1	1.00 UJ		ug/l	V2/H1/P/C/M
G6M-04-10A-SPR22 680-214942-3	N	2-Butanone (MEK)	25.0	20.0 U H	20.0 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	2-Chlorotoluene	1.00	0.500 U H	0.500 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	2-Hexanone	20.0	10.0 U H	10.0 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	4-Chlorotoluene	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U H Q	10.0 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Acetone	25.0	10.0 U H	10.0 UJ		ug/l	H1/P

Table of All Qualified Results

Test Method: SW8260B		**Extraction Method: SW5030B**						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-10A-SPR22 680-214942-3	N	Benzene	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Bromobenzene	1.00	0.500 U H	0.500 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Bromochloromethane	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Bromodichloromethane	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Bromoform	2.50	2.00 U H	2.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Bromomethane	20.0	10.0 U H	10.0 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Carbon disulfide	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Carbon Tetrachloride	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Chlorobenzene	1.00	0.500 U H	0.500 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Chloroethane	20.0	10.0 U H	10.0 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Chloroform	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Chloromethane	2.50	2.00 UHQJ1	2.00 UJ		ug/l	V2/H1/P
G6M-04-10A-SPR22 680-214942-3	N	cis-1,2-Dichloroethene	2.00	2.30 H	2.30 J	-	ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	cis-1,3-Dichloropropene	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Cumene	2.00	0.260 J H	0.260 J	-	ug/l	H1/TR/P
G6M-04-10A-SPR22 680-214942-3	N	Dibromochloromethane	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Dibromomethane	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Dichlorodifluoromethane	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Ethylbenzene	1.00	0.500 U M H	0.500 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Hexachlorobutadiene	5.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	m,p-Xylene	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Methyl tert-butyl ether (MTBE)	5.00	2.00 U H	2.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Methylene chloride	20.0	10.0 U H	10.0 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Naphthalene	10.0	5.00 U H	5.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	n-Butylbenzene	2.50	2.00 U H	2.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	n-Propylbenzene	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	o-Xylene	2.00	1.00 U H	1.00 UJ		ug/l	H1/P

Table of All Qualified Results

Test Method: SW8260B		**Extraction Method: SW5030B**						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-10A-SPR22 680-214942-3	N	p-Cymene (p-Isopropyltoluene)	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	sec-Butylbenzene	2.50	2.00 U H	2.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Styrene	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	tert-Butylbenzene	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Tetrachloroethene (PCE)	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Toluene	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	trans-1,2-Dichloroethene	2.00	1.00 J H	1.00 J	-	ug/l	H1/TR/P
G6M-04-10A-SPR22 680-214942-3	N	trans-1,3-Dichloropropene	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Trichloroethene (TCE)	1.00	0.240 J H	0.240 J	-	ug/l	H1/TR/P
G6M-04-10A-SPR22 680-214942-3	N	Trichlorofluoromethane	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Vinyl acetate	2.50	2.00 U H Q	2.00 UJ		ug/l	V2/H1/P
G6M-04-10A-SPR22 680-214942-3	N	Vinyl chloride	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Xylenes, Total	2.00	1.00 U H	1.00 UJ		ug/l	H1/P
G6M-07-02X-SPR22 680-214942-6	N	Chloromethane	2.50	2.00 U Q	2.00 UJ		ug/l	V2
G6M-07-02X-SPR22 680-214942-6	N	Dichlorodifluoromethane	2.00	1.00 U Q	1.00 UJ		ug/l	V2
G6M-07-02X-SPR22 680-214942-6	N	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5
G6M-13-01X-SPR22 680-214942-8	N	1,2-Dichloroethene	2.00	0.730 J	0.730 J	+	ug/l	I/TR
G6M-13-01X-SPR22 680-214942-8	N	cis-1,2-Dichloroethene	2.00	0.730 J	0.730 J	+	ug/l	I/TR
G6M-13-01X-SPR22 680-214942-8	N	Dichlorodifluoromethane	2.00	1.00 U Q	1.00 UJ		ug/l	V2
G6M-13-01X-SPR22 680-214942-8	N	Trichloroethene (TCE)	1.00	0.500 J	0.500 J	+	ug/l	I/TR
G6M-97-05B-SPR22 680-214942-10	N	Chloromethane	2.50	2.00 U Q	2.00 UJ		ug/l	V2
G6M-97-05B-SPR22 680-214942-10	N	Dichlorodifluoromethane	2.00	1.00 U Q	1.00 UJ		ug/l	V2
G6M-97-05B-SPR22 680-214942-10	N	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5
XSA-12-96X-SPR22 680-214942-11	N	Chloromethane	2.50	2.00 U Q	2.00 UJ		ug/l	V2
XSA-12-96X-SPR22 680-214942-11	N	Dichlorodifluoromethane	2.00	1.00 U Q	1.00 UJ		ug/l	V2
XSA-12-96X-SPR22 680-214942-11	N	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5

Table of All Qualified Results

Test Method: SW9034		Extraction Method: NONE						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-10A-SPR22 680-214942-3	N	Sulfide	1.80	1.30 U J1	1.30 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 SW8260B

FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-04-10A-SPR22 680-214942-3	N	1,1,1,2-Tetrachloroethane	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,1,1-Trichloroethane	1.00	0.500 U H	0.500 UJ	0.500 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,1,2,2-Tetrachloroethane	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,1,2-Trichloroethane	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,1-Dichloroethane	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,1-Dichloroethene	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,1-Dichloropropene	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,2,3-Trichlorobenzene	5.00	2.00 U H	2.00 UJ	2.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,2,3-Trichloropropane	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,2,4-Trichlorobenzene	5.00	2.00 U H	2.00 UJ	2.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U H	5.00 UJ	5.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,2-Dibromoethane (EDB)	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,2-Dichlorobenzene	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,2-Dichloroethane	2.00	1.00 U M H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,2-Dichloroethene	2.00	3.40 H	3.40 J	3.40 J	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,2-Dichloropropane	1.00	0.500 U H	0.500 UJ	0.500 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,3,5-Trimethylbenzene	2.00	0.960 J M H	0.960 J	0.960 J	H1/TR/P
G6M-04-10A-SPR22 680-214942-3	N	1,3-Dichlorobenzene	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,3-Dichloropropane	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	1,4-Dichlorobenzene	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	2,2-Dichloropropane	2.00	1.00 UHQJ1	1.00 UJ	1.00 UJ	V2/H1/P/C/M
G6M-04-10A-SPR22 680-214942-3	N	2-Butanone (MEK)	25.0	20.0 U H	20.0 UJ	20.0 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	2-Chlorotoluene	1.00	0.500 U H	0.500 UJ	0.500 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	2-Hexanone	20.0	10.0 U H	10.0 UJ	10.0 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	4-Chlorotoluene	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U H Q	10.0 UJ	10.0 UJ	H1/P

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260B							
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-04-10A-SPR22 680-214942-3	N	Acetone	25.0	10.0 U H	10.0 UJ	10.0 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Benzene	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Bromobenzene	1.00	0.500 U H	0.500 UJ	0.500 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Bromochloromethane	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Bromodichloromethane	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Bromoform	2.50	2.00 U H	2.00 UJ	2.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Bromomethane	20.0	10.0 U H	10.0 UJ	10.0 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Carbon disulfide	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Carbon Tetrachloride	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Chlorobenzene	1.00	0.500 U H	0.500 UJ	0.500 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Chloroethane	20.0	10.0 U H	10.0 UJ	10.0 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Chloroform	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Chloromethane	2.50	2.00 UHQJ1	2.00 UJ	2.00 UJ	V2/H1/P
G6M-04-10A-SPR22 680-214942-3	N	cis-1,2-Dichloroethene	2.00	2.30 H	2.30 J	2.30 J	H1/P
G6M-04-10A-SPR22 680-214942-3	N	cis-1,3-Dichloropropene	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Cumene	2.00	0.260 J H	0.260 J	0.260 J	H1/TR/P
G6M-04-10A-SPR22 680-214942-3	N	Dibromochloromethane	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Dibromomethane	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Dichlorodifluoromethane	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Ethylbenzene	1.00	0.500 U M H	0.500 UJ	0.500 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Hexachlorobutadiene	5.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	m,p-Xylene	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Methyl tert-butyl ether (MTBE)	5.00	2.00 U H	2.00 UJ	2.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Methylene chloride	20.0	10.0 U H	10.0 UJ	10.0 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Naphthalene	10.0	5.00 U H	5.00 UJ	5.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	n-Butylbenzene	2.50	2.00 U H	2.00 UJ	2.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	n-Propylbenzene	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260B							
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-04-10A-SPR22 680-214942-3	N	o-Xylene	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	p-Cymene (p-Isopropyltoluene)	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	sec-Butylbenzene	2.50	2.00 U H	2.00 UJ	2.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Styrene	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	tert-Butylbenzene	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Tetrachloroethene (PCE)	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Toluene	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	trans-1,2-Dichloroethene	2.00	1.00 J H	1.00 J	1.00 J	H1/TR/P
G6M-04-10A-SPR22 680-214942-3	N	trans-1,3-Dichloropropene	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Trichloroethene (TCE)	1.00	0.240 J H	0.240 J	0.240 J	H1/TR/P
G6M-04-10A-SPR22 680-214942-3	N	Trichlorofluoromethane	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Vinyl acetate	2.50	2.00 U H Q	2.00 UJ	2.00 UJ	V2/H1/P
G6M-04-10A-SPR22 680-214942-3	N	Vinyl chloride	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P
G6M-04-10A-SPR22 680-214942-3	N	Xylenes, Total	2.00	1.00 U H	1.00 UJ	1.00 UJ	H1/P

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
H1	Test Hold Time
I	Surrogate recovery outside project limits.
M	MS Recovery
P	Sample preservation/collection requirement not met.
TR	Trace Level Detect
V2	CCV
V5	Ending Continuing Calibration Verification
Z	LCS RPD

Flag Code and Definitions

Flag	Definition

J	Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.

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 and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
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?		•		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 and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
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?		•		MS/MSD for Nitrate/Nitrite-N %R 73/73 out of limits %90-110
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 and within acceptance criteria?	•			
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 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?	•			Methane > limits but 4x sample size was 4x spike.
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: 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 and within acceptance criteria?	•			
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?		•		
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: 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 and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
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?		•		MS for As %R 119 out of limits 84-116
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: SW8260B (Volatile Organic Compounds by Capillary 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?		•		Headspace not sufficient for samples 3, 10, 11
Were holding times met?		•		Sample 3 Analyte trans 1,3-dichloropropane past hold time
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?		•		CCV out for Chloromethane, Dichlorodifluoromethane, Vinyl Acetate, 2,2-Dichloropropane
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 and within acceptance criteria?	•			
Were surrogate recoveries within project acceptance limits?		•		TOC %R 134 in Sample 6 and MB out for limit of %R 89-112
Was a method blank prepared and analyzed with each batch?	•			
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?		•		LCS/LCSD of 2,2-Dichloropropane %57/55 out of limits of %R 60-139
Was the LCS/LCSD RPD within project acceptance limits?		•		RPD of Vinyl Acetate (45) out of limits of 20.
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?		•		MS/MSD of 2,2-Dichloropropane %R 39-41 out of limits %R 60-139. Chloromethane %R 153-164 out of limits 50-139
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 DoD QSM corrective actions followed if deviations were noted?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		Al data acceptable as removed 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 and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
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?		•		MS/MSD for Sulfide %R 71/71 out of limits %75-125
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 and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
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?		•		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 2022
Field Duplicates for SDG: 6802149421

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-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Alkalinity, Total (as CaCO3)	110	110	5.00	0.00	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-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Nitrate-Nitrite (as N)	0.150	0.130	0.100	14.3	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-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Ethane	3.60	4.00	1.10	10.5	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Ethene	3.80	3.90	1.00	2.60	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Methane	16000	18000	390	11.8	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-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Iron (FLDFLT)	120000	150000	100	22.2	30	OK	NA
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Manganese (FLDFLT)	3000	3600	10.0	18.2	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 2022
Field Duplicates for SDG: 6802149421

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-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Arsenic (FLDFLT)	47.0	48.0	5.00	2.11	30	OK	NA

Location	Analysis
G6M-07-02X	SW8260B

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-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	1,1,1,2-Tetrachloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	1,1,1-Trichloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	1,1,2,2-Tetrachloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	1,1,2-Trichloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	1,1-Dichloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	1,1-Dichloroethene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	1,1-Dichloropropene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	1,2,3-Trichlorobenzene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	1,2,3-Trichloropropane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	1,2,4-Trichlorobenzene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	1,2,4-Trimethylbenzene	1.00	1.10	2.00	9.52	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	1,2-Dibromo-3-chloropropane	ND	ND	10.0	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	1,2-Dibromoethane (EDB)	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	1,2-Dichlorobenzene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	1,2-Dichloroethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	1,2-Dichloroethene	2.30	2.00	2.00	14.0	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	1,2-Dichloropropane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	1,3,5-Trimethylbenzene	0.290	0.290	2.00	0.00	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	1,3-Dichlorobenzene	0.440	0.360	2.00	20.0	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 2022
Field Duplicates for SDG: 6802149421

Location	Analysis
G6M-07-02X	SW8260B

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-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	1,3-Dichloropropane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	1,4-Dichlorobenzene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	2,2-Dichloropropane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	2-Butanone (MEK)	ND	ND	25.0	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	2-Chlorotoluene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	2-Hexanone	ND	ND	20.0	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	4-Chlorotoluene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	4-Methyl-2-pentanone (MIBK)	ND	ND	20.0	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Acetone	ND	ND	25.0	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Benzene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Bromobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Bromochloromethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Bromodichloromethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Bromoform	ND	ND	2.50	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Bromomethane	ND	ND	20.0	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Carbon disulfide	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Carbon Tetrachloride	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Chlorobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Chloroethane	ND	ND	20.0	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Chloroform	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Chloromethane	ND	ND	2.50	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	cis-1,2-Dichloroethene	2.30	2.00	2.00	14.0	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	cis-1,3-Dichloropropene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Cumene	ND	ND	2.00	NA	30	NA	OK

FD = Field Duplicate
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Field Duplicate Report By SDG

Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Spring 2022
Field Duplicates for SDG: 6802149421

Location	Analysis
G6M-07-02X	SW8260B

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-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Dibromochloromethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Dibromomethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Dichlorodifluoromethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Ethylbenzene	0.260	0.250	1.00	3.92	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Hexachlorobutadiene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	m,p-Xylene	0.610	0.550	2.00	10.3	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Methyl tert-butyl ether (MTBE)	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Methylene chloride	ND	ND	20.0	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	n-Butylbenzene	0.550	0.660	2.50	18.2	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	n-Propylbenzene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Naphthalene	3.40	4.20	10.0	21.1	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	o-Xylene	0.370	0.370	2.00	0.00	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	p-Cymene (p-Isopropyltoluene)	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	sec-Butylbenzene	ND	ND	2.50	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Styrene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	tert-Butylbenzene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Tetrachloroethene (PCE)	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Toluene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	trans-1,2-Dichloroethene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	trans-1,3-Dichloropropene	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Trichloroethene (TCE)	ND	0.300	1.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Trichlorofluoromethane	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Vinyl acetate	ND	ND	2.50	NA	30	NA	OK
G6M-07-02X-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Vinyl chloride	0.830	0.670	2.00	21.3	30	NA	OK

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RPD = Relative Percent Difference

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Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Spring 2022
Field Duplicates for SDG: 6802149421

Location	Analysis
G6M-07-02X	SW8260B

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-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Xylenes, Total	0.980	0.920	2.00	6.32	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-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	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-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	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-SPR22 / AOC50-DUP01-SPR22	680-214942-6 / 680-214942-7	Total Organic Carbon	160	150	50.0	6.45	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"

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 2, 2022

SUBJECT: Fort Devens - Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on July 13, 2022. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #54432 B:

SDG #	Fraction
680-214970-1	Volatile, Dissolved Metals, Alkalinity, Nitrate/Nitrite-N, Sulfate, Sulfide, TOC, Methane, Ethane & Ethene

The data validation was performed under Stage 2B guidelines. The analyses were validated using the following documents and variances, 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
Project Manager/Senior Chemist
pgeng@lab-data.com

129 pages-ADV

Attachment 1

Stage 2B EQUIS EDD

LDC# 54432 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	VOA (8260B)		3 D.Met. (6010C/ 6020A)		Methane Ethane Ethene		Alk (2320B)		NO_3 /NO_2-N (353.2)		SO_4 (9056A)		S= (9034)		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	W	S
A	680-214942-1	07/13/22	07/27/22	9	0	9	0	8	0	8	0	8	0	8	0	8	0	8	0																		
B	680-214970-1	07/13/22	07/27/22	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0																		
C	680-215075-1	07/13/22	07/27/22	-	-	4	0	-	-	-	-	-	-	-	-	-	-	-	-																		
Total	T/PG			10	0	14	0	9	0	9	0	9	0	9	0	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	78

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

V:\LOGIN\Arcadis\Fort Devens\54432ST.wpd

Data Validation Report for 6802149701

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, AOC 50, Spring 2022
SDG:	6802149701
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
Prime Contractor:	Seres-Arcadis JV
Project Manager:	Jennifer Singer
Contract Laboratory(ies):	Eurofins Environment Testing TestAmerica, Arvada, CO | 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:	July 29, 2022

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	E353.2	RSK175	SW6010C - Dissolved	SW6020A - Dissolved	SW8260B	SW9034	SW9056A	SW9060
G6M-13-02X-SPR22	680-214970-1	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 JV; analyses were performed by Eurofins Environment Testing TestAmerica, Arvada, CO | Eurofins Environment Testing TestAmerica, Savannah, GA and were reported under sample delivery group (SDG) 6802149701. 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 4 results (5.06%) out of the 79 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.
SW8260B	No additional comments; see Checklist for detail.
SW9034	No additional comments; see Checklist for detail.
SW9056A	No additional comments; see Checklist for detail.



July 29, 2022

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.

August 02, 2022

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
LCSD6807204554 (BD)	Methane	164.8	< 30	< 30	rpd	J/None	Z	
LCSD6807204557 (BD)	Methane	167.4	< 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-13-02X-SPR22 680-214970-1	N	Methane	390	11000	11000 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 (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260B, 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
CCVIS68072104938 (CV)	2,2-Dichloropropane	57.00	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS68072104938 (CV)	Chloromethane	79.00	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS68072104938 (CV)	Vinyl acetate	78.00	80 - 120	80 - 120	percent	J/UJ	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 SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-13-02X-SPR22 680-214970-1	N	2,2-Dichloropropane	2.00	1.00 U Q	1.00 UJ		ug/l	V2/C
G6M-13-02X-SPR22 680-214970-1	N	Chloromethane	2.50	2.00 U Q	2.00 UJ		ug/l	V2
G6M-13-02X-SPR22 680-214970-1	N	Vinyl acetate	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 (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260B, 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
LCS68072104939 (BS)	2,2-Dichloropropane	57.00	60 - 139	10 - 139	percent	J/UJ	C	
LCSD68072104940 (BD)	2,2-Dichloropropane	55.00	60 - 139	10 - 139	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 SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-13-02X-SPR22 680-214970-1	N	2,2-Dichloropropane	2.00	1.00 U Q	1.00 UJ		ug/l	V2/C

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.

Quality Control Outliers for test method SW8260B, 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
LCSD68072104940 (BD)	Vinyl acetate	44.86	< 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: RSK175		**Extraction Method: METHOD**						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-13-02X-SPR22 680-214970-1	N	Methane	390	11000	11000 J		ug/l	Z

Test Method: SW8260B		**Extraction Method: SW5030B**						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-13-02X-SPR22 680-214970-1	N	2,2-Dichloropropane	2.00	1.00 U Q	1.00 UJ		ug/l	V2/C
G6M-13-02X-SPR22 680-214970-1	N	Chloromethane	2.50	2.00 U Q	2.00 UJ		ug/l	V2
G6M-13-02X-SPR22 680-214970-1	N	Vinyl acetate	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 (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.

Results with Modified Qualifiers

No qualifiers associated with this sample delivery group were modified manually.

Reason Code Definitions

Code	Definition
C	LCS Recovery
TR	Trace Level Detect
V2	CCV
Z	LCS RPD

Flag Code and Definitions

Flag	Definition
J	Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.

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 and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
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?		•		MS/MSD not in SDG
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?		•		No FD
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 and within acceptance criteria?	•			
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?		•		
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: 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 and within acceptance criteria?	•			
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 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?		•		No MS/MSD in SDG
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?			•	No FD
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.

Data Validation Report for 6802149701

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 and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
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?		•		No MS/MSD in SDG
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?			•	No FD
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 and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
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?		•		No MS/MSD in SDG
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?			•	No FD
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: SW8260B (Volatile Organic Compounds by Capillary 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 out for Chloromethane, 4-methyl-2-pentanone, Vinyl Acetate, 2,2-Dichloropropane
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 and within acceptance criteria?	•			
Were surrogate recoveries within project acceptance limits?	•			
Was a method blank prepared and analyzed with each batch?	•			
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?		•		LCS/LCSD for 2,2-Dichloropropane %R 57/55 out of limits %R 60-139
Was the LCS/LCSD RPD within project acceptance limits?		•		LCS/LCSD for Vinyl Acetate RPD 45 out of limits 20
Was a MS/MSD pair prepared with each batch?		•		No MS/MSD in SDG
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 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 and within acceptance criteria?	•			
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?		•		
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?		•		No MS/MSD in SDG
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?			•	No FD
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 and within acceptance criteria?	•			
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?		•		
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?		•		No MS/MSD in SDG
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.

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

January 18, 2023

SUBJECT: Fort Devens - Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on November 30, 2022. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #55524_B_RV1:

SDG #	**Fraction**
680-222340-1	Volatiles, Dissolved Metals, Alkalinity, Nitrate/Nitrite, Sulfate, Sulfide, TOC

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

346 pages-ADV

Attachment 1

Stage 2B EQUIS EDD

LDC# 55524 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	VOA (8260D)		3 D.Met. (6010C/ 6020A)		Methane Ethane Ethene		Alk (2320B)		DOC (9060A)		Cl (9056A)		NO_3 /NO_2-N (353.2)		SO_4 (9056A)		S= (9034)		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	W	S	W	S
A	680-223337-1	11/30/22	12/14/22	-	-	30	0	-	-	30	0	30	0	30	0	-	-	30	0	-	-	-	-														
B	680-222340-1	11/30/22	12/14/22	11	0	7	0	7	0	4	0	-	-	-	-	4	0	4	0	4	0	4	0														
C	680-222692-1	11/30/22	12/14/22	27	0	26	0	7	0	7	0	-	-	-	-	7	0	7	0	7	0	7	0														
D	680-223686-1	11/30/22	12/14/22	-	-	12	0	-	-	12	0	12	0	12	0	-	-	12	0	-	-	-	-														
E	680-223687-1	11/30/22	12/14/22	-	-	20	0	-	-	20	0	20	0	20	0	-	-	20	0	-	-	-	-														
Total	TR/PG			38	0	95	0	14	0	73	0	62	0	62	0	11	0	73	0	11	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	450

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

V:\LOGIN\Arcadis\Fort Devens\55524ST.wpd

Data Validation Report for 680-222340-1

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2022
SDG:	680-222340-1
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
Prime Contractor:	Seres-Arcadis JV
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:	December 30, 2022

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	E353.2	RSK175	SW6010C - Dissolved	SW6020A - Dissolved	SW8260D	SW9034	SW9056A	SW9060A
AOC50-DUP04-FAL22	680-222340-6	Water	Field Duplicate/FD				X	X	X			
AOC50-TB01-FAL22	680-222340-11	Water	Trip Blank/TB						X			
G6M-02-08X-FAL22	680-222340-7	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-04-10A-FAL22	680-222340-1	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-04-10X-FAL22	680-222340-2	Water	Field Sample/N						X			
G6M-04-13X-FAL22	680-222340-3	Water	Field Sample/N						X			
G6M-04-14X-FAL22	680-222340-4	Water	Field Sample/N				X	X	X			
G6M-13-05X-FAL22	680-222340-5	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-13-06X-FAL22	680-222340-8	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-95-19X-FAL22	680-222340-9	Water	Field Sample/N						X			
G6M-95-20X-FAL22	680-222340-10	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 JV; analyses were performed by Eurofins Environment Testing TestAmerica, Savannah, GA and were reported under sample delivery group (SDG) 680-222340-1. 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 5 results (0.62%) out of the 801 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

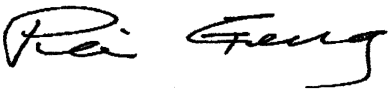
Analytical Method	Data Reviewer Comment
A2320B	No additional comments; see Checklist for detail.
E353.2	No additional comments; see Checklist for detail.
RSK175	No additional comments; see Checklist for detail.
SW6010C	No additional comments; see Checklist for detail.
SW6020A	No additional comments; 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.
SW9060A	No additional comments; see Checklist for detail.



December 30, 2022

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.



January 18, 2023

Reviewed by Pei Geng, Senior Scientist, Laboratory Data Consultants, Inc.

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
CCB68074425725 (CB)	Nitrate-Nitrite (as N)	0.0119	< 0.01	< 0.05	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 LOQ will be qualified based on the validation type such as J+ at the sample result.

Qualified Results associated with the Calibration Blank for E353.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-10A-FAL22 680-222340-1	N	Nitrate-Nitrite (as N)	0.0500	0.0430 J	0.0500 U		mg/l	B2
G6M-13-06X-FAL22 680-222340-8	N	Nitrate-Nitrite (as N)	0.0500	0.0270 J	0.0500 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 (LOQ) based on the sample concentration.
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
LCSD68074519534 (BD)	Methane	163	< 30	< 30	rpd	J/None	Z	
LCSD68074519536 (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-FAL22 (MS)	Methane	800	75 - 125	10 - 125	percent	J/None	M	Spike amount Insignificant
G6M-04-10A-FAL22 (SD)	Methane	200	75 - 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-FAL22 (MS)	Iron	-106	87 - 115	10 - 125	percent	J/X	M	Spike amount Insignificant
G6M-04-10A-FAL22 (SD)	Iron	62.0	87 - 115	10 - 125	percent	J/UJ	M	Spike amount Insignificant
G6M-04-10A-FAL22 (MS)	Manganese	63.0	90 - 114	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 SW6010C, Dissolved

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-10A-FAL22 680-222340-1	N	Manganese	10.0	770 J1	770 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 (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

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-FAL22 (MS)	Arsenic	64.0	84 - 116	10 - 125	percent	J/UJ	M	
G6M-04-10A-FAL22 (SD)	Arsenic	122	84 - 116	10 - 125	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 SW6020A, Dissolved

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-10A-FAL22 680-222340-1	N	Arsenic	5.00	270 J1	270 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 (LOQ) based on the sample concentration.
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
CCVIS6807449323 (CV)	Bromomethane	130	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807449323 (CV)	Chloroethane	246	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807453183 (CV)	Bromomethane	126	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807453183 (CV)	Chloroethane	254	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
CCVC68074493233 (EV)	Chloroethane	290	50 - 150	50 - 150	percent	J/None	V5	
CCVC68074531829 (EV)	Chloroethane	210	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
LCS6807449324 (BS)	Chloroethane	244	60 - 138	10 - 138	percent	J/None	C	
LCS6807453184 (BS)	Chloroethane	276	60 - 138	10 - 138	percent	J/None	C	
LCSD6807449325 (BD)	Chloroethane	256	60 - 138	10 - 138	percent	J/None	C	
LCSD6807453185 (BD)	Chloroethane	254	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, 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-FAL22 (MS)	Chloroethane	290	60 - 138	10 - 138	percent	J/None	M	
G6M-04-10A-FAL22 (SD)	Chloroethane	296	60 - 138	10 - 138	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-FAL22 (SD)	Trichlorofluoromethane	21.5	< 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 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-FAL22 (MS)	Sulfate	79.0	90 - 110	10 - 110	percent	J/UJ	M	
G6M-04-10A-FAL22 (SD)	Sulfate	83.0	90 - 110	10 - 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 SW9056A

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-10A-FAL22 680-222340-1	N	Sulfate	1.00	1.20 J1	1.20 J	-	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.

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-FAL22 680-222340-1	N	Nitrate-Nitrite (as N)	0.0500	0.0430 J	0.0500 U		mg/l	B2
G6M-13-06X-FAL22 680-222340-8	N	Nitrate-Nitrite (as N)	0.0500	0.0270 J	0.0500 U		mg/l	B2

Test Method: SW6010C		**Extraction Method: FLDFLT**						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-10A-FAL22 680-222340-1	N	Manganese	10.0	770 J1	770 J	-	ug/l	M

Test Method: SW6020A		**Extraction Method: FLDFLT**						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-10A-FAL22 680-222340-1	N	Arsenic	5.00	270 J1	270 J		ug/l	M

Test Method: SW9056A		**Extraction Method: NONE**						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-10A-FAL22 680-222340-1	N	Sulfate	1.00	1.20 J1	1.20 J	-	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	Modified Result	Reason
G6M-02-08X-FAL22 680-222340-7	N	Methane	390	28000	28000 J	28000	
G6M-04-10A-FAL22 680-222340-1	N	Methane	390	20000 J1	20000 J	20000	
G6M-13-05X-FAL22 680-222340-5	N	Methane	390	16000	16000 J	16000	
G6M-13-06X-FAL22 680-222340-8	N	Methane	390	16000	16000 J	16000	

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
M	MS 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?			•	Not applicable to this method.
Were all reported analytes for the ICV within the required criteria?			•	Not applicable to this method.
Were ICB/CCBs run at the required frequency?			•	Not applicable to this method.
Were target analytes in the ICBs/CCBs non-detect?			•	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 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?		•		Several results qualified U at the LOD due to CCB contamination.
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.
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?		•		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 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 %R limits but no results qualified due to sample result being 4x greater than spike.
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?		•		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.
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?		•		One result qualified J due to MS/MSD %R being lower than %R limits. Fe was not qualified due to sample result being 4x greater than spike.
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 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?		•		One result qualified J due to MS %R being lower than limits and MSD %R being greater than 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: 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 was greater than %D limits for several analytes but no results were qualified due to being non detects.
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 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?		•		LCS/LCSD %R was 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?	•			
Were MS/MSD recoveries within project acceptance limits?		•		MS/MSD %R was greater than %R limits but no results were qualified due to being non detects.
Was the MS/MSD RPD within project acceptance limits?		•		MS/MSD RPD was greater than RPD limits but no results were qualified due to being non detects.
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.
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?		•		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 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?		•		One result qualified J due to MS/MSD %R being 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?			•	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: SW9060A (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 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?			•	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.
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

January 18, 2023

SUBJECT: Fort Devens - Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on November 30, 2022. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #55524_C_RV1:

SDG #	**Fraction**
680-222692-1	Volatiles, Dissolved Metals, Alkalinity, Nitrate/Nitrite, Sulfate, Sulfide, TOC, 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

346 pages-ADV

Attachment 1

Stage 2B EQUIS EDD

LDC# 55524 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	VOA (8260D)		3 D.Met. (6010C/ 6020A)		Methane Ethane Ethene		Alk (2320B)		DOC (9060A)		Cl (9056A)		NO_3 /NO_2-N (353.2)		SO_4 (9056A)		S= (9034)		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	W	S	W	S
A	680-223337-1	11/30/22	12/14/22	-	-	30	0	-	-	30	0	30	0	30	0	-	-	30	0	-	-	-	-														
B	680-222340-1	11/30/22	12/14/22	11	0	7	0	7	0	4	0	-	-	-	-	4	0	4	0	4	0	4	0														
C	680-222692-1	11/30/22	12/14/22	27	0	26	0	7	0	7	0	-	-	-	-	7	0	7	0	7	0	7	0														
D	680-223686-1	11/30/22	12/14/22	-	-	12	0	-	-	12	0	12	0	12	0	-	-	12	0	-	-	-	-														
E	680-223687-1	11/30/22	12/14/22	-	-	20	0	-	-	20	0	20	0	20	0	-	-	20	0	-	-	-	-														
Total	TR/PG			38	0	95	0	14	0	73	0	62	0	62	0	11	0	73	0	11	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	450

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

V:\LOGIN\Arcadis\Fort Devens\55524ST.wpd

Data Validation Report for 680-222692-1

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2022
SDG:	680-222692-1
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
Prime Contractor:	Seres-Arcadis JV
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:	December 30, 2022

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	E353.2	RSK175	SW6010C - Dissolved	SW6020A - Dissolved	SW8260D	SW9034	SW9056A	SW9060A
AOC50-DUP01-FAL22	680-222692-1	Water	Field Duplicate/FD				X	X	X			
AOC50-DUP02-FAL22	680-222692-2	Water	Field Duplicate/FD	X	X	X	X	X	X	X	X	X
AOC50-RB01-FAL22	680-222692-24	Water	Equipment Blank/EB				X	X	X			
AOC50-TB02-FAL22	680-222692-19	Water	Trip Blank/TB						X			
AOC50-TB03-FAL22	680-222692-25	Water	Trip Blank/TB						X			
G6M-02-01X-FAL22	680-222692-26	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-02-04X-FAL22	680-222692-3	Water	Field Sample/N				X	X	X			
G6M-02-06X-FAL22	680-222692-4	Water	Field Sample/N				X	X	X			
G6M-02-07X-FAL22	680-222692-27	Water	Field Sample/N				X	X	X			
G6M-02-11X-FAL22	680-222692-5	Water	Field Sample/N				X	X	X			
G6M-02-13X-FAL22	680-222692-6	Water	Field Sample/N				X	X	X			
G6M-03-07X-FAL22	680-222692-7	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-03-10X-FAL22	680-222692-8	Water	Field Sample/N				X	X	X			
G6M-04-01X-FAL22	680-222692-28	Water	Field Sample/N				X	X	X			
G6M-04-02X-FAL22	680-222692-9	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-04-04X-FAL22	680-222692-10	Water	Field Sample/N				X	X	X			
G6M-04-06X-FAL22	680-222692-11	Water	Field Sample/N				X	X	X			
G6M-04-07X-FAL22	680-222692-12	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-04-11X-FAL22	680-222692-13	Water	Field Sample/N				X	X	X			

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	E353.2	RSK175	SW6010C - Dissolved	SW6020A - Dissolved	SW8260D	SW9034	SW9056A	SW9060A
G6M-07-01X-FAL22	680-222692-20	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-07-02X-FAL22	680-222692-14	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-97-28X-FAL22	680-222692-15	Water	Field Sample/N				X	X				
MW-3-FAL22	680-222692-16	Water	Field Sample/N				X	X	X			
MW-7-FAL22	680-222692-17	Water	Field Sample/N				X	X	X			
XSA-12-95X-FAL22	680-222692-18	Water	Field Sample/N				X	X	X			
XSA-12-96X-FAL22	680-222692-21	Water	Field Sample/N				X	X	X			
XSA-12-97X-FAL22	680-222692-22	Water	Field Sample/N				X	X	X			
XSA-12-98X-FAL22	680-222692-23	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 JV; analyses were performed by Eurofins Environment Testing TestAmerica, Savannah, GA and were reported under sample delivery group (SDG) 680-222692-1. 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
- 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 423 results (21.47%) out of the 1970 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.
SW9060A	No additional comments; see Checklist for detail.



December 30, 2022

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.

January 18, 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
CCB68074568927 (CB)	Nitrate-Nitrite (as N)	0.0381	< 0.01	< 0.05	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 LOQ will be qualified based on the validation type such as J+ at the sample result.

Qualified Results associated with the Calibration Blank for E353.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-07-01X-FAL22 680-222692-20	N	Nitrate-Nitrite (as N)	0.500	1.30 D	1.30 J	+	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 (LOQ) based on the sample concentration.
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
MB68074468014 (LB)	Nitrate-Nitrite (as N)	0.0179	< 0.01	< 0.05	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 LOQ will be qualified based on the validation type such as J+ at the sample result.

Qualified Results associated with the Lab Blank for E353.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP02-FAL22 680-222692-2	FD	Nitrate-Nitrite (as N)	0.0500	0.0400 J	0.0500 U		mg/l	L
G6M-03-07X-FAL22 680-222692-7	N	Nitrate-Nitrite (as N)	0.0500	0.0490 J	0.0500 U		mg/l	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 (LOQ) based on the sample concentration.
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
LCSD68074519534 (BD)	Methane	163	< 30	< 30	rpd	J/None	Z	
LCSD68074519536 (BD)	Methane	164	< 30	< 30	rpd	J/None	Z	
LCSD68074532065 (BD)	Methane	164	< 30	< 30	rpd	J/None	Z	
LCSD68074532067 (BD)	Methane	161	< 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, 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-FAL22 (MS)	Iron	30.0	87 - 115	10 - 125	percent	J/UJ	M	Spike amount Insignificant
MW-3-FAL22 (MS)	Manganese	-50.0	90 - 114	10 - 125	percent	J/X	M	Spike amount Insignificant
MW-3-FAL22 (SD)	Manganese	133	90 - 114	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 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-FAL22 (MS)	Arsenic	83.0	84 - 116	10 - 125	percent	J/UJ	M	Spike amount Insignificant
MW-3-FAL22 (SD)	Arsenic	56.0	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
CCVIS6807454194 (CV)	Bromoform	123	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807460273 (CV)	1,2-Dibromo-3-chloropropane	75.0	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6807460273 (CV)	2-Hexanone	73.0	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6807460273 (CV)	4-Methyl-2-pentanone (MIBK)	74.0	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6807460273 (CV)	Acetone	75.0	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6807460273 (CV)	Bromomethane	132	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807460273 (CV)	Chloroethane	258	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807462464 (CV)	Chloroethane	161	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807462464 (CV)	Chloromethane	0.00	80 - 120	80 - 120	percent	J/UJ	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-RB01-FAL22 680-222692-24	EB	Chloromethane	2.50	2.00 U	2.00 UJ		ug/l	V2
AOC50-TB03-FAL22 680-222692-25	TB	Chloromethane	2.50	2.00 U	2.00 UJ		ug/l	V2
G6M-02-01X-FAL22 680-222692-26	N	Chloromethane	2.50	2.00 U	2.00 UJ		ug/l	V2
G6M-02-04X-FAL22 680-222692-3	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-02-04X-FAL22 680-222692-3	N	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-02-04X-FAL22 680-222692-3	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-02-04X-FAL22 680-222692-3	N	Acetone	25.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-02-06X-FAL22 680-222692-4	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-02-06X-FAL22 680-222692-4	N	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-02-06X-FAL22 680-222692-4	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-02-06X-FAL22 680-222692-4	N	Acetone	25.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-02-07X-FAL22 680-222692-27	N	Chloromethane	2.50	2.00 U	2.00 UJ		ug/l	V2
G6M-02-11X-FAL22 680-222692-5	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-02-11X-FAL22 680-222692-5	N	2-Hexanone	20.0	10.0 U Q	10.0 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-02-11X-FAL22 680-222692-5	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-02-11X-FAL22 680-222692-5	N	Acetone	25.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-03-10X-FAL22 680-222692-8	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2/V4
G6M-03-10X-FAL22 680-222692-8	N	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2/V4
G6M-03-10X-FAL22 680-222692-8	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ		ug/l	V2/V4
G6M-03-10X-FAL22 680-222692-8	N	Acetone	25.0	10.0 U Q	10.0 UJ		ug/l	V2/V4
G6M-04-01X-FAL22 680-222692-28	N	Chloromethane	2.50	2.00 U	2.00 UJ		ug/l	V2/V4
G6M-04-06X-FAL22 680-222692-11	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-04-06X-FAL22 680-222692-11	N	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-04-06X-FAL22 680-222692-11	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-04-06X-FAL22 680-222692-11	N	Acetone	25.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-07-01X-FAL22 680-222692-20	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-07-01X-FAL22 680-222692-20	N	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-07-01X-FAL22 680-222692-20	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-07-01X-FAL22 680-222692-20	N	Acetone	25.0	10.0 U Q	10.0 UJ		ug/l	V2
MW-3-FAL22 680-222692-16	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
MW-3-FAL22 680-222692-16	N	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
MW-3-FAL22 680-222692-16	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q M	10.0 UJ		ug/l	V2
MW-3-FAL22 680-222692-16	N	Acetone	25.0	10.0 U Q	10.0 UJ		ug/l	V2
MW-7-FAL22 680-222692-17	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
MW-7-FAL22 680-222692-17	N	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
MW-7-FAL22 680-222692-17	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ		ug/l	V2
MW-7-FAL22 680-222692-17	N	Acetone	25.0	10.0 U Q	10.0 UJ		ug/l	V2
XSA-12-95X-FAL22 680-222692-18	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
XSA-12-95X-FAL22 680-222692-18	N	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
XSA-12-95X-FAL22 680-222692-18	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ		ug/l	V2
XSA-12-95X-FAL22 680-222692-18	N	Acetone	25.0	10.0 U Q	10.0 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-FAL22 680-222692-21	N	Chloromethane	2.50	2.00 U	2.00 UJ		ug/l	V2
XSA-12-97X-FAL22 680-222692-22	N	Chloromethane	2.50	2.00 U	2.00 UJ		ug/l	V2
XSA-12-98X-FAL22 680-222692-23	N	Chloromethane	2.50	2.00 U	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 (LOQ) based on the sample concentration.
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
CCVC68074541930 (EV)	Carbon disulfide	155	50 - 150	50 - 150	percent	J/None	V5	
CCVC68074541930 (EV)	Chloroethane	167	50 - 150	50 - 150	percent	J/None	V5	
CCVC68074541930 (EV)	Chloromethane	156	50 - 150	50 - 150	percent	J/None	V5	
CCVC68074541930 (EV)	Trichlorofluoromethane	184	50 - 150	50 - 150	percent	J/None	V5	
CCVC68074602734 (EV)	Chloroethane	268	50 - 150	50 - 150	percent	J/None	V5	
CCVC68074624632 (EV)	Chloroethane	166	50 - 150	50 - 150	percent	J/None	V5	
CCVC68074624632 (EV)	Vinyl acetate	44.0	50 - 150	50 - 150	percent	J/UJ	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-RB01-FAL22 680-222692-24	EB	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5
AOC50-TB03-FAL22 680-222692-25	TB	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5
G6M-02-01X-FAL22 680-222692-26	N	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5
G6M-02-07X-FAL22 680-222692-27	N	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5
G6M-04-01X-FAL22 680-222692-28	N	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5/V4
XSA-12-96X-FAL22 680-222692-21	N	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5
XSA-12-97X-FAL22 680-222692-22	N	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5
XSA-12-98X-FAL22 680-222692-23	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 (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260D, 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-RB01-FAL22 (EB)	Acetone	12.0	< 3.7	< 25	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 LOQ will be qualified based on the validation type such as J+ at the sample result.

Qualified Results associated with the Equipment Blank for SW8260D

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP02-FAL22 680-222692-2	FD	Acetone	25.0	6.50 J	25.0 UJ		ug/l	V/V4
G6M-04-02X-FAL22 680-222692-9	N	Acetone	25.0	14.0 J	25.0 U		ug/l	V
G6M-07-02X-FAL22 680-222692-14	N	Acetone	25.0	7.80 J	25.0 U		ug/l	V

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.

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
MB6807454199 (LB)	1,2,4-Trichlorobenzene	1.97	< 0.53	< 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 LOQ will be qualified based on the validation type such as J+ at the sample result.

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
LCS6807460274 (BS)	Chloroethane	258	60 - 138	10 - 138	percent	J/None	C	
LCS6807462465 (BS)	Chloroethane	161	60 - 138	10 - 138	percent	J/None	C	
LCSD6807460275 (BD)	Chloroethane	250	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, 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-FAL22 (MS)	Chloroethane	246	60 - 138	10 - 138	percent	J/None	M	
MW-3-FAL22 (SD)	Chloroethane	258	60 - 138	10 - 138	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, 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-DUP01-FAL22 (FD)	Toluene-d8	126	89 - 112	10 - 112	percent	J/None	I	
AOC50-DUP02-FAL22 (FD)	Toluene-d8	131	89 - 112	10 - 112	percent	J/None	I	
AOC50-TB02-FAL22 (TB)	Toluene-d8	123	89 - 112	10 - 112	percent	J/None	I	
G6M-02-13X-FAL22 (N)	Toluene-d8	127	89 - 112	10 - 112	percent	J/None	I	
G6M-03-07X-FAL22 (N)	Toluene-d8	130	89 - 112	10 - 112	percent	J/None	I	
G6M-04-02X-FAL22 (N)	Toluene-d8	128	89 - 112	10 - 112	percent	J/None	I	
G6M-04-04X-FAL22 (N)	Toluene-d8	131	89 - 112	10 - 112	percent	J/None	I	
G6M-04-07X-FAL22 (N)	Toluene-d8	131	89 - 112	10 - 112	percent	J/None	I	
G6M-04-11X-FAL22 (N)	Toluene-d8	131	89 - 112	10 - 112	percent	J/None	I	
G6M-07-02X-FAL22 (N)	Dibromofluoromethane	120	89 - 119	10 - 119	percent	J/None	I	
G6M-07-02X-FAL22 (N)	Toluene-d8	132	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
AOC50-DUP01-FAL22 680-222692-1	FD	1,2-Dichloroethene	2.00	0.780 J	0.780 J	+	ug/l	I/TR/V4
AOC50-DUP01-FAL22 680-222692-1	FD	cis-1,2-Dichloroethene	2.00	0.490 J	0.490 J	+	ug/l	I/TR/V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,2,4-Trimethylbenzene	2.00	1.50 J Q	1.50 J	+	ug/l	I/TR/V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,2-Dichloroethene	2.00	1.40 J	1.40 J	+	ug/l	I/TR/V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,3,5-Trimethylbenzene	2.00	0.390 J Q	0.390 J	+	ug/l	I/TR/V4
AOC50-DUP02-FAL22 680-222692-2	FD	2-Butanone (MEK)	25.0	7.30 J Q	7.30 J	+	ug/l	I/TR/V4
AOC50-DUP02-FAL22 680-222692-2	FD	cis-1,2-Dichloroethene	2.00	1.40 J	1.40 J	+	ug/l	I/TR/V4
AOC50-DUP02-FAL22 680-222692-2	FD	Ethylbenzene	1.00	0.300 J	0.300 J	+	ug/l	I/TR/V4
AOC50-DUP02-FAL22 680-222692-2	FD	m,p-Xylene	2.00	0.750 J	0.750 J	+	ug/l	I/TR/V4
AOC50-DUP02-FAL22 680-222692-2	FD	Naphthalene	10.0	5.00 J Q	5.00 J	+	ug/l	I/TR/V4
AOC50-DUP02-FAL22 680-222692-2	FD	n-Butylbenzene	2.50	1.10 J	1.10 J	+	ug/l	I/TR/V4
AOC50-DUP02-FAL22 680-222692-2	FD	o-Xylene	2.00	0.430 J	0.430 J	+	ug/l	I/TR/V4
AOC50-DUP02-FAL22 680-222692-2	FD	Toluene	2.00	0.580 J	0.580 J	+	ug/l	I/TR/V4

Qualified Results associated with the Surrogate for SW8260D

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP02-FAL22 680-222692-2	FD	Xylenes, Total	2.00	1.20 J	1.20 J	+	ug/l	I/TR/V4
G6M-02-13X-FAL22 680-222692-6	N	cis-1,2-Dichloroethene	2.00	0.330 J	0.330 J	+	ug/l	I/TR
G6M-02-13X-FAL22 680-222692-6	N	Methyl tert-butyl ether (MTBE)	5.00	2.00 J	2.00 J	+	ug/l	I/TR
G6M-03-07X-FAL22 680-222692-7	N	1,2-Dichloroethene	2.00	1.10 J	1.10 J	+	ug/l	I/TR
G6M-03-07X-FAL22 680-222692-7	N	cis-1,2-Dichloroethene	2.00	0.840 J	0.840 J	+	ug/l	I/TR
G6M-03-07X-FAL22 680-222692-7	N	Toluene	2.00	0.650 J	0.650 J	+	ug/l	I/TR
G6M-04-02X-FAL22 680-222692-9	N	1,2-Dichloroethene	2.00	100	100 J	+	ug/l	I
G6M-04-02X-FAL22 680-222692-9	N	cis-1,2-Dichloroethene	2.00	100	100 J	+	ug/l	I
G6M-04-02X-FAL22 680-222692-9	N	Tetrachloroethene (PCE)	2.00	43.0	43.0 J	+	ug/l	I
G6M-04-02X-FAL22 680-222692-9	N	trans-1,2-Dichloroethene	2.00	0.960 J	0.960 J	+	ug/l	I/TR
G6M-04-02X-FAL22 680-222692-9	N	Trichloroethene (TCE)	1.00	44.0	44.0 J	+	ug/l	I
G6M-04-02X-FAL22 680-222692-9	N	Vinyl chloride	2.00	24.0	24.0 J	+	ug/l	I
G6M-04-04X-FAL22 680-222692-10	N	1,2-Dichloroethene	2.00	1.20 J	1.20 J	+	ug/l	I/TR/V4
G6M-04-04X-FAL22 680-222692-10	N	cis-1,2-Dichloroethene	2.00	0.790 J	0.790 J	+	ug/l	I/TR/V4
G6M-04-04X-FAL22 680-222692-10	N	trans-1,2-Dichloroethene	2.00	0.380 J	0.380 J	+	ug/l	I/TR/V4
G6M-04-04X-FAL22 680-222692-10	N	Trichloroethene (TCE)	1.00	0.230 J M	0.230 J	+	ug/l	I/TR/V4
G6M-04-07X-FAL22 680-222692-12	N	1,2-Dichloroethene	2.00	150	150 J	+	ug/l	I
G6M-04-07X-FAL22 680-222692-12	N	cis-1,2-Dichloroethene	2.00	150	150 J	+	ug/l	I
G6M-04-07X-FAL22 680-222692-12	N	Tetrachloroethene (PCE)	2.00	0.420 J	0.420 J	+	ug/l	I/TR
G6M-04-07X-FAL22 680-222692-12	N	trans-1,2-Dichloroethene	2.00	1.30 J	1.30 J	+	ug/l	I/TR
G6M-04-07X-FAL22 680-222692-12	N	Trichloroethene (TCE)	1.00	24.0	24.0 J	+	ug/l	I
G6M-04-07X-FAL22 680-222692-12	N	Vinyl chloride	2.00	28.0	28.0 J	+	ug/l	I
G6M-04-11X-FAL22 680-222692-13	N	Toluene	2.00	0.450 J	0.450 J	+	ug/l	I/TR
G6M-07-02X-FAL22 680-222692-14	N	1,2,4-Trimethylbenzene	2.00	1.30 J Q	1.30 J	+	ug/l	I/TR
G6M-07-02X-FAL22 680-222692-14	N	1,2-Dichloroethene	2.00	2.10	2.10 J	+	ug/l	I
G6M-07-02X-FAL22 680-222692-14	N	1,3,5-Trimethylbenzene	2.00	0.380 J Q	0.380 J	+	ug/l	I/TR
G6M-07-02X-FAL22 680-222692-14	N	2-Butanone (MEK)	25.0	8.70 J Q	8.70 J	+	ug/l	I/TR

Qualified Results associated with the Surrogate for SW8260D

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-07-02X-FAL22 680-222692-14	N	cis-1,2-Dichloroethene	2.00	2.10	2.10 J	+	ug/l	I
G6M-07-02X-FAL22 680-222692-14	N	Ethylbenzene	1.00	0.270 J	0.270 J	+	ug/l	I/TR
G6M-07-02X-FAL22 680-222692-14	N	m,p-Xylene	2.00	0.780 J	0.780 J	+	ug/l	I/TR
G6M-07-02X-FAL22 680-222692-14	N	Naphthalene	10.0	4.80 J Q	4.80 J	+	ug/l	I/TR
G6M-07-02X-FAL22 680-222692-14	N	n-Butylbenzene	2.50	0.890 J	0.890 J	+	ug/l	I/TR
G6M-07-02X-FAL22 680-222692-14	N	o-Xylene	2.00	0.400 J	0.400 J	+	ug/l	I/TR
G6M-07-02X-FAL22 680-222692-14	N	Toluene	2.00	0.610 J	0.610 J	+	ug/l	I/TR
G6M-07-02X-FAL22 680-222692-14	N	Vinyl chloride	2.00	0.640 J M	0.640 J	+	ug/l	I/TR
G6M-07-02X-FAL22 680-222692-14	N	Xylenes, Total	2.00	1.20 J	1.20 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 (LOQ) based on the sample concentration.
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
AOC50-DUP02-FAL22 680-222692-2	FD	Nitrate-Nitrite (as N)	0.0500	0.0400 J	0.0500 U		mg/l	L
G6M-03-07X-FAL22 680-222692-7	N	Nitrate-Nitrite (as N)	0.0500	0.0490 J	0.0500 U		mg/l	L
G6M-07-01X-FAL22 680-222692-20	N	Nitrate-Nitrite (as N)	0.500	1.30 D	1.30 J	+	mg/l	B2

Test Method: SW8260D		Extraction Method: SW5030C						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP01-FAL22 680-222692-1	FD	1,1,1,2-Tetrachloroethane	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,1,1-Trichloroethane	1.00	0.500 U	0.500 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,1,2,2-Tetrachloroethane	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,1,2-Trichloroethane	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,1-Dichloroethane	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,1-Dichloroethene	2.00	1.00 U Q	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,1-Dichloropropene	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,2,3-Trichlorobenzene	5.00	2.00 U	2.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,2,3-Trichloropropane	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,2,4-Trichlorobenzene	5.00	2.00 U	2.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,2,4-Trimethylbenzene	2.00	1.00 U Q	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,2-Dibromo-3-chloropropane	10.0	5.00 U	5.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,2-Dibromoethane (EDB)	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,2-Dichlorobenzene	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,2-Dichloroethane	2.00	1.00 U M	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,2-Dichloroethene	2.00	0.780 J	0.780 J	+	ug/l	I/TR/V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,2-Dichloropropane	1.00	0.500 U	0.500 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,3,5-Trimethylbenzene	2.00	1.00 U Q	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,3-Dichlorobenzene	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,3-Dichloropropane	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,4-Dichlorobenzene	2.00	1.00 U	1.00 UJ		ug/l	V4

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-FAL22 680-222692-1	FD	2,2-Dichloropropane	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	2-Butanone (MEK)	25.0	20.0 U Q	20.0 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	2-Chlorotoluene	1.00	0.500 U Q	0.500 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	2-Hexanone	20.0	10.0 U	10.0 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	4-Chlorotoluene	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U	10.0 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Acetone	25.0	10.0 U	10.0 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Benzene	2.00	1.00 U M	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Bromobenzene	1.00	0.500 U Q	0.500 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Bromochloromethane	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Bromodichloromethane	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Bromomethane	20.0	10.0 U	10.0 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Carbon disulfide	2.00	1.00 U Q	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Carbon Tetrachloride	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Chlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Chloroethane	20.0	10.0 U Q	10.0 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Chloroform	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Chloromethane	2.50	2.00 U Q	2.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	cis-1,2-Dichloroethene	2.00	0.490 J	0.490 J	+	ug/l	I/TR/V4
AOC50-DUP01-FAL22 680-222692-1	FD	cis-1,3-Dichloropropene	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Cumene	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Dibromochloromethane	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Dibromomethane	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Dichlorodifluoromethane	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Ethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Hexachlorobutadiene	5.00	1.00 U	1.00 UJ		ug/l	V4

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-FAL22 680-222692-1	FD	m,p-Xylene	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Methyl tert-butyl ether (MTBE)	5.00	2.00 U	2.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Methylene chloride	20.0	10.0 U	10.0 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Naphthalene	10.0	5.00 U Q	5.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	n-Butylbenzene	2.50	2.00 U	2.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	n-Propylbenzene	2.00	1.00 U Q	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	o-Xylene	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	p-Cymene (p-Isopropyltoluene)	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	sec-Butylbenzene	2.50	2.00 U	2.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Styrene	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	tert-Butylbenzene	2.00	1.00 U Q	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Tetrachloroethene (PCE)	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Toluene	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	trans-1,2-Dichloroethene	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	trans-1,3-Dichloropropene	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Trichloroethene (TCE)	1.00	0.500 U M	0.500 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Trichlorofluoromethane	2.00	1.00 U Q	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Vinyl acetate	2.50	2.00 U	2.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Vinyl chloride	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Xylenes, Total	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,1,1,2-Tetrachloroethane	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,1,1-Trichloroethane	1.00	0.500 U	0.500 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,1,2,2-Tetrachloroethane	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,1,2-Trichloroethane	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,1-Dichloroethane	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,1-Dichloroethene	2.00	1.00 U Q	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,1-Dichloropropene	2.00	1.00 U	1.00 UJ		ug/l	V4

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-DUP02-FAL22 680-222692-2	FD	1,2,3-Trichlorobenzene	5.00	2.00 U	2.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,2,3-Trichloropropane	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,2,4-Trichlorobenzene	5.00	2.00 U	2.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,2,4-Trimethylbenzene	2.00	1.50 J Q	1.50 J	+	ug/l	I/TR/V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,2-Dibromo-3-chloropropane	10.0	5.00 U	5.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,2-Dibromoethane (EDB)	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,2-Dichlorobenzene	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,2-Dichloroethane	2.00	1.00 U M	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,2-Dichloroethene	2.00	1.40 J	1.40 J	+	ug/l	I/TR/V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,2-Dichloropropane	1.00	0.500 U	0.500 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,3,5-Trimethylbenzene	2.00	0.390 J Q	0.390 J	+	ug/l	I/TR/V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,3-Dichlorobenzene	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,3-Dichloropropane	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,4-Dichlorobenzene	2.00	1.00 U M	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	2,2-Dichloropropane	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	2-Butanone (MEK)	25.0	7.30 J Q	7.30 J	+	ug/l	I/TR/V4
AOC50-DUP02-FAL22 680-222692-2	FD	2-Chlorotoluene	1.00	0.500 U Q	0.500 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	2-Hexanone	20.0	10.0 U	10.0 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	4-Chlorotoluene	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U	10.0 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Acetone	25.0	6.50 J	25.0 UJ		ug/l	V/V4
AOC50-DUP02-FAL22 680-222692-2	FD	Benzene	2.00	1.00 U M	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Bromobenzene	1.00	0.500 U Q	0.500 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Bromochloromethane	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Bromodichloromethane	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Bromomethane	20.0	10.0 U	10.0 UJ		ug/l	V4

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-DUP02-FAL22 680-222692-2	FD	Carbon disulfide	2.00	1.00 U Q	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Carbon Tetrachloride	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Chlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Chloroethane	20.0	10.0 U Q	10.0 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Chloroform	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Chloromethane	2.50	2.00 U Q	2.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	cis-1,2-Dichloroethene	2.00	1.40 J	1.40 J	+	ug/l	I/TR/V4
AOC50-DUP02-FAL22 680-222692-2	FD	cis-1,3-Dichloropropene	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Cumene	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Dibromochloromethane	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Dibromomethane	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Dichlorodifluoromethane	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Ethylbenzene	1.00	0.300 J	0.300 J	+	ug/l	I/TR/V4
AOC50-DUP02-FAL22 680-222692-2	FD	Hexachlorobutadiene	5.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	m,p-Xylene	2.00	0.750 J	0.750 J	+	ug/l	I/TR/V4
AOC50-DUP02-FAL22 680-222692-2	FD	Methyl tert-butyl ether (MTBE)	5.00	2.00 U	2.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Methylene chloride	20.0	10.0 U	10.0 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Naphthalene	10.0	5.00 J Q	5.00 J	+	ug/l	I/TR/V4
AOC50-DUP02-FAL22 680-222692-2	FD	n-Butylbenzene	2.50	1.10 J	1.10 J	+	ug/l	I/TR/V4
AOC50-DUP02-FAL22 680-222692-2	FD	n-Propylbenzene	2.00	1.00 U Q	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	o-Xylene	2.00	0.430 J	0.430 J	+	ug/l	I/TR/V4
AOC50-DUP02-FAL22 680-222692-2	FD	p-Cymene (p-Isopropyltoluene)	2.00	1.00 U M	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	sec-Butylbenzene	2.50	2.00 U	2.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Styrene	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	tert-Butylbenzene	2.00	1.00 U Q	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Tetrachloroethene (PCE)	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Toluene	2.00	0.580 J	0.580 J	+	ug/l	I/TR/V4

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-DUP02-FAL22 680-222692-2	FD	trans-1,2-Dichloroethene	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	trans-1,3-Dichloropropene	2.00	1.00 U	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Trichloroethene (TCE)	1.00	0.500 U	0.500 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Trichlorofluoromethane	2.00	1.00 U Q	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Vinyl acetate	2.50	2.00 U	2.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Vinyl chloride	2.00	1.00 U M	1.00 UJ		ug/l	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Xylenes, Total	2.00	1.20 J	1.20 J	+	ug/l	I/TR/V4
AOC50-RB01-FAL22 680-222692-24	EB	Chloromethane	2.50	2.00 U	2.00 UJ		ug/l	V2
AOC50-RB01-FAL22 680-222692-24	EB	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5
AOC50-TB03-FAL22 680-222692-25	TB	Chloromethane	2.50	2.00 U	2.00 UJ		ug/l	V2
AOC50-TB03-FAL22 680-222692-25	TB	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5
G6M-02-01X-FAL22 680-222692-26	N	Chloromethane	2.50	2.00 U	2.00 UJ		ug/l	V2
G6M-02-01X-FAL22 680-222692-26	N	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5
G6M-02-04X-FAL22 680-222692-3	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-02-04X-FAL22 680-222692-3	N	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-02-04X-FAL22 680-222692-3	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-02-04X-FAL22 680-222692-3	N	Acetone	25.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-02-06X-FAL22 680-222692-4	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-02-06X-FAL22 680-222692-4	N	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-02-06X-FAL22 680-222692-4	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-02-06X-FAL22 680-222692-4	N	Acetone	25.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-02-07X-FAL22 680-222692-27	N	Chloromethane	2.50	2.00 U	2.00 UJ		ug/l	V2
G6M-02-07X-FAL22 680-222692-27	N	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5
G6M-02-11X-FAL22 680-222692-5	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-02-11X-FAL22 680-222692-5	N	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-02-11X-FAL22 680-222692-5	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-02-11X-FAL22 680-222692-5	N	Acetone	25.0	10.0 U Q	10.0 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
G6M-02-13X-FAL22 680-222692-6	N	cis-1,2-Dichloroethene	2.00	0.330 J	0.330 J	+	ug/l	I/TR
G6M-02-13X-FAL22 680-222692-6	N	Methyl tert-butyl ether (MTBE)	5.00	2.00 J	2.00 J	+	ug/l	I/TR
G6M-03-07X-FAL22 680-222692-7	N	1,2-Dichloroethene	2.00	1.10 J	1.10 J	+	ug/l	I/TR
G6M-03-07X-FAL22 680-222692-7	N	cis-1,2-Dichloroethene	2.00	0.840 J	0.840 J	+	ug/l	I/TR
G6M-03-07X-FAL22 680-222692-7	N	Toluene	2.00	0.650 J	0.650 J	+	ug/l	I/TR
G6M-03-10X-FAL22 680-222692-8	N	1,1,1,2-Tetrachloroethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	1,1,1-Trichloroethane	1.00	0.500 U	0.500 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	1,1,2,2-Tetrachloroethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	1,1,2-Trichloroethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	1,1-Dichloroethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	1,1-Dichloroethene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	1,1-Dichloropropene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	1,2,3-Trichlorobenzene	5.00	2.00 U	2.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	1,2,3-Trichloropropane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	1,2,4-Trichlorobenzene	5.00	2.00 U	2.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	1,2,4-Trimethylbenzene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2/V4
G6M-03-10X-FAL22 680-222692-8	N	1,2-Dibromoethane (EDB)	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	1,2-Dichlorobenzene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	1,2-Dichloroethane	2.00	1.00 U M	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	1,2-Dichloroethene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	1,2-Dichloropropane	1.00	0.500 U	0.500 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	1,3,5-Trimethylbenzene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	1,3-Dichlorobenzene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	1,3-Dichloropropane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	1,4-Dichlorobenzene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	2,2-Dichloropropane	2.00	1.00 U	1.00 UJ		ug/l	V4

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-03-10X-FAL22 680-222692-8	N	2-Butanone (MEK)	25.0	20.0 U	20.0 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2/V4
G6M-03-10X-FAL22 680-222692-8	N	4-Chlorotoluene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ		ug/l	V2/V4
G6M-03-10X-FAL22 680-222692-8	N	Acetone	25.0	10.0 U Q	10.0 UJ		ug/l	V2/V4
G6M-03-10X-FAL22 680-222692-8	N	Benzene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	Bromobenzene	1.00	0.500 U	0.500 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	Bromochloromethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	Bromodichloromethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	Bromoform	2.50	2.00 U	2.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	Carbon disulfide	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	Carbon Tetrachloride	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	Chlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	Chloroethane	20.0	10.0 U Q	10.0 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	Chloroform	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	Chloromethane	2.50	2.00 U	2.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	cis-1,2-Dichloroethene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	cis-1,3-Dichloropropene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	Cumene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	Dibromochloromethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	Dibromomethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	Dichlorodifluoromethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	Ethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	Hexachlorobutadiene	5.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	m,p-Xylene	2.00	1.00 U	1.00 UJ		ug/l	V4

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-03-10X-FAL22 680-222692-8	N	Methyl tert-butyl ether (MTBE)	5.00	2.00 U	2.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	Methylene chloride	20.0	10.0 U	10.0 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	Naphthalene	10.0	5.00 U	5.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	n-Butylbenzene	2.50	2.00 U	2.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	n-Propylbenzene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	o-Xylene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	p-Cymene (p-Isopropyltoluene)	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	sec-Butylbenzene	2.50	2.00 U	2.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	Styrene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	tert-Butylbenzene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	Tetrachloroethene (PCE)	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	Toluene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	trans-1,2-Dichloroethene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	trans-1,3-Dichloropropene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	Trichloroethene (TCE)	1.00	0.500 U	0.500 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	Trichlorofluoromethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	Vinyl acetate	2.50	2.00 U	2.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	Vinyl chloride	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-03-10X-FAL22 680-222692-8	N	Xylenes, Total	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	1,1,1,2-Tetrachloroethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	1,1,1-Trichloroethane	1.00	0.500 U	0.500 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	1,1,2,2-Tetrachloroethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	1,1,2-Trichloroethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	1,1-Dichloroethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	1,1-Dichloroethene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	1,1-Dichloropropene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	1,2,3-Trichlorobenzene	5.00	2.00 U	2.00 UJ		ug/l	V4

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-FAL22 680-222692-28	N	1,2,3-Trichloropropane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	1,2,4-Trichlorobenzene	5.00	2.00 U	2.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	1,2,4-Trimethylbenzene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U	5.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	1,2-Dibromoethane (EDB)	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	1,2-Dichlorobenzene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	1,2-Dichloroethane	2.00	1.00 U M	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	1,2-Dichloroethene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	1,2-Dichloropropane	1.00	0.500 U	0.500 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	1,3,5-Trimethylbenzene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	1,3-Dichlorobenzene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	1,3-Dichloropropane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	1,4-Dichlorobenzene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	2,2-Dichloropropane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	2-Butanone (MEK)	25.0	20.0 U	20.0 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	2-Hexanone	20.0	10.0 U	10.0 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	4-Chlorotoluene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U	10.0 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	Acetone	25.0	10.0 U	10.0 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	Benzene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	Bromobenzene	1.00	0.500 U	0.500 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	Bromochloromethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	Bromodichloromethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	Bromoform	2.50	2.00 U M	2.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	Bromomethane	20.0	10.0 U	10.0 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	Carbon disulfide	2.00	1.00 U	1.00 UJ		ug/l	V4

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-FAL22 680-222692-28	N	Carbon Tetrachloride	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	Chlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	Chloroethane	20.0	10.0 U Q	10.0 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	Chloroform	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	Chloromethane	2.50	2.00 U	2.00 UJ		ug/l	V2/V4
G6M-04-01X-FAL22 680-222692-28	N	cis-1,2-Dichloroethene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	cis-1,3-Dichloropropene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	Cumene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	Dibromochloromethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	Dibromomethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	Dichlorodifluoromethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	Ethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	Hexachlorobutadiene	5.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	m,p-Xylene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	Methyl tert-butyl ether (MTBE)	5.00	2.00 U	2.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	Methylene chloride	20.0	10.0 U	10.0 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	Naphthalene	10.0	5.00 U	5.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	n-Butylbenzene	2.50	2.00 U	2.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	n-Propylbenzene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	o-Xylene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	p-Cymene (p-Isopropyltoluene)	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	sec-Butylbenzene	2.50	2.00 U	2.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	Styrene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	tert-Butylbenzene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	Tetrachloroethene (PCE)	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	Toluene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	trans-1,2-Dichloroethene	2.00	1.00 U	1.00 UJ		ug/l	V4

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-FAL22 680-222692-28	N	trans-1,3-Dichloropropene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	Trichloroethene (TCE)	1.00	0.500 U	0.500 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	Trichlorofluoromethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5/V4
G6M-04-01X-FAL22 680-222692-28	N	Vinyl chloride	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-01X-FAL22 680-222692-28	N	Xylenes, Total	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-02X-FAL22 680-222692-9	N	1,2-Dichloroethene	2.00	100	100 J	+	ug/l	I
G6M-04-02X-FAL22 680-222692-9	N	Acetone	25.0	14.0 J	25.0 U		ug/l	V
G6M-04-02X-FAL22 680-222692-9	N	cis-1,2-Dichloroethene	2.00	100	100 J	+	ug/l	I
G6M-04-02X-FAL22 680-222692-9	N	Tetrachloroethene (PCE)	2.00	43.0	43.0 J	+	ug/l	I
G6M-04-02X-FAL22 680-222692-9	N	trans-1,2-Dichloroethene	2.00	0.960 J	0.960 J	+	ug/l	I/TR
G6M-04-02X-FAL22 680-222692-9	N	Trichloroethene (TCE)	1.00	44.0	44.0 J	+	ug/l	I
G6M-04-02X-FAL22 680-222692-9	N	Vinyl chloride	2.00	24.0	24.0 J	+	ug/l	I
G6M-04-04X-FAL22 680-222692-10	N	1,1,1,2-Tetrachloroethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	1,1,1-Trichloroethane	1.00	0.500 U	0.500 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	1,1,2,2-Tetrachloroethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	1,1,2-Trichloroethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	1,1-Dichloroethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	1,1-Dichloroethene	2.00	1.00 U Q	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	1,1-Dichloropropene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	1,2,3-Trichlorobenzene	5.00	2.00 U	2.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	1,2,3-Trichloropropane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	1,2,4-Trichlorobenzene	5.00	2.00 U	2.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	1,2,4-Trimethylbenzene	2.00	1.00 U Q	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U	5.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	1,2-Dibromoethane (EDB)	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	1,2-Dichlorobenzene	2.00	1.00 U	1.00 UJ		ug/l	V4

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-04-04X-FAL22 680-222692-10	N	1,2-Dichloroethane	2.00	1.00 U M	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	1,2-Dichloroethene	2.00	1.20 J	1.20 J	+	ug/l	I/TR/V4
G6M-04-04X-FAL22 680-222692-10	N	1,2-Dichloropropane	1.00	0.500 U	0.500 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	1,3,5-Trimethylbenzene	2.00	1.00 U Q	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	1,3-Dichlorobenzene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	1,3-Dichloropropane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	1,4-Dichlorobenzene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	2,2-Dichloropropane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	2-Chlorotoluene	1.00	0.500 U Q	0.500 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	2-Hexanone	20.0	10.0 U	10.0 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	4-Chlorotoluene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U	10.0 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	Acetone	25.0	10.0 U	10.0 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	Benzene	2.00	1.00 U M	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	Bromobenzene	1.00	0.500 U Q	0.500 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	Bromochloromethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	Bromodichloromethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	Bromoform	2.50	2.00 U Q	2.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	Bromomethane	20.0	10.0 U	10.0 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	Carbon disulfide	2.00	1.00 U Q	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	Carbon Tetrachloride	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	Chlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	Chloroethane	20.0	10.0 U Q	10.0 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	Chloroform	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	Chloromethane	2.50	2.00 U Q	2.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	cis-1,2-Dichloroethene	2.00	0.790 J	0.790 J	+	ug/l	I/TR/V4

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-04-04X-FAL22 680-222692-10	N	cis-1,3-Dichloropropene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	Cumene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	Dibromochloromethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	Dibromomethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	Dichlorodifluoromethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	Ethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	Hexachlorobutadiene	5.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	m,p-Xylene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	Methyl tert-butyl ether (MTBE)	5.00	2.00 U	2.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	Methylene chloride	20.0	10.0 U	10.0 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	Naphthalene	10.0	5.00 U Q	5.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	n-Butylbenzene	2.50	2.00 U	2.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	n-Propylbenzene	2.00	1.00 U Q	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	o-Xylene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	p-Cymene (p-Isopropyltoluene)	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	sec-Butylbenzene	2.50	2.00 U	2.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	Styrene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	tert-Butylbenzene	2.00	1.00 U Q	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	Tetrachloroethene (PCE)	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	Toluene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	trans-1,2-Dichloroethene	2.00	0.380 J	0.380 J	+	ug/l	I/TR/V4
G6M-04-04X-FAL22 680-222692-10	N	trans-1,3-Dichloropropene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	Trichloroethene (TCE)	1.00	0.230 J M	0.230 J	+	ug/l	I/TR/V4
G6M-04-04X-FAL22 680-222692-10	N	Trichlorofluoromethane	2.00	1.00 U Q	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	Vinyl acetate	2.50	2.00 U	2.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	Vinyl chloride	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-04X-FAL22 680-222692-10	N	Xylenes, Total	2.00	1.00 U	1.00 UJ		ug/l	V4

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-04-06X-FAL22 680-222692-11	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-04-06X-FAL22 680-222692-11	N	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-04-06X-FAL22 680-222692-11	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-04-06X-FAL22 680-222692-11	N	Acetone	25.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-04-07X-FAL22 680-222692-12	N	1,2-Dichloroethene	2.00	150	150 J	+	ug/l	I
G6M-04-07X-FAL22 680-222692-12	N	cis-1,2-Dichloroethene	2.00	150	150 J	+	ug/l	I
G6M-04-07X-FAL22 680-222692-12	N	Tetrachloroethene (PCE)	2.00	0.420 J	0.420 J	+	ug/l	I/TR
G6M-04-07X-FAL22 680-222692-12	N	trans-1,2-Dichloroethene	2.00	1.30 J	1.30 J	+	ug/l	I/TR
G6M-04-07X-FAL22 680-222692-12	N	Trichloroethene (TCE)	1.00	24.0	24.0 J	+	ug/l	I
G6M-04-07X-FAL22 680-222692-12	N	Vinyl chloride	2.00	28.0	28.0 J	+	ug/l	I
G6M-04-11X-FAL22 680-222692-13	N	Toluene	2.00	0.450 J	0.450 J	+	ug/l	I/TR
G6M-07-01X-FAL22 680-222692-20	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-07-01X-FAL22 680-222692-20	N	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-07-01X-FAL22 680-222692-20	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-07-01X-FAL22 680-222692-20	N	Acetone	25.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-07-02X-FAL22 680-222692-14	N	1,2,4-Trimethylbenzene	2.00	1.30 J Q	1.30 J	+	ug/l	I/TR
G6M-07-02X-FAL22 680-222692-14	N	1,2-Dichloroethene	2.00	2.10	2.10 J	+	ug/l	I
G6M-07-02X-FAL22 680-222692-14	N	1,3,5-Trimethylbenzene	2.00	0.380 J Q	0.380 J	+	ug/l	I/TR
G6M-07-02X-FAL22 680-222692-14	N	2-Butanone (MEK)	25.0	8.70 J Q	8.70 J	+	ug/l	I/TR
G6M-07-02X-FAL22 680-222692-14	N	Acetone	25.0	7.80 J	25.0 U		ug/l	V
G6M-07-02X-FAL22 680-222692-14	N	cis-1,2-Dichloroethene	2.00	2.10	2.10 J	+	ug/l	I
G6M-07-02X-FAL22 680-222692-14	N	Ethylbenzene	1.00	0.270 J	0.270 J	+	ug/l	I/TR
G6M-07-02X-FAL22 680-222692-14	N	m,p-Xylene	2.00	0.780 J	0.780 J	+	ug/l	I/TR
G6M-07-02X-FAL22 680-222692-14	N	Naphthalene	10.0	4.80 J Q	4.80 J	+	ug/l	I/TR
G6M-07-02X-FAL22 680-222692-14	N	n-Butylbenzene	2.50	0.890 J	0.890 J	+	ug/l	I/TR
G6M-07-02X-FAL22 680-222692-14	N	o-Xylene	2.00	0.400 J	0.400 J	+	ug/l	I/TR
G6M-07-02X-FAL22 680-222692-14	N	Toluene	2.00	0.610 J	0.610 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-07-02X-FAL22 680-222692-14	N	Vinyl chloride	2.00	0.640 J M	0.640 J	+	ug/l	I/TR
G6M-07-02X-FAL22 680-222692-14	N	Xylenes, Total	2.00	1.20 J	1.20 J	+	ug/l	I/TR
MW-3-FAL22 680-222692-16	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
MW-3-FAL22 680-222692-16	N	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
MW-3-FAL22 680-222692-16	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q M	10.0 UJ		ug/l	V2
MW-3-FAL22 680-222692-16	N	Acetone	25.0	10.0 U Q	10.0 UJ		ug/l	V2
MW-7-FAL22 680-222692-17	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
MW-7-FAL22 680-222692-17	N	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
MW-7-FAL22 680-222692-17	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ		ug/l	V2
MW-7-FAL22 680-222692-17	N	Acetone	25.0	10.0 U Q	10.0 UJ		ug/l	V2
XSA-12-95X-FAL22 680-222692-18	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
XSA-12-95X-FAL22 680-222692-18	N	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
XSA-12-95X-FAL22 680-222692-18	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ		ug/l	V2
XSA-12-95X-FAL22 680-222692-18	N	Acetone	25.0	10.0 U Q	10.0 UJ		ug/l	V2
XSA-12-96X-FAL22 680-222692-21	N	Chloromethane	2.50	2.00 U	2.00 UJ		ug/l	V2
XSA-12-96X-FAL22 680-222692-21	N	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5
XSA-12-97X-FAL22 680-222692-22	N	Chloromethane	2.50	2.00 U	2.00 UJ		ug/l	V2
XSA-12-97X-FAL22 680-222692-22	N	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5
XSA-12-98X-FAL22 680-222692-23	N	Chloromethane	2.50	2.00 U	2.00 UJ		ug/l	V2
XSA-12-98X-FAL22 680-222692-23	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-03-07X-FAL22 680-222692-7	N	Sulfide	2.60	1.70 U J1	1.70 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	Modified Result	Reason
AOC50-DUP02-FAL22 680-222692-2	FD	Methane	390	15000	15000 J	15000	
G6M-02-01X-FAL22 680-222692-26	N	Methane	390	29000	29000 J	29000	
G6M-03-07X-FAL22 680-222692-7	N	Methane	390	22000	22000 J	22000	
G6M-04-02X-FAL22 680-222692-9	N	Methane	390	20000	20000 J	20000	
G6M-04-07X-FAL22 680-222692-12	N	Methane	1.20	270	270 J	270	
G6M-07-01X-FAL22 680-222692-20	N	Methane	390	730	730 J	730	
G6M-07-02X-FAL22 680-222692-14	N	Methane	390	14000	14000 J	14000	

Modified Qualifiers for test method SW8260D

FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
AOC50-DUP01-FAL22 680-222692-1	FD	1,1,1,2-Tetrachloroethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,1,1-Trichloroethane	1.00	0.500 U	0.500 U	0.500 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,1,2,2-Tetrachloroethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,1,2-Trichloroethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,1-Dichloroethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,1-Dichloroethene	2.00	1.00 U Q	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,1-Dichloropropene	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,2,3-Trichlorobenzene	5.00	2.00 U	2.00 U	2.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,2,3-Trichloropropane	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,2,4-Trichlorobenzene	5.00	2.00 U	2.00 U	2.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,2,4-Trimethylbenzene	2.00	1.00 U Q	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,2-Dibromo-3-chloropropane	10.0	5.00 U	5.00 U	5.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,2-Dibromoethane (EDB)	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,2-Dichlorobenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,2-Dichloroethane	2.00	1.00 U M	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,2-Dichloroethene	2.00	0.780 J	0.780 J	0.780 J	I/TR/V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,2-Dichloropropane	1.00	0.500 U	0.500 U	0.500 UJ	V4

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-DUP01-FAL22 680-222692-1	FD	1,3,5-Trimethylbenzene	2.00	1.00 U Q	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,3-Dichlorobenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,3-Dichloropropane	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	1,4-Dichlorobenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	2,2-Dichloropropane	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	2-Butanone (MEK)	25.0	20.0 U Q	20.0 U	20.0 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	2-Chlorotoluene	1.00	0.500 U Q	0.500 U	0.500 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	2-Hexanone	20.0	10.0 U	10.0 U	10.0 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	4-Chlorotoluene	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U	10.0 U	10.0 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Acetone	25.0	10.0 U	10.0 U	10.0 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Benzene	2.00	1.00 U M	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Bromobenzene	1.00	0.500 U Q	0.500 U	0.500 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Bromochloromethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Bromodichloromethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Bromoform	2.50	2.00 U Q	2.00 U	2.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Bromomethane	20.0	10.0 U	10.0 U	10.0 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Carbon disulfide	2.00	1.00 U Q	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Carbon Tetrachloride	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Chlorobenzene	1.00	0.500 U	0.500 U	0.500 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Chloroethane	20.0	10.0 U Q	10.0 U	10.0 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Chloroform	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Chloromethane	2.50	2.00 U Q	2.00 U	2.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	cis-1,2-Dichloroethene	2.00	0.490 J	0.490 J	0.490 J	I/TR/V4
AOC50-DUP01-FAL22 680-222692-1	FD	cis-1,3-Dichloropropene	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Cumene	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Dibromochloromethane	2.00	1.00 U	1.00 U	1.00 UJ	V4

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-DUP01-FAL22 680-222692-1	FD	Dibromomethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Dichlorodifluoromethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Ethylbenzene	1.00	0.500 U	0.500 U	0.500 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Hexachlorobutadiene	5.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	m,p-Xylene	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Methyl tert-butyl ether (MTBE)	5.00	2.00 U	2.00 U	2.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Methylene chloride	20.0	10.0 U	10.0 U	10.0 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Naphthalene	10.0	5.00 U Q	5.00 U	5.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	n-Butylbenzene	2.50	2.00 U	2.00 U	2.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	n-Propylbenzene	2.00	1.00 U Q	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	o-Xylene	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	p-Cymene (p-Isopropyltoluene)	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	sec-Butylbenzene	2.50	2.00 U	2.00 U	2.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Styrene	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	tert-Butylbenzene	2.00	1.00 U Q	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Tetrachloroethene (PCE)	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Toluene	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	trans-1,2-Dichloroethene	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	trans-1,3-Dichloropropene	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Trichloroethene (TCE)	1.00	0.500 U M	0.500 U	0.500 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Trichlorofluoromethane	2.00	1.00 U Q	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Vinyl acetate	2.50	2.00 U	2.00 U	2.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Vinyl chloride	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP01-FAL22 680-222692-1	FD	Xylenes, Total	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,1,1,2-Tetrachloroethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,1,1-Trichloroethane	1.00	0.500 U	0.500 U	0.500 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,1,2,2-Tetrachloroethane	2.00	1.00 U	1.00 U	1.00 UJ	V4

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-DUP02-FAL22 680-222692-2	FD	1,1,2-Trichloroethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,1-Dichloroethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,1-Dichloroethene	2.00	1.00 U Q	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,1-Dichloropropene	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,2,3-Trichlorobenzene	5.00	2.00 U	2.00 U	2.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,2,3-Trichloropropane	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,2,4-Trichlorobenzene	5.00	2.00 U	2.00 U	2.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,2,4-Trimethylbenzene	2.00	1.50 J Q	1.50 J	1.50 J	I/TR/V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,2-Dibromo-3-chloropropane	10.0	5.00 U	5.00 U	5.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,2-Dibromoethane (EDB)	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,2-Dichlorobenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,2-Dichloroethane	2.00	1.00 U M	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,2-Dichloroethene	2.00	1.40 J	1.40 J	1.40 J	I/TR/V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,2-Dichloropropane	1.00	0.500 U	0.500 U	0.500 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,3,5-Trimethylbenzene	2.00	0.390 J Q	0.390 J	0.390 J	I/TR/V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,3-Dichlorobenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,3-Dichloropropane	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	1,4-Dichlorobenzene	2.00	1.00 U M	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	2,2-Dichloropropane	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	2-Butanone (MEK)	25.0	7.30 J Q	7.30 J	7.30 J	I/TR/V4
AOC50-DUP02-FAL22 680-222692-2	FD	2-Chlorotoluene	1.00	0.500 U Q	0.500 U	0.500 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	2-Hexanone	20.0	10.0 U	10.0 U	10.0 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	4-Chlorotoluene	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U	10.0 U	10.0 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Acetone	25.0	6.50 J	25.0 U	25.0 UJ	V/V4
AOC50-DUP02-FAL22 680-222692-2	FD	Benzene	2.00	1.00 U M	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Bromobenzene	1.00	0.500 U Q	0.500 U	0.500 UJ	V4

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-DUP02-FAL22 680-222692-2	FD	Bromochloromethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Bromodichloromethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Bromoform	2.50	2.00 U Q	2.00 U	2.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Bromomethane	20.0	10.0 U	10.0 U	10.0 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Carbon disulfide	2.00	1.00 U Q	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Carbon Tetrachloride	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Chlorobenzene	1.00	0.500 U	0.500 U	0.500 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Chloroethane	20.0	10.0 U Q	10.0 U	10.0 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Chloroform	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Chloromethane	2.50	2.00 U Q	2.00 U	2.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	cis-1,2-Dichloroethene	2.00	1.40 J	1.40 J	1.40 J	I/TR/V4
AOC50-DUP02-FAL22 680-222692-2	FD	cis-1,3-Dichloropropene	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Cumene	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Dibromochloromethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Dibromomethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Dichlorodifluoromethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Ethylbenzene	1.00	0.300 J	0.300 J	0.300 J	I/TR/V4
AOC50-DUP02-FAL22 680-222692-2	FD	Hexachlorobutadiene	5.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	m,p-Xylene	2.00	0.750 J	0.750 J	0.750 J	I/TR/V4
AOC50-DUP02-FAL22 680-222692-2	FD	Methyl tert-butyl ether (MTBE)	5.00	2.00 U	2.00 U	2.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Methylene chloride	20.0	10.0 U	10.0 U	10.0 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Naphthalene	10.0	5.00 J Q	5.00 J	5.00 J	I/TR/V4
AOC50-DUP02-FAL22 680-222692-2	FD	n-Butylbenzene	2.50	1.10 J	1.10 J	1.10 J	I/TR/V4
AOC50-DUP02-FAL22 680-222692-2	FD	n-Propylbenzene	2.00	1.00 U Q	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	o-Xylene	2.00	0.430 J	0.430 J	0.430 J	I/TR/V4
AOC50-DUP02-FAL22 680-222692-2	FD	p-Cymene (p-Isopropyltoluene)	2.00	1.00 U M	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	sec-Butylbenzene	2.50	2.00 U	2.00 U	2.00 UJ	V4

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-DUP02-FAL22 680-222692-2	FD	Styrene	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	tert-Butylbenzene	2.00	1.00 U Q	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Tetrachloroethene (PCE)	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Toluene	2.00	0.580 J	0.580 J	0.580 J	I/TR/V4
AOC50-DUP02-FAL22 680-222692-2	FD	trans-1,2-Dichloroethene	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	trans-1,3-Dichloropropene	2.00	1.00 U	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Trichloroethene (TCE)	1.00	0.500 U	0.500 U	0.500 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Trichlorofluoromethane	2.00	1.00 U Q	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Vinyl acetate	2.50	2.00 U	2.00 U	2.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Vinyl chloride	2.00	1.00 U M	1.00 U	1.00 UJ	V4
AOC50-DUP02-FAL22 680-222692-2	FD	Xylenes, Total	2.00	1.20 J	1.20 J	1.20 J	I/TR/V4
G6M-03-10X-FAL22 680-222692-8	N	1,1,1,2-Tetrachloroethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	1,1,1-Trichloroethane	1.00	0.500 U	0.500 U	0.500 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	1,1,2,2-Tetrachloroethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	1,1,2-Trichloroethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	1,1-Dichloroethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	1,1-Dichloroethene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	1,1-Dichloropropene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	1,2,3-Trichlorobenzene	5.00	2.00 U	2.00 U	2.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	1,2,3-Trichloropropane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	1,2,4-Trichlorobenzene	5.00	2.00 U	2.00 U	2.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	1,2,4-Trimethylbenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ	5.00 UJ	V2/V4
G6M-03-10X-FAL22 680-222692-8	N	1,2-Dibromoethane (EDB)	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	1,2-Dichlorobenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	1,2-Dichloroethane	2.00	1.00 U M	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	1,2-Dichloroethene	2.00	1.00 U	1.00 U	1.00 UJ	V4

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
G6M-03-10X-FAL22 680-222692-8	N	1,2-Dichloropropane	1.00	0.500 U	0.500 U	0.500 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	1,3,5-Trimethylbenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	1,3-Dichlorobenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	1,3-Dichloropropane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	1,4-Dichlorobenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	2,2-Dichloropropane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	2-Butanone (MEK)	25.0	20.0 U	20.0 U	20.0 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	2-Chlorotoluene	1.00	0.500 U	0.500 U	0.500 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	2-Hexanone	20.0	10.0 U Q	10.0 UJ	10.0 UJ	V2/V4
G6M-03-10X-FAL22 680-222692-8	N	4-Chlorotoluene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ	10.0 UJ	V2/V4
G6M-03-10X-FAL22 680-222692-8	N	Acetone	25.0	10.0 U Q	10.0 UJ	10.0 UJ	V2/V4
G6M-03-10X-FAL22 680-222692-8	N	Benzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	Bromobenzene	1.00	0.500 U	0.500 U	0.500 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	Bromochloromethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	Bromodichloromethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	Bromoform	2.50	2.00 U	2.00 U	2.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	Bromomethane	20.0	10.0 U Q	10.0 U	10.0 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	Carbon disulfide	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	Carbon Tetrachloride	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	Chlorobenzene	1.00	0.500 U	0.500 U	0.500 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	Chloroethane	20.0	10.0 U Q	10.0 U	10.0 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	Chloroform	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	Chloromethane	2.50	2.00 U	2.00 U	2.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	cis-1,2-Dichloroethene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	cis-1,3-Dichloropropene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	Cumene	2.00	1.00 U	1.00 U	1.00 UJ	V4

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
G6M-03-10X-FAL22 680-222692-8	N	Dibromochloromethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	Dibromomethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	Dichlorodifluoromethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	Ethylbenzene	1.00	0.500 U	0.500 U	0.500 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	Hexachlorobutadiene	5.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	m,p-Xylene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	Methyl tert-butyl ether (MTBE)	5.00	2.00 U	2.00 U	2.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	Methylene chloride	20.0	10.0 U	10.0 U	10.0 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	Naphthalene	10.0	5.00 U	5.00 U	5.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	n-Butylbenzene	2.50	2.00 U	2.00 U	2.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	n-Propylbenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	o-Xylene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	p-Cymene (p-Isopropyltoluene)	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	sec-Butylbenzene	2.50	2.00 U	2.00 U	2.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	Styrene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	tert-Butylbenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	Tetrachloroethene (PCE)	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	Toluene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	trans-1,2-Dichloroethene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	trans-1,3-Dichloropropene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	Trichloroethene (TCE)	1.00	0.500 U	0.500 U	0.500 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	Trichlorofluoromethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	Vinyl acetate	2.50	2.00 U	2.00 U	2.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	Vinyl chloride	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-03-10X-FAL22 680-222692-8	N	Xylenes, Total	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	1,1,1,2-Tetrachloroethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	1,1,1-Trichloroethane	1.00	0.500 U	0.500 U	0.500 UJ	V4

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
G6M-04-01X-FAL22 680-222692-28	N	1,1,2,2-Tetrachloroethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	1,1,2-Trichloroethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	1,1-Dichloroethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	1,1-Dichloroethene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	1,1-Dichloropropene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	1,2,3-Trichlorobenzene	5.00	2.00 U	2.00 U	2.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	1,2,3-Trichloropropane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	1,2,4-Trichlorobenzene	5.00	2.00 U	2.00 U	2.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	1,2,4-Trimethylbenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U	5.00 U	5.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	1,2-Dibromoethane (EDB)	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	1,2-Dichlorobenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	1,2-Dichloroethane	2.00	1.00 U M	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	1,2-Dichloroethene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	1,2-Dichloropropane	1.00	0.500 U	0.500 U	0.500 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	1,3,5-Trimethylbenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	1,3-Dichlorobenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	1,3-Dichloropropane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	1,4-Dichlorobenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	2,2-Dichloropropane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	2-Butanone (MEK)	25.0	20.0 U	20.0 U	20.0 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	2-Chlorotoluene	1.00	0.500 U	0.500 U	0.500 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	2-Hexanone	20.0	10.0 U	10.0 U	10.0 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	4-Chlorotoluene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U	10.0 U	10.0 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	Acetone	25.0	10.0 U	10.0 U	10.0 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	Benzene	2.00	1.00 U	1.00 U	1.00 UJ	V4

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
G6M-04-01X-FAL22 680-222692-28	N	Bromobenzene	1.00	0.500 U	0.500 U	0.500 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	Bromochloromethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	Bromodichloromethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	Bromoform	2.50	2.00 U M	2.00 U	2.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	Bromomethane	20.0	10.0 U	10.0 U	10.0 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	Carbon disulfide	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	Carbon Tetrachloride	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	Chlorobenzene	1.00	0.500 U	0.500 U	0.500 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	Chloroethane	20.0	10.0 U Q	10.0 U	10.0 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	Chloroform	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	Chloromethane	2.50	2.00 U	2.00 UJ	2.00 UJ	V2/V4
G6M-04-01X-FAL22 680-222692-28	N	cis-1,2-Dichloroethene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	cis-1,3-Dichloropropene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	Cumene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	Dibromochloromethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	Dibromomethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	Dichlorodifluoromethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	Ethylbenzene	1.00	0.500 U	0.500 U	0.500 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	Hexachlorobutadiene	5.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	m,p-Xylene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	Methyl tert-butyl ether (MTBE)	5.00	2.00 U	2.00 U	2.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	Methylene chloride	20.0	10.0 U	10.0 U	10.0 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	Naphthalene	10.0	5.00 U	5.00 U	5.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	n-Butylbenzene	2.50	2.00 U	2.00 U	2.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	n-Propylbenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	o-Xylene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	p-Cymene (p-Isopropyltoluene)	2.00	1.00 U	1.00 U	1.00 UJ	V4

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
G6M-04-01X-FAL22 680-222692-28	N	sec-Butylbenzene	2.50	2.00 U	2.00 U	2.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	Styrene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	tert-Butylbenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	Tetrachloroethene (PCE)	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	Toluene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	trans-1,2-Dichloroethene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	trans-1,3-Dichloropropene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	Trichloroethene (TCE)	1.00	0.500 U	0.500 U	0.500 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	Trichlorofluoromethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	Vinyl acetate	2.50	2.00 U Q	2.00 UJ	2.00 UJ	V5/V4
G6M-04-01X-FAL22 680-222692-28	N	Vinyl chloride	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-01X-FAL22 680-222692-28	N	Xylenes, Total	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	1,1,1,2-Tetrachloroethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	1,1,1-Trichloroethane	1.00	0.500 U	0.500 U	0.500 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	1,1,2,2-Tetrachloroethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	1,1,2-Trichloroethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	1,1-Dichloroethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	1,1-Dichloroethene	2.00	1.00 U Q	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	1,1-Dichloropropene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	1,2,3-Trichlorobenzene	5.00	2.00 U	2.00 U	2.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	1,2,3-Trichloropropane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	1,2,4-Trichlorobenzene	5.00	2.00 U	2.00 U	2.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	1,2,4-Trimethylbenzene	2.00	1.00 U Q	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U	5.00 U	5.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	1,2-Dibromoethane (EDB)	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	1,2-Dichlorobenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	1,2-Dichloroethane	2.00	1.00 U M	1.00 U	1.00 UJ	V4

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
G6M-04-04X-FAL22 680-222692-10	N	1,2-Dichloroethene	2.00	1.20 J	1.20 J	1.20 J	I/TR/V4
G6M-04-04X-FAL22 680-222692-10	N	1,2-Dichloropropane	1.00	0.500 U	0.500 U	0.500 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	1,3,5-Trimethylbenzene	2.00	1.00 U Q	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	1,3-Dichlorobenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	1,3-Dichloropropane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	1,4-Dichlorobenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	2,2-Dichloropropane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	2-Butanone (MEK)	25.0	20.0 U Q	20.0 U	20.0 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	2-Chlorotoluene	1.00	0.500 U Q	0.500 U	0.500 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	2-Hexanone	20.0	10.0 U	10.0 U	10.0 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	4-Chlorotoluene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U	10.0 U	10.0 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	Acetone	25.0	10.0 U	10.0 U	10.0 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	Benzene	2.00	1.00 U M	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	Bromobenzene	1.00	0.500 U Q	0.500 U	0.500 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	Bromochloromethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	Bromodichloromethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	Bromoform	2.50	2.00 U Q	2.00 U	2.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	Bromomethane	20.0	10.0 U	10.0 U	10.0 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	Carbon disulfide	2.00	1.00 U Q	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	Carbon Tetrachloride	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	Chlorobenzene	1.00	0.500 U	0.500 U	0.500 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	Chloroethane	20.0	10.0 U Q	10.0 U	10.0 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	Chloroform	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	Chloromethane	2.50	2.00 U Q	2.00 U	2.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	cis-1,2-Dichloroethene	2.00	0.790 J	0.790 J	0.790 J	I/TR/V4
G6M-04-04X-FAL22 680-222692-10	N	cis-1,3-Dichloropropene	2.00	1.00 U	1.00 U	1.00 UJ	V4

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
G6M-04-04X-FAL22 680-222692-10	N	Cumene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	Dibromochloromethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	Dibromomethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	Dichlorodifluoromethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	Ethylbenzene	1.00	0.500 U	0.500 U	0.500 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	Hexachlorobutadiene	5.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	m,p-Xylene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	Methyl tert-butyl ether (MTBE)	5.00	2.00 U	2.00 U	2.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	Methylene chloride	20.0	10.0 U	10.0 U	10.0 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	Naphthalene	10.0	5.00 U Q	5.00 U	5.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	n-Butylbenzene	2.50	2.00 U	2.00 U	2.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	n-Propylbenzene	2.00	1.00 U Q	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	o-Xylene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	p-Cymene (p-Isopropyltoluene)	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	sec-Butylbenzene	2.50	2.00 U	2.00 U	2.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	Styrene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	tert-Butylbenzene	2.00	1.00 U Q	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	Tetrachloroethene (PCE)	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	Toluene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	trans-1,2-Dichloroethene	2.00	0.380 J	0.380 J	0.380 J	I/TR/V4
G6M-04-04X-FAL22 680-222692-10	N	trans-1,3-Dichloropropene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	Trichloroethene (TCE)	1.00	0.230 J M	0.230 J	0.230 J	I/TR/V4
G6M-04-04X-FAL22 680-222692-10	N	Trichlorofluoromethane	2.00	1.00 U Q	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	Vinyl acetate	2.50	2.00 U	2.00 U	2.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	Vinyl chloride	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-04X-FAL22 680-222692-10	N	Xylenes, Total	2.00	1.00 U	1.00 U	1.00 UJ	V4

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW9034							
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-03-07X-FAL22 680-222692-7	N	Sulfide	2.60	1.70 U J1	1.70 U	1.70 UJ	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.

Reason Code Definitions

Code	Definition
B2	CCB
C	LCS Recovery
I	Surrogate recovery outside project limits.
L	Lab Blank
M	MS Recovery
TR	Trace Level Detect
V	Equipment Blank
V2	CCV
V4	Sample Receipt Condition
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?			•	Not applicable to this method.
Were all reported analytes for the ICV within the required criteria?			•	Not applicable to this method.
Were ICB/CCBs run at the required frequency?			•	Not applicable to this method.
Were target analytes in the ICBs/CCBs non-detect?			•	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 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?		•		Analyte detected in 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?		•		Several results qualified U at the concentration due to method blank contamination.
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: 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 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 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 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 was lower than %R limits for several results but were not qualified due to sample result being 4x greater than spike.
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.
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?		•		Result qualified J due to MS/MSD %R being 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: 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?		•		Several results qualified J for detects and UJ for non detects due to presence of headspace in vials.
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?		•		Several results qualified UJ due to CCV %D being lower than %D limits.
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?		•		Several results qualified J+ due to surrogate %R greater than %R limits.
Was a method blank prepared and analyzed with each batch?	•			
Were field blanks (EBs or FBs) submitted with these samples?	•			
Were target analytes reported in the field blank(s) less than MDL?		•		Several results qualified U at the LOQ due to equipment bank contamination.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?		•		LCS/LCSD %R was 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?	•			
Were MS/MSD recoveries within project acceptance limits?		•		MS/MSD %R was greater than %R limits but no results were qualified due to being non detects.
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 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 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?		•		One result qualified UJ due to MS/MSD %R being 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: 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.
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: SW9060A (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.
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.

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

January 18, 2023

SUBJECT: Fort Devens - Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on December 7, 2022. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #55581_RV1:

SDG #	**Fraction**
680-223156-1	Volatiles, Methane, Ethane, & Ethene, Dissolved Metals, Alkalinity, Nitrate/Nitrite, Sulfate, Sulfide, TOC

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

100 pages-ADV

Attachment 1

Stage 2B EQUIS EDD

LDC# 55581 (Arcadis - Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	VOA (8260D)		3 D.Met. (6010C/ 6020A)		Methane Ethane Ethene		Alk (2320B)		NO_3 /NO_2-N (353.2)		SO_4 (9056A)		S= (9034)		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	W	S
A	680-223156-1	12/07/22	12/21/22	18	0	14	0	6	0	6	0	6	0	6	0	6	0	6	0																		
Total	TR/PG			18	0	14	0	6	0	6	0	6	0	6	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	68

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

V:\LOGIN\Arcadis\Fort Devens\55581ST.wpd

Data Validation Report for 680-223156-1

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2022
SDG:	680-223156-1
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020
Prime Contractor:	Seres-Arcadis JV
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:	December 30, 2022

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	E353.2	RSK175	SW6010C - Dissolved	SW6020A - Dissolved	SW8260D	SW9034	SW9056A	SW9060A
AOC50-DUP03-FAL22	680-223156-1	Water	Field Duplicate/FD	X	X	X	X	X	X	X	X	X
AOC50-RB02-FAL22	680-223156-9	Water	Equipment Blank/EB				X	X	X			
AOC50-RB03-FAL22	680-223156-18	Water	Equipment Blank/EB				X	X	X			
AOC50-TB04-FAL22	680-223156-10	Water	Trip Blank/TB						X			
AOC50-TB05-FAL22	680-223156-17	Water	Trip Blank/TB						X			
G6M-02-12X-FAL22	680-223156-11	Water	Field Sample/N				X	X	X			
G6M-03-08X-FAL22	680-223156-2	Water	Field Sample/N				X	X	X			
G6M-04-03X-FAL22	680-223156-12	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-04-05X-FAL22	680-223156-3	Water	Field Sample/N						X			
G6M-04-09X-FAL22	680-223156-13	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-04-15X-FAL22	680-223156-14	Water	Field Sample/N				X	X	X			
G6M-04-22X-FAL22	680-223156-4	Water	Field Sample/N				X	X	X			
G6M-04-31X-FAL22	680-223156-5	Water	Field Sample/N				X	X	X			
G6M-13-01X-FAL22	680-223156-15	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-13-02X-FAL22	680-223156-6	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-13-03X-FAL22	680-223156-7	Water	Field Sample/N						X			
G6M-13-04X-FAL22	680-223156-16	Water	Field Sample/N				X	X	X			
G6M-97-05B-FAL22	680-223156-8	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 JV; analyses were performed by Eurofins Environment Testing TestAmerica, Savannah, GA and were reported under sample delivery group (SDG) 680-223156-1. 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
- 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 176 results (13.39%) out of the 1314 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	Error in eQAPP causing RPD values to be incorrect.
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.
SW9060A	No additional comments; see Checklist for detail.



December 30, 2022

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.

January 18, 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
CCVIS6807462242 (CV)	1,2-Dibromo-3-chloropropane	76.0	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6807462242 (CV)	2-Hexanone	78.0	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6807462242 (CV)	4-Methyl-2-pentanone (MIBK)	78.0	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6807462242 (CV)	Bromomethane	79.0	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6807462242 (CV)	Chloroethane	272	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807462464 (CV)	Chloroethane	161	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807462464 (CV)	Chloromethane	0.00	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6807468074 (CV)	1,2,3-Trichlorobenzene	126	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807468074 (CV)	Chloroethane	179	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807468074 (CV)	Trichlorofluoromethane	124	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807468133 (CV)	Bromomethane	148	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807468133 (CV)	Chloroethane	258	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807470444 (CV)	1,2,3-Trichlorobenzene	133	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807470444 (CV)	Carbon disulfide	124	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807470444 (CV)	Chloroethane	177	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807470444 (CV)	Hexachlorobutadiene	123	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807470444 (CV)	Naphthalene	121	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6807470444 (CV)	Trichlorofluoromethane	125	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-DUP03-FAL22 680-223156-1	FD	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
AOC50-DUP03-FAL22 680-223156-1	FD	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
AOC50-DUP03-FAL22 680-223156-1	FD	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ		ug/l	V2
AOC50-DUP03-FAL22 680-223156-1	FD	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
AOC50-RB02-FAL22 680-223156-9	EB	Chloromethane	2.50	2.00 U	2.00 UJ		ug/l	V2
AOC50-TB04-FAL22 680-223156-10	TB	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
AOC50-TB04-FAL22 680-223156-10	TB	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
AOC50-TB04-FAL22 680-223156-10	TB	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ		ug/l	V2
AOC50-TB04-FAL22 680-223156-10	TB	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-03-08X-FAL22 680-223156-2	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-03-08X-FAL22 680-223156-2	N	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-03-08X-FAL22 680-223156-2	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-03-08X-FAL22 680-223156-2	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-04-05X-FAL22 680-223156-3	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-04-05X-FAL22 680-223156-3	N	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-04-05X-FAL22 680-223156-3	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-04-05X-FAL22 680-223156-3	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-04-22X-FAL22 680-223156-4	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-04-22X-FAL22 680-223156-4	N	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-04-22X-FAL22 680-223156-4	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-04-22X-FAL22 680-223156-4	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-04-31X-FAL22 680-223156-5	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-04-31X-FAL22 680-223156-5	N	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-04-31X-FAL22 680-223156-5	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q M	10.0 UJ		ug/l	V2
G6M-04-31X-FAL22 680-223156-5	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-13-02X-FAL22 680-223156-6	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-13-02X-FAL22 680-223156-6	N	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-13-02X-FAL22 680-223156-6	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-13-02X-FAL22 680-223156-6	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-13-03X-FAL22 680-223156-7	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-13-03X-FAL22 680-223156-7	N	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-13-03X-FAL22 680-223156-7	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-13-03X-FAL22 680-223156-7	N	Bromomethane	20.0	10.0 U Q	10.0 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-97-05B-FAL22 680-223156-8	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-97-05B-FAL22 680-223156-8	N	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-97-05B-FAL22 680-223156-8	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-97-05B-FAL22 680-223156-8	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 (LOQ) based on the sample concentration.
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
CCVC68074622432 (EV)	Chloroethane	268	50 - 150	50 - 150	percent	J/None	V5	
CCVC68074624632 (EV)	Chloroethane	166	50 - 150	50 - 150	percent	J/None	V5	
CCVC68074624632 (EV)	Vinyl acetate	44.0	50 - 150	50 - 150	percent	J/UJ	V5	
CCVC68074680732 (EV)	Chloroethane	206	50 - 150	50 - 150	percent	J/None	V5	
CCVC68074680732 (EV)	p-Cymene (p-Isopropyltoluene)	654	50 - 150	50 - 150	percent	J/None	V5	
CCVC68074681331 (EV)	Chloroethane	274	50 - 150	50 - 150	percent	J/None	V5	
CCVC68074704431 (EV)	Chloroethane	178	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.

Qualified Results associated with the Ending Continuing Calibration Verification for SW8260D

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-RB02-FAL22 680-223156-9	EB	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 (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260D, 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-RB02-FAL22 (EB)	Acetone	15.0	< 3.7	< 25	ug/l	U/None*	V	
AOC50-RB03-FAL22 (EB)	Acetone	21.0	< 3.7	< 25	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 LOQ will be qualified based on the validation type such as J+ at the sample result.

No results associated with this QC element required qualification.

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
MB6807468079 (LB)	Cumene	0.338	< 0.26	< 2	ug/l	U/None*	L	
MB68074704410 (LB)	p-Cymene (p-Isopropyltoluene)	0.696	< 0.44	< 2	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 LOQ will be qualified based on the validation type such as J+ at the sample result.

Qualified Results associated with the Lab Blank for SW8260D

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-13-01X-FAL22 680-223156-15	N	p-Cymene (p-Isopropyltoluene)	2.00	0.600 J	2.00 U		ug/l	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 (LOQ) based on the sample concentration.
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
LCS6807462245 (BS)	Chloroethane	278	60 - 138	10 - 138	percent	J/None	C	
LCS6807462465 (BS)	Chloroethane	161	60 - 138	10 - 138	percent	J/None	C	
LCS6807468075 (BS)	1,2,3-Trichlorobenzene	135	69 - 129	10 - 129	percent	J/None	C	
LCS6807468075 (BS)	Chloroethane	183	60 - 138	10 - 138	percent	J/None	C	
LCS6807468075 (BS)	Naphthalene	129	61 - 128	10 - 128	percent	J/None	C	
LCS6807468134 (BS)	Bromomethane	148	53 - 141	10 - 141	percent	J/None	C	
LCS6807468134 (BS)	Chloroethane	264	60 - 138	10 - 138	percent	J/None	C	
LCS6807470445 (BS)	1,2,3-Trichlorobenzene	145	69 - 129	10 - 129	percent	J/None	C	
LCS6807470445 (BS)	Chloroethane	176	60 - 138	10 - 138	percent	J/None	C	
LCS6807470445 (BS)	Naphthalene	136	61 - 128	10 - 128	percent	J/None	C	
LCSD6807468076 (BD)	1,2,3-Trichlorobenzene	143	69 - 129	10 - 129	percent	J/None	C	
LCSD6807468076 (BD)	Chloroethane	181	60 - 138	10 - 138	percent	J/None	C	
LCSD6807468076 (BD)	Naphthalene	141	61 - 128	10 - 128	percent	J/None	C	
LCSD6807468135 (BD)	Bromomethane	144	53 - 141	10 - 141	percent	J/None	C	
LCSD6807468135 (BD)	Chloroethane	268	60 - 138	10 - 138	percent	J/None	C	
LCSD6807470446 (BD)	1,2,3-Trichlorobenzene	144	69 - 129	10 - 129	percent	J/None	C	
LCSD6807470446 (BD)	Chloroethane	177	60 - 138	10 - 138	percent	J/None	C	
LCSD6807470446 (BD)	Naphthalene	138	61 - 128	10 - 128	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-DUP03-FAL22 680-223156-1	FD	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
AOC50-DUP03-FAL22 680-223156-1	FD	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
AOC50-DUP03-FAL22 680-223156-1	FD	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ		ug/l	V2
AOC50-DUP03-FAL22 680-223156-1	FD	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
AOC50-RB02-FAL22 680-223156-9	EB	Chloromethane	2.50	2.00 U	2.00 UJ		ug/l	V2
AOC50-RB02-FAL22 680-223156-9	EB	Vinyl acetate	2.50	2.00 U Q	2.00 UJ		ug/l	V5
AOC50-TB04-FAL22 680-223156-10	TB	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
AOC50-TB04-FAL22 680-223156-10	TB	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
AOC50-TB04-FAL22 680-223156-10	TB	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ		ug/l	V2
AOC50-TB04-FAL22 680-223156-10	TB	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-03-08X-FAL22 680-223156-2	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-03-08X-FAL22 680-223156-2	N	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-03-08X-FAL22 680-223156-2	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-03-08X-FAL22 680-223156-2	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-04-05X-FAL22 680-223156-3	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-04-05X-FAL22 680-223156-3	N	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-04-05X-FAL22 680-223156-3	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-04-05X-FAL22 680-223156-3	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-04-09X-FAL22 680-223156-13	N	1,1,1,2-Tetrachloroethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	1,1,1-Trichloroethane	1.00	0.500 U	0.500 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	1,1,2,2-Tetrachloroethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	1,1,2-Trichloroethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	1,1-Dichloroethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	1,1-Dichloroethene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	1,1-Dichloropropene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	1,2,3-Trichlorobenzene	5.00	2.00 U	2.00 UJ		ug/l	V4

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-04-09X-FAL22 680-223156-13	N	1,2,3-Trichloropropane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	1,2,4-Trichlorobenzene	5.00	2.00 U	2.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	1,2,4-Trimethylbenzene	2.00	0.540 J	0.540 J		ug/l	TR/V4
G6M-04-09X-FAL22 680-223156-13	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U	5.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	1,2-Dibromoethane (EDB)	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	1,2-Dichlorobenzene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	1,2-Dichloroethane	2.00	1.00 U M	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	1,2-Dichloroethene	2.00	1.90 J	1.90 J		ug/l	TR/V4
G6M-04-09X-FAL22 680-223156-13	N	1,2-Dichloropropane	1.00	0.500 U	0.500 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	1,3,5-Trimethylbenzene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	1,3-Dichlorobenzene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	1,3-Dichloropropane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	1,4-Dichlorobenzene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	2,2-Dichloropropane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	2-Butanone (MEK)	25.0	20.0 U	20.0 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	2-Hexanone	20.0	10.0 U	10.0 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	4-Chlorotoluene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U M	10.0 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	Acetone	25.0	10.0 U	10.0 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	Benzene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	Bromobenzene	1.00	0.500 U	0.500 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	Bromochloromethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	Bromodichloromethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	Bromoform	2.50	2.00 U	2.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	Carbon disulfide	2.00	1.00 U	1.00 UJ		ug/l	V4

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-04-09X-FAL22 680-223156-13	N	Carbon Tetrachloride	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	Chlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	Chloroethane	20.0	10.0 U Q	10.0 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	Chloroform	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	Chloromethane	2.50	2.00 U	2.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	cis-1,2-Dichloroethene	2.00	0.940 J	0.940 J		ug/l	TR/V4
G6M-04-09X-FAL22 680-223156-13	N	cis-1,3-Dichloropropene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	Cumene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	Dibromochloromethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	Dibromomethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	Dichlorodifluoromethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	Ethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	Hexachlorobutadiene	5.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	m,p-Xylene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	Methyl tert-butyl ether (MTBE)	5.00	2.00 U	2.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	Methylene chloride	20.0	10.0 U	10.0 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	Naphthalene	10.0	5.00 U	5.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	n-Butylbenzene	2.50	2.00 U	2.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	n-Propylbenzene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	o-Xylene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	p-Cymene (p-Isopropyltoluene)	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	sec-Butylbenzene	2.50	2.00 U	2.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	Styrene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	tert-Butylbenzene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	Tetrachloroethene (PCE)	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	Toluene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	trans-1,2-Dichloroethene	2.00	0.980 J	0.980 J		ug/l	TR/V4

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-04-09X-FAL22 680-223156-13	N	trans-1,3-Dichloropropene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	Trichloroethene (TCE)	1.00	0.500 U	0.500 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	Trichlorofluoromethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	Vinyl acetate	2.50	2.00 U	2.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	Vinyl chloride	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-09X-FAL22 680-223156-13	N	Xylenes, Total	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	1,1,1,2-Tetrachloroethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	1,1,1-Trichloroethane	1.00	0.500 U	0.500 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	1,1,2,2-Tetrachloroethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	1,1,2-Trichloroethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	1,1-Dichloroethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	1,1-Dichloroethene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	1,1-Dichloropropene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	1,2,3-Trichlorobenzene	5.00	2.00 U	2.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	1,2,3-Trichloropropane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	1,2,4-Trichlorobenzene	5.00	2.00 U	2.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	1,2,4-Trimethylbenzene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U	5.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	1,2-Dibromoethane (EDB)	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	1,2-Dichlorobenzene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	1,2-Dichloroethane	2.00	1.00 U M	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	1,2-Dichloroethene	2.00	1.20 J	1.20 J		ug/l	TR/V4
G6M-04-15X-FAL22 680-223156-14	N	1,2-Dichloropropane	1.00	0.500 U	0.500 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	1,3,5-Trimethylbenzene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	1,3-Dichlorobenzene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	1,3-Dichloropropane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	1,4-Dichlorobenzene	2.00	1.00 U	1.00 UJ		ug/l	V4

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-04-15X-FAL22 680-223156-14	N	2,2-Dichloropropane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	2-Butanone (MEK)	25.0	20.0 U	20.0 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	2-Hexanone	20.0	10.0 U M	10.0 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	4-Chlorotoluene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U M	10.0 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	Acetone	25.0	10.0 U	10.0 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	Benzene	2.00	0.380 J	0.380 J		ug/l	TR/V4
G6M-04-15X-FAL22 680-223156-14	N	Bromobenzene	1.00	0.500 U	0.500 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	Bromochloromethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	Bromodichloromethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	Bromoform	2.50	2.00 U	2.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	Carbon disulfide	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	Carbon Tetrachloride	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	Chlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	Chloroethane	20.0	10.0 U Q	10.0 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	Chloroform	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	Chloromethane	2.50	2.00 U	2.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	cis-1,2-Dichloroethene	2.00	1.20 J	1.20 J		ug/l	TR/V4
G6M-04-15X-FAL22 680-223156-14	N	cis-1,3-Dichloropropene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	Cumene	2.00	0.560 J	0.560 J		ug/l	TR/V4
G6M-04-15X-FAL22 680-223156-14	N	Dibromochloromethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	Dibromomethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	Dichlorodifluoromethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	Ethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	Hexachlorobutadiene	5.00	1.00 U	1.00 UJ		ug/l	V4

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-04-15X-FAL22 680-223156-14	N	m,p-Xylene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	Methyl tert-butyl ether (MTBE)	5.00	2.00 U	2.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	Methylene chloride	20.0	10.0 U	10.0 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	Naphthalene	10.0	5.00 U	5.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	n-Butylbenzene	2.50	2.00 U	2.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	n-Propylbenzene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	o-Xylene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	p-Cymene (p-Isopropyltoluene)	2.00	1.00 U M	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	sec-Butylbenzene	2.50	2.00 U	2.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	Styrene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	tert-Butylbenzene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	Tetrachloroethene (PCE)	2.00	0.430 J	0.430 J		ug/l	TR/V4
G6M-04-15X-FAL22 680-223156-14	N	Toluene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	trans-1,2-Dichloroethene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	trans-1,3-Dichloropropene	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	Trichloroethene (TCE)	1.00	0.700 J	0.700 J		ug/l	TR/V4
G6M-04-15X-FAL22 680-223156-14	N	Trichlorofluoromethane	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	Vinyl acetate	2.50	2.00 U	2.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	Vinyl chloride	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-15X-FAL22 680-223156-14	N	Xylenes, Total	2.00	1.00 U	1.00 UJ		ug/l	V4
G6M-04-22X-FAL22 680-223156-4	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-04-22X-FAL22 680-223156-4	N	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-04-22X-FAL22 680-223156-4	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-04-22X-FAL22 680-223156-4	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-04-31X-FAL22 680-223156-5	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-04-31X-FAL22 680-223156-5	N	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-04-31X-FAL22 680-223156-5	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q M	10.0 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
G6M-04-31X-FAL22 680-223156-5	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-13-01X-FAL22 680-223156-15	N	p-Cymene (p-Isopropyltoluene)	2.00	0.600 J	2.00 U		ug/l	L
G6M-13-02X-FAL22 680-223156-6	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-13-02X-FAL22 680-223156-6	N	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-13-02X-FAL22 680-223156-6	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-13-02X-FAL22 680-223156-6	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-13-03X-FAL22 680-223156-7	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-13-03X-FAL22 680-223156-7	N	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-13-03X-FAL22 680-223156-7	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-13-03X-FAL22 680-223156-7	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-97-05B-FAL22 680-223156-8	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U Q	5.00 UJ		ug/l	V2
G6M-97-05B-FAL22 680-223156-8	N	2-Hexanone	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-97-05B-FAL22 680-223156-8	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U Q	10.0 UJ		ug/l	V2
G6M-97-05B-FAL22 680-223156-8	N	Bromomethane	20.0	10.0 U Q	10.0 UJ		ug/l	V2

Test Method: SW9034		Extraction Method: NONE						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-13-02X-FAL22 680-223156-6	N	Sulfide	2.50	1.70 U J1	1.70 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 SW8260D

FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-04-09X-FAL22 680-223156-13	N	1,1,1,2-Tetrachloroethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	1,1,1-Trichloroethane	1.00	0.500 U	0.500 U	0.500 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	1,1,2,2-Tetrachloroethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	1,1,2-Trichloroethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	1,1-Dichloroethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	1,1-Dichloroethene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	1,1-Dichloropropene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	1,2,3-Trichlorobenzene	5.00	2.00 U	2.00 U	2.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	1,2,3-Trichloropropane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	1,2,4-Trichlorobenzene	5.00	2.00 U	2.00 U	2.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	1,2,4-Trimethylbenzene	2.00	0.540 J	0.540 J	0.540 J	TR/V4
G6M-04-09X-FAL22 680-223156-13	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U	5.00 U	5.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	1,2-Dibromoethane (EDB)	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	1,2-Dichlorobenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	1,2-Dichloroethane	2.00	1.00 U M	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	1,2-Dichloroethene	2.00	1.90 J	1.90 J	1.90 J	TR/V4
G6M-04-09X-FAL22 680-223156-13	N	1,2-Dichloropropane	1.00	0.500 U	0.500 U	0.500 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	1,3,5-Trimethylbenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	1,3-Dichlorobenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	1,3-Dichloropropane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	1,4-Dichlorobenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	2,2-Dichloropropane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	2-Butanone (MEK)	25.0	20.0 U	20.0 U	20.0 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	2-Chlorotoluene	1.00	0.500 U	0.500 U	0.500 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	2-Hexanone	20.0	10.0 U	10.0 U	10.0 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	4-Chlorotoluene	2.00	1.00 U	1.00 U	1.00 UJ	V4

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
G6M-04-09X-FAL22 680-223156-13	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U M	10.0 U	10.0 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	Acetone	25.0	10.0 U	10.0 U	10.0 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	Benzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	Bromobenzene	1.00	0.500 U	0.500 U	0.500 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	Bromochloromethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	Bromodichloromethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	Bromoform	2.50	2.00 U	2.00 U	2.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	Bromomethane	20.0	10.0 U Q	10.0 U	10.0 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	Carbon disulfide	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	Carbon Tetrachloride	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	Chlorobenzene	1.00	0.500 U	0.500 U	0.500 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	Chloroethane	20.0	10.0 U Q	10.0 U	10.0 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	Chloroform	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	Chloromethane	2.50	2.00 U	2.00 U	2.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	cis-1,2-Dichloroethene	2.00	0.940 J	0.940 J	0.940 J	TR/V4
G6M-04-09X-FAL22 680-223156-13	N	cis-1,3-Dichloropropene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	Cumene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	Dibromochloromethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	Dibromomethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	Dichlorodifluoromethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	Ethylbenzene	1.00	0.500 U	0.500 U	0.500 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	Hexachlorobutadiene	5.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	m,p-Xylene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	Methyl tert-butyl ether (MTBE)	5.00	2.00 U	2.00 U	2.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	Methylene chloride	20.0	10.0 U	10.0 U	10.0 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	Naphthalene	10.0	5.00 U	5.00 U	5.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	n-Butylbenzene	2.50	2.00 U	2.00 U	2.00 UJ	V4

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
G6M-04-09X-FAL22 680-223156-13	N	n-Propylbenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	o-Xylene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	p-Cymene (p-Isopropyltoluene)	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	sec-Butylbenzene	2.50	2.00 U	2.00 U	2.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	Styrene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	tert-Butylbenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	Tetrachloroethene (PCE)	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	Toluene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	trans-1,2-Dichloroethene	2.00	0.980 J	0.980 J	0.980 J	TR/V4
G6M-04-09X-FAL22 680-223156-13	N	trans-1,3-Dichloropropene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	Trichloroethene (TCE)	1.00	0.500 U	0.500 U	0.500 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	Trichlorofluoromethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	Vinyl acetate	2.50	2.00 U	2.00 U	2.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	Vinyl chloride	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-09X-FAL22 680-223156-13	N	Xylenes, Total	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	1,1,1,2-Tetrachloroethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	1,1,1-Trichloroethane	1.00	0.500 U	0.500 U	0.500 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	1,1,2,2-Tetrachloroethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	1,1,2-Trichloroethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	1,1-Dichloroethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	1,1-Dichloroethene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	1,1-Dichloropropene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	1,2,3-Trichlorobenzene	5.00	2.00 U	2.00 U	2.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	1,2,3-Trichloropropane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	1,2,4-Trichlorobenzene	5.00	2.00 U	2.00 U	2.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	1,2,4-Trimethylbenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	1,2-Dibromo-3-chloropropane	10.0	5.00 U	5.00 U	5.00 UJ	V4

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
G6M-04-15X-FAL22 680-223156-14	N	1,2-Dibromoethane (EDB)	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	1,2-Dichlorobenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	1,2-Dichloroethane	2.00	1.00 U M	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	1,2-Dichloroethene	2.00	1.20 J	1.20 J	1.20 J	TR/V4
G6M-04-15X-FAL22 680-223156-14	N	1,2-Dichloropropane	1.00	0.500 U	0.500 U	0.500 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	1,3,5-Trimethylbenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	1,3-Dichlorobenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	1,3-Dichloropropane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	1,4-Dichlorobenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	2,2-Dichloropropane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	2-Butanone (MEK)	25.0	20.0 U	20.0 U	20.0 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	2-Chlorotoluene	1.00	0.500 U	0.500 U	0.500 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	2-Hexanone	20.0	10.0 U M	10.0 U	10.0 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	4-Chlorotoluene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	4-Methyl-2-pentanone (MIBK)	20.0	10.0 U M	10.0 U	10.0 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	Acetone	25.0	10.0 U	10.0 U	10.0 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	Benzene	2.00	0.380 J	0.380 J	0.380 J	TR/V4
G6M-04-15X-FAL22 680-223156-14	N	Bromobenzene	1.00	0.500 U	0.500 U	0.500 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	Bromochloromethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	Bromodichloromethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	Bromoform	2.50	2.00 U	2.00 U	2.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	Bromomethane	20.0	10.0 U Q	10.0 U	10.0 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	Carbon disulfide	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	Carbon Tetrachloride	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	Chlorobenzene	1.00	0.500 U	0.500 U	0.500 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	Chloroethane	20.0	10.0 U Q	10.0 U	10.0 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	Chloroform	2.00	1.00 U	1.00 U	1.00 UJ	V4

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
G6M-04-15X-FAL22 680-223156-14	N	Chloromethane	2.50	2.00 U	2.00 U	2.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	cis-1,2-Dichloroethene	2.00	1.20 J	1.20 J	1.20 J	TR/V4
G6M-04-15X-FAL22 680-223156-14	N	cis-1,3-Dichloropropene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	Cumene	2.00	0.560 J	0.560 J	0.560 J	TR/V4
G6M-04-15X-FAL22 680-223156-14	N	Dibromochloromethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	Dibromomethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	Dichlorodifluoromethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	Ethylbenzene	1.00	0.500 U	0.500 U	0.500 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	Hexachlorobutadiene	5.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	m,p-Xylene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	Methyl tert-butyl ether (MTBE)	5.00	2.00 U	2.00 U	2.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	Methylene chloride	20.0	10.0 U	10.0 U	10.0 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	Naphthalene	10.0	5.00 U	5.00 U	5.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	n-Butylbenzene	2.50	2.00 U	2.00 U	2.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	n-Propylbenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	o-Xylene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	p-Cymene (p-Isopropyltoluene)	2.00	1.00 U M	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	sec-Butylbenzene	2.50	2.00 U	2.00 U	2.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	Styrene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	tert-Butylbenzene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	Tetrachloroethene (PCE)	2.00	0.430 J	0.430 J	0.430 J	TR/V4
G6M-04-15X-FAL22 680-223156-14	N	Toluene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	trans-1,2-Dichloroethene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	trans-1,3-Dichloropropene	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	Trichloroethene (TCE)	1.00	0.700 J	0.700 J	0.700 J	TR/V4
G6M-04-15X-FAL22 680-223156-14	N	Trichlorofluoromethane	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	Vinyl acetate	2.50	2.00 U	2.00 U	2.00 UJ	V4

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
G6M-04-15X-FAL22 680-223156-14	N	Vinyl chloride	2.00	1.00 U	1.00 U	1.00 UJ	V4
G6M-04-15X-FAL22 680-223156-14	N	Xylenes, Total	2.00	1.00 U	1.00 U	1.00 UJ	V4

Modified Qualifiers for test method SW9034							
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-13-02X-FAL22 680-223156-6	N	Sulfide	2.50	1.70 U J1	1.70 U	1.70 UJ	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.

Reason Code Definitions

Code	Definition
C	LCS Recovery
L	Lab Blank
M	MS Recovery
TR	Trace Level Detect
V	Equipment Blank
V2	CCV
V4	Sample Receipt Condition
V5	Ending Continuing Calibration Verification

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 and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
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 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 and within acceptance criteria?	•			
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.
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?		•		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 and within acceptance criteria?	•			
Were surrogate recoveries within project acceptance limits?			•	Not applicable to this method.
Was a method blank prepared and analyzed with each batch?	•			
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 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 validated.

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 and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
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 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 and within acceptance criteria?	•			
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?	•			
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?		•		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?		•		Results qualified J for detects and UJ for nondetects due to presence of headspace within the vials.
Were holding times met?	•			
Were all requested target analytes reported?	•			
Was the Calibration within acceptance criteria?		•		Several results qualified UJ due to ending CCV %D being greater than %D limits.
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 field blanks (EBs or FBs) submitted with these samples?	•			
Were target analytes reported in the field blank(s) less than MDL?		•		Analytes detected in equipment blank but no results were qualified.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?		•		LCS/LCSD %R was higher than %R limits but no results were qualified due to being non detetcs.
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?			•	Insufficient sample for MS/MSD analysis.
Was the MS/MSD RPD within project acceptance limits?			•	Insufficient sample for MS/MSD analysis.
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 and within acceptance criteria?	•			
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.
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?		•		Result qualified UJ due to MS/MSD recoveries being lower than % recovery 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 and within acceptance criteria?	•			
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.
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: SW9060A (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 and within acceptance criteria?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
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 any data recommended for rejection (exclusion) in the data validation process?		•		All data acceptable as reported and qualified.

Appendix D

Historical Groundwater Analytical Results

Appendix D
Historical Groundwater Analytical Results
2022 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	PCE	trans-1,2-DCE	TCE	cis-1,2-DCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	TOC	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/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	5	70	5	70	2	10	3.129	1,460					10,000									
Area	Well ID	Date Sampled																							
Area 1	G6M-02-08X	5/17/2002	1.0 U	2,300	2.0 U	35	250	5.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.0	-
Area 1		1/31/2003	1.0 U	3,600	2.3	46	480	2.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.0	-
Area 1		3/31/2005	50 U	1,300	50 U	38 J	250	50 U	5.0 U	0.3 J	770	0.049	0.79	1.2	62	1.1	6.2	2.0 U	15	7.08	0.563	24.6	9.10	9.6	-50.0
Area 1		7/5/2005	12 U	1,000	12 U	130	1,800	12 U	33	110	29,000	0.16	0.22	3.0	350	0.05 U	3.7	8.3	450	4.23	1.616	4.72	1.66	15.0	19.1
Area 1		9/27/2005	1.8	560	1.0 U	26	1,300	2.5	270	310 J	75 U	0.11	0.25	21	466	0.05 U	320 J	16	1,200	5.03	1.965	3.16	0.33	18.8	-68.6
Area 1		12/16/2005	2.0 U	300	4.0 U	24	1,200	4.0 U	4.4	350 J	15 U	0.19	0.36	2.1	520	0.05 U	57	9.4	1,500	5.46	1.999	66.4	0.03	9.7	-31.4
Area 1		3/21/2006	2.1	180	2.0 U	25	1,300	2.3	80	470	40,000	0.084	0.24	15	1,400	1.0 U	245	14	3,000	5.46	2.450	6.98	0.33	15.0	-62.5
Area 1		6/21/2006	1.0 U	230	2.0 U	30	850	2.0 U	100	970	44,000	0.14	0.23	19	1,800	1.7	759	40	5,700	4.80	4.528	45.4	1.32	12.4	-25.2
Area 1		9/20/2006	1.6	150	2.0 U	25	1,300	2.0 U	77	860	29,000	0.072	0.14	11	1,000	2.0 U	655	16	4,400	5.20	4.503	53.4	1.57	19.6	-14.4
Area 1		12/11/2006	1.6	830	2.0 U	340	620	7.3	190	130	27,000	0.020 J	0.047	9,000	-	-	6.1	1.2	360	6.28	1.930	2.10	14.1	11.0	-260.0
Area 1		3/28/2007	1.0 U	60	2.0 U	14	500	2.0 U	72	1,200	30,000 J	0.31	0.14	62	-	-	1,170	80	7,200	4.46	7.243	60.9	0.21	11.7	-144.5
Area 1		6/13/2007	1.0 U	110	2.0 U	8.4	420	2.0 U	130	1,200	33,000	0.092	0.11	180	-	-	1,160	82	6,800	4.70	6.948	1,328	1.78	9.3	24.1
Area 1		9/13/2007	1.0 U	140	2.0 U	74	1,400	2.0 U	410	1,100	37,000	0.22	0.17	120	3,000	0.2 U	890	200	4,400	5.34	6.823	28.2	2.68	11.5	-150.5
Area 1		12/10/2007	2.0	250	2.0 U	66	1,100	3.3	360	1,200	42,000	0.14	0.23	240	-	-	414	120	7,700	5.17	7.569	10.8	0.15	11.1	-115.7
Area 1		3/10/2008	1.0 U	32	2.0 U	5.5	170	2.0 U	570	970	20,000	0.36	0.15	280	-	-	770	16	11,000	4.28	7.828	13.8	0.50	15.4	-55.7
Area 1		10/6/2008	5.0 U	49	5.0 U	4.5 J	81	5.0 U	103 J	598	7,630	6.3 U	7.9 U	3,000	1,800	0.13 U	610	0.75 U	4,190	4.52	4.495	65.0	0.00	12.3	-25.9
Area 1		1/21/2009	14 U	29	11 U	18 U	39	11 U	76	474 J	6,650	1.2 U	1.5 U	3,400	3,000	0.13 U	710	0.39	2,900 J	4.76	3.739	46.4	0.15	13.1	39.2
Area 1		5/7/2009	20 U	25	20 U	20 U	29	20 U	53	356	5,130	1.3 U	5.8	3,500	550 J	0.092 J	410	0.053	3,000	3.97	3.538	15.4	0.40	15.0	71.4
Area 1		10/20/2009	0.5 U	0.5 U	0.5 U	0.5 U	0.31 J	0.5 U	71	486	6,840	1.3 U	1.6 U	2,300 J	40	1.3 U	440	0.3 U	2,300	4.61	3.973	20.1	1.88	12.5	79.4
Area 1		4/21/2010	2.0 U	11 J	2.0 U	2.0 U	75 J	2.0 U	99	447 J	8,720	1.3 U	1.6 U	4,400	40	1.3 U	130	0.28	3,400	4.49	3.353	22.3	0.10	11.1	28.2
Area 1		10/7/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	73	381	8,080	1.3 U	1.6 U	27,000	860	2.6 U	100	0.095	2,400	4.47	3.209	4.33	0.33	12.7	58.0
Area 1		6/9/2011	0.5 U	13	0.5 U	0.5 U	140	1.6	155	473	14,000	1.2 U	1.5 U	83,000	1,100	6.5 U	99 J	0.38	2,800	4.64	2.968	11.0	0.11	11.1	18.9
Area 1		10/4/2011	8.0 U	8.0 U	8.0U	8.0 U	210	8.0 U	194	491	15,900	1.2 U	1.5 U	28,000	230	0.13 U	86	0.091	2,400	4.81	2.376	4.99	0.02	13.7	18.1
Area 1		5/10/2012	8.0 U	9.8	8.0U	8.0 U	270	8.0 U	184	581	19,000	1.2 U	1.5 U	14,000	730	0.13 U	64	1.8	1,900	5.16	3.338	3.29	0.21	11.5	-9.9
Area 1		10/15/2012	4.0 U	12	4.0 U	4.0 U	270	6.2	121	523	20,300	1.2 U	1.5 U	3,600	900	0.08 J	37	0.096	1,800	4.85	2.915	3.76	0.32	10.4	-1.0
Area 1		5/23/2013	8.0 U	20	8.0U	8.0 U	510	24	160	460	18,200	1.2 U	1.5 U	11,000	610	0.041 J	5.3	3.5 j	1,600	4.88	2.618	4.01	0.10	-	9.4
Area 1		10/22/2013	13 U	13 U	13 U	13 U	500	51	200	428	15,400	3.6	84	40,000	630	0.13 U	8.9	3.8	1,100	5.23	1.308	10.8	0.27	8.2	1.1
Area 1		6/12/2014	0.70	12	0.5 U	1.5	400	140	241	420	10,100	1.3 U	1.6 U	9,400	700 J	0.13 U	1.0 J	0.03 U	670	5.23	2.023	6.68	0.21	16.6	11.2
Area 1		11/3/2014	5.0 U	8.3	5.0 U	5.0 U	260	44	258	461	10,400	4.4	7.7	26,000	590	0.13 U	0.96 J	0.03 U	1,400	5.28	0.994	33.6	0.12	15.0	-33.6
Area 1		6/16/2015	10 U	10 U	10 U	10 U	99	10 U	318	455	10,200	10 U	10 U	1,410	582	0.15	8.6 J	1.0 U	1,020	5.43	1.476	110	2.94	13.6	43.0
Area 1		9/9/2015	20 U	20 U	20 U	20 U	84	20 U	340	428	8,780	10 U	10 U	10,600	-	0.078 J	16	4.8	976	5.59	1.337	12.0	0.07	13.7	-39.2
Area 1		10/13/2015	21 U	20 U	21 U	21 U	84	21 U	320	483	9,410	10 U	10 U	18,400	526	0.11 U	7.1 J	2.0 U	1,280	5.02	1.689	47.8	0.33	9.8	0.4
Area 1		2/10/2016	2.0 U	2.9	2.0 U	2.0 U	49	4.7	272	1,150	12,100	10 U	10 U	14,500	879	0.10 J	5.3 J	2.0 U	3,110	4.89	2.906	17.2	0.47	10.4	52.6
Area 1		6/14/2016	10 U	10 U	10 U	10 U	35	10 U	220	1,200	8,000	2.8	1.0 U	19,000	1,200	0.05 U	1.3	1.0 U	2,600	5.21	3.370	10.7	0.33	16.4	29.1
Area 1		11/10/2016	1.0 U	4.3	1.0 U	1.0 U	27	2.1	230	880	8,600	1.1 U	1.0 U	11,000	1,000	0.053 J	0.58 J	7.0	2,100	5.27	1.370	9.44	0.77	8.3	-0.9
Area 1		5/18/2017	20 U	20 U	20 U	20 U	51	20 U	410	770	4,300	1.1 U	1.0 U	15,000	930	0.10 U	1.0 U	1.0 U	740	12.31	2.650	30.4	0.01	13.0	-111.3
Area 1		10/18/2017	20 U	20 U	20 U	20 U	20 U	20 U	370	640	3,300	1.1 U	1.0 U	16,000	680	0.26	2.0 U	1.6	250	6.66	1.970	38.1	0.44	12.2	-144.8
Area 1		10/19/2018	10 U	10 U	10 U	10 U	8.0 J	10 U	300	240	1,400	1.1 U	1.0 U	38,000	190	0.23	2.0 U	1.0 U	110	6.37	1.439	41.6	0.35	11.2	111.3
Area 1		10/16/2019	5.0 U	5.0 U	5.0 U	5.0 U	5.9 J	5.0 U	370	180	1,100	1.1 U	4.3	31,000	120	0.054 J	1.0 U	1.8	89	6.43	1.400	44.0	1.82	12.0	-115.0
Area 1		10/13/2020	1.0 U	1.0 U	1.0 U	1.0 U	3.5	1.0 U	390	78	420	1.1 U	0.76 J	12,000	95	0.12	5.0 U	0.81 U	37	6.61	0.522	8.12	0.51	11.6	-93.1
Area 1		10/14/2021	1.0 U	2.0 U	1.0 U	1.0 U	3.3	1.6	260	22	110	2.5	6.7	25,000	87	0.047 J	2.0 U	0.81 U	25	6.95	0.597	28.90	0.63	13.4	-119.0
Area 1		10/4/2022	1.0 U	1.0 U	1.0 U	0.5 U	0.91 J	1.0 U	210	19	240	3.4	0.71 U	28,000	52	0.025 U	1.1	1.7 U	15	6.88	0.109	7.61	1.01	12.4	-102.0
Area 1	G6M-03-01X	10/21/2009	25 U	380	25 U	65	670	25 U	-	-	-	-	-	-	-	-	-	-	-	6.52	0.559	7.25	0.88	12.0	-153.5
Area 1		10/16/2012	10 U	200	10 U	60	200	550	-	-	-	-	-	-	-	-	-	-	-	6.51	1.776	2.28	0.95	20.2	-69.4
Area 1		6/12/2014	0.51	0.29 J	0.59	37	19	68	-	-	-	-	-	-	-	-	-	-	-	6.52	0.812	13.1	1.95	16.7	11.7
Area 1		10/31/2014	0.5 U	300	0.5 U	310	98	34	-	-	-	-	-	-	-	-	-	-	-	6.40	1.263	8.57	0.75	9.6	-106.6
Area 1		6/18/2015	0.55 J	0.65 J	0.5 U	37	53	19	-	-	-	-	-	-	-	-	-	-	-	6.36	1.093	22.9	1.82	13.6	19.9
Area 1		9/10/2015	1.4	103	2.4	67	65	63	46	42	7,080	10 U	69	8,640	-	0.076 J	10	2.0 U	5.3	6.00	1.881	4.38	0.61	12.6	-55.0
Area 1		10/13/2015	1.5	126	5.2	190	141	58	-	-	-	-	-	-	-	-	-	-	-	6.27	2.096	3.61	0.28	13.3	-83.5
Area 1		2/22/2016	1.0 U	1.0 U	1.9	81	87	51	24	20	6,330	10 U	96	16,300	144	0.11 U	3.4 J	2.0 U	6.4	6.62	1.162	4.98	2.11	8.5	33.6
Area 1		6/15/2016	1.4	9.6	8.8	180	180	99	-	-	-	-	-	-	-	-	-	-	-	5.84	1.726	5.61	2.81	12.9	-48.3
Area 1		11/10/2016	1.4	1.0 U	4.0	130	180	140	-	-	-	-	-	-	-	-	-	-	-	6.25	1.097	2.40	0.47	8.2	-84.7
Area 1		5/18/2017	0.70 J	61	2.3	77	210	73	75	120	70,000	1.1 U	120	7,900	310	0.08 J	8.6	1.0 U	26	12.52	2.275	8.51	0.12	13.6	-93.1
Area 1		10/12/2017	2.0 U	2.0 U	2.0 U	9.7 J	240 J	160 J	130	210	65,000	1.1 U	1.0 U	8,000	390	0.12	0.50 J	1.0 U	72	6.42	2.020	7.96	2.23	12.5	-69.7
Area 1	G6M-03-02X	5/12/2003	1.0 U	1,300	2.0 U	2.0 U	4.4	2.0 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.9	-
Area 1		10/11/2004	1.0 U	690	2.0 U	2.0 U	5.6	2.0 U	5.0 U	1.0 U	17	0.051	0.030	2.6	12	3.7	20	1.7 J	1.0 U	6.29	0.321	12.1	8.25	8.8	97.4
Area 1		12/15/2004	1.0 U	200	2.0 U	2.0 U	5.0	2.0 U	5.0 U	1.0 U	610	0.056	0.063	3.4	29	2.4	30	2.0 U	390	5.86	0.382	1.93	1.75	12.8	-132.9
Area 1		3/29/2005	10 U	340	20 U	20 U	14 J	20 U	640	140	49,000	0.15	0.34	5.1	366	0.2 U	230	6.7 J	1,300	5.23	1.654	28.7	0.65	15.5	-20.1
Area 1		6/29/2005	2.5 U	190	2.5 U	11	91	2.5 U	130	220 J	35,000 J	0.29	0.65	43	431	0.05 U	74	11	1,200	4.62	1.723	29.1	1.13	15.6	2.9
Area 1		9/29/2005	2.5 U	57	2.5 U	7.8	190	2.5 U	150	260 J	37,000	0.20	0.29	560	345	0.05 U	62	16	850	4.94	1.752	23.8	0.53	11.3	-73.7
Area 1		12/15/2005	4.0 U	39	8.0U	8.0 U	190	8.0 U	146	290 J	38,000	0.17	0.26	4,300	550	0.05 U	66	16	1,100	5.42	1.650	19.7	4.55	12.1	13.9
Area 1		3/21/2006	1.0 U	17	2.0 U	2.0 U	140	2.0 U	140	320	37,000	0.016 J	0.14	6,700	1,200	2.0 U	88	8.8	1,400	5.56	1.731	17.3	0.16	13.4	-47.7
Area 1		6/21/2006	1.0 U	8.2	2.0 U	2.0 U	160	2.0 U	240	410	23,000	0.044	0.12	10,000	1,000	1.0 U	120	9.6	1,300	3.21	2.428	11.6	0.89	10.1	140.1
Area 1		9/20/2006	1.0 U	9.7	2.0 U	2.3	230	2.0 U	200	440	21,000	0.050	0.20	8,700	570	1.0 U	115	8.4	1,300	5.55	2.029	13.7	0.71	11.5	-27.8
Area 1		12/11/2006	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 U	15 U	0.008 J	0.038	11	-	-	6.6	1.0 U	5.0 U	6.38	0.076	2.23	10.7	12.1	91.3
Area 1		12/12/2006	1.1	140	2.0 U	28	910	2.0 U	73	1,000	32,000	0.18	0.17	30	-	-	14	110	6,400	4.93	6.436	109	0.67	7.4	-38.3
Area 1		3/28/2007	1.0 U	13	2.0 U	2.2	320	2.0 U	230	470	14,000 J	0.033	0.11	9,800	-	-	75	9.2	920	5.38	2.523	14.9	0.17	12.8	-62.3
Area 1		6/12/2007	1.4	11	2.0 U	2.0 U	650	17	200	360	10,000	0.025 U	0.14	21,000	-	-	39	8.4	840	5.77	2.268	39.5	0.38	12.0	-59.3
Area 1		9/12/2007	1.0 U	12	2.0 U	2.1	800	81	230	350	12,000	0.006 J	0.60	17,000	790	0.2 U	580	20	740	5.44	2.156	18.1	10.3	12.3	-122.8
Area 1		12/10/2007	1.8	3.8	2.0 U	2.0 U	720	94	290	390	29,000	0.005 J	1.4	14,000	-	-	25	7.0	1,000	5.67	2.802	5.30	6.03	12.3	-80.2
Area 1		3/10/2008	1.8	2.0 U	2.0 U	2.0 U	590	50	320	410	100,000	0.098	3.4	11,000	-	-	50 U	4.8	2,000	5.47	3.113	24.5	0.51	11.7	-55.9

Appendix D
Historical Groundwater Analytical Results
2022 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	PCE	trans-1,2-DCE	TCE	cis-1,2-DCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	TOC	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/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	5	70	5	70	2	10	3.129	1,460					10,000									
Area	Well ID	Date Sampled																							
Area 1		10/15/2008	5.0 U	5.0 U	5.0 U	5.0 U	**260**	**27**	**193**	**366**	**108,000**	1.2 U	10	12,000	860	0.13 U	59	0.03 U	454	5.60	2.376	15.0	0.75	11.0	-28.1
Area 1		5/7/2009	4.0 U	4.0 U	4.0 U	4.0 U	**220**	**12**	**188**	**396**	**56,700**	1.2 U	18	23,000	1,100 J	0.13 U	44	0.03 U	900	5.45	1.962	4.81	0.32	11.3	-46.7
Area 1		10/19/2009	10 U	10 U	10 U	20 U	**290**	**9.5 J**	**205**	**423**	**43,400**	1.3 U	14	18,000	920	0.13 U	300	0.03 U	290	5.99	1.832	11.9	2.56	-	-44.2
Area 1		4/21/2010	2.0 U	2.0 U	2.0 U	2.0 U	**120 J**	**9.3 J**	**189**	**566 J**	**39,600**	1.3 U	16	16,000	1,000	0.13 U	0.28 J	0.03 U	1,200	5.85	1.902	7.28	0.29	18.1	18.9
Area 1		10/6/2010	0.5 U	0.5 U	0.5 U	0.5 U	3.2	0.42 J	**118**	**580**	**36,100**	1.2 U	20	35,000	1,100	0.29	0.40 J	0.03 U	810	5.65	2.137	5.47	0.57	13.0	-21.1
Area 1		10/4/2011	13 U	13 U	13 U	13 U	**410**	**30**	**379**	**352**	**12,400**	1.2 U	63	47,000	3,300	0.13 U	0.51 J	0.035	190	6.32	1.140	13.0	0.09	16.7	-86.1
Area 1		10/11/2012	2.0 U	2.0 U	2.0 U	2.0 U	59	**34**	**270**	**295**	**10,200**	1.2 U	540	39,000	500	0.051 J	5.0 U	0.49	140	6.13	1.310	9.50	0.46	24.0	-68.9
Area 1		10/22/2013	1.3 U	1.3 U	1.3 U	1.3 J	44	**36**	**296**	**212**	**6,750**	1.2 U	200	44,000	300	0.13 U	5.0 U	0.19	57	6.24	0.609	9.19	0.41	18.0	-68.8
Area 1		10/30/2014	0.5 U	0.5 U	0.5 U	0.27 J	6.6	**6.3**	**254**	**251**	**6,090**	1.2 U	12	38,000	450	0.13 U	0.23 J	0.03 U	340	6.45	0.820	13.6	0.33	10.2	-61.7
Area 1		10/13/2015	1.0 U	1.0 U	1.0 U	1.0 U	6.0	**5.3**	**168**	**116**	**3,540**	10 U	10 U	17,600	156	0.062 J	10	2.0 U	33	5.85	0.679	23.1	0.39	13.1	-86.6
Area 1		11/10/2016	1.0 U	1.0 U	1.0 U	0.54 J	18	**6.4**	**180**	**260**	**3,900**	1.1 U	1.0 U	17,000	300	0.05 U	0.44 J	1.9	120	6.21	0.730	8.87	0.25	9.2	-57.0
Area 1		10/12/2017	1.0 U	1.0 U	1.0 U	1.0 U	3.5	**4.0**	**250**	**150**	**2,000**	1.1 U	13	16,000	140	0.15	1.0 U	1.0 U	21	6.29	1.130	13.9	1.29	11.2	-44.1
Area 1	G6M-04-09X	9/24/2004	1.0 U	**7,400**	2.0 U	4.2	9.0	2.0 U	5.0 U	1.0 U	160	-	-	-	-	-	-	-	-	5.15	0.495	0.82	3.84	9.5	637.6
Area 1		9/28/2005	5.0 U	**3,200**	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	1.0 U	37	-	-	-	-	-	-	-	-	5.92	0.169	2.07	3.41	10.2	678.4
Area 1		9/21/2006	1.0 U	**190**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 U	50	-	-	-	-	-	-	-	-	5.83	0.102	5.51	8.18	15.4	215.6
Area 1		9/12/2007	1.0 U	**440**	2.0 U	**22**	31	2.0 U	5.0 U	0.83	390	-	-	-	-	-	-	-	-	6.22	0.179	4.30	2.18	14.0	49.7
Area 1		10/17/2008	50 U	**4,000**	50 U	**330**	**410**	**44**	**63**	**13**	**5,700**	-	-	-	-	-	-	-	-	6.23	0.497	9.20	0.66	10.5	-36.2
Area 1		10/21/2009	50 U	**1,600**	50 U	**210**	**210**	**51**	**71**	**13**	**3,960**	-	-	-	-	-	-	-	-	5.80	0.376	4.53	0.58	12.4	33.3
Area 1		10/8/2010	0.89	**1,000**	0.79	**420**	**990**	**7.8**	**70**	**14**	**15,300**	-	-	-	-	-	-	-	-	6.17	0.388	1.58	0.99	11.9	-20.8
Area 1		6/9/2011	1.7	**260**	0.56	**140**	**950**	**200**	**203**	**43**	**9,820**	-	-	-	-	-	-	-	-	6.14	0.562	0.03	0.35	11.3	-49.3
Area 1		10/7/2011	20 U	20 U	20 U	**23**	**910**	**240**	**291**	**107**	**50,900**	-	-	-	-	-	-	-	45	6.45	0.626	2.00	0.14	10.1	-105.8
Area 1		5/9/2012	40 U	**970**	40 U	**250**	**510**	**340**	**344**	**77**	**17,800**	-	-	-	-	-	-	-	9.1 J	6.66	0.495	12.5	0.08	10.1	-85.2
Area 1		10/16/2012	20 U	**260**	20 U	**70**	**100**	**350**	**225**	**42**	**13,800**	-	-	-	-	-	-	-	3.0 J	6.24	0.289	10.3	0.31	10.8	-79.9
Area 1		5/22/2013	0.5 U	**5.9**	0.81	3.6	5.9	**9.9**	**321**	**135**	**30,800**	-	-	-	-	-	-	-	11	6.29	0.812	4.21	0.15	8.7	-84.7
Area 1		10/22/2013	0.5 U	0.5 U	0.53	0.5 U	52	**38**	**551**	**303**	**27,100**	-	-	-	-	-	-	-	34	6.64	0.917	18.5	3.30	10.0	-130.9
Area 1		6/12/2014	0.5 U	1.4	0.60	0.75	12	**26**	**607**	**315**	**19,200**	-	-	-	-	-	-	-	29	6.37	1.392	3.64	0.26	10.4	-82.0
Area 1		11/3/2014	0.5 U	0.21 J	0.21 J	0.5 U	0.43 J	0.83	**600**	**339**	**16,500**	-	-	-	-	-	-	-	31	6.59	1.030	21.8	0.05	10.5	-129.2
Area 1		6/17/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**351**	**159**	**3,560**	-	-	-	-	-	-	-	14	6.33	1.384	96.0	0.64	14.0	-65.0
Area 1		10/14/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**577**	**241**	**5,600**	-	-	-	-	-	-	-	16	6.61	1.604	15.3	0.13	10.8	134.9
Area 1		2/19/2016	1.0 U	1.0 U	1.0 U	1.0 U	0.55 J	1.0 U	**514**	**202**	**3,600**	10 U	10 U	16,700	439	0.37	4.5 J	2.0 U	13	6.74	1.280	12.4	1.09	9.9	-95.7
Area 1		6/15/2016	1.0 U	1.0 U	1.0 U	0.85 J	1.0	0.61 J	**550**	**200**	**3,100**	-	-	-	-	-	-	-	14	6.38	2.118	11.5	2.56	11.2	-87.6
Area 1		11/9/2016	1.0 U	1.0 U	1.0 U	1.0 U	0.67 J	0.56 J	**430**	**160**	**2,600**	-	-	-	-	-	-	-	-	7.32	1.277	21.7	0.52	8.5	-139.7
Area 1		5/18/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**430**	**180**	**3,200**	1.1 U	1.0 U	14,000	190	0.15	5.4	1.0 U	11	6.58	1.813	17.0	0.45	10.4	-116.7
Area 1		10/23/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.74 J	**370**	**110**	**2,400**	-	-	-	-	-	-	-	7.8	6.72	1.860	30.7	0.13	10.4	-106.4
Area 1		10/19/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**330**	**140**	**2,600**	-	-	-	-	-	-	-	-	6.42	1.315	16.8	0.81	10.3	14.3
Area 1		10/10/2019	1.0 U	2.8	1.4	**11**	23	**11**	**310**	**64**	**1,600**	-	-	-	-	-	-	-	-	6.48	0.443	43.6	0.28	10.0	-116.9
Area 1		10/20/2020	0.94 J	**110**	2.3	**110**	68	**34**	**200**	**44**	**2,100**	-	-	-	-	-	-	-	-	6.62	0.298	20.3	0.54	11.6	-122.0
Area 1		5/14/2021	1.0 U	2.0 U	2.2	2.5	3.2	**2.5**	**380**	**100**	**4,800**	5.8	52	38,000	140	0.071 J	3.7	0.81 U	9.5	6.48	0.936	426.7	1.12	10.5	-139.2
Area 1		10/18/2021	1.0 U	2.0 U	1.1	3.2	12	1.7	**460**	**94**	**3,100**	-	-	-	-	-	-	-	-	6.57	0.515	22.3	0.74	10.3	-138.0
Area 1		10/12/2022	1.0 U	1.0 U	0.98 J	0.5 U	0.94 J	1.0 U	**280**	**43**	**1,900**	3.3	3.0	15,000	98	0.029 J	5.0 U	1.9 U	7.1	6.79	0.329	35.1	0.48	16.0	-145.4
Area 1	G6M-04-11X	9/20/2004	1.0 U	**8.5**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.54	0.782	16.8	3.42	14.4	374.7
Area 1		9/26/2005	1.0 U	**7.8**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.96	0.390	8.70	5.14	10.6	94.6
Area 1		9/20/2006	1.0 U	4.0	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.24	0.380	5.99	6.00	14.4	129.0
Area 1		9/11/2007	1.0 U	2.1	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.87	0.380	14.8	6.59	11.8	46.5
Area 1		10/17/2008	0.5 U	1.4	0.5 U	0.5 U	0.5 U	0.5 U	-	-	-	-	-	-	-	-	-	-	-	6.53	0.302	3.50	5.62	9.5	98.1
Area 1		10/16/2009	1.0 U	1.1	1.0 U	**53**	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	6.46	0.225	4.20	7.04	9.8	176.0
Area 1		10/8/2010	0.5 U	0.41 J	0.5 U	0.5 U	0.5 U	0.5 U	-	-	-	-	-	-	-	-	-	-	-	6.71	0.247	3.15	6.95	9.6	152.6
Area 1		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		10/16/2012	0.5 U	0.62	0.5 U	0.5 U	0.5 U	0.5 U	-	-	-	-	-	-	-	-	-	-	-	6.36	0.224	< 0.01	9.40	10.1	161.8
Area 1		10/31/2014	0.5 U	0.54	0.5 U	0.5 U	0.5 U	0.5 U	-	-	-	-	-	-	-	-	-	-	-	6.88	0.163	0.91	7.12	10.4	167.7
Area 1		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		10/22/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.05 U	3.0 U	-	-	-	-	-	-	-	-	6.23	0.254	2.65	6.24	10.4	206.0
Area 1		10/16/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.05 U	1.6 J	-	-	-	-	-	-	-	-	6.62	0.144	1.57	7.29	16.6	135.0
Area 1		10/5/2022	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	3.0 U	0.05 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	**310**	2.0 U	**7.5**	56	2.0 U	5.0 U	1.0	44	-	-	-	-	-	-	-	-	11.03	2.003	5.22	0.86	9.6	102.6
Area 1		9/26/2005	1.0 U	**250**	2.0 U	**6.8**	49	2.0 U	**15**	1.0 U	360	-	-	-	-	-	-	-	-	8.41	1.961	1.65	1.05	-	234.2
Area 1		9/18/2006	1.0 U	**470**	2.0 U	**9.4**	60	2.0 U	6.5	0.1 U	550	-	-	-	-	-	-	-	-	7.21	1.764	7.11	3.22	12.7	253.5
Area 1		9/10/2007	1.0 U	**350**	2.0 U	**11**	50	2.0 U	2.0 U	0.1 U	580	-	-	-	-	-	-	-	-	6.84	2.613	29.8	1.73	12.2	90.2
Area 1		10/16/2008	10 U	**360**	10 U	**7.7 J**	35	10 U	3.1 J	0.2 U	360	-	-	-	-	-	-	-	-	7.23	2.623	2.00	1.45	12.4	91.2
Area 1		10/19/2009	10 U	**170**	10 U	22 U	28	10 U	2.3 J	0.2 U	308	-	-	-	-	-	-	-	-	6.72	2.543	5.91	1.80	11.5	66.7
Area 1		10/8/2010	0.5 U	**100**	0.5 U	4.4	22	0.5 U	5.0 U	0.1 U	336	-	-	-	-	-	-	-	-	6.57	3.632	2.35	1.75	10.6	208.0
Area 1		6/9/2011	0.5 U	**180**	0.5 U	3.9	19	0.5 U	5.0 U	0.1 U	209	-	-	-	-	-	-	-	-	7.26	2.816	9.00	1.38	10.2	25.6
Area 1		10/4/2011	4.0 U	**280**	4.0 U	4.6	27	4.0 U	5.0 U	0.1 U	200	-	-	-	-	-	-	-	-	6.62	2.332	2.44	1.06	13.4	63.8
Area 1		5/9/2012	5.0 U	**160**	5.0 U	5.0 U	12	5.0 U	4.1 J	0.1 U	155	-	-	-	-	-	-	-	-	6.70	2.680	1.42	1.34	12.3	85.1
Area 1		10/16/2012	5.0 U	**120**	5.0 U	5.0 U	14	5.0 U	5.0 U	0.1 U	156	-	-	-	-	-	-	-	-	6.60	3.799	2.03	2.11	13.0	62.5
Area 1		5/22/2013	5.0 U	**220**	5.0 U	3.4 J	18	5.0 U	3.8 J	0.1 U	93	-	-	-	-	-	-	-	-	6.55	2.927	2.58	0.87	12.5	120.8
Area 1		10/22/2013	4.0 U	**190**	4.0 U	3.7 J	23	4.0 U	5.0 U	0.1 U	106	-	-	-	-	-	-	-	-	6.58	2.231	4.88	1.60	12.3	133.7
Area 1		6/10/2014	0.5 U	**130**	0.5 U	2.7	13	0.5 U	5.0 U	0.1 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	**5.2**	2.0 U	2.0 U	5.3	2.0 U	5.0 U	**4.8**	**8,100**	-	-	-	-	-	-	-	-	5.26	2.640	0.23	0.82	11.3	410.0
Area 1		9/28/2005	1.0 U	**9.1**	2.0 U	2.0 U	6.4	2.0 U	**33**	1.8	**4,400**	-	-	-	-	-	-	-	-	5.11	0.674	0.29	0.39	11.8	248.1
Area 1		9/20/2006	1.0 U	3.5	2.0 U	2.0 U	5.2	2.0 U	**20**	2.0	**4,300**	-	-	-	-	-	-	-	-	4.60	1.555	0.95	1.07	11.1	-100.3

Appendix D
Historical Groundwater Analytical Results
2022 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	PCE	trans-1,2-DCE	TCE	cis-1,2-DCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	TOC	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/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	5	70	5	70	2	10	3.129	1,460					10,000									
Area	Well ID	Date Sampled																							
Area 1		9/11/2007	1.0 U	2.7	2.0 U	2.0 U	2.0 U	2.0 U	**18**	0.75	**2,100**	-	-	-	-	-	-	-	-	6.21	1.353	3.50	3.21	11.3	85.1
Area 1		10/17/2008	0.5 U	4.8	0.5 U	1.0	2.3	0.5 U	**36**	3.0	**3,010**	-	-	-	-	-	-	-	-	6.34	0.910	4.00	1.50	11.1	-8.1
Area 1		10/19/2009	0.5 U	1.9	0.5 U	**14**	3.2	0.5 U	**49**	**4.8**	**3,130**	-	-	-	-	-	-	-	-	6.19	0.799	4.68	0.31	11.1	24.4
Area 1		10/8/2010	0.5 U	0.65	0.5 U	0.34 J	3.2	0.5 U	**59**	**4.8**	**2,900**	-	-	-	-	-	-	-	-	6.14	0.704	1.34	0.30	10.9	3.2
Area 1		10/6/2011	0.5 U	0.52	0.5 U	0.5 U	3.7	0.5 U	**56**	**3.8**	**3,470**	-	-	-	-	-	-	-	-	6.12	0.446	4.89	0.05	19.3	37.3
Area 1		10/16/2012	0.5 U	1.0	0.5 U	0.5 U	3.9	0.5 U	**111**	**11**	**4,300**	-	-	-	-	-	-	-	-	6.15	0.760	1.08	0.49	14.3	-48.6
Area 1		10/18/2013	0.5 U	0.97	0.5 U	0.27 J	2.2	0.5 U	**112**	**15**	**3,530**	-	-	-	-	-	-	-	-	5.68	0.838	1.33	0.24	18.8	14.1
Area 1		11/4/2014	0.5 U	1.6	0.5 U	0.29 J	2.2	0.5 U	**135**	**33**	**14,000**	-	-	-	-	-	-	-	-	6.08	1.937	3.61	0.14	13.0	-16.0
Area 1		10/14/2015	1.0 U	0.76 J	1.0 U	1.0 U	1.0 U	1.0 U	**103**	**45**	**21,200**	-	-	-	-	-	-	-	-	5.93	4.011	1.24	0.69	13.6	-38.2
Area 1		11/10/2016	1.0 U	1.0 U	1.0 U	0.95 J	1.0 U	1.0 U	**55**	**16**	**14,000**	-	-	-	-	-	-	-	-	4.64	2.929	4.60	0.50	13.9	-21.4
Area 1		10/9/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**70**	**15**	**19,000**	-	-	-	-	-	-	-	-	6.13	4.280	8.90	0.59	14.5	0.6
Area 1		10/19/2018	1.0 U	1.5	1.0 U	0.60 J	1.0 U	1.0 U	**62**	**11**	**5,900**	-	-	-	-	-	-	-	-	6.21	3.171	7.49	0.12	12.0	116.0
Area 1		10/9/2019	1.0 U	2.2	1.0 U	1.1	0.64 J	1.0 U	**71**	**8.9**	**2,500**	-	-	-	-	-	-	-	-	6.45	2.500	5.50	0.19	11.0	-10.0
Area 1		10/20/2020	1.0 U	1.0 U	1.0 U	0.86 J	0.62 J	1.0 U	**75**	**5.2**	630	-	-	-	-	-	-	-	-	7.06	1.000	3.81	0.49	11.2	-121.0
Area 1		10/18/2021	1.0 U	0.87 J	1.0 U	0.88 J	1.6	1.0 U	**94**	**4.3**	670	-	-	-	-	-	-	-	-	6.56	0.940	2.97	0.75	11.9	-53.4
Area 1		10/12/2022	1.0 U	0.43 J	1.0 U	0.70 J	1.2 J	1.0 U	**95**	**7.2**	1,000	-	-	-	-	-	-	-	-	6.39	1.247	2.21	0.60	11.8	-50.7
Area 1	G6M-04-22X	9/21/2004	1.0 U	**900**	2.0 U	**24**	**110**	2.0 U	5.0 U	1.0 U	990	-	-	-	-	-	-	-	-	6.30	0.897	19.0	4.78	13.2	192.2
Area 1		9/28/2005	1.0 U	**210**	2.5	**6.8**	45	2.0 U	5.0 U	1.0 U	120	-	-	-	-	-	-	-	-	5.52	0.757	21.0	6.13	14.1	391.3
Area 1		9/20/2006	1.0 U	**200**	2.0 U	**8.7**	54	2.0 U	5.0 U	0.43	**4,500**	-	-	-	-	-	-	-	-	5.68	1.048	6.98	2.80	15.4	197.8
Area 1		9/11/2007	1.0 U	**95**	2.0 U	**12**	**75**	**9.4**	**390**	**250**	**44,000**	-	-	-	-	-	-	-	-	6.92	2.250	20.7	0.28	13.4	-160.8
Area 1		10/17/2008	1.0 U	**18**	0.44 J	3.7	53	**26**	**439**	**421**	**15,900**	-	-	-	-	-	-	-	-	6.34	2.104	18.0	0.28	12.9	-106.1
Area 1		10/19/2009	0.5 U	**7.2**	0.5 U	**9.7**	16	**4.9**	**320**	**355**	**9,360**	-	-	-	-	-	-	-	-	6.26	2.181	290	1.27	14.3	-48.7
Area 1		10/8/2010	0.5 U	0.39 J	0.23 J	2.2	7.1	**4.7**	**522**	**210**	**3,020**	-	-	-	-	-	-	-	-	6.32	1.691	22.2	2.51	14.8	-59.7
Area 1		10/6/2011	0.5 U	0.5 U	0.5 U	0.5 U	13	**7.5**	**534**	**232**	**15,800**	-	-	-	-	-	-	-	-	6.25	0.016	6.47	0.39	12.2	-53.4
Area 1		10/12/2012	0.5 U	0.5 U	0.5 U	0.5 U	5.7	**6.6**	**657**	**162**	**9,080**	-	-	-	-	-	-	-	-	6.41	1.701	8.66	0.60	12.4	-66.8
Area 1		10/18/2013	-	-	-	-	-	-	**767**	-	-	-	-	-	-	-	-	-	-	6.12	1.113	14.3	0.29	12.8	-68.7
Area 1		11/4/2014	0.5 U	0.5 U	0.72	0.5 U	2.0	**4.6**	**667**	**150**	**1,600**	-	-	-	-	-	-	-	-	6.39	0.951	42.9	0.20	13.3	-64.0
Area 1		10/13/2015	-	-	-	-	-	-	**223**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Area 1		11/9/2016	1.0 U	2.5	1.0 U	1.4	1.2	1.0 U	**650**	**150**	960	-	-	-	-	-	-	-	-	6.92	0.740	55.5	1.22	7.0	-73.1
Area 1		10/18/2017	--	--	--	--	--	--	**970**	-	-	-	-	-	-	-	-	-	-	6.32	1.270	120	0.48	11.7	-66.9
Area 1		10/22/2018	1.0 U	1.0 U	1.0 U	1.0 U	2.8 J	**3.4 J**	**820**	**140**	760	-	-	-	-	-	-	-	-	6.18	1.371	35.9	0.24	12.0	49.6
Area 1		10/20/2020	1.0 U	1.0 U	1.0 U	1.0 U	2.0	1.8	**780**	**120**	890	-	-	-	-	-	-	-	-	6.25	0.717	< 0.01	0.49	11.0	-81.1
Area 1		10/10/2022	1.0 U	1.0 U	1.0 U	0.5 U	1.4 J	1.0 U	**720**	**110**	920	-	-	-	-	-	-	-	-	6.15	0.947	11.9	0.64	11.4	-60.9
Area 1	G6M-04-31X	9/21/2004	1.0 U	**1,600**	2.0 U	2.0 U	4.2	2.0 U	5.0 U	1.0 U	190	-	-	-	-	-	-	-	-	5.69	1.000	2.99	5.10	13.3	211.0
Area 1		9/28/2005	5.0 U	**1,900**	5.0 U	5.0 U	5.2	5.0 U	5.0 U	1.0 U	35	-	-	-	-	-	-	-	-	5.63	0.388	2.20	3.66	9.3	305.4
Area 1		9/20/2006	1.0 U	**600**	2.0 U	**6.1**	2.5	2.0 U	5.0 U	0.1 U	15 U	-	-	-	-	-	-	-	-	6.52	0.729	3.56	0.28	9.2	-108.5
Area 1		9/11/2007	1.3	**340**	2.8	**260**	**330**	2.0 U	5.0 U	0.10	890	-	-	-	-	-	-	-	-	6.38	0.217	6.90	5.61	10.9	101.6
Area 1		10/17/2008	20 U	**110**	20 U	**72**	**340**	**730**	**103**	**68**	**9,710**	-	-	-	-	-	-	-	-	6.43	0.636	9.00	2.00	9.4	-72.7
Area 1		10/21/2009	10 U	**86**	10 U	**11**	**270**	**560**	**311**	**181**	**16,900**	-	-	-	-	-	-	-	-	5.82	0.626	6.23	1.96	10.3	-102.0
Area 1		10/8/2010	0.5 U	3.1	0.30 J	1.1	7.4	**31**	**428**	**127**	**9,620**	-	-	-	-	-	-	-	-	6.41	0.728	1.21	0.93	9.5	-107.6
Area 1		10/6/2011	0.5 U	**18**	0.5 U	**5.3**	38	**37**	**635**	**223**	**15,800**	-	-	-	-	-	-	-	-	6.62	1.333	2.89	0.07	11.2	-112.4
Area 1		10/12/2012	2.0 U	**25**	2.0 U	**31**	61	**72**	**556**	**181**	**8,940**	-	-	-	-	-	-	-	-	6.62	1.193	4.58	0.43	11.4	-104.6
Area 1		10/18/2013	-	-	-	-	-	-	**498**	-	-	-	-	-	-	-	-	-	-	6.36	1.656	1.13	1.71	10.8	-87.6
Area 1		11/4/2014	0.5 U	0.5 U	0.23 J	0.51	6.9	**3.4**	**468**	**121**	**9,690**	-	-	-	-	-	-	-	-	6.51	1.775	9.01	0.12	11.6	-95.5
Area 1		10/13/2015	-	-	-	-	-	-	**420**	-	-	-	-	-	-	-	-	-	-	5.93	3.980	9.80	0.84	9.0	-144.3
Area 1		11/10/2016	1.0 U	1.0 U	1.0 U	0.95 J	1.0 U	1.0 U	**430**	-	-	-	-	-	-	-	-	-	-	6.15	2.490	2.95	0.89	14.1	-95.8
Area 1		10/9/2017	--	--	--	--	--	--	**410**	-	-	-	-	-	-	-	-	-	-	6.52	2.830	8.70	0.58	14.3	-83.5
Area 1		10/22/2018	1.0 U	1.0 U	1.0 U	0.58 J	1.0 U	1.0 U	**370**	**60**	**6,800**	-	-	-	-	-	-	-	-	6.59	2.999	4.49	0.20	10.6	111.5
Area 1		10/20/2020	1.0 U	1.5 U	1.0 U	1.0 U	1.0 U	0.98 J	**360 J**	**30**	**2,100**	-	-	-	-	-	-	-	-	6.71	1.580	0.93	0.51	13.2	-124.0
Area 1		10/10/2022	1.0 U	1.0 U	1.0 U	0.23 J	1.0 U	1.0 U	**330**	**77**	**5,200**	-	-	-	-	-	-	-	-	6.52	1.605	2.01	0.60	11.8	-119.1
Area 1	G6M-13-05X	1/30/2014	10 U	**250**	10 U	10U	16	10 U	-	-	-	-	-	-	-	-	-	-	-	8.63	1.112	3.09	0.37	11.4	-86.6
Area 1		6/10/2014	0.54	**1,200**	0.40 J	**12**	70	0.5 U	**11**	0.299 J	556	-	-	-	-	-	-	-	-	7.65	0.515	8.19	0.46	11.3	-107.0
Area 1		11/4/2014	32 U	**1,700**	32 U	**13 J**	**77**	32 U	6.6	0.23	565	-	-	-	-	-	-	-	-	7.43	0.417	9.73	0.47	18.3	-93.6
Area 1		6/16/2015	0.5 U	**1,520**	0.5 U	**12**	62	0.5 U	5.2	0.05 U	229	-	-	-	-	-	-	-	-	7.04	0.398	33.2	1.63	12.7	57.0
Area 1		10/13/2015	1.0 U	**1,120**	1.0 U	**11**	63	1.0 U	2.3 J	0.1 U	235	-	-	-	-	-	-	-	-	7.22	0.525	2.14	0.99	11.2	59.5
Area 1		2/10/2016	10 U	**770**	10 U	**5.2 J**	24	10 U	4.0 U	0.1 U	199	10 U	10 U	10 U	25	1.4	10 U	2.0 U	1.0 U	6.20	0.523	20.2	4.39	9.7	244.6
Area 1		6/15/2016	10 U	**1,200**	10 U	**9.6**	50	10 U	3.0	0.022 J	130	-	-	-	-	-	-	-	-	6.41	0.582	2.59	0.89	12.3	55.2
Area 1		11/10/2016	10 U	**830**	10 U	**7.2 J**	31	10 U	3.0 U	0.05 U	54	-	-	-	-	-	-	-	-	6.57	0.404	2.47	2.63	9.2	20.9
Area 1		5/18/2017	20 U	**1,300**	20 U	20 U	64 J	20 U	3.0 U	0.28	350	1.1 U	1.0 U	0.58 U	32 J	1.5	1.0 U	1.0 U	1.0 U	11.40	0.550	7.65	3.97	12.7	25.1
Area 1		10/5/2017	10 U	**280**	10 U	**69**	**750**	10 U	**35**	**12**	**1,700**	1.1 U	1.0 U	32	49	0.04 J	1.0 U	1.0 U	28	5.95	0.630	27.4	0.51	12.8	19.7
Area 1		4/5/2018	10 U	**59**	10 U	**81**	**410**	**5.6 J**	**85**	**32**	**3,900**	0.75 J	1.1	6,800	77	0.10	0.95 J	1.0 U	85	6.31	0.641	5.92	0.89	10.3	-20.9
Area 1		10/16/2018	5.0 U	5.0 U	5.0 U	2.7 J	**250**	**57**	**95**	**66**	**15,000**	4.1	39	16,000	170	0.05 U	5.0 U	1.0 U	210	4.99	0.973	4.83	0.45	11.2	87.2
Area 1		4/5/2019	1.0 U	1.0 U	1.2	0.62 J	**120**	**39**	**120**	**83**	**20,000**	8.7	65	25,000	-	0.23	1.0 U	1.0 U	150	6.00	1.100	1.80	0.74	8.6	-13.0
Area 1		10/10/2019	1.0 U	1.5 J	0.93 J	1.8	33	**38**	**130**	**94**	**19,000**	3.3	33	12,000	140	0.05 U	1.0 U	0.83 U	37	7.80	0.950	7.00	0.14	12.0	-65.6
Area 1		5/12/2020	1.0 U	1.0 U	0.88 J	1.3 J	8.4	**10**	**120**	**100**	**16,000**	27	57	19,000	160	0.10 U	5.0 U	0.81 U	27	6.30	1.010	7.30	0.60	12.7	-54.2
Area 1		10/13/2020	1.0 U	1.0 U	0.48 J	1.0 U	1.3	1.7	**150**	**110**	**15,000**	21	11	4,000	130	0.12 U	1.0 U	0.81 U	12	6.82	0.689	4.82	0.61	11.1	-104.0
Area 1		5/11/2021	1.0 U	**50**	1.0	**18**	42	**29**	**120**	**53**	**6,400**	45	77	17,000	71	0.028 J	0.59 J	0.81 U	4.4	6.51	0.567	154.92	0.97	14.2	-75.5
Area 1		10/14/2021	1.0 U	**9.2**	0.64 J	2.8	23	**13**	**130**	**92**	**10,000**	30	35	17,000	91	0.043 J	1.0 U	0.81 U	11	6.74	1.800	21.4	0.74	12.5	-117.0
Area 1		5/2/2022	1.0 U	**8.0**	0.54 J	2.4	16	**9.4**	**150**	**78**	**8,300**	55	23	21,000 J	65	0.049 J	1.0 U	1.5 U	6.9	6.64	0.728	4.89	0.73	12.0	-143.0
Area 1		10/3/2022	1.0 U	**24**	0.57 J	**12**	12	**12**	**110**	**68**	**7,100**	47	12	16,000	250	0.025 U	1.0 U	1.7 U	3.9	6.93	0.580	27.81	1.09	13.5	-109.9
Area 1	G6M-13-06X	1/30/2014	8.0 U	3.9 J	8.0U	8.0 U	**300**	**95**	-	-	-	-	-	-	-	-	-	-	-	6.61	2.521	35.9	0.33	10.8	-38.3

		Analytical Method	VOCs						Dissolved Metals			Dissolved Gases			General Chemistry					Field Parameters					
		Analyte	1,1-DCE	PCE	trans-1,2-DCE	TCE	cis-1,2-DCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	TOC	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/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	5	70	5	70	2	10	3.129	1,460					10,000									
Area	Well ID	Date Sampled																							
Area 1		6/12/2014	0.37 J	0.5 U	0.68	0.44 J	**180**	**330**	**444**	**365**	**16,900**	1.3 U	33 J	18,000 J	710 J	0.13 U	0.68 J	0.03 U	160	6.42	1.710	13.7	0.24	19.0	-88.9
Area 1		10/30/2014	0.5 U	0.5 U	0.70	0.5 U	14	**15**	**558**	**274**	**12,500**	1.2 U	63	79,000	580	0.13 U	0.42 J	0.03 U	42	6.31	1.943	20.1	0.24	18.3	-99.0
Area 1		6/16/2015	0.5 U	0.5 U	0.98 J	0.5 U	3.9	**6.0**	**546**	**246**	**16,900**	10 U	27	10,300	510	0.15	1.0 J	1.0 U	55	6.25	1.989	31.9	0.11	11.3	-40.1
Area 1		9/9/2015	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	**4.0 J**	**511**	**269**	**22,500**	5.0 U	37	18,200	-	0.11	10 U	6.5	82	6.02	1.745	4.09	0.16	12.2	-53.6
Area 1		10/14/2015	5.0 U	5.0 U	5.0 U	5.0 U	3.2 J	5.0 U	**531**	**260**	**21,300**	10 U	30	11,300	434	0.071 J	1.7	1.5	62	5.71	0.904	1.46	1.19	19.3	100.7
Area 1		2/9/2016	1.0 U	1.0 U	0.80 J	1.0 U	2.0	**4.6**	**536**	**226**	**12,000**	10 U	32	14,500	409	0.17	10 U	2.0 U	46	6.35	1.204	3.69	1.07	7.1	-23.7
Area 1		6/14/2016	1.0 U	1.0 U	0.59 J	1.0 U	1.9	**4.2**	**490**	**280**	**18,000**	1.1 U	41	13,000	640	0.05 U	0.8 U	1.0 U	150	6.40	2.223	2.27	0.57	10.7	-48.4
Area 1		11/8/2016	1.0 U	1.0 U	0.55 J	1.0 U	9.8	**7.7**	**470**	**250**	**9,600**	1.1 U	23	11,000	560	0.05 U	1.0 U	5.8	55	6.42	1.230	4.72	1.47	8.2	-127.3
Area 1		5/19/2017	1.0 U	1.0 U	0.45 J	1.0 U	2.2	**2.6**	**500**	**250**	**7,000**	14	16	17,000	470	0.14 J	3.0	1.0 U	70 J	5.96	1.450	7.43	1.01	10.9	-64.8
Area 1		10/5/2017	1.0 U	1.0 U	1.0 U	1.0 U	2.3 J	1.1	**490**	**220**	**7,500**	6.0	6.3	6,000	440	0.17 J	1.0 U	1.0 U	72	6.20	1.460	15.2	0.31	11.0	-88.6
Area 1		10/19/2018	1.0 U	1.0 U	1.0 U	1.0 U	0.67 J	1.2	**400**	**220**	**5,300**	12	18	17,000	480	0.18	2.0 U	1.0 U	120	6.25	2.131	13.2	1.50	10.5	-61.9
Area 1		10/10/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0	0.82 J	**500**	**220**	**2,900**	11	14	11,000	420	0.29 J	1.0 U	1.2	110	7.00	1.500	18.0	0.11	11.0	-35.0
Area 1		10/13/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**430**	**220**	**2,500**	10	3.0	11,000	540	0.22 U	1.0 U	0.81 U	120	6.26	1.080	41.5	0.39	11.2	-63.2
Area 1		10/12/2021	1.0 U	2.0 U	1.0 U	1.0 U	1.5	0.59 J	**440**	**220**	**2,300**	8.4	4.7	12,000	310	0.064 J	1.0 U	0.81 U	150	6.28	2.080	23.8	0.76	11.8	-69.2
Area 1		10/3/2022	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	**360**	**160**	1,100	11	3.4	16,000	78	0.025 U	1.0 U	1.7 U	69	6.38	0.781	8.94	1.04	11.5	-57.1
Area 1	G6M-93-13X	10/15/2001	1.0 U	0.55 J	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.30	6.000	1.20	9.90	14.9	355.0
Area 1		9/20/2004	1.0 U	3.8	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1.0	15 U	0.008	0.014	0.89	23	1.3 J	10	2.7 J	1.0 U	6.14	0.059	4.31	13.1	12.4	250.7
Area 1		12/13/2004	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1.0 U	15 U	0.005 U	0.005 U	3.8	20	1.2	9.6	2.0 U	5.0 U	6.16	0.080	1.42	10.4	14.8	192.5
Area 1		3/29/2005	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1.0 U	15 U	0.006	0.28	3.1	22	0.2 U	9.1	2.0 U	0.6 J	6.24	0.090	0.64	10.4	15.9	97.3
Area 1		6/28/2005	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	10 U	0.023	0.020	9.4	41	0.081	8.2	1.0 U	4.9	11.30	0.275	2.46	11.4	13.3	146.1
Area 1		9/26/2005	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1.0 U	15 U	0.006 J	0.018 J	4.9	27	0.083	9.5	1.0 U	3.1	6.04	0.126	18.2	7.98	15.2	191.8
Area 1		12/13/2005	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1.0 U	15 U	0.008 J	0.011 J	9.3	41	3.4	9.4	1.0 U	4.4 J	6.48	0.086	0.50	9.55	13.7	69.6
Area 1		3/21/2006	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 U	19	0.025 U	0.046	9.5	24	0.2 U	6.8	1.0 U	6.8	6.87	0.058	0.61	9.55	13.0	-9.4
Area 1		6/19/2006	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 U	28	0.008 J	0.008 J	5.3	46	0.2 U	4.4	1.0 U	1.4 J	6.33	0.087	1.34	9.14	11.5	190.1
Area 1		9/18/2006	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 U	15 U	0.006 J	0.014 J	5.0	22	0.2 U	7.8	1.0 U	4.6 J	6.22	0.062	4.62	9.33	10.4	173.6
Area 1		3/28/2007	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 U	15 U	0.005 J	0.014 J	9.6	-	-	5.7	1.0 U	5.0 U	6.14	0.071	8.73	9.80	12.6	-3.1
Area 1		6/11/2007	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 U	15 U	0.034	0.30	13	-	-	9.0	1.0 U	0.4 J	6.64	0.121	3.30	10.1	14.0	125.4
Area 1		9/11/2007	1.0 U	3.0	2.0 U	2.0 U	2.0 U	2.0 U	6.0 U	0.1 U	15 U	0.005 J	0.025 U	2.8	99	0.2 U	12	1.0 U	0.70 J	6.31	0.095	7.10	9.67	12.4	96.7
Area 1		12/10/2007	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 U	15 U	0.004 J	0.007 J	1.1	-	-	6.9	1.0 U	5.0 U	6.25	0.156	0.60	8.81	11.8	71.0
Area 1		3/10/2008	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.20	**12,000**	0.008 J	0.050	10	-	-	100	1.0 U	34	6.30	0.953	< 0.01	3.84	16.0	141.0
Area 1		10/15/2008	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	8.0 U	0.2 U	**3,270**	1.3 U	1.6 U	5.6	110	3.6	34	0.03 U	10 U	6.31	0.304	< 0.01	2.97	15.2	116.4
Area 1		5/7/2009	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.5 J	0.2 U	50 U	1.2 U	1.5 U	2.2	67 J	0.71	16	0.03 U	10 U	6.26	0.164	1.10	6.10	-	79.6
Area 1		10/19/2009	0.5 U	0.5 U	0.5 U	**15**	0.5 U	0.5 U	8.0 U	0.142 U	50 U	1.3 U	1.6 U	6.3	54	0.058 J	9.2	0.03 U	10 U	6.42	0.110	1.01	4.79	15.7	182.0
Area 1		4/21/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.115 U	25 U	1.2 U	1.5 U	440	140	0.13 U	10	0.03 U	6.5 J	6.19	0.109	< 0.01	9.03	15.2	37.3
Area 1		10/6/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.1 U	25 U	1.2 U	1.5 U	16	63	0.05 J	11	0.03 U	10 U	6.12	0.116	3.42	4.77	17.3	114.0
Area 1		9/9/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	0.1 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		2/9/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	0.1 U	12 J	10 U	10 U	10 U	86	0.11 U	73	2.0 U	2.2	6.21	0.350	10.7	1.64	9.0	232.3
Area 1		6/14/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.045 J	130	-	-	-	-	-	-	-	-	6.35	0.306	14.0	1.01	13.4	63.1
Area 1		11/8/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.15	230	-	-	-	-	-	-	-	-	6.47	0.192	11.4	0.91	9.5	-29.7
Area 1	G6M-95-19X	10/15/2001	1.0 U	**110**	1.5 J	**6.6**	42	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.46	2.870	8.50	6.24	9.8	202.0
Area 1		9/20/2004	1.0 U	**41**	2.0 U	2.9	16	2.0 U	5.0 U	1.0	210	-	-	-	-	-	-	-	-	5.45	4.170	3.10	7.92	14.1	467.5
Area 1		9/26/2005	1.0 U	**21**	2.0 U	2.0 U	5.4	2.0 U	8.3	1.0 U	160	-	-	-	-	-	-	-	-	4.00	4.361	0.72	4.51	14.5	595.3
Area 1		9/19/2006	1.0 U	**12**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 U	160	-	-	-	-	-	-	-	-	3.82	4.236	2.41	6.77	11.8	281.0
Area 1		9/12/2007	1.0 U	**21**	2.0 U	2.0 U	4.0	2.0 U	5.0 U	0.1 U	200	-	-	-	-	-	-	-	-	5.28	6.566	0.40	7.62	12.5	175.1
Area 1		10/15/2008	0.5 U	**14 J**	0.5 U	0.39 J	1.6 J	0.5 U	8.0 U	0.2 U	212	-	-	-	-	-	-	-	-	5.35	5.306	0.90	6.63	12.2	267.9
Area 1		10/16/2009	20 U	20 U	20 U	**540**	20 U	20 U	8.0 U	0.2 U	153	-	-	-	-	-	-	-	-	5.22	4.529	1.49	4.53	11.5	232.0
Area 1		1/15/2010	0.75 U	**6.9**	0.75 U	0.5 U	0.46 J	1.0 U	-	-	-	-	-	-	-	-	-	-	-	5.46	4.733	2.17	4.09	10.5	243.8
Area 1		10/7/2010	0.5 U	1.8	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.1 U	186	-	-	-	-	-	-	-	-	5.34	4.211	3.88	3.35	9.8	159.4
Area 1		10/7/2011	0.5 U	2.2	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.1 U	242	-	-	-	-	-	-	-	-	5.51	2.319	1.10	2.90	12.7	132.2
Area 1		10/15/2012	0.5 U	3.3	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.1 U	1,450	-	-	-	-	-	-	-	-	5.53	7.618	0.19	2.80	9.9	225.1
Area 1		10/18/2013	0.5 U	2.4	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.1 U	**2,250**	-	-	-	-	-	-	-	-	5.49	3.827	5.42	1.44	10.3	154.9
Area 1		11/3/2014	0.5 U	3.0	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.085 U	1,190	-	-	-	-	-	-	-	-	5.73	2.189	2.78	3.06	10.0	202.5
Area 1		10/14/2015	1.0 U	1.9	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	0.1 U	739	-	-	-	-	-	-	-	-	5.85	4.126	1.43	1.10	10.9	170.4
Area 1		11/8/2016	1.0 U	1.6	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.05 U	760	-	-	-	-	-	-	-	-	2.68	2.952	3.39	1.70	12.5	67.5
Area 1		10/5/2017	1.0 U	1.9	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.05 U	1,400	-	-	-	-	-	-	-	-	5.60	3.530	3.41	1.22	13.0	171.7
Area 1		10/17/2018	1.0 U	1.6	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	5.43	4.601	1.99	2.08	11.7	246.1
Area 1		10/9/2019	1.0 U	1.9	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	5.58	4.800	0.77	2.75	12.0	103.0
Area 1		10/16/2020	1.0 U	1.4	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	5.54	3.020	3.38	1.88	14.6	170.0
Area 1		10/14/2021	1.0 U	0.92 J	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	5.44	5.980	2.38	4.46	11.3	242.0
Area 1		10/4/2022	1.0 U	1.4 J	1.0 U	0.5 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	5.69	2.727	0.35	3.61	12.8	224.1
Area 1	G6M-95-20X	10/16/2001	1.0 U	4.4	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.90	0.270	4.10	7.20	11.2	212.0
Area 1		2/25/2002	1.0 U	5.0	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.59	0.171	7.67	12.4	11.5	155.7
Area 1		2/27/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	4.7	-	-	-	-	-	-	-	10.4	-
Area 1		9/21/2004	1.0 U	2.8	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1.0 U	15 U	-	-	-	-	-	-	-	-	5.76	0.544	< 0.01	8.88	11.3	205.5
Area 1		9/26/2005	1.0 U	2.3	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1.0 U	15 U	-	-	-	-	-	-	-	-	5.62	0.741	0.95	8.75	11.4	328.7
Area 1		9/19/2006	1.0 U	2.2	2.0 U	2.0 U	42	2.0 U	**71**	**350**	**39,000**	-	-	-	-	-	-	-	-	6.31	2.715	4.19	0.76	12.2	-108.0
Area 1		9/12/2007	1.0 U	2.0 U	2.0 U	2.0 U	11	2.0 U	**160**	**110**	**15,000**	-	-	-	-	-	-	-	-	6.49	0.740	73.7	3.19	12.6	-114.3
Area 1		10/15/2008	0.5 U	0.38 J	0.5 U	0.20 J	2.5	0.5 U	**97**	**46**	**5,250**	-	-	-	-	-	-	-	-	6.45	0.511	4.20	0.49	9.5	-104.4
Area 1		10/16/2009	0.5 U	0.5 U	0.5 U	**37 J**	3.1	0.5 U	**166**	**206**	**7,660**	-	-	-	-	-	-	-	-	6.61	0.898	8.81	0.29	13.4	-81.4
Area 1		10/6/2010	0.5 U	0.5 U	0.5 U	0.5 U	5.1	1.8	**149**	**546**	**12,200**	-	-	-	-	-	-	-	-	6.49	2.047	36.6	0.11	14.2	-124.3
Area 1		10/7/2011	0.5 U	0.5 U	0.5 U	0.5 U	1.5	0.5 U	**108**	**58**	**3,610**	-	-	-	-	-	-	-	-	6.59	0.234	4.00	0.10	14.3	-112.9

Appendix D
Historical Groundwater Analytical Results
2022 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	PCE	trans-1,2-DCE	TCE	cis-1,2-DCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	TOC	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/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	5	70	5	70	2	10	3.129	1,460					10,000									
Area	Well ID	Date Sampled																							
Area 1		10/15/2012	0.5 U	0.5 U	0.5 U	0.5 U	1.0	0.5 U	**112**	**68**	**3,140**	-	-	-	-	-	-	-	-	6.58	0.526	4.83	0.60	12.7	-98.2
Area 1		10/18/2013	0.5 U	0.5 U	0.5 U	0.29 J	0.59	0.5 U	**80**	**30**	**1,760**	-	-	-	-	-	-	-	-	6.56	0.410	3.37	0.18	12.6	-79.5
Area 1		10/31/2014	0.5 U	2.7	0.5 U	0.53	0.5 U	0.5 U	7.9	**20**	1,160	-	-	-	-	-	-	-	-	6.59	0.688	4.03	0.16	10.9	-105.1
Area 1		10/13/2015	1.0 U	1.2	1.0 U	1.0 U	1.0 U	1.0 U	**32**	**110**	614	-	-	-	-	-	-	-	-	6.61	0.722	2.86	0.55	12.2	-55.0
Area 1		11/8/2016	1.0 U	0.82 J	1.0 U	1.0	1.0 U	1.0 U	**26**	**14**	940	-	-	-	-	-	-	-	-	4.99	0.799	7.04	0.54	13.6	-5.6
Area 1		10/5/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**18**	**6.3**	410	-	-	-	-	-	-	-	-	5.80	0.603	11.0	0.35	14.5	27.8
Area 1		10/17/2018	1.0 U	1.1	1.0 U	0.64 J	1.0 U	1.0 U	**18**	**3.5**	170	-	-	-	-	-	-	-	-	5.84	0.426	24.9	0.13	12.2	154.3
Area 1		10/10/2019	1.0 U	1.0 U	1.0 U	0.55 J	1.5	1.0 U	**73**	**39**	**1,500**	-	-	-	-	-	-	-	-	6.92	0.310	9.70	0.15	12.0	-39.8
Area 1		10/14/2020	1.0 U	1.0 U	1.0 U	1.0 U	0.41 J	1.0 U	**87**	**54**	**2,200**	-	-	-	-	-	-	-	-	6.49	0.255	3.45	0.50	11.8	-52.1
Area 1		10/14/2021	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**37**	**6.5**	440	-	-	-	-	-	-	-	-	6.04	0.887	44.80	1.11	11.5	22.9
Area 1		10/4/2022	1.0 U	0.49 J	1.0 U	0.20 J	1.0 U	1.0 U	**32**	3.0	220	-	-	-	-	-	-	-	-	6.38	0.133	3.18	1.35	13.6	56.7
Area 1	G6M-96-13B	10/15/2001	1.0 U	**3,600**	12	**39**	**220**	1.1 J	-	-	-	-	-	-	-	-	-	-	-	6.10	0.120	6.80	2.90	12.6	219.0
Area 1		2/25/2002	1.0 U	**5,200**	1.4 J	**34**	**200**	1.5 J	-	-	-	-	-	-	-	-	-	-	-	6.40	1.142	6.59	3.85	13.6	181.5
Area 1		1/31/2003	1.0 U	**3,800**	2.0 U	**31**	**190**	2.0 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.1	-
Area 1		9/20/2004	1.0 U	**4,500**	2.0 U	**35**	**210**	**2.1**	5.0 U	1.0	15 U	0.022	0.12	1.7	38	5.4 J	19	2.0	1.0 U	6.30	1.035	0.50	3.57	11.4	186.4
Area 1		12/13/2004	1.0 U	**2,500**	2.0 U	**24**	**150**	2.0 U	5.0 U	1.0 U	23	0.050	0.025	24	35	5.0	31 J	2.0 U	5.0 U	6.26	0.787	2.68	2.57	12.5	316.5
Area 1		3/28/2005	200 U	**4,500**	200 U	200 U	**180 J**	200 U	5.0 U	2.6	**1,600**	0.17	0.22	37	47	0.46	17	2.0 U	5.7	6.24	0.943	0.68	0.87	10.1	21.2
Area 1		8/10/2005	4.8	**2,800**	3.6	**190**	**1,500**	**6.8**	**32**	**24 J**	**8,100**	0.15	0.44	2.9	99	0.23	4.6	5.3	140	4.35	0.838	3.50	0.16	-	-35.6
Area 1		9/26/2005	5.0 U	**3,700**	5.0 U	**140**	**570**	5.0 U	**44**	**51 J**	**12,000**	0.054	0.33	18	134	0.28	11	11	200	4.98	1.071	4.54	1.32	13.5	-45.9
Area 1		12/13/2005	5.0 U	**3,400**	10 U	**130**	**350**	10 U	**46**	**63 J**	**12,100**	0.069	0.35	31	150	0.05 U	11	4.5	140	5.51	0.851	0.90	0.13	16.4	-52.1
Area 1		3/20/2006	1.2	**2,100**	2.0 U	**250**	**400**	**2.5**	**38**	**96**	**17,000**	0.036	0.42	97	300	0.21	6.8	2.4	360	5.68	0.759	7.10	0.17	15.1	-161.5
Area 1		6/20/2006	1.0 U	**1,900**	2.0 U	**280**	**370**	**3.5**	**48 J**	**100**	**16,000**	0.044	0.27	200	310	0.2 U	4.2	4.8	110	5.46	1.252	2.63	0.62	13.3	-86.8
Area 1		9/18/2006	1.3	**880**	2.0 U	**370**	**530**	**9.4**	**150**	**110**	**20,000**	0.022 J	0.43	2,400	370	0.26	4.6	3.0	300	6.14	1.555	2.19	0.48	12.5	-120.9
Area 1		3/27/2007	2.1	**940**	2.6	**290**	**590**	**26**	**250**	**230**	**35,000 J**	0.025 U	0.96	22,000	-	-	4.3	1.6	140	5.71	1.861	1.79	0.10	12.5	-16.8
Area 1		6/11/2007	1.7	**1,200**	2.0 U	**280**	**610**	**55**	**200**	**200**	15 U	0.025 U	0.68	22,000	-	-	8.2	2.2	260	6.24	1.870	1,322	0.15	12.0	-97.5
Area 1		9/10/2007	1.6	**2,600**	2.0 U	**130 J**	**590**	**38**	**240**	**210**	**25,000**	0.036	6.3	32,000	410	0.2 U	580	2.8	270	6.25	1.866	15.5	0.40	13.0	-136.3
Area 1		12/11/2007	1.5	**750**	2.0 U	**99**	**830**	**110**	**260**	**230**	**25,000**	0.005 J	3.6	26,000	-	-	429	2.4	240	6.11	1.907	8.00	1.92	12.0	-25.7
Area 1		3/10/2008	1.7	**1,200**	2.0 U	**140**	**1,000**	**140**	**240**	**240**	**26,000**	0.025 U	8.3	29,000	-	-	5.0 U	2.0	210	6.18	1.958	6.40	1.55	11.3	-90.2
Area 1		10/15/2008	10 U	**7.3 J**	10 U	**6.5 J**	**490**	**350**	**172**	**290**	**39,500**	1.2 U	5.7	9,700	470	0.13 U	21	0.03 U	92	6.19	2.046	11.0	0.90	13.0	-59.2
Area 1		5/7/2009	10 U	**190**	10 U	**75**	**310**	**95**	**169**	**323**	**38,600**	1.2 U	13	46,000	740 J	0.13 U	32	0.03 U	74	6.09	1.909	4.00	0.10	10.5	-97.6
Area 1		10/19/2009	10 U	**440**	10 U	**140**	**290**	**89**	**173**	**325**	**36,000**	1.2 U	9.2	52,000	630	0.022 U	53	0.041	54	6.32	2.054	13.6	1.53	-	-93.1
Area 1		4/21/2010	2.0 U	**93**	2.0 U	**29**	**100**	**57**	**217**	**400 J**	**39,100**	1.3 U	15	37,000	610	0.13 U	0.71 J	0.041	130	6.21	2.496	11.0	0.13	-	18.2
Area 1		10/6/2010	0.70	**360**	1.5	**150**	**150**	**65**	**222**	**366**	**37,500**	1.2 U	18	96,000	95	0.045 J	1.1 J	0.03 U	57	6.19	2.547	12.9	0.22	12.3	-103.4
Area 1		6/9/2011	1.4	**740**	1.9	**90**	**270**	**86**	**242**	**304**	**25,100**	3.7	44	110,000	300	0.023 J	0.49J	0.03 U	75	6.22	2.126	13.1	0.09	11.5	-112.0
Area 1		10/4/2011	8.0 U	**160**	8.0U	**24**	**79**	**43**	**284**	**335**	**25,300**	1.2 U	1.5 U	98,000	620	0.13 U	0.35 J	0.03 U	73	6.36	1.733	20.0	0.02	10.8	-77.8
Area 1		5/9/2012	5.0 U	**130**	5.0 U	**47**	**150**	**38**	**298**	**231**	**16,600**	44	100	29,000	500	0.13 U	0.58 J	0.13	51	6.47	1.680	12.1	1.70	16.9	-89.7
Area 1		10/11/2012	5.0 U	**130**	5.0 U	**48**	**130**	**76**	**282**	**209**	**17,100**	81	190	62,000	480	0.13 U	5.0 U	0.14	38	6.26	2.335	7.09	0.44	10.9	-66.4
Area 1		5/22/2013	5.0 U	**170**	2.7 J	**55**	**230**	**100**	**395**	**241**	**18,600**	1.1 U	86	23,000	540 J	0.13 U	5.0 U	0.12 J	29	6.23	2.270	13.0	0.15	9.7	-84.3
Area 1		10/17/2013	4.0 U	**78**	4.0 U	**38**	**200**	**170**	**365**	**234**	**17,600**	2.4	36	18,000	560	0.13 U	5.0 U	0.058	37	6.46	1.728	17.3	0.15	10.9	-113.1
Area 1	G6M-96-25B	10/15/2001	1.0 U	**360**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.81	0.498	3.90	5.30	12.0	142.0
Area 1		2/25/2002	1.0 U	**130**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.70	0.150	9.75	11.5	13.7	158.5
Area 1		2/27/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	7.2	-	-	-	-	-	-	-	13.8	-
Area 1		1/31/2003	1.0 U	**52**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17.0	-
Area 1		9/20/2004	1.0 U	**56**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	4.98	0.589	< 0.01	7.63	13.7	593.0
Area 1		9/26/2005	1.0 U	**40**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.82	0.587	1.10	6.74	17.0	314.1
Area 1		9/19/2006	1.0 U	**44**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.20	0.496	1.46	7.64	12.2	223.5
Area 1		9/11/2007	1.0 U	**16**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.91	0.802	9.50	6.29	16.3	96.6
Area 1		10/17/2008	0.5 U	1.7	0.5 U	0.5 U	0.5 U	0.5 U	-	-	-	-	-	-	-	-	-	-	-	6.80	0.151	4.00	8.41	14.5	89.7
Area 1		10/16/2009	0.5 U	1.9	0.5 U	**38 J**	0.5 U	0.5 U	-	-	-	-	-	-	-	-	-	-	-	6.27	0.404	4.70	8.08	10.5	183.5
Area 1		10/8/2010	0.5 U	3.1	0.5 U	0.5 U	0.5 U	0.5 U	-	-	-	-	-	-	-	-	-	-	-	5.80	0.622	1.59	6.70	16.3	190.2
Area 1		10/6/2011	0.5 U	0.58	0.5 U	0.5 U	0.5 U	0.5 U	-	-	-	-	-	-	-	-	-	-	-	6.85	0.131	4.50	8.11	16.8	69.8
Area 1		10/16/2012	0.5 U	2.0	0.5 U	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	4.2 U	4.0 U	4.0 U	**81**	**4.1**	-	-	-	-	-	-	-	-	-	-	-	6.04	0.635	24.5	0.70	19.6	-99.6
Area 1/FDSA		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	**2,900**	2.0 U	2.5	3.4	2.0 U	5.0 U	1.0	170	0.021	0.030	1.1	41	4.5 J	22	2.0	1.0 U	5.91	0.552	1.70	3.75	10.8	206.5
Area 1/FDSA		12/14/2004	1.0 U	**2,400**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1.0 U	120	0.015	0.096	1,500	25	1.7	13	2.0 U	5.0 U	5.89	0.965	2.04	2.81	9.6	215.4
Area 1/FDSA		3/30/2005	40 U	**640**	40 U	40 U	40 U	40 U	8.4	1.2	**8,100**	0.33	0.070	1.4	107	0.33	16	2.0 U	52	5.90	1.010	1.76	4.22	11.0	68.3
Area 1/FDSA		8/11/2005	2.0 U	**380**	2.0 U	**45**	**390**	2.0 U	**77**	**87 J**	**50,000 J**	0.24	0.23	3.4	359	0.05 U	7.8	1.0 U	240	5.65	0.977	14.9	1.84	10.1	11.9
Area 1/FDSA		9/27/2005	1.0 U	**340**	1.0 U	**88**	**260**	1.0 U	**190**	**230 J**	**76,000**	0.080	0.15	110	442	0.084	3.0 J	5.9	330	6.33	1.135	4.30	1.89	10.8	-1.9
Area 1/FDSA		12/14/2005	1.0 U	**1,500**	2.0 U	**180**	**220**	2.0 U	**179**	**250 J**	**32,500**	0.048	0.13	6,800	480	0.05 U	3.7	7.4	370	6.41	0.985	1.90	1.57	10.2	-64.8
Area 1/FDSA		3/21/2006	1.0 U	**4,400**	2.0 U	**180**	**450**	**8.3**	**180**	**220**	**8,100**	0.025 U	0.69	20,000	390	0.2 U	4.1	2.0	180	6.72	0.676	7.51	0.27	9.8	-121.4
Area 1/FDSA		6/20/2006	1.0 U	**6,100**	2.0 U	**650**	**330**	**27**	**160**	**220**	**5,700**	0.025 U	0.12	16,000	340	0.2 U	4.3	3.2	120	6.34	0.893	9.82	0.22	11.0	-99.8
Area 1/FDSA		9/19/2006	1.0 U	**1,000**	2.0 U	**15**	59	**14**	**170**	**97**	**5,000**	0.23	0.11	11,000	150	0.31	5.2	1.2	61	6.56	0.430	6.00	1.14	14.6	-86.9
Area 1/FDSA		3/28/2007	1.6 J	**1,200 J**	2.0 U	**230 J**	**680 J**	**60 J**	**380**	**260**	**27,000 J**	0.65	0.26	20,000	-	-	2.1	1.0 U	130	6.10	1.188	15.4	0.19	11.2	-89.9
Area 1/FDSA		6/12/2007	2.1	**760**	2.0 U	**140**	**900**	**130**	**310**	**260**	**15,000**	0.54	1.1	23,000	-	-	1.0 U	2.4	190	6.58	1.295	129	0.19	15.8	-145.2
Area 1/FDSA		9/11/2007	1.0 U	**2,700**	2.0 U	**99 J**	**400**	**91**	**240**	**290**	**13,000**	0.35	0.47	18,000	440	0.2 U	54	2.4	220	6.42	0.864	42.3	1.72	14.0	-138.2
Area 1/FDSA		12/11/2007	1.0 U	**830**	2.0 U	**8.8**	**280**	**90**	**330**	**280**	**12,000**	0.30	0.52	31,000	-	-	3.6	3.0	270	6.40	1.366	8.00	1.20	10.1	-70.1
Area 1/FDSA		3/10/2008	1.8	**200**	3.4	**830**	**670**	**37**	**340**	**230**	**35,000**	0.34	0.61	25,000	-	-	10	2.2	210	6.53	1.362	24.0	0.94	9.8	-123.8
Area 1/FDSA		10/6/2008	100 U	**4,000**	100 U	**450**	**990**	**1,400**	**247**	**187**	**9,100**	1.3 U	11	16,000	210	0.13 U	12	0.03 U	34	6.38	0.948	15.0	0.21	15.3	-168.0
Area 1/FDSA		1/21/2009	0.67 J	**1,500**	1.0 U	**390**	**1,400**	**1,200**	**250**	**234 J**	7.8	1.2 U	9.6	53,000	20 U	0.13 U	20	0.03 U	46 J	6.60	0.937	7.02	0.20	14.3	-112.6
Area 1/FDSA		5/7/2009	10 U	**380**	10 U	**41**	**390 J**	**420**	**292**	**194**	**17,200**	1.2 U	11	34,000	590 J	0.13 U	24	0.03 U	49	6.40	1.165	4.20	0.80	11.3	-125.0

Appendix D
Historical Groundwater Analytical Results
2022 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	PCE	trans-1,2-DCE	TCE	cis-1,2-DCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	TOC	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/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	5	70	5	70	2	10	3.129	1,460					10,000									
Area	Well ID	Date Sampled																							
Area 1/FDSA		10/20/2009	50 U	**2,700**	50 U	**290**	**2,100**	**1,400**	**220**	**127**	**8,960**	1.3 U	15	11,000	350	0.13 U	8.7	0.03 U	21	6.42	0.805	11.4	0.17	12.6	-121.4
Area 1/FDSA		4/21/2010	4.0 U	**170**	4.0 U	**21**	**170**	**130**	**286**	**297 J**	**18,200 J**	1.3 U	15	21,000 J	670	0.017 J	0.65 J	0.03 U	120	6.58	0.880	7.00	0.70	14.7	-139.5
Area 1/FDSA		10/6/2010	20 U	**25**	20 U	**10 J**	**600**	**190**	**296**	**119**	**4,280**	1.2 U	14	51,000	260	0.13 U	0.98 J	0.03 U	26	6.32	0.694	6.24	0.17	13.6	-85.2
Area 1/FDSA		6/9/2011	0.5 U	**110**	0.5 U	**36**	**300**	**170**	**295**	**198**	**9,140**	1.2 U	5.7	92,000	660	0.13 U	1.2 J	0.03 U	63	6.40	1.243	5.10	0.39	10.5	-105.1
Area 1/FDSA		10/4/2011	40 U	**850**	40 U	**170**	**1,100**	**270**	**322**	**304**	**17,600**	1.2 U	74	36,000	750	0.13 U	1.1 J	0.22	160	6.07	0.629	8.18	0.21	8.3	-94.0
Area 1/FDSA		5/10/2012	20 U	**180**	20 U	**120**	**610**	**200**	**367**	**183**	**6,700**	1.1 U	250	46,000	340	0.13 U	0.70 J	0.10	16	6.49	0.710	9.05	0.48	11.0	-107.7
Area 1/FDSA		10/15/2012	2.0 U	2.0 U	2.0 U	2.0 U	26	**110**	**291**	**185**	**8,250**	1.2 U	44	14,000	340	0.092 J	5.0 U	0.13 J	64	6.43	0.920	5.50	0.60	10.4	-103.7
Area 1/FDSA		5/23/2013	0.5 U	0.5 U	0.53	0.5 U	13	**15**	**342**	**400**	**7,110**	1.2 U	1.5 U	18,000	650	0.11 J	0.84 J	0.10 J	200	6.37	1.311	11.0	1.30	10.6	-84.4
Area 1/FDSA		10/17/2013	10 U	**360 J**	10 U	**92 J**	**130 J**	**14 J**	**292**	**341**	**5,000**	1.2 U	9.4	24,000 J	650	0.13 U	1.1 J	0.034 J	150	6.37	1.756	9.78	0.29	10.5	-95.5
Area 1/FDSA		6/12/2014	0.5 U	0.5 U	0.5 U	0.23 J	1.4	**5.1**	**264**	**164**	**3,730**	2.2 J	1.6 U	9,500 J	200 J	0.13 U	17	0.03 U	29	6.36	1.761	10.9	0.59	10.9	-82.7
Area 1/FDSA		11/3/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.92	**4.4**	**288**	**184**	**2,100**	1.2 U	3.6 J	21,000	240	0.13 U	16 J	0.03 U	34	6.62	1.742	17.0	0.15	11.2	-136.9
Area 1/FDSA		6/19/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.50 J	**5.0**	**274**	**145**	**1,940**	5.0 U	5.0 U	7,510	278	0.11 U	22	1.0 U	18	6.62	2.201	8.06	0.51	10.5	-94.6
Area 1/FDSA		10/13/2015	1.0 U	1.0 U	1.0 U	1.0 U	0.72 J	1.6	**292**	**205**	**2,360**	10 U	10 U	15,000	241	0.099 J	8.6 J	2.0 U	27	6.53	2.367	17.0	0.08	11.3	-119.6
Area 1/FDSA		6/14/2016	1.0 U	1.0 U	1.0 U	0.64 J	1.1	**4.0**	**220**	**82**	**1,700**	1.1 U	1.0 U	13,000	190	0.05 U	7.3	1.0 U	10	5.94	1.878	7.73	0.23	11.9	-66.6
Area 1/FDSA		11/9/2016	1.0 U	1.0 U	1.0 U	0.49 J	0.96 J	1.4	**220**	**92**	**3,200**	1.1 U	1.0 U	7,100	86	0.05 U	17	1.5	5.5	6.50	1.440	5.27	0.37	8.5	-96.9
Area 1/FDSA		5/18/2017	1.0 U	1.0 U	1.0 U	0.52 J	1.4	0.85 J	**170**	**74**	**4,800**	1.1 U	1.0 U	5,500	38	0.12	15	1.0 U	5.7	6.59	1.780	19.2	0.33	10.9	-98.6
Area 1/FDSA		10/12/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.2	0.81 J	**290**	**100**	**4,600**	1.1 U	3.6	9,200	78	0.12	8.4	1.2	8.4	6.62	1.870	16.0	0.97	10.0	-94.7
Area 1/FDSA		4/4/2018	1.0 U	1.0 U	1.0 U	1.0 U	0.89 J	0.60 J	**250**	**98**	**2,600**	1.1 U	3.6	25,000	190	0.17	11	1.0 U	19	6.61	1.279	9.76	1.04	9.6	-90.7
Area 1/FDSA		10/16/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.9	1.2	**230**	**140**	**6,100**	0.99 J	1.0 U	32,000	210	0.05 U	6.5 J	1.0 U	240	5.51	1.243	346	0.72	10.7	-47.2
Area 1/FDSA		4/4/2019	1.0 U	1.0 U	1.0 U	**12**	29	**9.3**	**240**	**140**	**4,400**	3.8	46	19,000 J	-	0.26	4.3	1.0 U	95	5.80	0.800	11.0	1.70	9.5	-29.0
Area 1/FDSA		10/16/2019	1.0 U	**11**	1.2	**34**	**150**	**45**	**210**	**89**	**2,300**	4.0	160	33,000	170	0.05 U	5.6	0.96 U	65	6.37	0.700	21.0	1.12	10.0	-75.7
Area 1/FDSA		05/12/2020	1.0 U	1.0 U	0.93 J	1.0 U	11	**2.9**	**270**	**130**	**3,700**	0.90 J	18	14,000	300	0.10 U	3.8 J	0.83 U	44	6.26	0.628	30.8	0.25	9.9	29.8
Area 1/FDSA		10/14/2020	1.0 U	**35**	0.65 J	**49**	**120**	**26**	**230**	**96**	**3,000**	1.2	25	10,000	210	0.087 J	6.2	0.81 U	22	6.52	0.530	9.96	0.37	15.4	-91.2
Area 1/FDSA		6/17/2021	1.0 U	0.5 U	0.62 J	0.5 U	4.7	1.5 J	**310**	**85**	1,200 J	5.0 U	5.0 U	17,000	220 J	0.025 U	13 J	0.80 U	17	6.22	0.739	7.84	2.80	11.6	-68.8
Area 1/FDSA		10/13/2021	1.0 U	2.0 U	1.0 U	1.0 U	3.6	1.7	**320 J**	**85**	1,100	6.9	9.3	27,000	140	0.05 U	2.8	0.81 U	22	6.52	0.596	76.20	0.54	11.4	-121.0
Area 1/FDSA		5/2/2022	1.0 UJ	1.0 UJ	1.0 J	0.24 J	2.3 J	1.0 UJ	**290 J**	**80**	900	10	24	19,000 J	130	0.05 UJ	1.0 U	1.3 UJ	14	6.55	0.381	4.13	0.79	10.0	-115.0
Area 1/FDSA		10/4/2022	1.0 U	1.0 U	0.35 J	0.39 J	0.74 J	1.0 U	**270 J**	**80**	770 J	16	8.4	20,000 J	180	0.025 U	1.2 J	1.7 U	13	6.58	0.325	7.65	1.33	10.8	-86.3
Area 1/FDSA	G6M-04-10X	9/20/2004	1.0 U	**70**	2.0 U	**7.5**	32	2.0 U	5.0 U	1.0	260	0.019	0.039	1.0	11	6.7 J	21	3.4	1.0 U	5.59	0.902	0.95	6.87	10.2	246.2
Area 1/FDSA		12/14/2004	1.0 U	**65**	2.0 U	**7.8**	35	2.0 U	5.0 U	1.0 U	200	0.022	0.053	2.2	10 U	6.6	23	2.0 U	5.0 U	5.40	0.816	5.50	7.57	16.2	424.2
Area 1/FDSA		3/31/2005	2.0 U	**56**	2.0 U	**6.8**	30	2.0 U	5.0 U	1.0 U	190	0.022	0.86	1.1	10 U	1.5	25	2.0 U	0.4 J	5.18	1.337	0.41	7.65	13.1	256.7
Area 1/FDSA		7/1/2005	1.0 U	**50**	2.0 U	**5.4**	23	2.0 U	4.2	1.0 U	10 U	0.035	0.050	12	44	1.7	12	1.0 U	5.9	5.33	1.502	0.90	6.09	17.5	265.2
Area 1/FDSA		9/27/2005	1.0 U	**48**	2.0 U	4.7	23	2.0 U	5.0 U	1.0 U	170	0.010 J	0.018 J	16	7.7	1.4	26	1.0 U	4.0	5.26	1.123	0.50	6.68	14.7	450.9
Area 1/FDSA		12/14/2005	1.0 U	**67**	2.0 U	**6.3**	27	2.0 U	5.0 U	1.0 U	164	0.016 J	0.034	11	9.8	1.5	28	1.0 U	5.0 U	5.49	1.032	3.40	6.78	10.8	205.1
Area 1/FDSA		3/22/2006	1.0 U	**76**	2.0 U	**9.1 J**	32	2.0 U	5.0 U	1.0 U	200	0.015 J	0.025 J	25	10 U	1.4	24	1.0 U	5.6	5.57	0.940	1.45	6.74	10.6	195.7
Area 1/FDSA		6/20/2006	1.0 U	**87**	2.0 U	**10**	47	2.0 U	5.0 U	0.1 U	240	0.013 J	0.012 J	18	10 U	1.7	25	1.0 U	5.0 U	5.08	1.512	1.90	6.23	10.9	248.8
Area 1/FDSA		9/19/2006	1.0 U	**65**	2.0 U	**6.8**	32	2.0 U	5.0 U	0.1 U	240	0.026	0.025 J	13	8.0	1.3	22	1.0 U	2.2 J	5.21	1.660	4.68	6.94	12.2	273.9
Area 1/FDSA		12/13/2006	1.0 U	**64**	2.0 U	**7.2**	35	2.0 U	5.0 U	0.1 U	280	0.008 J	0.011 J	28	-	-	27	1.0 U	5.0 U	5.38	2.160	0.59	7.90	11.3	39.3
Area 1/FDSA		3/28/2007	1.0 U	**56**	2.0 U	**5.9**	26	2.0 U	5.0 U	0.21	290 J	0.017 J	0.054	21	-	-	28	1.0 U	5.0 U	5.21	1.947	3.71	6.37	10.6	77.9
Area 1/FDSA		6/12/2007	1.0 U	**28**	2.0 U	2.4	9.9	2.0 U	5.0 U	0.1 U	250	0.010 J	0.065	18	-	-	31	1.0 U	5.0 U	5.35	3.150	14.0	6.31	15.9	230.7
Area 1/FDSA		9/11/2007	1.0 U	**35**	2.0 U	3.4	13	2.0 U	6.0 U	0.1 U	270	0.008 J	0.010 J	13	10 U	1.4	2,000	1.0 U	5.0 U	5.29	2.617	10.5	8.98	14.3	-40.6
Area 1/FDSA		12/11/2007	1.0 U	**20**	2.0 U	2.0 U	6.4	2.0 U	5.0 U	0.1 U	230	0.010 J	0.028	5.3	-	-	35	1.0 U	5.0 U	5.46	3.660	2.80	5.62	14.5	27.7
Area 1/FDSA		3/11/2008	1.0 U	**22**	2.0 U	2.1	9.7	2.0 U	5.0 U	0.16	250	0.004 J	0.010 J	4.1	-	-	28	1.0 U	5.0 U	4.99	2.890	< 0.01	6.42	13.6	213.5
Area 1/FDSA		10/15/2008	0.5 U	**18**	0.5 U	1.6	8.4	0.5 U	8.0 U	0.2 U	265	1.2 U	1.5 U	6.1	30	1.4	27	0.03 U	10 U	5.28	3.339	1.40	6.58	11.8	247.1
Area 1/FDSA		5/7/2009	0.5 U	**15**	0.5 U	1.2	5.0	0.5 U	8.0 U	0.2 U	213	1.3 U	1.6 U	0.76	20 U	1.2	33	0.03 U	10 U	5.20	2.229	1.53	5.86	11.2	196.8
Area 1/FDSA		10/20/2009	0.5 U	**9.8**	0.5 U	4.8	5.2	0.27 J	8.0 U	0.139 U	197	1.3 U	1.6 U	19	20 U	1.1	29	0.03 U	10 U	5.20	2.651	2.68	5.72	11.6	226.2
Area 1/FDSA		4/21/2010	0.5 U	**24**	0.5 U	1.5	6.5	0.5 U	5.0 U	0.1 U	200	1.3 U	1.6 U	87	25	1.4	31	0.03 U	10 U	5.26	2.760	4.00	5.13	14.4	187.2
Area 1/FDSA		10/6/2010	0.5 U	**24**	0.5 U	1.8	7.9	0.5 U	5.0 U	0.1 U	208	1.2 U	1.5 U	3.7	25	1.8	28	0.03 U	10 U	5.18	2.937	< 0.01	5.63	12.4	225.7
Area 1/FDSA		10/4/2011	0.5 U	**9.0**	0.5 U	0.5 U	1.9	0.5 U	5.0 U	0.1 U	173	1.2 U	1.5 U	47	20 U	1.3	28	0.03 U	4.5 J	5.01	1.078	1.16	4.46	11.3	192.8
Area 1/FDSA		10/15/2012	0.5 U	**15**	0.5 U	0.72	1.9	0.5 U	5.0 U	0.1 U	224	1.2 U	1.5 U	32	20 U	1.2	35	0.03 U	10 U	5.53	3.135	0.33	5.25	12.9	204.0
Area 1/FDSA		10/17/2013	0.5 U	**6.2**	0.5 U	0.28 J	0.50 J	0.5 U	3.3 J	1.3	262	1.2 U	1.5 U	5,500	20 U	0.95	37	0.03 U	2.7 J	5.32	4.698	2.89	3.90	13.0	164.1
Area 1/FDSA		11/3/2014	0.5 U	**7.4**	0.5 U	0.27 J	0.47 J	0.5 U	2.5 U	1.3	308	1.2 U	1.5 U	200	20 U	1.3 J	30 J	0.03 U	5.0 U	5.27	2.562	0.97	5.28	12.6	148.4
Area 1/FDSA		9/9/2015	0.5 U	2.8	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	0.11	383	5.0 U	5.0 U	5.0 U	-	0.92	35	1.0 U	0.81 U	5.38	2.257	4.98	3.32	13.1	169.9
Area 1/FDSA		10/13/2015	1.0 U	3.1	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	0.1 U	344	10 U	10 U	10 U	7.2	1.1	35	2.0 U	1.0 U	5.31	3.174	28.5	2.86	12.3	202.1
Area 1/FDSA		2/9/2016	1.0 U	2.3	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	0.053 J	274	10 U	10 U	6.9 J	7.1	0.91	35	2.0 U	1.0 U	5.49	1.922	19.3	2.49	8.6	196.7
Area 1/FDSA		6/14/2016	1.0 U	3.0	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.073	330	5.3	5.1 J	27	9.4	1.0	35	1.0 U	0.63 J	5.72	3.364	0.96	1.77	11.6	102.1
Area 1/FDSA		11/9/2016	1.0 U	2.1	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.036 J	420	1.1 U	1.0 U	170	10	0.58	32	2.2	0.72 J	5.70	1.546	4.27	0.76	9.2	67.9
Area 1/FDSA		5/18/2017	1.0 U	1.2	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.020 J	1,100	1.1 U	1.0 U	180	12	0.42	32	1.0 U	1.0 U	5.51	1.523	11.3	0.63	10.9	162.1
Area 1/FDSA		10/12/2017	1.0 U	1.2	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.075 U	1,200	1.1 U	1.0 U	760	13	0.46	34	1.0 U	1.0 U	5.56	2.020	4.17	1.11	10.3	195.3
Area 1/FDSA		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		10/9/2019	1.0 U	1.3	1.0 U	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		10/14/2020	1.0 U	1.1	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	5.28	1.910	3.33	0.44	13.2	118.0
Area 1/FDSA		10/13/2021	1.0 U	1.7 J	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	5.26	2.260	1.40	0.89	12.0	122.0
Area 1/FDSA		10/4/2022	1.0 U	0.36 J	1.0 U	0.5 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	6.24	1.264	1.28	0.72	11.8	31.9
Area 1/FDSA	G6M-04-13X	9/21/2004	1.0 U	**8.0**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1.0 U	350	-	-	-	-	-	-	-	-	5.96	0.138	1.75	8.00	16.0	551.8
Area 1/FDSA		9/26/2005	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1.0 U	15 U	-	-	-	-	-	-	-	-	6.43	0.042	3.80	10.5	17.2	180.0
Area 1/FDSA		9/18/2006	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 U	15 U	-	-	-	-	-	-	-	-	5.65	0.076	12.1	8.63	13.3	213.9
Area 1/FDSA		9/12/2007	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 U	15 U	-	-	-	-	-	-	-	-	6.07	0.140	14.1	8.70	13.4	147.4
Area 1/FDSA		10/17/2008	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	8.0 U	0.2 U	50 U	-	-	-	-	-	-	-	-	5.22	0.046	45.0	9.98	10.6	124.4
Area 1/FDSA		10/20/2009	25 U	25 U	25 U	**16 J**	25 U	25 U	2.0 J	0.132 U	50 U	-	-	-	-	-	-	-	-	5.78	0.049	12.2	10.6	11.1	283.7
Area 1/FDSA		10/7/2010	0.5 U	0.29 J	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.1 U	25 U	-	-	-	-	-	-	-	-	5.83	0.048	2.87	8.84	10.3	147.3
Area 1/FDSA		10/4/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.1 U	14 J	-	-	-	-	-	-	-	-	5.54	0.024	13.5	9.15	11.4	208.7

Appendix D
Historical Groundwater Analytical Results
2022 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	PCE	trans-1,2-DCE	TCE	cis-1,2-DCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	TOC	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/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	5	70	5	70	2	10	3.129	1,460					10,000									
Area	Well ID	Date Sampled																							
Area 1/FDSA		10/16/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.1 U	5.1 J	-	-	-	-	-	-	-	-	6.28	0.047	17.2	9.95	11.1	108.1
Area 1/FDSA		10/22/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.1 U	25 U	-	-	-	-	-	-	-	-	5.92	0.021	45.6	10.7	10.3	120.9
Area 1/FDSA		11/3/2014	0.5 U	0.36 J	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.024 J	7.5 U	-	-	-	-	-	-	-	-	6.23	0.029	35.2	6.38	15.2	147.6
Area 1/FDSA		10/14/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	0.1 U	15 U	-	-	-	-	-	-	-	-	6.85	0.045	1.07	8.83	14.7	114.7
Area 1/FDSA		11/10/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.05 U	3.0 U	-	-	-	-	-	-	-	-	6.13	0.027	2.69	8.22	6.8	-8.8
Area 1/FDSA		5/16/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.05 U	3.6 J	12	10	21	9.5	0.62	4.8	1.0 U	1.0 U	6.47	0.034	2.36	9.01	9.7	210.7
Area 1/FDSA		10/6/2017	1.0 U	1.3	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.05 U	3.0 U	1.1 U	1.0 U	0.33 J	8.7 U	0.84	4.6	1.0 U	0.45 J	5.86	0.056	2.60	3.64	10.4	223.4
Area 1/FDSA		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		10/9/2019	1.0 U	1.0 U	1.0 U	1.0 U	2.4	1.0 U	-	-	-	-	-	-	-	-	-	-	-	7.41	0.100	3.10	1.6	10.0	14.3
Area 1/FDSA		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		10/13/2021	1.0 U	2.0 U	1.0 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		10/4/2022	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	7.16	0.074	2.33	0.75	11.8	-107.2
Area 1/FDSA	G6M-07-02X	12/12/2007	1.0 U	**50**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 U	64	0.024 J	0.022 J	0.73	-	-	16	1.0 U	5.0 U	5.90	0.148	5.40	7.54	9.8	194.2
Area 1/FDSA		3/11/2008	1.0 U	**1,800**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 U	35	0.014 J	0.019 J	7.1	-	-	26	1.0 U	5.0 U	5.70	0.108	< 0.01	7.50	11.0	165.5
Area 1/FDSA		10/15/2008	5.0 U	**170**	5.0 U	5.0 U	5.0 U	5.0 U	5.5 J	0.2 U	21 J	1.2 U	10	12,000	20 U	0.13 U	11	0.03 U	10 U	5.34	0.067	19.0	9.25	10.7	93.2
Area 1/FDSA		5/11/2009	0.5 U	**46**	0.5 U	0.5 U	0.5 U	0.5 U	7.1	0.2 U	5.8 J	1.2 U	1.5 U	7.0	20 U	0.062	8.6 J	0.03 U	5.7 J	6.17	0.055	4.00	9.40	11.3	115.7
Area 1/FDSA		10/20/2009	0.5 U	**30 J**	0.5 U	0.5 U	0.5 U	0.5 U	6.6	0.2 U	50 U	1.3 U	1.6 U	6.2 J	20 U	0.13 U	7.2	0.03 U	10 U	6.00	0.053	9.35	9.34	14.5	128.9
Area 1/FDSA		4/21/2010	2.0 U	**63**	2.0 U	2.0 U	2.0 U	2.0 U	6.2	0.176 U	25 U	1.2 U	1.5 U	3,200	30	0.0098 J	6.8	0.03 U	10 U	6.10	0.034	12.0	0.33	16.3	139.3
Area 1/FDSA		10/6/2010	0.5 U	**26 J**	0.5 U	0.5 U	0.5 U	0.5 U	3.4 J	0.1 U	25 U	1.2 U	1.5 U	28	32	0.21	5.6	0.03 U	10 U	5.31	0.053	5.48	6.13	13.0	170.0
Area 1/FDSA		10/4/2011	0.5 U	**700**	0.5 U	0.5 U	0.5 U	0.5 U	4.6 J	0.1 U	80	1.2 U	1.5 U	46,000	31	0.13 U	4.4 J	0.03 U	10 U	5.17	0.045	8.20	0.09	10.9	176.5
Area 1/FDSA		10/11/2012	5.0 U	**90**	5.0 U	**190**	6.4	5.0 U	5.0 U	0.29	40	1.2 U	1.5 U	46,000 J	20 U	0.056 J	6.4	0.03 U	10 U	6.28	0.068	11.3	1.60	19.8	76.1
Area 1/FDSA		10/17/2013	20 U	**1,000**	20 U	**8.7 J**	20 U	20 U	5.0 U	0.1 U	32	1.2 U	1.5 U	520 J	21	0.13 U	4.5 J	0.03 U	10 U	6.03	0.060	1.17	4.25	20.2	143.0
Area 1/FDSA		11/3/2014	50 U	**14,000**	50 U	**40 J**	31 J	50 U	2.2 J	0.421 J	43	1.2 U	1.5 U	6,200	22	0.13 U	4.2 J	0.03 U	5.0 U	5.85	0.040	12.1	0.23	9.2	70.2
Area 1/FDSA		12/11/2014	50 U	**6,200**	50 U	**57**	50 U	50 U	-	-	-	-	-	-	-	-	-	-	-	5.39	0.098	0.85	0.51	7.4	218.1
Area 1/FDSA		10/13/2015	1.0 U	**482**	3.1 J	**13**	1.0 U	1.0 U	4.0 U	0.30	33	10 U	10 U	3,200 J	10	0.11 U	10	2.0 U	1.0 U	5.86	0.055	5.95	0.27	15.6	59.3
Area 1/FDSA		6/14/2016	20 U	**1,400**	20 U	**10 J**	20 U	20 U	3.0 U	0.11	37	1.1 U	1.0 U	970	12	0.05 U	6.6	1.0 U	1.2	5.56	0.060	0.92	1.86	10.3	94.3
Area 1/FDSA		11/9/2016	20 U	**3,200**	20 U	20 U	20 U	20 U	3.0 U	0.10	41	1.1 U	1.0 U	100	15	0.062 J	6.0	1.0 U	0.93 J	5.91	0.042	2.63	1.18	8.2	39.5
Area 1/FDSA		5/16/2017	20 U	**1,800**	20 U	20 U	20 U	20 U	3.0 U	0.05 U	17	1.1 U	1.0 U	1.8	14	0.32	6.2	1.0 U	1.0 U	5.70	0.042	2.73	3.69	9.7	213.3
Area 1/FDSA		10/10/2017	20 U	**910 J**	20 U	20 U	20 U	20 U	**37 J**	**220 J**	**14,000 J**	24 J	4.3 J	1,200	520	2.0	20	1.0 U	3,400	6.21	2.080	> 5,000	0.51	11.1	-161.2
Area 1/FDSA		4/4/2018	5.0 U	**350**	5.0 U	5.0 U	33	5.0 U	**89**	**85**	**2,800**	10	17	25,000	150	0.13	10	1.0 U	1.0 U	5.91	0.652	1,700	0.81	9.0	-69.7
Area 1/FDSA		10/17/2018	5.0 U	**370**	5.0 U	4.1 J	**110**	**3.3 J**	**69**	**370**	**6,100**	14	43	25,000	400	0.43 J	6.6 J	1.0 U	1,300	5.48	1.315	> 5,000	0.15	10.7	44.9
Area 1/FDSA		4/5/2019	1.0 U	**71 J**	1.0 U	1.8	**110**	**3.4**	**40**	**210**	**5,600**	7.6	11	16,000	-	0.27	1.0 U	1.0 U	350	6.10	0.850	35.0	0.37	8.4	82.0
Area 1/FDSA		10/9/2019	5.0 U	**5.3**	5.0 U	5.0 U	**140**	**4.6 J**	**48**	**210**	**5,500**	5.0	6.2	13,000	210	0.39	1.0 U	0.83 U	260	7.34	0.730	12.0	0.21	11.0	-55.3
Area 1/FDSA		05/12/2020	1.0 U	2.4	1.0 U	0.72 J	**110**	**3.6**	**43**	**250**	**4,900**	3.6	4.4	14,000	250	0.13 U	5.0 U	1.9	290	6.58	0.620	27.8	0.32	9.8	7.0
Area 1/FDSA		10/14/2020	1.0 U	1.1	1.0 U	1.0 U	40	1.7	**42**	**220**	**4,500**	1.3	2.0	6,600	190	0.17	5.0 U	0.81 U	230	6.63	0.526	20.9	0.51	12.0	-111.0
Area 1/FDSA		5/12/2021	1.0 U	2.0 U	1.0 U	1.0 U	14	**2.6**	6.2	**240**	**4,500**	4.6	5.7	20,000	230	0.12	1.0 U	4.0 U	260	6.50	0.737	23.4	1.46	19.4	-166.9
Area 1/FDSA		10/12/2021	1.0 U	2.0 U	1.0 U	1.0 U	9.8	1.5	**25**	**170**	**4,300**	3.4	3.2	15,000	130	0.074 J	1.0 U	0.81 U	190	6.96	0.459	62.4	0.64	13.3	-169.9
Area 1/FDSA		5/2/2022	1.0 U	1.0 U	1.0 U	1.0 U	2.3	0.83 J	**47**	**120**	**3,000**	3.6	3.8	16,000 J	110	0.15	1.0 U	1.5 U	160	6.48	0.433	5.75	0.88	10.2	-113.0
Area 1/FDSA		10/5/2022	1.0 U	1.0 U	1.0 U	0.5 U	2.1 J	0.64 J	**35**	**120**	**3,400**	1.9	2.2	14,000	120	0.025 U	1.0 U	1.7 U	160	6.17	0.442	2.45	0.68	10.9	-78.4
Area 2	G6M-02-01X	2/28/2002	1.0 U	**11**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.91	0.624	14.0	4.70	13.5	66.6
Area 2		9/23/2004	1.0 U	**24**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.64	0.784	6.11	2.54	19.4	145.0
Area 2		9/30/2005	1.0 U	**110**	2.0 U	2.0 U	3.1	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.07	0.555	10.9	3.82	18.0	384.8
Area 2		9/20/2006	1.0 U	**1,300**	2.0 U	**12**	**91**	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.19	0.708	9.07	3.68	17.3	-108.2
Area 2		3/30/2007	1.0 U	**1,700**	2.0 U	**19**	**120**	2.0 U	5.0 U	0.1 U	120 J	0.012 J	0.081	-	-	-	9.4	1.0 U	3.3 J	6.64	0.800	0.78	4.22	14.1	-35.3
Area 2		6/14/2007	1.0 U	**1,700**	2.0 U	**16**	**97**	2.0 U	-	-	-	-	-	-	-	-	-	-	1.9 J	6.72	0.853	10.4	3.30	14.8	69.6
Area 2		9/14/2007	1.0 U	**1,900**	2.0 U	**24**	**150**	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.57	0.747	0.10	3.32	14.4	102.4
Area 2		12/13/2007	1.0 U	**1,600**	2.0 U	**21 J**	**130 J**	2.0 U	-	-	-	-	-	-	-	-	-	-	3.6 J	6.61	0.807	< 0.01	2.73	12.6	128.0
Area 2		3/14/2008	2.2	**520**	2.0 U	**70**	**600**	2.0 U	**150**	**26**	**23,000**	0.052	0.16	12	-	-	5.0 U	1.0 U	180	6.45	1.620	2.70	0.38	13.4	-99.2
Area 2		10/7/2008	10 U	**180**	10 U	**49**	**360**	10 U	**141**	**15**	**5,880**	6.3 U	9.5	5,000	200	0.13 U	11	0.03 U	18	6.97	1.193	8.40	0.18	12.1	-112.9
Area 2		1/21/2009	1.2 J	**280**	1.3 U	76 U	**170**	94 U	**148**	**11.2 J**	**4,500**	1.3 U	24	4,000	170	0.13 U	7.0 U	0.03 U	11 J	7.13	1.279	1.20	0.39	11.1	-142.7
Area 2		5/6/2009	10 U	**610**	10 U	**190**	**100**	**54**	**133**	**19**	**3,950**	1.2 U	29	29,000	220 J	0.059 J	8.4	0.03 U	13	6.69	1.085	1.15	0.20	11.4	-127.7
Area 2		10/20/2009	40 U	**820**	40 U	**180**	**76**	**47**	**108**	**12**	**2,470**	1.3 U	9.0	5,000 J	130	0.074 J	7.6	0.03 U	4.6 J	6.66	0.925	3.52	1.24	11.5	32.9
Area 2		4/21/2010	2.0 U	**37 J**	2.0 U	**53 J**	0.47 J	**69 J**	**164**	**20.5 J**	**4,480**	1.3 U	43	12,000 J	280 J	0.024 J	4.0 J	0.03 U	40	6.70	1.180	1.60	0.42	11.6	-122.0
Area 2		10/6/2010	1.4	**470**	1.4	**120**	**72**	**84**	**133**	**14**	**3,050**	1.2 U	49	25,000	120	0.13 U	5.2	0.03 U	10 U	6.39	1.039	3.65	0.28	12.5	-77.8
Area 2		6/9/2011	0.5 U	0.5 U	0.69	4.3	11	**12**	**173**	**46**	**7,380**	1.2 U	230	71,000	400	0.11 J	3.3 J	0.03 U	90	6.42	1.423	< 0.01	0.30	14.6	-86.3
Area 2		10/5/2011	0.5 U	0.5 U	0.5 U	0.88	3.6	**7.3**	**271**	**27**	**5,470**	1.2 U	290	72,000 J	190	0.13 U	1.4 J	0.03 U	18	6.60	0.681	0.87	0.02	12.5	-106.0
Area 2		5/9/2012	8.0 U	**250**	8.0U	**310**	65	**63**	**271**	**11**	**2,050**	1.1 U	260	41,000	86	0.13 U	6.8	0.081	2.3 J	6.66	0.798	1.60	0.07	12.4	-79.2
Area 2		10/10/2012	10 U	**350**	10 U	**120**	**75**	**160**	**220**	**10**	**2,080**	1.2 U	250	37,000 J	120 J	0.13 U	6.5	0.36 J	10 U	6.64	0.906	3.71	0.50	13.2	-80.5
Area 2		5/21/2013	0.5 U	0.25 J	0.67	4.7	8.4	**5.2**	**272**	**36**	**7,450**	1.2 U	220	22,000	240 J	0.13 U	3.0 J	0.076 J	43	6.57	1.439	0.71	0.14	14.2	-91.7
Area 2		10/17/2013	0.5 U	0.5 U	0.58	2.4	11	**14**	**323**	**40**	**4,000**	1.2 U	450 J	52,000	140	0.13 U	5.0 U	0.078	2.6 J	6.66	0.753	2.24	0.22	13.1	-117.5
Area 2		6/11/2014	0.5 U	0.5 U	0.5 U	0.5 U	1.4	**2.6**	**449**	**84 J**	**4,260**	1.3 U	16 J	5,300 J	210 J	0.13 U	1.2 U	0.03 U	9.5 J	6.73	1.174	4.68	0.25	13.1	-103.1
Area 2		10/30/2014	0.5 U	0.5 U	0.5 U	0.21 J	1.5	0.87	**384**	**48**	**1,820**	15	40	24,000	86	0.13 U	2.3 J	0.03 U	5.0 U	6.57	0.959	1.81	0.23	12.7	-130.8
Area 2		6/17/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.53 J	0.5 U	**418**	**62**	**1,760**	5.0 U	6.0 J	712	67	0.11 U	0.5 U	1.0 U	6.2	6.80	0.671	8.45	0.25	13.7	-91.1
Area 2		9/10/2015	1.0 U	1.0 U	1.0 U	0.50 J	1.0 U	1.0 U	**374**	**61**	**1,750**	10 U	5.3 J	8,550	-	0.061 J	0.96 J	2.0 U	2.1	6.77	0.807	0.81	0.24	16.0	-110.5
Area 2		10/16/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**360**	**56**	**1,750**	10 U	10 U	14,200	55	0.11 U	1.1 J	2.0 U	2.1	6.86	1.109	2.79	0.11	16.1	-128.2
Area 2		2/18/2016	1.0 U	1.0 U	1.0 U	1.0 U	0.89 J	0.53 J	**347**	**53**	**2,420**	10 U	10 U	12,500	155	0.10 U	1.5 J	2.0 U	6.8	7.01	1.659	3.95	0.80	10.3	31.9
Area 2		6/13/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**450**	**100**	**2,700**	1.1 U	1.0 U	22,000	150	0.021 J	0.8 U	1.0 U	7.7	6.87	1.691	5.91	0.21	17.2	-145.7
Area 2		11/9/2016	1.0 U	1.0 U	1.0 U	1.0 U	0.69 J	1.0 U	**430**	**62**	**2,100**	1.1 U	1.0 U	18,000	140	0.05 U	1.0 U	1.8	3.1	6.92	1.743	4.67	0.23	13.1	-13.0
Area 2		5/19/2017	1.0 U	1.0 U	1.0 U	1.0 U	0.52 J	1.0 U	**500**	**110**	**2,600**	1.1 U	1.0 U	24,000	220	0.09 J	0.51 J	1.0 U	4.9	6.85	1.590	7.23	0.42	14.4	-132.4
Area 2		10/13/2017	1.0 U	1.0 U	1.0 U	1.0 U	0.77 J	0.52 J	**400**	**76**	1,300	1.1 U	3.8	12,000	64	0.10	0.57 J	1.0 U	3.3	6.66	0.958	7.14	0.46	12.1	-107.4
Area 2		10/29/2018	1.0 U	1.0 U	1.0 U	0.73 J	1.3	1.0 U	**51**	3.1	**2,700**	-	-	-	-	-	-	-	-	7.48	3.070	18.2	0.17	12.8	-115.8

Appendix D
Historical Groundwater Analytical Results
2022 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	PCE	trans-1,2-DCE	TCE	cis-1,2-DCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	TOC	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/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	5	70	5	70	2	10	3.129	1,460					10,000									
Area	Well ID	Date Sampled																							
Area 2		10/16/2019	1.0 U	1.0 U	1.0 U	4.1	2.0	0.63 J	**100**	**5.3**	**2,700**	-	-	-	-	-	-	-	-	6.60	2.700	16.0	0.13	12.0	-120.0
Area 2		10/20/2020	1.0 U	**5.3**	1.0 U	**25**	4.5	**2.8**	**270**	**27**	**2,000**	-	-	-	-	-	-	-	-	6.95	1.450	17.8	0.20	13.7	-103.0
Area 2		5/12/2021	1.0 U	2.0 U	1.0 U	2.2	1.2	1.0 U	**230**	**16**	**2,200**	0.76 U	11	24,000	140	0.05 U	13	0.81 U	2.0	6.94	1.968	109.0	0.55	13.8	-126.0
Area 2		10/13/2021	1.0 U	2.0 U	1.0 U	2.4	1.4	0.72 J	**310**	**22**	**1,900**	-	-	-	-	-	-	-	-	6.87	3.780	39.9	0.51	15.4	-127.0
Area 2		10/7/2022	1.0 U	**7.7**	1.0 U	**23**	3.7	**2.4**	**140**	**18**	**1,600**	1.1	18	29,000	110	0.025 U	8.3	1.7 U	2.4	7.05	1.498	1.67	0.63	15.9	-142.4
Area 2	G6M-04-01X	9/23/2004	1.0 U	**250**	2.0 U	3.6	21	2.0 U	5.0 U	1.0 U	220	-	-	-	-	-	-	-	-	6.82	2.391	9.42	3.92	15.4	245.2
Area 2		9/28/2005	1.0 U	**140**	2.0 U	2.0 U	9.2	2.0 U	5.1	1.0 U	170	-	-	-	-	-	-	-	-	6.49	2.699	7.29	5.85	13.2	202.3
Area 2		9/20/2006	1.0 U	**150**	2.0 U	2.0 U	7.2	2.0 U	5.0 U	0.1 U	220	-	-	-	-	-	-	-	-	5.87	2.920	3.53	4.88	11.9	-91.4
Area 2		12/13/2006	1.0 U	**200**	2.0 U	**11**	**75**	2.0 U	**160**	**83**	**20,000**	0.004 J	0.038	1,700	-	-	50	2.8	440	6.07	3.107	5.21	1.43	13.6	-72.8
Area 2		9/14/2007	1.0 U	**290**	2.0 U	2.0 U	8.6	2.0 U	6.0 U	0.1 U	130	-	-	-	-	-	-	-	-	6.00	2.055	35.8	5.21	12.2	155.3
Area 2		10/20/2008	10 U	**270 J**	10 U	**11 J**	10 U	10 U	8.0 U	0.2 U	53.1 J	-	-	-	-	-	-	-	-	7.32	0.999	3.50	3.37	17.3	96.2
Area 2		10/20/2009	13 U	**190**	13 U	**130**	**360**	**15**	8.0 U	0.1 U	113	-	-	-	-	-	-	-	-	5.79	0.908	4.80	2.25	13.4	342.4
Area 2		10/7/2010	0.29 J	**27**	0.68	**19**	**120**	**140**	5.0 U	1.1	164	-	-	-	-	-	-	-	-	6.14	1.312	1.55	0.29	11.5	124.3
Area 2		10/5/2011	0.5 U	**14**	0.71	**7.6**	36	**160**	3.7 J	0.38	261	-	-	-	-	-	-	-	-	6.27	1.132	3.30	0.48	12.7	69.9
Area 2		10/12/2012	4.0 U	**5.5**	4.0 U	4.0 U	18	**130**	3.5 J	0.74	925	-	-	-	-	-	-	-	-	6.36	1.700	1.85	0.38	12.4	19.1
Area 2		10/17/2013	0.5 U	0.5 U	0.29 J	0.78	0.99	**14**	6.0	1.1	**8,890**	-	-	-	-	-	-	-	-	6.46	2.509	2.49	0.40	14.5	17.4
Area 2		10/31/2014	0.5 U	0.39 J	0.37 J	0.52	0.56	**7.9**	**164**	**59**	**28,900**	-	-	-	-	-	-	-	-	6.69	1.850	19.6	0.48	13.3	-95.3
Area 2		9/10/2015	1.0 U	1.0 U	1.0 U	1.0 U	0.93 J	0.75 J	**162**	**32**	**9,040**	10 U	10 U	6,240	-	0.12	3.6 J	2.0 U	19	7.15	1.880	41.6	0.45	15.9	-152.7
Area 2		10/14/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**382**	**96**	**24,400**	-	-	-	-	-	-	-	-	6.78	2.878	4.83	0.10	12.5	-133.0
Area 2		2/18/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**76**	**16**	**7460**	10 U	10 U	7,060	411	0.10 U	14	2.0 U	12	6.68	1.624	6.39	1.67	9.5	182.6
Area 2		6/13/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**380**	**80**	**19,000**	-	-	-	-	-	-	-	-	6.69	3.639	17.6	0.65	17.7	-120.3
Area 2		11/9/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**320**	**95**	**19,000**	-	-	-	-	-	-	-	-	6.76	2.631	4.60	0.42	11.4	-82.0
Area 2		10/13/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**450**	**81**	**18,000**	-	-	-	-	-	-	-	-	6.66	3.540	11.5	0.87	13.5	-99.2
Area 2		10/30/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**470**	**68**	**19,000**	-	-	-	-	-	-	-	-	6.48	5.152	3.01	0.55	11.7	-73.1
Area 2		10/16/2019	1.0 U	1.0 U	1.0 U	0.48 J	0.41 J	1.0 U	**540**	**52**	**13,000**	-	-	-	-	-	-	-	-	6.20	4.400	3.70	0.18	13.0	-67.0
Area 2		10/19/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**580**	**45**	**13,000**	-	-	-	-	-	-	-	-	6.56	2.840	34.7	0.29	12.9	-73.4
Area 2		10/13/2021	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**680**	**42**	**11,000**	-	-	-	-	-	-	-	-	6.45	5.250	7.57	0.68	15.6	-79.2
Area 2		10/7/2022	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	**650**	0.05 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	**440**	2.0 U	2.0 U	3.3	2.0 U	5.0 U	1.0 U	**3,100**	0.22	0.036	100	53	5.1	23	2.2	1.4	6.37	1.236	12.2	3.41	12.9	446.5
Area 2		9/27/2005	1.0 U	**680**	1.0 U	**14**	10	1.0 U	5.0 U	0.6 J	**3,500**	0.19	0.32	52	82	0.35	38 J	1.0 U	6.0	6.29	1.361	9.62	0.79	12.9	377.5
Area 2		9/22/2006	1.0 U	**2,600**	2.0 U	**420**	6.3	2.0 U	5.0 U	0.1 U	**2,900**	0.049	0.30	17	190	0.2 U	17	1.0 U	7.2	6.30	0.524	3.52	0.43	15.1	152.1
Area 2		12/14/2006	1.0 U	**1,600**	2.0 U	**18**	**120**	2.0 U	-	-	-	-	-	-	-	-	-	-	5.0 U	6.54	0.831	2.81	3.64	14.3	-34.8
Area 2		9/14/2007	1.0 U	**770**	2.0 U	**68**	2.7	2.0 U	**38**	0.87	**2,300**	0.062	0.11	3.0	100	0.2 U	24	1.0 U	1.6 J	7.29	0.294	3.60	0.49	14.2	-110.3
Area 2		10/16/2008	5.0 U	**160**	5.0 U	**18**	7.6	5.0 U	**95**	0.2 U	930	1.3 U	1.6 U	6.2 J	150 J	0.10 U	8.0	0.03 U	10 U	10.48	0.539	5.80	2.01	14.0	18.0
Area 2		10/15/2009	0.5 U	**16**	0.5 U	**8.4**	8.6	0.5 U	**148**	2.0	**3,270**	1.3 U	1.6 U	2,000	240	0.13 U	7.0 U	0.03 U	10 U	8.80	0.227	5.00	1.49	13.3	-46.9
Area 2		10/7/2010	0.25 J	**300**	0.62	**52**	**94**	**29**	**133**	**5.5**	**3,910**	1.2 U	3.5	29,000	120	0.13 U	4.8 J	0.03 U	10 U	6.67	0.345	9.09	2.47	14.8	-35.2
Area 2		10/5/2011	0.5 U	**7.3**	0.5 U	1.8	7.5	**4.6**	**73**	0.19 U	559	1.2 U	1.5 U	29,000	130	0.13 U	6.0	0.03 U	3.1 J	10.63	0.307	< 0.01	0.49	12.7	6.3
Area 2		10/10/2012	0.5 U	**8.7**	0.5 U	1.9	6.3	**16**	**66**	0.26	1,320	1.2 U	170	38,000	160	0.096 J	8.0	0.03 U	10 U	10.65	0.556	6.84	1.09	13.8	-18.4
Area 2		10/17/2013	4.0 U	**190**	4.0 U	**87**	**200**	**86**	**32**	**33**	**8,450**	1.2 U	270	51,000	67	0.13 U	8.6	0.03 U	2.5 J	6.55	0.583	28.0	0.69	15.4	-77.3
Area 2		10/30/2014	0.5 U	**20**	0.38 J	**15**	53	**19**	**14**	0.29	114	1.2 U	17	6,700	420	0.13 U	7.5	0.03 U	4.7 J	10.60	1.152	24.3	1.99	13.5	-70.1
Area 2		9/11/2015	1.0 U	**11**	1.0 U	**9.3**	40	**5.5**	**105**	**23**	**2,720**	10 U	10 U	3,450	-	0.068 J	7.0 J	2.0 U	5.3	7.71	1.079	11.6	0.36	14.6	-194.0
Area 2		10/14/2015	1.0 U	5.0	1.0 U	3.2	43	**6.8**	**232**	**75**	**11,300**	10 U	10 U	8,190	337	0.13 J	7.0 J	2.0 U	8.2	6.79	1.208	9.64	1.03	12.8	-68.4
Area 2		2/18/2016	1.0 U	0.60 J	1.0 U	0.59 J	25	**7.3**	**673**	**97**	**15,200**	10 U	10 U	12,500	456	0.10 U	1.2 J	2.0 U	8.1	8.56	0.799	11.2	0.99	6.7	212.9
Area 2		11/10/2016	1.0 U	1.0 U	1.0 U	0.65 J	5.8	**4.1**	**380**	**110**	**31,000**	1.1 U	25 J	20,000	390	0.05 U	2.2	1.0 U	9.8	6.47	1.018	6.66	0.43	11.5	-74.1
Area 2		10/20/2017	1.0 U	1.0 U	1.0 U	1.0 U	2.2	1.6	**260**	**85**	**20,000**	1.1 U	1.0 U	9,100	160	0.06 J	19	1.0 U	5.1	6.45	2.750	5.87	0.38	12.7	-55.0
Area 2		10/30/2018	1.0 U	1.0 U	1.0 U	0.93 J	0.44 J	1.0 U	**310**	**74**	**10,000**	-	-	-	-	-	-	-	-	6.78	2.944	6.82	0.57	13.4	-113.0
Area 2		10/16/2019	1.0 U	**9.0**	1.0 U	**12**	26	**5.8**	**220**	**59**	**7,100**	-	-	-	-	-	-	-	-	5.80	1.600	1.80	0.18	14.0	-46.0
Area 2		05/12/2020	1.0 U	**6.9**	1.0 U	4.5	10	**3.5**	**73**	**47**	**5,600**	1.1 U	2.1	11,000	140	0.10 U	13	0.81 U	4.0	5.92	1.600	5.51	1.11	12.8	28.6
Area 2		10/16/2020	1.0 U	1.0 U	1.0 U	0.80 J	0.70 J	1.0 U	**180**	**27**	**3,100**	1.1 U	1.5	22,000	190	0.082 J	6.4	0.81 U	6.0	6.55	0.772	3.43	0.16	13.1	-84.1
Area 2		5/11/2021	1.0 U	2.0 U	1.0 U	2.3	4.2	**3.2**	**190**	**44**	**5,200**	0.73 J	4.2	16,000	160	0.03 J	4.2	0.81 U	6.7 J	6.48	1.077	18.44	0.69	18.6	-87.3
Area 2		10/13/2021	1.0 U	2.0 U	0.72 J	0.60 J	0.58 J	0.71 J	**210**	**36**	**3,600**	1.9	3.5	20,000	200	0.05 U	2.3	0.81 U	7.3	6.87	2.690	32.4	0.70	19.2	-128.0
Area 2		10/12/2022	1.0 U	1.0 U	1.0 U	1.7	0.65 J	1.0 U	**190**	**9.9**	**1,200**	2.0	0.71 U	20,000	240	0.025 U	0.44 J	1.6 U	6.5	7.07	0.638	4.49	0.75	16.0	-130.4
Area 2	G6M-07-01X	10/15/2008	0.5 U	**26**	0.5 U	0.24 J	0.5 U	0.5 U	-	-	-	-	-	-	-	-	-	-	-	7.78	0.591	608	2.22	12.4	53.9
Area 2		10/20/2009	0.5 U	**21**	0.5 U	**15**	0.5 U	0.5 U	-	-	-	-	-	-	-	-	-	-	-	7.44	0.532	283	4.11	27.3	171.9
Area 2		10/7/2010	0.5 U	**50**	0.5 U	0.31 J	0.25J	0.5 U	-	-	-	-	-	-	-	-	-	-	-	7.03	0.414	4.78	3.62	10.1	139.0
Area 2		10/5/2011	0.5 U	**11**	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.1 U	11 J	-	-	-	-	-	-	-	-	7.06	0.285	130	4.43	12.0	72.9
Area 2		10/12/2012	0.5 U	**19**	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.088 J	11 J	-	-	-	-	-	-	-	-	6.92	0.437	30.2	3.56	11.9	59.0
Area 2		10/17/2013	0.5 U	**15**	0.5 U	0.37 J	0.5 U	0.5 U	5.0 U	0.1 U	5.4 J	-	-	-	-	-	-	-	-	6.86	0.450	16.4	4.34	12.7	95.1
Area 2		4/5/2019	1.0 U	**35**	1.0 U	1.2	1.0 U	1.0 U	3.5	0.21	95	1.1 U	1.0 U	36	-	1.1	6.6	1.0 U	0.61 J	6.90	0.880	6.90	1.40	12.0	32.0
Area 2		05/13/2020	1.0 U	**27**	1.0 U	0.97 J	1.0 U	1.0 U	3.0 U	0.093 U	19	1.1 U	1.0 U	1.4	35	1.2	7.6	0.83 U	0.47 J	6.12	0.972	3.81	2.30	13.8	101.0
Area 2		10/19/2020	1.0 U	**32**	1.0 U	0.71 J	1.0 U	1.0 U	2.1 J	0.12	30	1.1 U	1.0 U	34	31	1.5	3.6	0.81 U	3.3	6.23	0.547	6.92	2.79	13.1	107.0
Area 2		5/12/2021	1.0 U	**10**	1.0 U	2.1	8.6	1.0 U	1.6 J	0.18	61	0.76 U	0.71 U	17	39	0.84	14	0.81 U	3.2	6.50	0.991	50.07	1.40	16.9	64.0
Area 2		11/3/2021	1.0 U	**13**	1.0 U	1.8	0.71 J	1.0 U	1.6 J	0.17	42	0.76 U	0.71 U	13 J	6.4 U	1.0	12	0.81 U	5.3	6.44	1.440	17.40	1.52	8.7	81.1
Area 2		10/7/2022	1.0 U	**14**	1.0 U	0.75 J	1.0 U	1.0 U	1.3 J	0.044 J	50	0.76 U	0.71 U	730	34	1.3 J	11	1.6 U	1.1	6.45	0.665	18.78	0.99	16.6	98.8
Area 2	G6M-97-08B	10/18/2001	1.0 U	**92**	1.6 J	**6.1**	36	2.0 U	-	-	-	-	-	-	-	-	1.0	-	-	5.60	0.130	18.0	4.80	14.2	224.0
Area 2		2/26/2002	1.0 U	**100**	2.0 U	**5.9**	32	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.87	1.157	5.30	5.13	12.8	186.4
Area 2		9/22/2004	1.0 U	**220**	2.0 U	**9.3**	41	2.0 U	5.0 U	1.0 U	26	0.008	0.005 U	1.3	10 U	6.1	12	1.5 J	1.0 U	5.69	1.516	18.3	4.66	12.9	252.8
Area 2		12/16/2004	1.0 U	**200**	2.0 U	**7.7**	41	2.0 U	5.0 U	1.0 U	25	0.13	0.072	0.92	10 U	6.1	12	5.4	5.0 U	5.79	1.633	3.81	8.78	16.4	165.0
Area 2		3/30/2005	2.0 U	**95**	4.0 U	3.4 J	16	4.0 U	5.0 U	1.0 U	21	0.015	0.032	0.54	12	0.80	7.0	2.0 U	0.4 J	5.58	0.999	9.42	8.06	15.6	202.8
Area 2		6/28/2005	1.0 U	**140**	1.4	**8.0**	36	2.0 U	2.0 U	1.0 J	27	0.016	0.041	35	17	1.4	12	1.0 U	7.1	11.30	1.506	8.16	4.94	13.9	173.7
Area 2		9/27/2005	1.0 U	**180**	2.0 U	**7.5**	42	2.0 U	5.0 U	1.0 U	33	0.013 J	0.027	0.39	16	1.3	16	1.0 U	4.4	5.60	1.713	2.82	5.73	13.5	319.2

		Analytical Method	VOCs						Dissolved Metals			Dissolved Gases			General Chemistry				Field Parameters						
		Analyte	1,1-DCE	PCE	trans-1,2-DCE	TCE	cis-1,2-DCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	TOC	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/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	5	70	5	70	2	10	3.129	1,460					10,000									
Area	Well ID	Date Sampled																							
Area 2		12/12/2005	1.0 U	120	2.0 U	5.7	27	2.0 U	5.0 U	1.0 U	28	0.040	0.11	26	23	0.05 U	13	1.0 U	0.6 J	5.87	1.110	0.70	4.19	15.8	171.1
Area 2		3/23/2006	1.0 U	240	2.0 U	8.8	44	2.0 U	5.0 U	0.1 U	46	0.022 J	0.13	12	13	1.3	14	1.0 U	5.0 U	5.85	1.440	3.16	5.13	14.2	181.5
Area 2		6/21/2006	1.0 U	220	2.0 U	11	35	2.0 U	5.0 U	0.17	1,300	0.019 J	0.086	24	66	0.81	14	1.0	16	5.90	2.015	1.48	2.39	-	141.1
Area 2		9/19/2006	1.0 U	190	2.0 U	14	55	2.0 U	130	21	13,000	0.078	0.13	18	300	0.2 U	24	2.8	270	5.79	2.287	4.58	1.58	12.5	47.6
Area 3		12/14/2006	1.3	190	2.0 U	30	310	160	220	400	38,000	0.025	5.9	26,000	-	-	2.4	2.8	300	6.37	2.155	6.19	0.17	12.6	-160.0
Area 2		3/30/2007	1.0 U	200	2.0 U	8.5	46	2.0 U	130	170	26,000 J	0.028	0.19	6,000	-	-	126	4.6	620	5.36	3.626	1.13	0.46	12.5	14.8
Area 2		6/14/2007	1.0 U	140	2.0 U	5.5	37	2.0 U	100	370	24,000	0.025 U	0.021 J	7,900	-	-	120	6.4	760	5.66	3.659	1.00	1.68	9.9	-45.4
Area 2		9/12/2007	1.0 U	170	2.0 U	8.4	43	3.0	120	370	18,000	0.004 J	0.050	8,400	650	0.2 U	1,500	3.2	630	5.66	3.924	5.50	2.72	11.0	-31.4
Area 2		12/14/2007	1.0 U	150 J	2.0 U	5.7 J	31 J	4.5 J	150	280	12,000	0.006 J	0.054	10,000	-	-	92	5.6	520	5.84	3.673	< 0.01	0.75	11.8	-45.3
Area 2		3/12/2008	1.0 U	150	2.0 U	6.5	32	6.8	160	190	8,100	0.008 J	0.15	9,800	-	-	38	2.8	270	5.94	3.091	< 0.01	2.15	12.4	-66.4
Area 3	G6M-03-07X	5/12/2003	1.0 U	1,200	2.0 U	7.2	34	2.0 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.7	-
Area 3		9/24/2004	1.0 U	1,700	2.0 U	6.3	31	2.0 U	5.0 U	1.0 U	20	0.035	0.28	5.7	10 U	4.3 J	12	1.6 J	1.0 U	5.77	0.341	84.6	7.00	16.0	168.3
Area 3		12/16/2004	1.0 U	1,500	2.0 U	6.0	35	2.0 U	5.0 U	1.0 U	190	0.026	0.080	0.39	10 U	4.2	12	2.9	5.0 U	6.02	0.348	8.46	17.1	14.0	321.7
Area 3		3/30/2005	20 U	1,100	40 U	91	140	40 U	18	18	10,000	0.078	0.21	1.8	76	0.33	8.0	2.0 U	29	6.33	0.671	0.70	1.90	14.1	-54.6
Area 3		6/29/2005	20 U	940	40 U	78	940	40 U	31	39 J	15,000 J	0.060	0.34	3.9	118	0.079	6.4	1.0 U	83	11.97	0.915	5.93	1.12	8.5	-20.1
Area 3		9/29/2005	2.7	300	2.3	44	1,000	1.0 U	46	210 J	30,000	0.068	0.45	660	307	0.05 U	3.2	12	290	6.20	1.266	7.68	2.70	14.7	-62.0
Area 3		12/12/2005	10 U	92	20 U	22	710	20 U	96	190	46,600	0.078	0.13	13,000	320	0.05 U	2.0 U	6.2	220	6.50	1.038	3.60	0.22	14.2	-82.1
Area 3		3/24/2006	2.0	110	2.0 U	23	430	270	130	280	48,000	0.010 J	2.0	22,000	590	0.2 U	1.0	8.6	260	6.87	1.390	10.1	0.17	11.4	-130.5
Area 3		6/21/2006	1.0 U	9.5	2.0 U	3.6	180	310	140	460	59,000	0.073	21	21,000	570	0.2 U	1.0 U	4.8	280	5.13	2.258	31.4	0.70	13.0	-170.4
Area 3		3/29/2007	1.0 U	2.0 U	2.0 U	2.0 U	35	360	190	420	20,000 J	0.080	5.1	15,000	-	-	1.0 U	4.4	130	6.32	1.787	39.6	2.46	13.4	-69.3
Area 3		6/14/2007	1.0 U	37	2.0 U	8.1	190	200	220	490	37,000	0.025 U	2.3	25,000	-	-	11	2.4	310	6.40	2.386	9.70	1.31	13.6	-159.0
Area 3		9/13/2007	1.1	27	2.2	13	290	140	210	500	29,000	0.008 J	12	26,000	560	0.2 U	420	4.8	72	6.26	2.743	118	3.08	14.5	-174.9
Area 3		12/14/2007	1.0 U	2.6	3.0	2.0 U	9.8	120	270	320	12,000	0.010 J	34	25,000	-	-	10 U	4.0	140	6.51	2.138	70.9	0.99	13.2	-123.7
Area 3		3/14/2008	1.0 U	2.0 U	2.0 U	2.0 U	2.3	4.3	210	230	11,000	0.11	26	30,000	-	-	5.0 U	4.0	130	6.41	1.897	236	1.06	14.9	-85.5
Area 3		10/7/2008	5.0 U	5.0 U	21	2.2 J	5.0 U	5.0 U	246	348	5,370	6.3 U	12	14,000	190	190	24	0.03 U	64	6.24	1.742	16.0	0.10	14.1	-44.4
Area 3		1/22/2009	1.7 U	1.4 U	15	2.3 U	1.7 J	3.6	227	338 J	5,000	1.2 U	10	16,000	20 U	0.13 U	37	0.03 U	110 J	6.60	1.743	30.0	1.20	14.4	-74.9
Area 3		5/6/2009	0.5 U	0.5 U	20	0.5 U	1.8	2.6	351	361	5,500	1.2 U	9.9	28,000	720 J	0.025 J	32	0.03 U	66	5.88	1.735	20.3	0.21	14.2	-117.9
Area 3		10/15/2009	0.5 U	0.27 J	19	0.5 U	2.3	2.2	318	251	4,870	1.1 U	7.3	16,000	550	0.13 U	30	0.03 U	44	6.25	1.362	5.60	0.88	13.4	-100.4
Area 3		4/21/2010	0.5 U	0.5 U	5.3	0.5 U	0.88	1.3	339	176 J	2,000	1.3 U	6.3	27,000	320	0.13 U	0.11 J	0.03 U	46	6.46	1.086	8.90	0.69	16.2	-106.3
Area 3		10/5/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	346	164	4,650	1.2 U	14	48,000	35	0.13 U	0.27 J	0.03 U	16	6.35	1.276	4.56	0.11	-	-106.1
Area 3		6/8/2011	0.5 U	0.5 U	7.8	0.5 U	1.7	2.1	381	158	3,540	1.2 U	13	72,000	460	0.13 U	5.0 U	0.10	41	6.25	0.841	9.82	0.08	15.3	-87.0
Area 3		10/5/2011	0.5 U	0.5 U	5.6	0.5 U	0.86	1.4	375	133	2,500	1.2 U	1.5 U	48,000	320	0.13 U	5.0 U	0.049	39	6.40	0.764	6.00	0.02	9.7	-42.0
Area 3		5/9/2012	0.5 U	0.5 U	4.4	0.5 U	1.2	0.92	388	131	3,090	1.2 U	200	74,000	320	0.13 U	0.35 J	0.063	31	6.52	1.046	2.43	0.14	12.9	-111.7
Area 3		10/11/2012	0.5 U	0.5 U	3.4	0.5 U	0.74	1.5	365	116	2,900	1.2 U	800	97,000	270	0.027J	5.0 U	0.040	26	6.50	0.962	4.81	0.34	15.3	-96.2
Area 3		5/21/2013	0.5 U	0.5 U	3.4	0.5 U	1.0	0.77	413	114	2,150	1.2 U	1.5 U	22,000	180 J	0.13 U	5.0 U	0.03 U	23	6.01	0.923	1.28	0.17	14.8	-64.9
Area 3		10/16/2013	0.5 U	0.5 U	2.9	0.5 U	0.86	1.3	434	120	2,340	1.2 U	33	31,000	340	0.13 U	5.0 U	0.065	26	6.53	0.901	1.01	0.21	9.7	-102.4
Area 3		6/11/2014	0.5 U	0.40 J	3.0	0.5 U	0.72	2.5	422	105 J	1,670	1.3 U	3.5 J	10,000 J	260 J	0.13 U	0.52 U	0.03 U	45	6.32	0.787	2.54	0.28	11.6	-48.4
Area 3		10/30/2014	0.5 U	0.5 U	2.8	0.5 U	0.69	1.1	355	79	1,400	1.2 U	1.8	54,000	180	0.13 U	0.38 J	0.03 U	22	6.49	0.532	5.63	0.24	12.9	-120.7
Area 3		6/18/2015	0.5 U	0.5 U	2.1	0.5 U	0.62 J	0.77 J	97	107	1,810	5.0 U	5.7 J	12,400	262	0.15 U	0.5 U	1.0 U	27	6.40	0.626	15.1	0.16	16.2	-94.9
Area 3		9/14/2015	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	436	103	1,700	10 U	6.0 J	11,900	-	0.086 J	0.94 J	2.0 U	25	6.45	0.545	5.16	0.56	14.2	-112.8
Area 3		10/14/2015	1.0 U	1.0 U	1.8	1.0 U	0.59 J	0.73 J	441	102	1,660	10 U	6.5 J	16,600	161	0.085 J	2.3 J	2.0 U	243	6.61	0.754	5.37	0.24	12.3	-76.2
Area 3		2/10/2016	1.0 U	1.0 U	1.8	1.0 U	1.0 U	0.78 J	461	97	1,360	10 U	5.0 J	12,800	194	0.18	10 U	2.0 U	25	6.49	0.704	16.1	0.84	11.2	-68.8
Area 3		6/16/2016	1.0 U	1.0 U	1.5	0.61 J	0.73 J	0.73 J	440	90	1,600	1.1 U	1.0 U	28,000	200	0.05 U	0.8 U	1.0 U	26	6.46	0.759	9.00	0.29	17.0	-71.9
Area 3		11/10/2016	1.0 U	1.0 U	1.4	1.0 U	0.44 J	0.63 J	420	81	1,400	1.1 U	16	23,000	170	0.05 U	1.0 U	1.0 U	22	5.50	0.480	17.4	0.29	14.9	-86.0
Area 3		5/16/2017	1.0 U	1.0 U	0.76 J	1.0 U	0.51 J	1.0 U	370	84	1,600	1.2	7.2	14,000	200	0.14	1.0 U	1.0 U	19	6.59	0.589	11.0	0.35	17.5	-91.3
Area 3		10/23/2017	1.0 U	1.0 U	0.97 J	1.0 U	0.55 J	0.72 J	450	94	1,800	2.7	14	21,000	170	0.13	1.0 U	1.0 U	24	6.32	0.657	5.78	0.07	13.5	-75.1
Area 3		10/29/2018	1.0 U	1.0 U	0.66 J	1.0 U	0.55 J	0.74 J	420	99	2,100	2.8	19	37,000	170	0.20	5.0 U	1.0 U	18	6.54	0.795	3.12	0.27	13.2	-78.0
Area 3		10/18/2019	1.0 U	1.0 U	1.0 U	1.0 U	0.70 J	0.55 J	430	120	3,100	3.0	17	29,000	170	0.075 J	1.0 U	0.86 U	15	6.30	0.930	3.70	0.12	14.0	-84.0
Area 3		05/13/2020	50 U	50 U	50 U	26 J	50 U	50 U	340	95	2,100	6.1	1.0 U	11,000	160	0.032 J	1.0 U	0.96 U	19	6.01	0.498	8.60	0.51	11.9	32.1
Area 3		10/21/2020	1.0 U	1.0 U	1.0 U	1.0 U	0.58 J	1.0 U	410	110	2,900	4.3	12	34,000	150	0.057 J	1.0 U	0.89 U	14	6.07	0.816	5.61	0.42	17.4	-79.4
Area 3		5/12/2021	1.0 U	2.0 U	1.0 U	1.0 U	0.95 J	1.0 U	480	100	2,400	9.4	7.3	34,000	210	0.05 U	1.0 U	0.81 U	18	6.47	0.721	29.36	0.49	14.4	-99.2
Area 3		10/18/2021	1.0 U	2.0 U	1.0 U	1.0 U	0.50 J	1.0 U	580	98	2,400	9.4	0.71 U	37,000	190	0.026 J	1.0 U	0.81 U	19	6.35	0.955	2.34	0.51	15.0	-105.0
Area 3		10/5/2022	1.0 U	1.0 U	1.0 U	0.5 U	0.84 J	1.0 U	490	86	2,000	10	3.4	22,000	200	0.025 U	0.70 J	1.7 U	16	6.70	0.594	16.08	0.67	14.7	-102.3
Area 3	G6M-04-02X	9/23/2004	1.0 U	1,900	2.0 U	2.0 U	3.8	2.0 U	5.0 U	1.0 U	86	-	-	-	-	-	-	-	-	6.59	0.704	9.52	7.25	13.1	152.4
Area 3		9/28/2005	5.0 U	1,800	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	1.0 U	15 U	-	-	-	-	-	-	-	-	5.21	0.607	12.0	6.54	18.4	294.0
Area 3		9/20/2006	1.0 U	1,100	2.0 U	170	2.2	2.0 U	5.0 U	0.1 U	24	-	-	-	-	-	-	-	-	5.22	0.696	10.6	2.88	17.2	-101.5
Area 3		9/14/2007	1.0 U	710	21	98	290	2.0 U	48	16	13,000	-	-	-	-	-	-	-	-	6.52	1.356	2.30	2.91	15.3	-31.3
Area 3		10/16/2008	5.0 U	320	5.0 U	47	290	5.0 U	135	57	6,530	-	-	-	-	-	-	-	-	6.32	1.302	3.80	0.74	15.8	-143.6
Area 3		10/15/2009	8.0 U	400	8.0U	110	15	8.0 U	78	21	3,580	-	-	-	-	-	-	-	-	6.19	1.011	4.00	0.90	14.1	-25.0
Area 3		10/6/2010	20 U	380	20 U	54	27	20 U	182	40	5,530	-	-	-	-	-	-	-	-	6.25	1.071	3.53	0.51	13.0	-50.1
Area 3		6/8/2011	-	-	-	-	-	-	317	43	4,540	-	-	-	-	-	-	-	-	6.44	0.678	1.90	0.76	13.6	-95.9
Area 3		10/5/2011	13 U	630	13 U	93	13 U	13 U	172	18	4,370	-	-	-	-	-	-	-	-	6.24	0.669	6.60	0.41	15.2	1.0
Area 3		5/8/2012	-	-	-	-	-	-	225	16	3,980	-	-	-	-	-	-	-	-	6.36	0.475	1.12	0.20	14.9	-25.6
Area 3		10/12/2012	5.0 U	160	5.0 U	30	5.0 U	5.0 U	228	17	4,890	-	-	-	-	-	-	-	-	6.33	0.534	2.02	0.44	15.9	-33.5
Area 3		5/21/2013	-	-	-	-	-	-	143	7.3	5,400	-	-	-	-	-	-	-	-	5.98	0.699	0.74	0.36	13.6	18.3
Area 3		10/17/2013	4.0 U	140	4.0 U	31	5.7	4.0 U	231	21	6,800	-	-	-	-	-	-	-	-	5.70	0.485	3.75	0.37	15.8	-12.3
Area 3		6/11/2014	-	-	-	-	-	-	137	13.9 U	5,900	-	-	-	-	-	-	-	-	6.15	0.795	2.48	0.62	18.3	4.5
Area 3		10/30/2014	0.5 U	480	0.5 U	70	33	2.7 J	160	41	5,980	-	-	-	-	-	-	-	-	6.34	0.628	1.86	0.28	19.0	-63.1
Area 3		6/18/2015	0.5 U	62	0.5 U	20	16	1.8	362	82	7,220	-	-	-	-	-	-	-	-	6.30	0.500	10.9	0.32	13.1	-101.0
Area 3		9/11/2015	1.0 U	16	1.0 U	7.4	8.8	1.8	343	91	6,920	10 U	10 U	7,390	-	0.067 J	0.87 J	2.0 U	3.3	6.59	0.663	2.50	0.39	14.0	-147.8
Area 3		10/16/2015	1.0 U	105	1.0 U	31	1.0 U	1.6	237	66	7,570	-	-	-	-	-	-	-	-	6.32	0.818	2.43	0.23	12.8	-56.1

Appendix D
Historical Groundwater Analytical Results
2022 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	PCE	trans-1,2-DCE	TCE	cis-1,2-DCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	TOC	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/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	5	70	5	70	2	10	3.129	1,460					10,000									
Area	Well ID	Date Sampled																							
Area 3		2/10/2016	2.0 U	**333**	2.0 U	**60 J**	12	1.5 J	**118**	**28**	**8,730**	10 U	10 U	4,410 J	118	0.11	10	2.0 U	2.1	6.74	0.536	10.8	0.87	10.0	-112.9
Area 3		6/13/2016	1.0 U	**120**	1.0 U	**48**	23	**3.4**	**200**	**44**	**8,000**	-	-	-	-	-	-	-	-	6.43	0.875	1.59	0.34	13.4	-56.2
Area 3		11/10/2016	1.0 U	**160**	0.37 J	**60**	58	**8.4**	**180**	**48**	**9,100**	-	-	-	-	-	-	-	-	6.62	0.629	4.32	0.51	10.3	-67.3
Area 3		5/16/2017	1.0 U	**280**	0.39 J	**120**	22 J	**2.3 J**	**42**	**15**	**11,000**	1.1 U	2.2	4,800	130	0.065 J	10	1.0 U	2.5 J	6.00	0.956	3.90	2.09	13.2	29.5
Area 3		10/20/2017	2.0 U	**97**	2.0 U	**26**	13	1.8 J	**260**	**66**	**10,000**	1.1 U	1.0 U	16,000	160	0.08 J	6.2	1.0 U	3.3	6.36	0.910	4.26	0.28	12.5	-66.9
Area 3		4/3/2018	2.0 U	**300**	2.0 U	**74**	19	1.7 J	**99**	**30**	**9,800**	1.1 U	3.4	23,000	120	0.10	11	1.0 U	2.5	6.34	1.139	1.90	0.96	10.9	-22.3
Area 3		10/30/2018	2.0 U	**200**	2.0 U	**64**	27	**3.0**	**81**	**45**	**14,000**	1.1 U	4.1	14,000 J	140	0.13	9.1	1.0 U	8.4	6.01	1.317	0.58	0.90	12.1	-22.7
Area 3		4/3/2019	1.0 U	**160**	0.61 J	**130**	29	**3.5**	**120**	**47**	**9,800**	1.1 U	7.9	16,000	-	0.17 U	7.1	1.0 U	3.1	6.20	1.500	0.49	1.10	11.0	-76.0
Area 3		10/18/2019	0.90 J	**5.4**	2.0 U	**7.0**	**260**	1.7 J	**230 J**	**81**	**13,000**	2.9	3.6	11,000	150	0.04 J	1.0 U	0.88 U	170	5.40	1.600	1,000	0.08	13.0	-52.0
Area 3		05/12/2020	0.88 J	1.7	0.92 J	2.3	**290 J**	**28**	**93**	**52**	**6,900**	1.3	31	18,000	130	0.10 U	2.0 J	0.88 U	100	5.54	1.380	344	1.19	11.9	31.6
Area 3		10/20/2020	1.0 U	**5.7 J**	1.0 U	**6.1 J**	**120 J**	**5.1 J**	**82**	**44**	**8,200**	3.7	8.6	2,600	100	0.067 J	10 U	4.0	220	6.09	1.030	313	0.10	14.1	-63.1
Area 3		6/17/2021	0.63 J	4.2	0.94 J	3.7	**170**	**32**	**50**	**28**	**7,900**	5.0 U	33	20,000	120	0.12 U	1.1	1.0 U	40	5.33	1.356	135	0.11	15.9	-45.8
Area 3		10/18/2021	1.0 U	**21**	0.84 J	**13**	**130**	**18**	**61**	**22**	**6,500**	0.56 J	37	19,000	120	0.05 U	3.4	0.81 U	17	5.87	2.080	12.2	0.55	11.6	-55.5
Area 3		5/2/2022	1.0 U	**38**	0.71 J	**35**	**98**	**16**	**61**	**22**	**7,800**	1.9	36	26,000 J	110	0.05 U	4.2	1.2 U	8.4	5.88	1.340	77.8	0.25	12.3	-78.3
Area 3		10/5/2022	1.0 U	**43 J**	0.96 J	**44 J**	**100 J**	**24 J**	**62**	**23**	**8,900**	2.4	23	20,000	140	0.025 U	5.0	1.7 U	7.5	6.20	1.000	8.87	0.71	13.7	-71.2
Area 3	G6M-04-04X	9/24/2004	1.0 U	**2,300**	2.0 U	**7.8**	24	2.0 U	5.0 U	1.0 U	560	0.037	0.12	13	10 U	5.5	20	2.0 U	1.0 U	5.75	1.637	169	5.05	12.5	197.3
Area 3		9/29/2005	2.5 U	**1,600**	2.5 U	**5.4**	15	2.5 U	5.0 U	1.0 U	430	0.018 J	0.060	0.44	5.3	1.4	23	1.0 U	0.5 J	5.34	1.666	7.39	5.66	13.9	295.9
Area 3		9/19/2006	1.0 U	**1,600**	2.0 U	**45**	**260**	2.0 U	**110**	**84**	**31,000**	0.12	0.095	33	190	0.2 U	10	1.6	120	6.22	1.765	7.64	0.32	13.5	-71.5
Area 3		9/13/2007	1.2	**600**	2.0	**130**	**210**	**300**	**280**	**130**	**25,000**	0.005 J	7.0	18,000	270	0.2 U	890	1.2	63	6.57	2.398	3.50	3.20	13.0	-186.6
Area 3		10/16/2008	2.5 U	**6.0**	2.8	**8.1**	48	**150 J**	**523**	**248**	**19,300**	1.3 U	62	18,000	520	0.10 U	7.0	0.03 U	35	6.40	2.239	4.00	2.39	13.2	-106.2
Area 3		10/15/2009	0.5 U	0.5 U	5.2	0.5 U	4.8	**6.9**	**615**	**239**	**16,800**	1.3 U	61	38,000 J	520	0.13 U	23 J	0.03 U	32	6.47	1.744	5.00	0.86	14.2	-123.0
Area 3		10/5/2010	0.5 U	0.5 U	2.6	0.5 U	2.8	**3.2**	**529**	**155**	**16,900**	1.2 U	210	52,000 J	81 J	0.13 U	5.0 U	0.03 U	15	6.35	2.133	3.10	0.40	13.6	-112.0
Area 3		10/5/2011	0.5 U	0.5 U	4.1	0.5 U	1.1	**2.7**	**615**	**145**	**16,400**	1.2 U	160	31,000 J	350 J	0.13 U	5.0 U	0.049	17	6.61	1.042	5.00	0.10	13.0	-88.0
Area 3		10/11/2012	0.5 U	0.5 U	3.7	0.5 U	0.80	**2.6**	**590**	**133**	**15,700**	1.3 U	460	51,000	220	0.13 U	5.0 U	0.052	13	6.66	1.693	1.53	0.39	14.0	-108.6
Area 3		10/16/2013	0.5 U	0.5 U	3.1	0.5 U	1.8	**3.0**	**601**	**114**	**11,000**	3.5	420	44,000	240	0.13 U	0.94 J	0.049	11	6.57	1.345	4.75	0.24	11.0	-109.9
Area 3		10/30/2014	0.5 U	0.5 U	1.7	0.5 U	0.5 U	0.39 J	**453**	**113**	**8,520**	1.2 U	85	43,000	180	0.098 J	0.18 J	0.03 U	9.0 J	6.59	1.537	6.54	0.42	11.4	-145.8
Area 3		9/14/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.91 J	**486**	**11.9 J**	**10,700 J**	10 U	33	9,170	-	0.068 J	3.4 J	2.0 U	7.5	6.70	1.264	3.25	0.28	15.0	-180.4
Area 3		10/16/2015	2.8	0.76 J	1.0 U	1.0 U	1.0 U	1.0 U	**505**	**115**	**10,000**	10 U	61	20,000	167	0.11 U	1.6 J	2.0 U	8.5	5.99	1.727	3.13	0.57	10.7	-114.6
Area 3		2/19/2016	1.0 U	1.0 U	2.8	1.0 U	0.50 J	1.0	**550**	**114**	**9,760**	10 U	65	13,900	278	0.10	1.3 J	2.0 U	7.3	7.68	1.173	3.97	1.29	11.5	-38.7
Area 3		6/16/2016	1.0 U	1.0 U	1.0 U	0.65 J	1.1	**580**	**120**	**10,000**	9.2	86	31,000	160	0.05 U	30	1.0 U	8.6	6.51	1.407	4.20	1.46	16.2	-108.1
Area 3		11/8/2016	1.0 U	1.0 U	1.2	1.0 U	0.43 J	0.57 J	**530**	**120**	**9,700**	3.0	38	20,000	180	0.05 U	1.0 U	4.4	7.3	6.01	1.402	3.49	0.32	13.8	-106.9
Area 3		10/20/2017	1.0 U	1.0 U	1.4	1.0 U	0.51 J	1.0 U	**600**	**170**	**17,000**	3.8	39	19,000	250	0.11	0.72 J	1.0 U	11	6.64	0.940	4.39	0.24	12.7	-111.1
Area 3		10/26/2018	1.0 U	1.0 U	0.37 J	1.0 U	0.83 J	0.60 J	**460**	**110**	**21,000**	-	-	-	-	-	-	-	-	6.44	2.529	9.98	0.21	13.0	-91.7
Area 3		10/10/2019	1.0 U	1.0 U	1.0 U	1.0 U	0.93 J	0.55 J	3.0 U	50 U	61	-	-	-	-	-	-	-	-	6.40	3.000	2.30	0.34	13.0	-88.0
Area 3		10/21/2020	1.0 U	1.0 U	0.39 J	1.0 U	0.64 J	1.0 U	**510**	**130**	**16,000**	-	-	-	-	-	-	-	-	6.23	2.460	3.79	0.15	15.1	-56.9
Area 3		10/18/2021	1.0 U	2.0 U	1.0 U	1.0 U	0.68 J	1.0 U	**470**	**88**	**19,000**	-	-	-	-	-	-	-	-	6.48	2.220	29.30	0.01	15.5	-102.0
Area 3		10/5/2022	1.0 U	1.0 U	0.38 J	0.23 J	0.79 J	1.0 U	**580**	**91**	**11,000**	-	-	-	-	-	-	-	-	6.77	1.571	18.76	0.74	13.4	-104.4
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		10/30/2014	0.5 U	0.50 J	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.029 J	407	-	-	-	-	-	-	-	-	6.39	0.192	15.3	1.65	6.7	183.6
Area 3		10/16/2015	1.0 U	0.57 J	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	100 U	362	-	-	-	-	-	-	-	-	5.53	2.539	36.6	1.58	11.9	157.6
Area 3		11/10/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.2 J	0.45	420	-	-	-	-	-	-	-	-	4.15	1.540	31.6	0.43	12.5	40.0
Area 3		10/18/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.075 U	550	-	-	-	-	-	-	-	-	5.61	2.250	4.69	0.58	11.9	170.1
Area 3		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		10/16/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.05 U	430	-	-	-	-	-	-	-	-	5.33	1.820	3.11	0.42	13.7	172.0
Area 3		10/10/2022	1.0 U	1.0 U	1.0 U	0.5 U	1.0 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	**210**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	11.61	1.154	18.1	2.21	18.9	11.0
Area 4		9/23/2004	1.0 U	**48**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	4.95	1.374	3.80	1.17	17.6	632.1
Area 4		9/29/2005	1.0 U	**12**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.70	1.138	10.7	2.90	17.6	204.9
Area 4		9/18/2006	1.0 U	**10**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.20	0.993	4.32	0.35	14.4	219.4
Area 4		9/14/2015	1.0 U	0.82 J	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	0.1 U	79	10 U	10 U	284	-	1.3	9.7 J	2.0 U	1.1	5.67	0.722	3.00	5.09	14.1	93.2
Area 4		6/16/2016	-	-	-	-	-	-	3.0 U	0.05 U	310	-	-	-	-	-	-	-	-	4.87	1.658	19.9	0.45	16.7	139.6
Area 4		11/8/2016	-	-	-	-	-	-	3.0 U	0.029 J	99	-	-	-	-	-	-	-	-	7.58	0.960	3.88	1.03	11.7	-53.7
Area 4		10/24/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.18	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	**470**	2.0 U	0.88 J	1.3 J	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.47	0.260	24.0	3.40	18.0	189.5
Area 4		9/23/2004	1.0 U	**170**	2.0 U	2.0 U	2.9	2.0 U	5.0 U	1.0 U	15 U	-	-	-	-	-	-	-	-	6.29	0.453	8.48	3.03	19.6	175.5
Area 4		9/28/2005	1.0 U	**150**	2.0 U	2.0 U	6.2	2.0 U	5.0 U	1.0 U	15 U	-	-	-	-	-	-	-	-	5.61	0.502	12.6	2.75	17.3	302.3
Area 4		9/20/2006	1.0 U	**48**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 U	15 U	-	-	-	-	-	-	-	-	5.84	0.467	8.45	4.57	14.5	189.0
Area 4		9/13/2007	1.0 U	**21**	2.0 U	4.2	2.0 U	2.0 U	6.0 U	0.1 U	15	-	-	-	-	-	-	-	-	6.39	0.927	4.80	3.13	14.9	93.0
Area 4		10/16/2008	2.5 U	**9.0**	2.5 U	2.5 U	**150**	2.5 U	**78**	**8.6**	**7,370**	-	-	-	-	-	-	-	-	6.91	1.126	4.00	1.05	12.1	-80.0
Area 4		10/15/2009	5.0 U	5.0 U	5.0 U	**17**	**120**	**10**	**309**	**82**	**10,900**	-	-	-	-	-	-	-	-	6.55	0.766	2.18	1.52	15.6	-139.8
Area 4		10/4/2010	0.5 U	**5.3**	0.5 U	2.6	2.1	0.5 U	**101**	**20**	1,240	-	-	-	-	-	-	-	-	6.48	0.975	2.80	0.98	14.7	-86.9
Area 4		6/9/2011	-	-	-	-	-	-	**246**	**28**	**3,180**	-	-	-	-	-	-	-	-	6.67	0.856	< 0.01	0.28	13.3	-88.3
Area 4		10/6/2011	0.5 U	0.69	0.5 U	0.80	0.67	0.5 U	**292**	**36**	**2,480**	-	-	-	-	-	-	-	-	6.84	0.601	3.71	0.26	12.7	-112.5
Area 4		5/9/2012	-	-	-	-	-	-	**451**	**43**	**2,510**	-	-	-	-	-	-	-	-	6.94	0.487	2.90	0.52	13.7	-114.8
Area 4		10/9/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**374**	**30**	**1,860**	-	-	-	-	-	-	-	-	6.87	0.591	< 0.01	0.43	13.4	-129.3
Area 4		5/21/2013	-	-	-	-	-	-	**313**	**28**	**1,890**	-	-	-	-	-	-	-	-	6.88	0.745	2.26	0.30	13.6	-110.5
Area 4		10/16/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**370**	**24**	1,390	-	-	-	-	-	-	-	-	6.92	0.522	1.32	0.38	13.2	-124.4
Area 4		6/11/2014	-	-	-	-	-	-	**175**	**14**	997	-	-	-	-	-	-	-	-	6.60	0.956	3.35	0.59	13.1	-10.8
Area 4		11/3/2014	0.5 U	0.5 U	0.5 U	0.24 J	0.5 U	0.5 U	**350**	**16**	971	-	-	-	-	-	-	-	-	7.08	0.550	1.38	1.42	14.7	-111.1
Area 4		6/26/2015	0.5 U	0.60 J	0.5 U	0.52 J	0.91 J	0.5 U	**157**	**10**	1,060	-	-	-	-	-	-	-	-	7.39	1.238	1.55	0.71	14.7	-55.4
Area 4		9/14/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**408**	**20**	995	10 U	10 U	4,350	-	0.057 U	9.6 J	2.0 U	1.6	7.01	0.400	1.30	0.40	14.6	-152.4

Appendix D
Historical Groundwater Analytical Results
2022 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	PCE	trans-1,2-DCE	TCE	cis-1,2-DCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	TOC	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/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	5	70	5	70	2	10	3.129	1,460					10,000									
Area	Well ID	Date Sampled																							
Area 4		10/16/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**320**	**15**	1,000	-	-	-	-	-	-	-	-	6.78	0.665	0.86	0.43	13.0	-97.3
Area 4		2/12/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**353**	**22**	1,370	10 U	10 U	964	42	0.12	8.0 J	2.0 U	1.1	7.08	0.711	1.94	0.79	11.3	-79.7
Area 4		6/15/2016	1.0 U	1.0 U	1.0 U	0.59 J	1.0 U	1.0 U	**470**	**27**	1,400	-	-	-	250	0.05 U	0.8 U	1.0 U	4.4	6.88	1.031	2.84	0.30	16.7	-106.2
Area 4		11/8/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.2	1.0 U	**470**	**21**	1,100	-	-	-	-	-	-	-	-	7.00	0.268	2.57	0.89	13.2	-153.6
Area 4		10/16/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**440**	**22**	1,300	-	-	-	-	-	-	-	-	7.07	0.626	4.31	0.42	12.6	-119.3
Area 4		10/26/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**470**	**22**	1,400	5.1	1.0 U	6,500	-	-	-	-	-	7.12	0.741	9.32	0.25	13.5	-141.7
Area 4		10/28/2019	-	-	-	-	-	-	**520**	**53**	**2,600**	-	-	-	-	-	-	-	-	7.00	0.890	4.60	0.34	12.0	-130.0
Area 4		12/20/2019	1.0 U	1.0 U	1.0 U	0.85 J	1.4	1.0 U	-	-	-	-	-	-	-	-	-	-	-	7.21	0.391	2.80	2.93	6.4	-181.3
Area 4		10/15/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**430**	**63**	**3,400**	-	-	-	-	-	-	-	-	6.91	0.731	3.10	0.46	13.7	-157.0
Area 4		10/21/2021	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**400**	**37**	**2,000**	-	-	-	-	-	-	-	-	7.04	0.727	47.0	0.68	15.0	-143.0
Area 4		10/6/2022	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	**520**	**47**	**2,000**	-	-	-	-	-	-	-	-	7.15	0.604	7.58	0.68	18.6	-164.5
Area 4	G6M-02-13X	8/2/2002	1.0 U	**4,600**	2.0 U	4.0	2.0 U	2.0 U	5.0 U	-	-	-	-	-	-	-	-	-	-	6.17	0.665	7.62	0.54	14.0	141.0
Area 4		9/23/2004	1.0 U	**5,000**	2.0 U	**13**	16	2.0 U	5.0 U	1.0 U	1,200	0.27	0.15	57	31	2.3	17	1.8 J	1.0 U	6.37	0.618	2.14	0.34	16.7	170.8
Area 4		12/13/2004	1.0 U	**4,600**	2.0 U	**14**	21	2.0 U	5.0 U	1.0 U	1,300	0.27	0.11	88	34	2.5	16 J	2.0 U	5.0 U	5.79	0.518	2.63	0.89	18.3	274.8
Area 4		3/30/2005	50 U	**2,100**	100 U	**64 J**	**210**	100 U	**36**	**4.2**	**4,000**	0.16	0.11	38	60	0.23	13	2.0 U	8.1	5.97	0.735	2.91	0.89	15.0	-22.6
Area 4		8/11/2005	2.0 U	**2,300**	5.9	**190**	**460**	2.0 U	**150**	**34 J**	**12,000 J**	0.026	0.045	46	230	0.05 U	2.3	1.0 U	66	5.82	0.897	5.60	0.74	14.8	-68.8
Area 4		9/29/2005	10 U	**3,700**	10 U	**120**	**470**	10 U	**74**	**22**	**6,800**	0.16	0.12	420	110	0.05 U	8.9	2.4	37	6.41	0.710	6.99	1.26	15.5	-89.1
Area 4		12/14/2005	2.0	**210**	2.0 U	**50**	**850**	2.0 U	**477**	**200 J**	**36,200**	0.057	0.087	11,000	420	0.083	2.0 U	8.2	290	6.60	1.389	0.60	0.11	15.4	-134.4
Area 4		3/22/2006	1.0 U	**660**	2.0 U	**37 J**	**640**	2.0 U	**320**	**170**	**29,000**	0.025 U	0.009 J	21,000	480	0.2 U	8.1	3.0	280	6.67	1.379	2.37	0.90	14.3	-214.4
Area 4		6/22/2006	1.0 U	**160**	2.0 U	**8.8**	**440**	**280**	**750**	**420**	**30,000**	0.025 J	0.51	25,000	480	0.2 U	1.2	20	140	6.54	2.175	16.1	0.28	14.7	-138.7
Area 4		9/18/2006	1.0 U	**550**	2.0 U	**52**	**160**	**280**	**420**	**160**	**9,900**	0.15	1.1	24,000	140	0.2 U	8.1	2.8	52	6.12	1.190	6.90	0.36	13.4	-119.3
Area 4		12/14/2006	1.0 U	**460**	2.0 U	**20**	**190**	**220**	**460**	**260**	**12,000**	0.025	0.35	23,000	-	-	4.3	3.6	140	6.49	1.748	8.30	0.19	11.0	-73.7
Area 4		3/27/2007	1.0 U	**460**	2.0 U	**39**	**120**	**170**	**400**	**170**	**8,400 J**	0.031	3.7	27,000	-	-	9.7	1.6	37	6.08	1.378	11.2	0.12	13.8	-14.6
Area 4		6/13/2007	1.0 U	**440**	2.0 U	**45**	48	**46**	**380**	**300**	**9,400**	0.025 U	6.3	26,000	-	-	13	3.6	78	6.58	1.926	47.5	0.46	12.3	-178.7
Area 4		9/13/2007	1.0 U	**510**	2.0 U	**150**	**120**	**53**	**230**	**88**	**4,800**	0.14	26	20,000	74	0.2 U	480	1.0 U	18	6.54	1.332	18.2	0.45	13.7	-145.3
Area 4		12/14/2007	1.0 U	**690**	2.0 U	**84 J**	58 J	**21 J**	**210**	**46**	**4,500**	0.068	21	16,000	-	-	13	1.0 U	11	6.51	1.133	3.60	0.27	14.2	-133.2
Area 4		3/12/2008	1.0 U	**130**	2.0 U	**96**	29	**12**	**260**	**68**	**7,600**	0.092	35	21,000	-	-	9.0	1.0 U	17	6.48	1.221	7.70	0.57	14.5	-140.5
Area 4		10/6/2008	5.0 U	5.0 U	5.0 U	**9.7**	7.9	**7.5**	**380**	**91**	**4,940**	6.5 U	8.8	14,000	300	0.13 U	11	0.03 U	24	6.56	1.071	5.20	0.28	13.6	-173.6
Area 4		1/21/2009	1.7 U	1.4 U	1.3 U	5.0	5.4	**5.7**	**371**	**72 J**	**3,990**	0.25 U	3.8	17,000	200	0.13 U	14	0.03 U	11 J	6.88	0.821	4.00	0.28	13.1	-121.2
Area 4		5/6/2009	0.5 U	0.5 U	0.24 J	**5.1**	9.8	**6.2**	**351**	**69**	**3,820**	1.2 U	2.6	26,000	300 J	0.012 J	12	0.03 U	9.4 J	6.01	0.916	2.09	0.29	14.2	-93.4
Area 4		10/15/2009	0.5 U	0.92	0.70	**8.6**	16	**8.5**	**369**	**93**	**6,800**	1.2 U	2.2	7,400	370	0.13 U	13	0.03 U	7.0 J	6.47	0.932	1.71	0.24	14.5	-148.8
Area 4		4/20/2010	0.5 U	0.5 U	0.42 J	0.29 J	14	**13**	**322**	**134 J**	**5,790**	1.3 U	6.4	44,000	500	0.13 U	5.0 U	0.03 U	36	6.47	1.219	2.98	0.28	14.3	-7.3
Area 4		10/4/2010	0.5 U	0.30 J	0.24 J	1.6	8.3	**8.4**	**281**	**59**	**4,690**	1.2 U	9.5	48,000	370	0.046 J	3.3 J	0.03 U	10 U	6.57	1.168	0.90	0.18	13.7	-124.5
Area 4		6/9/2011	-	-	-	-	-	-	**302**	**72**	**6,820**	-	-	-	-	-	-	-	-	6.49	1.210	2.19	0.21	13.4	-110.8
Area 4		10/6/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.96	**2.4**	**258**	**36**	**5,690**	1.2 U	1.5 U	12,000	110	0.13 U	0.45 J	0.056	6.7 J	6.65	1.235	2.00	0.07	14.6	-94.6
Area 4		5/9/2012	-	-	-	-	-	-	**205**	**26**	**6,670**	-	-	-	-	-	-	-	-	7.00	1.281	1.01	0.16	11.5	-118.5
Area 4		10/11/2012	0.5 U	0.5 U	0.5 U	0.83	0.69	0.5 U	**159**	**25**	**8,190**	1.3 U	87	22,000	380	0.013 J	5.0 U	0.03 U	2.7 J	6.68	1.195	< 0.01	0.34	12.3	-109.8
Area 4		5/21/2013	-	-	-	-	-	-	**212**	**22**	**12,500**	-	-	-	-	-	-	-	-	6.88	0.900	4.89	0.12	12.0	-118.0
Area 4		10/16/2013	0.5 U	0.5 U	0.27 J	0.78	1.8	1.1	**140**	**19**	**11,400**	1.8	3.9	34,000	350	0.13 U	5.0 U	0.037	2.5 J	6.87	0.916	< 0.01	0.37	12.0	-110.0
Area 4		6/11/2014	-	-	-	-	-	-	**195**	**20**	**15,800**	-	-	-	-	-	-	-	-	6.74	0.958	3.92	0.27	13.6	-85.0
Area 4		10/29/2014	0.5 U	0.5 U	0.5 U	1.3	2.8	1.8	**128**	**12 J**	**7,920 J**	1.2 U	1.5 U	7,300	280	0.13 U	0.16 J	0.03 U	5.0 U	6.86	0.822	6.49	0.26	-	-81.0
Area 4		6/23/2015	0.5 U	0.5 U	0.5 U	1.7	3.4	**2.5**	**142**	**13**	**11,100**	5.0 U	5.0 U	1,840	250	0.11 U	2.6 J	1.0 U	2.9	6.74	0.817	5.37	1.24	14.6	-107.2
Area 4		9/11/2015	1.0 U	1.0 U	1.0 U	2.8	5.2	**4.9**	**142**	**11**	**9,980**	10 U	10 U	832	-	0.067 J	0.52 J	2.0 U	2.3	6.45	0.619	2.85	0.25	13.4	-76.0
Area 4		10/16/2015	1.0 U	1.0 U	1.0 U	3.6	1.0 U	**3.3**	**114**	**9.8**	**12,300**	10 U	10 U	473	261	0.11 U	1.5 J	2.0 U	3.2	6.84	0.667	2.90	0.31	8.4	-87.2
Area 4		2/12/2016	1.0 U	4.5	0.51 J	**14**	13	**7.7**	**145**	**10**	**11,100**	10 U	10 U	500	252	0.11	10 U	2.0 U	2.1	7.02	0.671	2.00	0.59	9.5	-102.3
Area 4		6/16/2016	1.0 U	1.0 U	0.65 J	**22**	20	**9.4**	**96**	**7.9**	**11,000**	0.87 J	8.2	3,400	210	0.05 U	0.8 U	1.0 U	2.4	7.03	0.618	4.63	0.66	16.5	-86.6
Area 4		11/8/2016	1.0 U	1.0 U	0.59 J	**9.7**	65	**23**	**110**	**7.7**	**12,000**	1.1 U	7.8	1,500	190	0.05 U	0.63 J	1.0 U	1.7	6.98	0.383	2.97	0.77	12.3	-152.9
Area 4		10/19/2017	1.0 U	3.3	0.47 J	**21**	57	**17**	**120**	**6.4**	**8,500**	0.73 J	5.9	1,500	180	0.05 U	3.0	1.0 U	1.8	6.75	0.501	5.52	0.22	12.4	-58.1
Area 4		10/24/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.8	1.6	**150**	**11**	**18,000**	1.8	2.8	5,900	-	-	-	-	-	6.53	1.260	14.6	1.39	12.6	-40.1
Area 4		10/14/2019	1.0 U	1.0 U	1.0 U	1.0 U	4.4	**5.1**	**140**	**10**	**20,000**	-	-	-	-	-	-	-	-	6.70	1.300	4.70	0.11	14.0	-82.0
Area 4		10/16/2020	1.0 U	1.0 U	1.0 U	1.0 U	0.90 J	0.96 J	**160**	**12 J**	**26,000**	-	-	-	-	-	-	-	-	6.79	0.958	< 0.01	0.63	13.0	-79.7
Area 4		10/15/2021	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**250**	**14**	**22,000**	-	-	-	-	-	-	-	-	6.72	2.580	1.22	0.68	12.4	-96.8
Area 4		10/5/2022	1.0 U	1.0 U	1.0 U	0.5 U	0.33 J	1.0 U	**270**	**11**	**19,000**	-	-	-	-	-	-	-	-	6.46	1.906	2.57	1.57	16.3	-64.4
Area 4	G6M-06-01X	3/30/2006	1.0 U	**30**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.03	0.652	70.7	3.73	8.2	-87.8
Area 4		3/30/2007	1.0 U	**72**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.73	1.005	10.2	2.87	10.0	138.5
Area 4		9/13/2007	1.0 U	**83**	2.0 U	2.0 U	2.1	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.60	0.967	6.30	10.7	12.7	-93.9
Area 4		12/14/2007	1.0 U	**110**	2.0 U	2.0 U	2.3	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.96	0.991	3.90	2.43	17.5	132.9
Area 4		10/16/2008	1.0 U	**71**	1.0 U	1.8	1.4	1.0 U	-	-	-	-	-	-	-	-	-	-	-	5.51	0.956	20.0	3.08	10.8	118.6
Area 4		10/15/2009	8.0 U	**170**	8.0U	**28**	6.3 J	8.0 U	8.0 U	0.32	50 U	-	-	-	-	-	-	-	-	5.82	0.832	0.13	2.69	13.7	85.3
Area 4		10/4/2010	4.0 U	**120**	4.0 U	3.4 J	7.2	4.0 U	5.0 U	0.211 U	33.2 U	-	-	-	-	-	-	-	-	6.00	1.160	25.1	1.72	13.2	57.1
Area 4		6/8/2011	0.5 U	**190**	0.5 U	**7.7**	7.2	0.5 U	5.0 U	0.1 U	25 U	-	-	-	-	-	-	-	-	5.81	0.979	4.01	1.39	17.1	122.0
Area 4		10/6/2011	1.3 U	**96**	1.3 U	**30**	46	**3.5**	3.7 J	0.14	39	-	-	-	-	-	-	-	-	6.22	0.825	13.1	0.59	11.0	40.8
Area 4		5/8/2012	10 U	**310**	10 U	**18**	16	10 U	5.0 U	0.1 U	9.4 J	-	-	-	-	-	-	-	-	6.14	0.943	2.59	0.65	13.1	87.4
Area 4		10/10/2012	4.0 U	**180**	4.0 U	**7.6**	9.1	4.0 U	5.0 U	0.052 J	8.8 J	-	-	-	-	-	-	-	-	5.94	0.819	2.61	0.54	10.6	56.2
Area 4		5/21/2013	5.0 U	**170**	5.0 U	**30**	17	2.0 J	5.0 U	0.1 U	25 U	-	-	-	-	-	-	-	-	5.96	1.058	8.89	0.36	13.1	81.0
Area 4		11/05/2020	1.0 U	0.95 J	1.0 U	1.1 J	9.0 J	1.0 U	**160**	**140**	**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	**120**	0.34 J	**20**	34	**14**	-	-	-	-	-	-	-	-	-	-	-	6.44	1.099	3.11	0.88	16.0	53.9
Area 4		6/11/2014	0.29 J	**170**	0.53	**54**	**81**	**6.0**	3.2 J	0.47	33	-	-	-	-	-	-	-	-	6.05	0.900	4.29	0.71	11.6	144.8
Area 4		11/3/2014	5.0 U	**210**	5.0 U	**39**	**95**	**6.7**	2.5 U	0.146 U	20 J	-	-	-	-	-	-	-	-	6.31	0.625	2.27	1.30	5.7	75.8
Area 4		6/26/2015	0.5 U	**105**	0.5 U	**50**	38	1.1	2.1 J	0.05 U	9.4 J	-	-	-	-	-	-	-	-	5.99	0.917	9.69	1.03	17.1	101.6
Area 4		10/16/2015	1.0 U	**70**	1.0 U	**31**	1.0 U	1.4 J	4.0 U	0.087	15	-	-	-	-	-	-	-	-	6.27	1.069	2.97	0.35	8.0	72.0

Appendix D
Historical Groundwater Analytical Results
2022 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	PCE	trans-1,2-DCE	TCE	cis-1,2-DCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	TOC	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/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	5	70	5	70	2	10	3.129	1,460					10,000									
Area	Well ID	Date Sampled																							
Area 4		2/22/2016	1.0 U	**86**	0.54 J	**25**	21	0.65 J	4.0 U	0.1 U	22	10 U	10 U	3,560	56	0.28	16	2.0 U	0.81 J	6.23	0.818	4.89	0.90	11.5	21.6
Area 4		6/16/2016	1.0 U	**77**	0.89 J	**34**	61	1.5	1.8 J	0.19	20	-	-	-	-	-	-	-	-	6.17	0.937	11.3	1.29	16.7	3.6
Area 4		11/8/2016	1.0 U	**84**	1.0 U	**27**	38	0.93 J	3.0 U	0.05 U	4.7 J	-	-	-	-	-	-	-	-	6.30	0.689	2.01	0.94	11.9	-136.1
Area 4		5/16/2017	1.0 U	**79**	0.39 J	**25**	30	0.90 J	3.0 U	0.05 U	16	0.64 J	1.0 U	4,300	54	0.34	12	1.0 U	1.0 U	6.07	0.841	5.79	0.47	12.9	89.7
Area 4		10/19/2017	1.0 U	**65**	0.5 U	**15**	13	0.99 J	1.5 J	0.23	50	1.1 U	1.0 U	4,100	75	0.47	12	1.0 U	2.2	6.33	0.996	8.18	0.22	13.4	51.1
Area 4		4/3/2018	1.0 U	**58**	0.65 J	**11**	15	1.1	3.0 U	0.16	54	1.1 U	1.0 U	6,300	53	0.35	11	1.0 U	6.8	6.51	1.063	4.17	0.81	11.3	-19.0
Area 4		10/24/2018	1.0 U	**28 J**	1.0 J	**9.6 J**	24 J	**3.5 J**	3.6	0.10	160	1.6	1.3	6,700	67	0.095 J	10 J	1.0 U	29 J	5.79	1.217	38.7	0.32	13.4	-26.4
Area 4		4/4/2019	1.0 U	**22**	0.42 J	**8.5**	11	1.5	1.5 J	0.40	80	1.3	1.0 U	7,800	-	0.23	12	1.0 U	1.8	6.20	1.200	6.80	0.92	13.0	-120.0
Area 4		10/30/2019	-	-	-	-	-	-	2.4 J	0.75	130	1.2	1.0 U	11,000	57	0.048 J	12	0.83 U	0.86 J	6.00	1.200	7.00	0.15	13.0	4.8
Area 4		12/26/2019	1.0 U	**16**	0.53 J	**8.6**	8.8	1.0 U	-	-	-	-	-	-	-	-	-	-	-	6.22	1.171	1.84	0.86	11.7	-22.4
Area 4		05/12/2020	1.0 U	**5.6**	1.1	**12**	32	**17**	3.0 U	0.15	16	1.3	2.1	16,000	66	0.10 U	4.1	1.4	5.2	5.98	1.010	12.7	0.82	11.9	-13.9
Area 4		10/19/2020	1.0 U	**14 J**	0.74 J	**8.4 J**	8.9 J	**3.8 J**	10	2.5	540	1.0 J	1.0 U	18,000	78	0.05 U	7.3	0.93 U	4.5	6.04	0.842	11.8	0.43	13.6	-14.8
Area 4		5/14/2021	1.0 U	3.3	0.73 J	4.8	10	**3.2**	**15**	3.5	1200 J	1.5	2.5	13,000	75	0.02 J	7.9	0.81 U	2.5	6.22	0.739	7.8	2.80	11.6	-68.8
Area 4		10/18/2021	1.0 U	**11**	0.68 J	**12**	13	**2.3**	**14**	1.7	**2,700**	0.69 J	0.84 J	6,500	100	0.05 U	8.0	0.81 U	7.0	6.25	1.980	7.4	0.60	11.0	-11.9
Area 4		5/3/2022	1.0 U	3.4	0.67 J	**8.4**	6.8	1.0 U	3.2 J	0.29	**1,500**	0.68 J	0.71 U	11,000 J	48	0.053 J	7.6	1.2 U	1.1	5.87	0.978	53.0	0.52	11.7	47.3
Area 4		10/10/2022	1.0 U	1.5 J	0.70 J	3.1	3.9	1.0 U	9.3	0.72	**11,000**	0.76 U	0.71 U	5,200	100	0.028 J	6.3	1.7 U	2.1	6.64	0.920	4.7	0.69	14.4	3.6
Area 4	G6M-97-28X	9/14/2015	1.0 U	0.57 J	1.6	**63**	37	**22**	4.0 U	0.23	**2,110**	10 U	10 U	85	-	0.11 U	12	2.0 U	1.1	6.21	0.256	-	0.30	14.4	67.7
Area 4		2/12/2016	1.0 U	1.0 U	1.0 U	1.1	1.4	0.53 J	**48**	2.5	**5,690**	10 U	10 U	235	111	0.085 J	4.2 J	2.0 U	1.6	6.92	0.210	8.64	1.99	6.1	72.8
Area 4		6/16/2016	-	-	-	-	-	-	**190**	**6.0**	**2,200**	-	-	-	-	-	-	-	-	6.68	0.312	2.15	0.28	23.1	-85.3
Area 4		11/8/2016	-	-	-	-	-	-	**27**	2.2	**18,000**	-	-	-	-	-	-	-	-	6.72	0.537	11.9	0.86	12.8	-70.9
Area 5		12/13/2006	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 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		10/26/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**92**	**9.5**	**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		10/28/2019	-	-	-	-	-	-	**71**	**7.9**	**10,000**	-	-	-	-	-	-	-	-	6.10	1.100	1.80	0.35	12.0	6.8
Area 4		10/15/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**44**	**8.3**	**12,000**	-	-	-	-	-	-	-	-	6.08	0.875	6.24	0.59	14.7	-7.6
Area 4		10/12/2021	-	-	-	-	-	-	**120**	**7.7**	**6,800**	-	-	-	-	-	-	-	-	6.69	0.550	4.89	1.25	17.5	-125.0
Area 4		10/6/2022	-	-	-	-	-	-	**70**	**4.3**	**5,000**	-	-	-	-	-	-	-	-	6.77	0.528	7.49	0.76	14.7	-94.6
Area 5	G6M-02-05X	2/28/2002	1.0 U	**130**	2.0 U	2.0 U	1.9 J	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.15	0.597	11.0	6.61	15.7	181.1
Area 5		1/30/2003	1.0 U	**170**	2.0 U	2.0 U	2.3	2.0 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.7	-
Area 5		9/30/2005	1.0 U	**200**	2.0 U	2.0 U	2.6	2.0 U	-	-	-	-	-	-	-	-	-	-	-	4.73	0.512	7.90	3.61	15.8	441.8
Area 5		9/22/2006	1.0 U	**350**	2.0 U	2.0 U	2.2	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.52	0.543	7.38	2.14	12.7	94.8
Area 5		9/12/2007	1.0 U	**510**	2.0 U	**50**	7.9	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.39	0.723	30.6	0.78	12.3	-57.8
Area 5		10/20/2008	10 U	**390**	10 U	**17**	4.4 J	10 U	-	-	-	-	-	-	-	-	-	-	-	7.00	0.588	3.00	1.83	12.4	-41.9
Area 5		10/19/2009	10 U	**370**	10 U	**53**	10 U	10 U	**49**	**3.8**	**2,490**	1.3 U	1.6 U	410	57	0.26	19	0.03 U	10 U	6.22	0.699	1.40	0.31	12.5	30.6
Area 5		10/5/2010	5.0 U	**240**	5.0 U	**100**	4.0 J	5.0 U	**71**	**5.4**	**2,420**	1.2 U	1.5 U	160	20 U	0.025 J	13	0.03 U	10 U	6.25	0.749	5.99	0.25	12.3	-37.5
Area 5		6/8/2011	0.62	**200**	3.7	**230**	**78**	**18 J**	**105**	**8.6**	**2,700**	1.2 U	10	5,400	180	0.13 U	11	0.03 U	2.6 J	6.16	0.708	< 0.01	0.24	12.3	-42.8
Area 5		10/6/2011	2.0 U	**37**	2.0 U	**140**	59	**25**	**125**	**11**	**2,300**	1.2 U	15	6,600	530	0.012 J	14	0.03 U	2.1 J	6.18	0.959	1.40	0.73	11.6	-4.0
Area 5		10/6/2011	2.0 U	**37**	2.0 U	**140**	59	**25**	**125**	**11**	**2,300**	1.2 U	15	6,600	530	0.012 J	14	0.03 U	2.1 J	6.18	0.959	1.40	0.73	12.4	-4.0
Area 5		5/9/2012	0.5 U	**140**	0.5 U	**68**	17	0.5 U	**103**	**8.6**	**2,060**	1.3 U	1.6 U	3,900	75	0.13 U	14	0.03 U	10 U	6.19	0.682	1.52	0.78	12.6	9.0
Area 5		10/10/2012	2.0 U	**94**	2.0 U	**44**	16	2.0 U	**73**	**6.8**	1,460	1.2 U	1.5 U	4,400	64	0.11 J	14	0.03 U	10 U	6.14	0.809	< 0.01	1.92	11.2	15.2
Area 5		5/21/2013	0.30 J	**38 J**	0.48 J	**33 J**	**78**	**2.3**	**84**	**8.4**	1,310	1.2 U	1.5 U	2,200	100 J	0.13 U	12	0.03 U	10 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		9/24/2004	1.0 U	**5.5**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	7.33	0.090	0.02	9.48	12.3	152.8
Area 5		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		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		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		10/20/2008	0.5 U	0.47 J	0.5 U	0.5 U	0.5 U	0.5 U	-	-	-	-	-	-	-	-	-	-	-	7.09	0.109	6.50	7.71	11.3	88.8
Area 5		10/14/2009	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	8.0 U	0.2 U	50 U	-	-	-	-	-	-	-	-	6.98	0.115	0.20	8.96	11.4	26.1
Area 5		10/5/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.1 U	25 U	-	-	-	-	-	-	-	-	6.90	0.128	4.38	7.66	11.6	63.6
Area 5		10/7/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 J	0.1 U	25 U	-	-	-	-	-	-	-	-	6.87	0.076	18.6	6.30	11.8	24.7
Area 5		10/10/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.1 U	25 U	-	-	-	-	-	-	-	-	7.11	0.134	10.5	8.89	11.4	16.8
Area 5		10/15/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.1 U	25 U	-	-	-	-	-	-	-	-	7.36	0.134	2.62	9.84	12.9	110.9
Area 5		10/30/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.155 U	6.0 J	-	-	-	-	-	-	-	-	7.21	0.101	2.18	7.73	13.9	73.1
Area 5		10/19/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	0.1 U	15 U	-	-	-	-	-	-	-	-	7.29	0.114	2.23	8.05	12.9	82.5
Area 5		11/11/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.05 U	3.0 U	-	-	-	-	-	-	-	-	7.86	0.840	4.92	6.80	9.6	-32.7
Area 5		10/19/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.075 U	5.0 U	-	-	-	-	-	-	-	-	7.02	0.123	4.41	5.72	11.9	40.2
Area 5		10/22/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.05 U	3.0 U	-	-	-	-	-	-	-	-	7.21	0.152	11.8	5.35	11.2	168.4
Area 5		10/15/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.7 J	0.05 U	3.0 U	-	-	-	-	-	-	-	-	7.30	0.150	3.50	8.40	11.0	63.0
Area 5		10/16/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.5 J	0.05 U	1.3 J	-	-	-	-	-	-	-	-	7.37	0.095	3.93	8.55	11.8	224.0
Area 5		10/14/2021	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.5 J	0.05 U	3.0 U	-	-	-	-	-	-	-	-	7.26	0.119	0.50	6.97	13.8	107.0
Area 5		10/6/2022	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	1.5 J	0.05 U	5.0 U	-	-	-	-	-	-	-	-	7.21	0.153	2.69	6.20	13.1	605.6
Area 5	G6M-02-07X	2/26/2002	1.0 U	**24**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	7.34	0.259	46.0	0.00	11.5	110.3
Area 5		9/23/2004	1.0 U	**26**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	7.26	0.423	25.0	1.72	12.4	332.8
Area 5		9/30/2005	1.0 U	**16**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	7.69	0.389	7.70	6.98	11.1	121.2
Area 5		9/21/2006	1.0 U	**11**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	7.58	0.251	14.3	3.72	10.8	143.6
Area 5		9/13/2007	1.0 U	**12**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	7.68	0.334	3.00	3.78	10.5	43.3
Area 5		10/20/2008	0.5 U	**9.8 J**	0.5 U	0.27 J	0.5 U	0.5 U	-	-	-	-	-	-	-	-	-	-	-	7.46	0.271	12.0	3.15	10.5	42.8
Area 5		10/15/2009	10 U	**6.7 J**	10 U	**210**	10 U	10 U	8.0 U	0.127 U	50 U	-	-	-	-	-	-	-	-	7.41	0.413	3.00	1.15	11.5	-14.0
Area 5		1/15/2010	0.75 U	**5.7**	0.75 U	0.5 U	0.5 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	7.53	0.344	1.88	3.26	11.6	150.2
Area 5		10/5/2010	0.5 U	4.7	0.5 U	0.24 J	0.5 U	0.5 U	5.0 U	0.1 U	25 U	-	-	-	-	-	-	-	-	7.39	0.296	1.33	2.57	11.8	60.3
Area 5		10/3/2011	0.5 U	3.6	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.1 U	25 U	-	-	-	-	-	-	-	-	7.54	0.198	5.12	1.58	11.8	26.6
Area 5		10/11/2012	0.5 U	4.6	0.5 U	0.5 U	0.57	0.5 U	5.0 U	0.028 J	25 U	-	-	-	-	-	-	-	-	7.68	0.352	2.69	1.31	-	98.1

		Analytical Method	VOCs						Dissolved Metals			Dissolved Gases			General Chemistry					Field Parameters					
		Analyte	1,1-DCE	PCE	trans-1,2-DCE	TCE	cis-1,2-DCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	TOC	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/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	5	70	5	70	2	10	3.129	1,460					10,000									
Area	Well ID	Date Sampled																							
Area 5		10/15/2013	0.5 U	1.1	0.5 U	0.5 U	0.5 U	0.5 U	2.9 J	0.1 U	5.1 J	-	-	-	-	-	-	-	-	7.62	0.911	1.05	2.39	-	99.8
Area 5		10/29/2014	0.5 U	3.9	0.5 U	0.27 J	0.62	0.5 U	2.4 J	0.025 U	7.8 J	-	-	-	-	-	-	-	-	7.41	0.535	3.71	0.22	11.4	10.9
Area 5		10/19/2015	1.0 U	4.5	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	0.1 U	15 U	-	-	-	-	-	-	-	-	7.64	0.362	3.69	0.35	16.0	75.3
Area 5		11/11/2016	1.0 U	**5.4**	1.0 U	0.75 J	1.0	1.0 U	3.0 U	0.050	11	-	-	-	-	-	-	-	-	7.86	0.084	4.92	6.80	9.6	-32.7
Area 5		10/23/2017	1.0 U	4.2	1.0 U	1.0 U	1.0 U	1.0 U	1.9 J	0.11	12	-	-	-	-	-	-	-	-	7.57	0.335	9.82	0.29	11.9	-39.4
Area 5		10/23/2018	1.0 U	3.4	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.05 U	3.0 U	-	-	-	-	-	-	-	-	7.65	0.575	8.66	0.31	11.7	81.7
Area 5		10/9/2019	1.0 U	4.7	1.0 U	0.52 J	1.0 U	1.0 U	3.0 U	0.05 U	1.2 J	-	-	-	-	-	-	-	-	7.60	0.320	1.20	0.48	11.0	47.0
Area 5		10/16/2020	1.0 U	3.8 J	1.0 U	1.0 U	1.0 U	1.0 U	1.5 J	0.017 J	6.1 J	-	-	-	-	-	-	-	-	7.81	0.217	39.1	0.73	12.0	-5.3
Area 5		10/14/2021	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.042 J	13	-	-	-	-	-	-	-	-	7.78	1.510	4.41	0.01	14.3	-56.8
Area 5		10/7/2022	1.0 U	2.0	1.0 U	0.5 U	1.0 U	1.0 U	1.1 J	**27**	**1,600**	-	-	-	-	-	-	-	-	7.36	0.408	2.78	0.58	12.8	579.6
Area 5	G6M-02-11X	8/1/2002	1.0 U	**450**	2.0 U	2.8	2.0 U	2.0 U	5.0 U	-	-	-	-	-	-	-	-	-	-	6.01	0.984	8.13	0.46	13.9	184.0
Area 5		8/28/2002	1.0 U	**540 J**	2.0 U	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		10/29/2002	1.0 U	**970**	2.0 U	**22**	3.0	2.0 U	5.0 U	1.0 U	**1,700**	-	-	-	51	0.10 U	17	2.0 U	5.0 U	6.02	0.920	5.04	0.49	13.2	51.0
Area 5		2/3/2003	1.0 U	**710**	20 U	**22**	2.0 U	2.0 U	5.0 U	1.0 U	-	-	-	-	65	-	-	-	5.0 U	6.22	0.971	12.7	0.71	14.1	178.0
Area 5		7/16/2003	1.0 U	**530**	2.0 U	**54**	33	2.0 U	5.0 U	1.0 U	-	0.005 U	0.014	460	120	-	16 J	2.0 U	5.0 U	6.31	0.813	11.9	0.86	16.1	166.0
Area 5		9/26/2003	1.0 U	**590**	2.0 U	**31**	37	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		1/8/2004	1.0 U	**300**	2.0 U	**15**	49	2.0 U	5.0 U	1.0 U	**1,900**	0.005 U	0.0093	2,300	150	-	12 J	2.0 U	5.0 U	6.29	0.729	0.60	0.00	6.6	104.0
Area 5		3/10/2004	1.0 U	**160**	2.0 U	**11**	53	2.0 U	5.0 U	1.0 U	**2,200**	0.005 U	0.068	14,000	130	-	9.6	2.0 U	1.8	6.39	0.847	7.50	0.82	15.6	103.0
Area 5		6/4/2004	1.0 U	**440**	2.0 U	**23**	54	2.0 U	5.0 U	1.0 U	**1,900**	0.005 U	0.010	2,300	110	-	12	1.9 J	2.4 J	6.72	0.807	21.3	12.1	13.7	54.5
Area 5		9/22/2004	1.0 U	**540**	2.0 U	**50**	**140**	2.0 U	5.0 U	1.0 U	**2,400**	0.005 U	0.005 U	13,000	100	0.5 U	12	1.5 J	1.2	6.19	0.996	1.25	0.96	11.1	412.7
Area 5		12/15/2004	1.0 U	**760**	2.0 U	**47**	**120**	2.0 U	5.0 U	1.0 U	**2,100**	0.005 U	0.021	9,700	95	1.0	15	2.0 U	5.0 U	6.35	0.675	21.2	1.36	13.8	200.1
Area 5		3/28/2005	4.0 U	**1,100**	40 U	**41**	45	40 U	5.0 U	1.0 U	**2,200**	0.005 U	0.065	10,000	90	0.2 U	13	2.0 U	3.6 J	6.19	0.938	48.3	1.02	16.0	84.3
Area 5		7/1/2005	10 U	**1,500**	10 U	**90**	**280**	10 U	2.1	1.0 U	**1,800**	0.028	0.42	15,000	98	0.05 U	14	1.0 U	9.4	5.78	0.806	6.66	0.37	14.9	221.6
Area 5		9/27/2005	1.0 U	**240**	2.0 U	**78**	**260**	**16**	5.0 U	1.0 U	**2,500**	0.020 J	8.1	21,000	148	0.05 U	5.9 J	1.0 U	3.4	5.92	0.755	0.69	0.40	13.0	93.6
Area 5		12/12/2005	1.0 U	**220**	2.0 U	**28**	50	**9.1**	7.8	0.2 J	**3,100**	0.082	29	24,000	270	1.3 J	3.5	1.0 U	5.5	6.28	1.107	8.90	0.18	13.0	64.8
Area 5		3/21/2006	1.0 U	**520**	2.3	**94**	**230**	**60**	5.0 U	0.1 U	**1,500**	0.025 U	34	17,000	120	0.2 U	8.8	1.0 U	8.2	6.45	0.765	7.15	12.0	14.5	326.6
Area 5		6/22/2006	1.0 U	**130**	20	**44**	20	**9.2**	5.0 U	1.0 U	**6,300**	0.051	78	22,000	210	0.2 U	2.5	1.0 U	6.1	6.19	1.231	5.04	0.27	14.0	59.7
Area 5		9/22/2006	1.0 U	**37**	2.8	**17**	8.6	**4.0**	6.9	0.58	**9,300**	0.089	15	21,000	180	0.2 U	4.9	1.0 U	9.8	5.93	1.079	4.55	1.22	13.0	-158.9
Area 5		3/27/2007	1.0 U	**38**	9.8	**21**	3.6	2.0 U	**120**	**7.1**	**24,000 J**	6.8	28	23,000	-	-	-	-	10	6.25	0.912	19.0	0.61	12.6	-39.6
Area 5		6/13/2007	1.0 U	**30**	10	**28**	12	**2.8**	**310**	**6.8**	**18,000**	4.8	33	27,000	-	-	9.6	1.6	12	6.22	1.198	2.10	0.65	11.2	-36.4
Area 5		9/11/2007	1.0 U	4.4	12	**24**	7.9	**4.3**	**420**	**18**	**18,000**	2.8	36	30,000	270	0.2 U	470	1.0 U	14	6.24	1.423	9.70	3.52	11.0	-11.1
Area 5		12/13/2007	1.0 U	2.8 J	5.5 J	**19 J**	6.0 J	**4.4 J**	**470**	**47**	**18,000**	8.3	16	29,000	-	-	5.0 U	1.0	15	6.36	1.409	0.50	0.52	11.8	-117.9
Area 5		3/11/2008	1.0 U	2.0 U	9.7	**6.2**	2.5	2.0 U	**570**	**59**	**27,000**	24	5.8	28,000	-	-	5.0 U	2.8	17	6.35	1.560	0.30	0.41	11.7	-90.5
Area 5		10/16/2008	0.5 U	1.3	0.80	**7.3**	6.9	**2.2**	**1,170**	**116**	**8,420**	1.2 U	5.4	39,000	240	0.10 U	9.3	0.03 U	21	5.80	0.154	4.00	1.51	13.7	-20.6
Area 5		5/7/2009	0.5 U	0.5 U	0.92	0.76	0.47 J	0.5 U	**1,060**	**125**	**3,950**	3.1	3.5	42,000	370 J	0.13 U	17	0.03 U	31	6.04	1.605	0.32	0.24	12.1	-117.5
Area 5		10/14/2009	0.5 U	0.23 J	0.63	1.4	0.58	0.46 J	**1,070**	**126**	**2,390**	1.2 U	1.5 U	55,000	430	0.13 U	9.7	0.03 U	8.7 J	6.46	1.342	5.00	0.52	11.1	-114.9
Area 5		4/20/2010	0.5 U	0.5 U	0.24 J	1.6	24	**5.8**	**1,050**	**106 J**	**3,760**	1.2 U	2.0	17,000	500	0.13 U	5.0 U	0.03 U	8.7 J	6.75	0.778	1.50	0.38	11.6	-130.5
Area 5		10/5/2010	0.5 U	0.5 U	0.38 J	0.94	0.52	0.66	**956**	**94**	**1,590**	1.2 U	1.5 U	47,000	700	0.13 U	1.4 J	0.03 U	10 U	6.51	1.368	0.86	0.72	11.6	-136.0
Area 5		6/9/2011	-	-	-	-	-	-	**804**	**92**	**2,480**	-	-	-	-	-	-	-	-	6.60	1.131	4.53	0.10	11.7	-111.1
Area 5		10/3/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.64	1.2	**901**	**100**	**2,670**	1.2 U	1.5 U	19,000	520	0.13 U	5.0 U	0.03 U	7.6 J	6.58	0.740	0.95	0.44	11.7	-114.4
Area 5		5/8/2012	-	-	-	-	-	-	**769**	**84**	**2,560**	-	-	-	-	-	-	-	-	6.83	1.014	1.03	0.14	11.6	-128.1
Area 5		10/10/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**683**	**70**	**1,840**	3.9	1.5 U	12,000	390	0.11 J	1.3 J	0.03 U	4.2 J	6.52	1.341	0.84	0.28	12.5	-122.8
Area 5		5/21/2013	-	-	-	-	-	-	**649**	**60**	**3,660**	-	-	-	-	-	-	-	-	6.70	1.247	< 0.01	0.24	18.2	-124.9
Area 5		10/16/2013	0.5 U	0.5 U	0.20 J	0.5 U	0.26 J	0.5 U	**616**	**53**	**3,230**	17	1.6 U	56,000	320	0.13 U	5.0 U	0.03 U	4.2 J	6.80	1.243	0.39	0.22	14.2	-114.8
Area 5		6/11/2014	-	-	-	-	-	-	**573**	**50**	**8,010**	-	-	-	-	-	-	-	-	6.84	1.069	1.38	0.32	13.5	-104.4
Area 5		10/29/2014	0.5 U	0.5 U	0.34 J	0.5 U	0.42 J	0.44 J	**624**	**64 J**	**4,860 J**	8.1 J	1.5 U	15,000	340	0.13 U	0.17 J	0.03 U	5.0 U	6.96	1.224	0.65	0.35	12.8	-156.8
Area 5		6/26/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**578**	**51**	**10,800**	5.0 U	5.0 U	8,180	312	0.17	2.0 J	1.0 U	5.8	5.98	0.934	9.20	2.49	12.5	-62.1
Area 5		9/10/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**546**	**44**	**9,920**	5.5 J	10 U	11,500	-	0.087 J	0.78 J	2.0 U	5.3	6.29	0.570	5.37	3.21	14.6	44.2
Area 5		10/15/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**551**	**44**	**10,400**	5.8 J	10 U	9,710	229	0.062 J	10 U	2.0 U	4.9	7.03	0.942	1.12	0.26	14.8	-132.7
Area 5		2/11/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**584**	**46**	**9,880**	10 U	10 U	4,980	219	0.10 J	10 U	2.0 U	5.1	7.02	0.717	2.14	0.60	10.1	-117.2
Area 5		6/15/2016	1.0 U	1.0 U	1.0 U	1.0 U	0.63 J	1.0 U	**550**	**35**	**9,000**	4.6	1.0 U	11,000	250	0.05 U	0.8 U	1.0 U	4.4	6.81	0.861	20.9	2.29	18.2	-130.1
Area 5		11/14/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**530**	**32**	**7,600**	5.6	1.0 U	11,000	220	0.05 U	1.0 U	1.0 U	4.1	7.16	0.632	5.71	0.92	11.8	-127.9
Area 5		10/19/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**530**	**33**	**7,300**	5.2	1.0 U	6,500	190	0.03 J	1.0 U	1.0 U	3.9	6.91	0.816	12.1	0.22	12.1	-115.9
Area 5		10/23/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**480**	**38**	**8,800**	-	-	-	-	-	-	-	-	6.85	1.013	11.2	0.21	11.7	4.2
Area 5		10/15/2019	1.0 U	1.0 U	1.0 U	1.0 U	0.46 J	1.0 U	**500**	**37**	**9,900**	-	-	-	-	-	-	-	-	6.80	1.400	12.0	0.34	12.0	-120.0
Area 5		10/14/2020	1.0 U	1.0 U	1.0 U	0.49 J	0.47 J	1.0 U	**450**	**37**	**10,000**	-	-	-	-	-	-	-	-	7.08	1.070	15.2	0.73	12.9	-127.0
Area 5		10/12/2021	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**520**	**39**	**8,800**	-	-	-	-	-	-	-	-	6.98	0.917	9.3	0.90	15.1	-129.0
Area 5		10/6/2022	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	**610**	**40**	**9,200**	-	-	-	-	-	-	-	-	6.80	1.361	3.9	0.66	12.1	-141.2
Area 5	G6M-02-12X	8/1/2002	1.0 U	**330**	2.0 U	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		8/28/2002	1.0 U	**520**	2.0 U	**6.5**	2.0 U	2.0 U	5.0 U	-	-	-	-	-	54	-	-	-	5.0 U	6.15	0.868	2.96	0.19	14.1	156.0
Area 5		10/29/2002	1.0 U	**790**	2.0 U	**10**	2.0 U	2.0 U	5.0 U	1.0 U	1,100	-	-	-	40	0.10 U	17	2.0 U	2.0 J	6.14	0.927	2.08	0.27	14.8	68.0
Area 5		2/3/2003	1.0 U	**580**	2.0 U	4.0	2.0 U	2.0 U	5.0 U	1.0 U	-	-	-	-	52	-	-	-	5.0 U	6.04	0.947	5.06	-	12.5	78.0
Area 5		7/14/2003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.0 U	-	-	-	-	11.0	-
Area 5		9/22/2004	1.0 U	**1,000**	2.0 U	**43**	**110**	2.0 U	5.0 U	1.0 U	450	0.005 U	0.005 U	2,900	84	0.5 U	13	2.0 U	1.0 U	5.87	0.873	4.95	0.35	11.6	570.2
Area 5		9/27/2005	1.0 U	**1,100**	1.4	**38**	**250**	**5.4**	5.0 U	1.0 U	690	0.025 U	1.1	14,000	106	0.05 U	13 J	1.0 U	3.5	6.11	6.920	24.5	1.17	11.7	238.5
Area 5		9/21/2006	1.0 U	**190**	23	**88**	64	**67**	5.0 U	0.37	**3,200**	0.038	46	15,000	170	0.2 U	5.7	1.0 U	7.6	6.23	0.799	60.6	0.17	11.7	78.0
Area 5		12/13/2006	1.0 U	**45**	4.4	**7.9**	3.6	2.0 U	**22**	1.0	**16,000**	0.24	19	28,000	-	-	1.1	1.2	9.3	6.39	1.277	6.94	0.19	13.7	169.6
Area 5		9/12/2007	1.0 U	**62**	4.4	**50**	28	**18**	20 U	0.58	**5,500**	0.40	8.4	11,000	180	0.2 U	340	1.0	2.6 J	6.52	0.934	5.80	3.06	11.8	52.8
Area 5		10/16/2008	0.5 U	0.37 J	1.6	**7.1**	18	**4.8**	**174**	**12**	**15,800**	1.2 U	3.1	19,000	310	0.10 U	7.0 U	0.03 U	10 U	6.09	1.091	10.0	0.53	11.7	-67.4
Area 5		10/14/2009	0.5 U	0.5 U	0.74	0.30 J	13	1.6	**540**	**24**	**11,000**	1.3 U	1.6 U	6,900	350	0.13 U	7.0 U	0.03 U	4.6 J	6.27	1.025	1.50	1.27	19.7	-40.0
Area 5		10/5/2010	0.5 U	0.5 U	0.27 J	0.5 U	5.6	1.5	**1,040**	**72**	**13,700**	1.2 U	2.0	40,000	810	0.05 J	2.8 J	0.03 U	10 U	6.34	1.217	1.11	0.58	17.1	-88.1

Appendix D
Historical Groundwater Analytical Results
2022 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	PCE	trans-1,2-DCE	TCE	cis-1,2-DCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	TOC	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/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	5	70	5	70	2	10	3.129	1,460					10,000									
Area	Well ID	Date Sampled																							
Area 5		10/4/2011	0.5 U	0.5 U	0.5 U	0.5 U	6.3	**4.3**	**1,020**	**71**	**9,540**	1.2 U	1.5 U	21,000	440	0.13 U	0.33 J	0.03 U	6.4 J	6.65	0.807	1.90	0.48	13.1	-89.1
Area 5		10/10/2012	0.5 U	0.5 U	0.5 U	0.5 U	1.0	1.0	**865**	**66**	**5,010**	1.8	1.5 U	14,000	320	0.13 U	0.59 J	0.03 U	4.0 J	6.76	1.068	1.68	0.70	14.4	-111.4
Area 5		10/16/2013	0.5 U	0.5 U	0.21 J	0.5 U	0.72	0.54	**809**	**61**	**4,910**	10	1.5 U	55,000	83	0.13 U	5.0 U	0.03 U	4.2 J	6.85	1.010	1.87	0.45	21.3	-127.7
Area 5		10/29/2014	0.5 U	0.5 U	0.56	0.5 U	0.90	0.79	**760**	**56 J**	**4,870 J**	9.2	1.5 U	25,000	330	0.13 U	0.22 J	0.03 U	6.2 J	6.96	0.995	2.48	0.83	15.5	-103.4
Area 5		10/15/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**714**	**43**	**8,540**	10 U	10 U	11,300	243	0.11 U	10 U	2.0 U	6.4	7.26	0.630	6.17	1.07	13.7	-108.0
Area 5		11/14/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**720**	**40**	**7,700**	3.2	1.0 U	9,400	210	0.05 U	2.0	1.0 U	4.5	6.90	0.530	13.9	1.24	11.9	-131.0
Area 5		10/23/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**670**	**41**	**8,100**	4.0	1.0 U	8,000	200	0.055 J	1.0 U	1.0 U	4.3	6.90	0.678	7.49	0.29	12.2	-117.9
Area 5		10/23/2018	1.0 U	1.0 U	0.39 J	1.0 U	1.0 U	1.0 U	**590**	**40**	**7,800**	-	-	-	-	-	-	-	-	7.02	0.731	18.9	0.49	11.4	-16.1
Area 5		10/15/2020	1.0 U	1.0 U	1.0 U	1.0 U	0.42 J	1.0 U	**530**	**44**	**8,100**	-	-	-	-	-	-	-	-	6.95	0.871	2.03	0.62	12.1	-137.0
Area 5		10/12/2022	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	**660**	**39**	**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	**750**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	-	-	13.3	-
Area 5		9/22/2004	1.0 U	**690**	2.0 U	**6.3**	5.4	2.0 U	5.0 U	1.0 U	15 U	0.005 U	0.005 U	1.8	16	8.3	13	1.5 J	1.0 U	5.89	0.463	3.22	1.81	14.1	247.6
Area 5		12/16/2004	1.0 U	**1,100**	2.0 U	**11**	9.6	2.0 U	5.0 U	1.0 U	17	0.069	0.030	4.7	20	5.7	13	2.9	5.0 U	5.93	0.495	8.98	0.70	13.3	135.7
Area 5		3/31/2005	20 U	**340**	20 U	20 U	9.6 J	20 U	5.0 U	1.0 U	15 U	0.011	0.45	14	12	2.3	17	2.0 U	0.3 J	5.94	0.205	0.93	1.96	12.8	166.3
Area 5		7/6/2005	1.0 U	**780**	2.0 U	**8.2**	15	2.0 U	4.0 U	1.0 U	10 U	0.11	0.068	410	29	1.8	14	1.0 U	5.5	5.85	0.463	5.37	0.78	13.4	236.1
Area 5		9/28/2005	1.0 U	**620**	1.0 U	4.8	14	1.0 U	5.0 U	1.0 U	15 U	0.025 U	0.009 J	2,400	28	1.6	12	1.0 U	5.0 U	5.60	0.352	8.30	3.56	10.8	172.3
Area 5		12/14/2005	1.0 U	**700**	2.0 U	**8.0**	17	2.0 U	5.0 U	1.0 U	15 U	0.025 U	0.025 U	7,000	32	1.2	12	1.0 U	5.0 U	6.16	0.404	3.70	0.54	11.5	153.8
Area 5		3/22/2006	1.0 U	**1,100**	2.6	**21 J**	34	2.0 U	5.0 U	0.1 U	15 U	0.025 U	0.006 J	12,000	29	0.59	12	1.0 U	6.5	6.28	0.299	9.75	5.43	10.7	394.2
Area 5		6/21/2006	1.0 U	**610**	2.0 U	**16**	48	2.0 U	5.0 U	1.8	42	0.004 J	0.14	16,000	41J	0.33	10	1.0 U	5.0 U	5.91	0.490	21.4	0.29	10.6	141.6
Area 5		3/29/2007	1.0 U	**570**	2.0 U	**37**	**74**	**11**	5.0 U	0.1 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		6/12/2007	1.0 U	**740**	2.0 U	**55**	**88**	**14**	5.0 U	0.1 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		9/10/2007	1.0 U	**520**	2.0 U	**75**	**75**	**21**	2.0 U	0.1 U	15 U	0.025 U	1.7	14,000	42	0.2 U	200	1.0 U	5.0 U	5.92	0.385	9.70	2.55	11.4	154.2
Area 5		12/11/2007	1.0 U	**390**	2.0 U	**53**	49	**15**	5.0 U	0.1 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		3/13/2008	1.0 U	**390**	2.0 U	5.0	10	2.0 U	5.0 U	0.1 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		10/20/2008	5.0 U	**290**	5.0 U	**61**	**140**	**26**	8.0 U	0.2 U	33	1.3 U	2.1	21,000	110	0.13 U	14	0.03 U	10 U	6.42	0.548	2.00	1.58	12.1	68.9
Area 5		5/6/2009	4.0 U	**120**	4.0 U	**38**	**150**	**15**	3.1 J	0.2 U	144	1.2 U	1.6	37,000	190 J	0.13 U	10	0.03 U	10 U	5.93	0.701	1.50	0.32	13.2	100.8
Area 5		10/14/2009	5.0 U	5.0 U	5.0 U	**20**	**120**	**11**	8.0 U	0.139 U	**1,470**	1.3 U	1.6 U	7,300 J	240	0.13 U	8.3	0.03 U	10 U	5.91	0.643	2.11	0.33	-	152.3
Area 5		4/20/2010	2.0 U	**26 J**	2.0 U	**9.9 J**	**88 J**	1.5 J	9.0	0.194 U	**6,520**	1.3 U	1.6 U	3,500	250	0.13 U	7.8	0.03 U	10 U	6.31	0.382	0.30	0.90	14.3	87.9
Area 5		10/4/2010	2.0 U	**8.2**	2.0 U	**5.2**	**80**	**3.5**	3.4 J	0.132 U	**11,300**	1.2 U	1.5 U	890	360	0.13 U	5.5	0.03 U	10 U	6.07	0.549	< 0.01	0.68	10.2	84.9
Area 5		6/8/2011	-	-	-	-	-	-	**14**	0.27	**16,100**	-	-	-	-	-	-	-	-	6.28	0.686	0.50	0.21	11.3	49.5
Area 5		10/3/2011	2.5 U	4.3	2.5 U	3.4	62	**9.6**	5.1 J	0.194 J	**16,800**	1.2 U	1.5 U	590	360	0.13 U	3.2 J	0.03 U	10 U	6.17	0.603	0.51	0.43	15.2	77.2
Area 5		5/8/2012	-	-	-	-	-	-	5.0 U	0.127 U	**17,700**	-	-	-	-	-	-	-	-	6.58	0.618	0.55	1.87	13.1	39.7
Area 5		10/9/2012	0.5 U	0.5 U	0.76	0.78	9.8	**7.4**	5.0 U	0.15	**18,600**	1.3 U	3.6	110	380	0.13 U	1.4 J	0.03 U	2.5 J	6.34	0.648	1.42	0.43	11.9	53.9
Area 5		5/22/2013	-	-	-	-	-	-	3.1 J	0.117 U	**12,500**	-	-	-	-	-	-	-	-	6.56	0.591	0.14	1.40	11.9	36.5
Area 5		10/15/2013	0.5 U	0.5 U	1.2	0.87	2.8	1.6	5.2	0.121 U	**12,300**	1.8	1.5 U	360	450	0.13 U	5.0 U	0.03 U	3.0 J	6.57	0.851	< 0.01	0.39	16.0	82.7
Area 5		6/12/2014	-	-	-	-	-	-	4.3 J	0.15	**9,850**	-	-	-	-	-	-	-	-	6.57	0.592	6.31	1.84	13.0	58.9
Area 5		6/18/2015	0.5 U	0.5 U	0.5 U	0.51 J	0.5 U	0.5 U	2.5 J	0.05 U	**2,320**	5.0 U	5.0 U	5.0 U	83	0.11 U	8.4 J	1.0 U	5.4	6.32	0.273	8.42	1.11	13.2	113.0
Area 5		10/14/2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Area 5		2/24/2016	1.0 U	1.0 U	1.0 U	1.0 U	3.0	1.0 U	8.2	1.0	**4,710**	10 U	10 U	91	155	0.10 U	3.1 J	2.0 U	1.8	6.79	0.244	3.93	1.03	7.5	-54.7
Area 5		11/14/2016	1.0 U	1.0 U	1.0 U	0.96 J	0.84 J	1.0 U	**12**	0.18	**4,200**	1.1 U	1.0 U	170	140	0.053 J	9.8	1.0 U	1.3	7.03	0.339	7.46	1.19	8.3	-99.6
Area 5		10/4/2017	1.0 U	1.0 U	1.0 U	1.0 U	0.50 J	1.0 U	6.6	0.23	**6,900**	1.1 U	0.90 J	91	110	0.05 U	9.5	1.0 U	0.84 J	6.70	0.374	5.94	0.65	13.3	-29.9
Area 5		10/31/2018	1.0 U	1.0 U	1.0 U	1.0 U	0.60 J	1.0 U	8.6	0.27	**7,300**	-	-	-	-	-	-	-	-	6.67	0.478	25.0	1.69	10.8	30.9
Area 5		10/22/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**87**	1.6	**7,800**	-	-	-	-	-	-	-	-	6.85	0.391	20.4	0.75	12.4	-20.0
Area 5		10/10/2022	1.0 U	1.0 U	1.0 U	0.5 U	0.34 J	1.0 U	**270**	2.6	**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	1.0 U	-	-	-	-	-	-	-	-	-	-	-	-	-	13.3	-
Area 5		9/23/2004	1.0 U	3.7	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1.0 U	15 U	0.005 U	0.005 U	1.9	23	19	15	2.2	1.0 U	6.23	0.130	4.57	8.67	13.2	176.2
Area 5		12/14/2004	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1.0 U	15 U	0.015	0.026	2.0	25	11	15	2.0 U	5.0 U	6.08	0.106	12.1	8.17	12.4	417.6
Area 5		3/29/2005	1.0 U	1.5 J	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1.0 U	15 U	0.013	0.26	1.4	18	1.5	13	2.0 U	0.3 J	6.18	0.123	72.4	6.00	13.3	113.2
Area 5		6/30/2005	1.0 U	**5.8**	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	10 U	0.077	0.032	1.2	25	1.3	13	1.0 U	15	5.75	0.135	53.6	2.81	10.2	160.2
Area 5		9/28/2005	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1.0 U	15 U	0.006 J	0.009 J	29	38	3.7	13	1.0 U	4.0 J	5.90	0.108	7.60	10.6	11.2	181.0
Area 5		12/13/2005	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1.0 U	15 U	0.005 J	0.014 J	790	53	0.05 U	13	1.0 U	5.0 U	6.21	1.720	4.90	3.06	10.6	259.3
Area 5		3/22/2006	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 U	20	0.006 J	0.016 J	39	36	1.8	12	1.0 U	7.9	6.40	0.102	10.8	3.00	11.0	415.5
Area 5		6/23/2006	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 U	15 U	0.025 U	0.042	390	39	2.7	13	1.0 U	5.0 U	5.92	0.156	16.9	4.55	11.0	164.9
Area 5		9/21/2006	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 U	15 U	0.014 J	0.12	140	36	2.5	9.2	1.0 U	0.80 J	6.71	0.212	4.56	2.24	13.8	127.6
Area 5		3/29/2007	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 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		6/13/2007	1.0 U	3.8	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 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		9/10/2007	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	6.0 U	0.1 U	15 U	0.025 U	0.025 U	18,000	53	2.0	20	1.0 U	5.0 U	6.26	0.193	9.90	2.74	11.1	128.0
Area 5		12/11/2007	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 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		3/12/2008	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.11	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		10/20/2008	0.5 U	0.37 J	0.5 U	0.5 U	0.5 U	0.5 U	8.0 U	0.2 U	50 U	1.3 U	1.6 U	1,600	48	0.84	19	0.03 U	10 U	5.98	0.129	6.50	0.24	11.3	177.8
Area 5		5/6/2009	0.5 U	0.78	0.5 U	0.5 U	0.5 U	0.5 U	8.0 U	0.2 U	50 U	1.2 U	1.5 U	340	52 J	0.90	14	0.03 U	10 U	5.99	0.171	1.00	0.33	11.4	104.0
Area 5		10/14/2009	0.5 U	0.35 J	0.5 U	0.5 U	0.5 U	0.5 U	8.0 U	0.2 U	50 U	1.2 U	1.5 U	230	53	0.32	13	0.03 U	10 U	5.49	0.161	< 0.01	0.26	-	-89.9
Area 5		4/20/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.1 U	25 U	1.3 U	1.6 U	700	90	0.13 U	12	0.03 U	10 U	6.19	0.102	0.60	0.40	15.4	166.0
Area 5		10/4/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.1 U	25 U	1.2 U	1.5 U	35 J	44	0.86	12	0.03 U	10 U	5.90	0.159	0.60	1.18	12.1	146.6
Area 5		6/8/2011	-	-	-	-	-	-	5.0 U	1.7	11 J	-	-	-	-	-	-	-	-	5.99	0.154	0.40	0.42	11.1	122.8
Area 5		10/3/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.2 U	50 U	1.2 U	1.5 U	230	35	0.39	11	0.03 U	10 U	5.82	0.107	0.23	0.61	16.6	163.2
Area 5		5/8/2012	-	-	-	-	-	-	5.0 U	0.1 U	25 U	-	-	-	-	-	-	-	-	6.12	0.095	0.71	2.27	13.4	186.4
Area 5		10/9/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.1 U	6.2 J	1.3 U	1.6 U	2.6	25	2.8	8.9	0.03 U	10 U	5.71	0.136	0.58	4.36	12.1	167.9
Area 5		5/22/2013	-	-	-	-	-	-	5.0 U	0.1 U	25 U	-	-	-	-	-	-	-	-	6.01	0.084	1.83	0.46	13.9	172.9
Area 5		10/15/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.1 U	9.6 J	1.2 U	1.5 U	7,600	29	0.82	10	0.03 U	10 U	6.08	0.144	< 0.01	1.16	16.0	150.3
Area 5		6/12/2014	-	-	-	-	-	-	5.0 U	0.021 J	7.4 J	-	-	-	-	-	-	-	-	5.89	0.102	2.49	0.54	14.1	163.9

		Analytical Method	VOCs						Dissolved Metals			Dissolved Gases			General Chemistry					Field Parameters					
		Analyte	1,1-DCE	PCE	trans-1,2-DCE	TCE	cis-1,2-DCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	TOC	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/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	5	70	5	70	2	10	3.129	1,460					10,000									
Area	Well ID	Date Sampled																							
Area 5		10/28/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.268 J	13 J	1.4	1.5 U	20	35	1.6	11	0.03 U	5.0 U	6.24	0.139	2.78	1.65	13.6	124.1
Area 5		6/18/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	0.05 U	20	5.0 U	5.0 U	30	27	0.057 U	8.6 J	1.0 U	0.70 U	5.39	0.191	2.25	0.45	11.4	169.7
Area 5		10/15/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	0.1 U	57	10 U	10 U	1,090	28	0.11 U	11	2.0 U	1.0 U	6.06	0.144	0.81	0.22	15.7	123.1
Area 5		2/19/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	0.1 U	100	14	6.4 J	270	37	0.19	11	2.0 U	1.0 U	8.64	0.100	3.99	2.29	9.6	513.6
Area 5		6/16/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.05 U	81	1.1 U	1.0 U	8.8	43	0.05 U	16	1.0 U	0.78 J	6.02	0.220	3.32	1.80	11.8	131.6
Area 5		11/14/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.05 U	90	1.1 U	1.0 U	0.58 U	31	1.5	8.4	1.0 U	0.78 J	6.23	0.119	4.19	1.27	9.4	8.0
Area 5		10/17/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.075 U	180	1.1 U	1.0 U	0.48 J	24	1.7	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	**15**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	-	-	14.2	-
Area 5		9/22/2004	1.0 U	**27**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1.0 U	340	0.050	0.68	680	51	2.8	12	1.5 J	1.0 U	6.28	0.539	20.5	1.28	13.1	-77.2
Area 5		12/14/2004	1.0 U	**19**	2.0 U	2.0 U	44	2.0 U	5.0 U	1.0 U	880	0.020	0.025	1.9	110	3.8	21	2.0 U	5.0 U	6.52	0.801	1.57	0.94	13.9	62.0
Area 5		3/29/2005	1.0 U	**14**	1.2 J	0.98 J	68	2.0 U	5.0 U	1.0 U	1,200	0.005 U	0.38	2,600	146	0.2 U	12	2.0 U	5.9	6.44	0.869	6.77	0.59	11.8	-14.5
Area 5		6/30/2005	1.0 U	3.6	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	**1,900**	0.026	0.021	8,600	199	0.10	11	1.0 U	19	5.18	0.702	5.06	0.39	12.5	273.2
Area 5		9/28/2005	1.0 U	**6.7**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1.0 U	720	0.025 U	0.020 J	1,100	140	0.20	16	1.0 U	0.6 J	6.43	0.588	7.36	4.30	11.3	74.1
Area 5		12/13/2005	1.0 U	3.4	2.0 U	2.0 U	2.0 U	2.0 U	6.9	1.0 U	**3,020**	0.009 J	0.027	12,000	250	0.48	8.4	1.0 U	5.0 U	6.73	1.032	1.30	0.15	12.3	57.2
Area 5		3/23/2006	1.0 U	**9.9**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.22	**3,800**	0.020 J	0.052	7,000	170	0.2 U	8.9	1.0 U	3.5 J	6.64	0.663	5.39	0.67	12.2	36.6
Area 5		6/22/2006	1.0 U	2.6	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.74	**7,300**	0.004 J	0.042	14,000	200	0.2 U	4.4	1.0 U	5.0 J	4.87	0.770	0.64	0.64	14.0	610.8
Area 5		9/20/2006	1.0 U	2.2	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.21	**6,200**	0.006 J	0.14	14,000	180	0.2 U	7.0	1.0 U	6.0	6.41	0.856	3.90	1.26	12.3	-140.2
Area 5		3/29/2007	1.0 U	2.2	2.0 U	2.1	4.2	2.0 U	8.6	0.30	**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		6/11/2007	1.0 U	2.5	2.0 U	2.0 U	4.1	2.0 U	**23**	1.0	**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		9/10/2007	1.0 U	2.0 U	2.0 U	2.0 U	3.8	2.0 U	**29**	0.40	**8,100**	0.10	0.057	620	150	0.2 U	290	1.0 U	3.5 J	6.28	0.859	13.6	0.24	12.3	61.3
Area 5		12/12/2007	1.0 U	2.0 U	2.0 U	2.0 U	2.8	2.0 U	**26**	0.33	**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		3/11/2008	1.0 U	**16**	2.0 U	**8.7**	16	**4.0**	**91**	**15**	**9,200**	0.040	59	28,000	-	-	-	-	5.0 J	6.32	1.029	7.30	0.22	11.7	-62.9
Area 5		10/20/2008	0.5 U	1.0	0.5 U	2.0	5.4	1.0	**248**	**7.1**	**10,300**	1.3 U	1.6 U	21,000	170	0.13 U	8.3	0.03 U	170	5.98	0.781	8.20	0.21	18.1	-10.9
Area 5		5/6/2009	0.5 U	1.0	0.5 U	5.0	9.1	1.5	**522**	**54**	**9,210**	1.2 U	1.5 U	31,000	230 J	0.0076 J	9.3	0.03 U	11	5.91	1.040	0.50	0.33	18.6	-64.0
Area 5		10/14/2009	0.5 U	0.61	0.5 U	3.7	10	**2.2**	**518**	**58**	**7,410**	1.3 U	1.6 U	9,000 J	310	0.13 U	21	0.03 U	7.4 J	6.32	0.896	1.20	0.67	19.1	-62.2
Area 5		4/20/2010	0.5 U	1.2	0.21 J	**5.6**	2.0	1.1	**648**	**61 J**	**4,910**	1.2 U	1.5 U	4,100	130	0.13 U	6.5	0.03 U	4.7 J	6.78	0.799	1.40	0.77	16.3	-101.1
Area 5		10/4/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**475**	**58**	**5,650**	1.2 U	6.2	20,000	230	0.13 U	5.9	0.03 U	10 U	6.52	0.729	0.50	0.22	11.3	-115.6
Area 5		6/9/2011	-	-	-	-	-	-	**520**	**54**	**2,550**	-	-	-	-	-	-	-	-	6.74	0.704	4.62	0.58	12.1	-118.8
Area 5		10/3/2011	0.5 U	0.5 U	0.5 U	2.7	1.2	0.53	**528**	**55**	**3,980**	1.2 U	1.5 U	9,800	100	0.21	7.6	0.03 U	3.0 J	6.75	0.633	0.85	0.10	12.3	-85.8
Area 5		5/8/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**480**	**56**	**4,070**	-	-	-	-	-	-	-	-	7.00	0.817	0.77	0.15	13.0	-119.1
Area 5		10/9/2012	0.5 U	0.5 U	0.5 U	0.55	0.5 U	0.5 U	**456**	**48**	**2,280**	22	1.6 U	13,000	100	0.13 U	8.4	0.03 U	10 U	6.88	0.940	< 0.01	0.43	12.1	-109.6
Area 5		5/22/2013	-	-	-	-	-	-	**514**	**57**	**2,340**	-	-	-	-	-	-	-	-	6.80	1.111	0.40	0.16	12.0	-137.6
Area 5		10/15/2013	0.5 U	0.5 U	0.5 U	0.68	0.52	0.5 U	**452**	**51**	**2,770**	1.8	1.5 U	23,000	80	0.042 U	9.2	0.03 U	10 U	6.87	1.018	0.19	4.57	12.2	-122.7
Area 5		6/12/2014	-	-	-	-	-	-	**510**	**52**	**2,400**	-	-	-	-	-	-	-	-	6.82	0.857	> 5,000	0.51	22.1	-88.0
Area 5		10/29/2014	0.5 U	0.5 U	0.5 U	0.77	0.92	0.41 J	**418**	**43 J**	3,090 J	1.2 U	1.5 U	14,000	92	0.13 U	8.6	0.03 U	5.0 U	7.02	0.787	4.94	0.29	19.6	-122.4
Area 5		9/10/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**453**	**68**	**2,020**	10 U	10 U	8,910	-	0.08 J	11	2.0 U	1.5	6.56	0.787	3.00	0.51	12.6	-107.5
Area 5		10/15/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**457**	**69**	**2,410**	10 U	10 U	11,500	65	0.11 U	7.8 J	2.0 U	1.9	7.03	1.206	1.74	0.49	19.3	-128.0
Area 5		2/11/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**492**	**72**	**2,370**	10 U	10 U	7,550	105	0.11	2.0 J	2.0 U	3.3	7.02	1.345	0.10	0.40	10.0	-131.1
Area 5		6/16/2016	1.0 U	**16**	1.0 U	0.65 J	1.0 U	1.0 U	**400**	**61**	**1,600**	1.1 U	1.0 U	14,000	88	0.05 U	3.3	1.0 U	1.8	6.18	1.407	8.39	1.16	13.1	-86.0
Area 5		11/14/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**430**	**68**	**2,700**	1.1 U	1.0 U	8,000	110	0.05 U	3.7	1.0 U	1.6	7.11	0.745	6.94	11.7	7.4	-101.7
Area 5		10/23/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**420**	**62**	**2,100**	1.1 U	1.0 U	6,500	62	0.07 J	5.5	1.0 U	1.4	6.88	1.190	3.99	0.22	12.2	-115.0
Area 5		10/23/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**380**	**51**	**1,900**	-	-	-	-	-	-	-	-	6.93	1.576	3.98	0.14	11.6	-30.2
Area 5		10/15/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**360**	**45**	**2,100**	-	-	-	-	-	-	-	-	6.80	1.500	1.20	0.31	12.0	-140.0
Area 5		10/22/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**360**	**59**	**2,000**	-	-	-	-	-	-	-	-	6.94	0.853	11.3	0.66	12.4	-128.0
Area 5		10/12/2021	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**290**	**44**	**1,900**	-	-	-	-	-	-	-	-	6.94	1.070	24.7	1.10	13.7	-118.0
Area 5		10/6/2022	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	1.0 U	**370**	**48**	**2,000**	-	-	-	-	-	-	-	-	6.81	1.426	3.87	0.66	12.6	-145.0
Area 5	G6M-04-05X	9/22/2004	1.0 U	**140**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1.0 U	15 U	0.005 U	0.0092	1.3	14	4.9	14	2.0 U	1.0 U	6.10	0.099	0.68	9.68	11.3	233.9
Area 5		12/15/2004	1.0 U	**17**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1.0 U	15 U	0.005 U	0.016	1.4	14	7.5	13	2.0 U	5.0 U	5.87	0.098	1.04	1.17	11.4	228.7
Area 5		3/30/2005	5.0 U	**130**	10 U	10U	10 U	10 U	5.0 U	1.0 U	15 U	0.007	0.028	15	14	1.2	10	2.0 U	0.5 J	6.04	0.093	1.92	2.80	11.8	123.1
Area 5		6/30/2005	1.0 U	**200**	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	10 U	0.041	0.022	96	16	0.87	8.9	1.0 U	2.4	5.48	0.094	8.19	0.88	11.5	207.1
Area 5		9/29/2005	1.0 U	**110**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1.0 U	33	0.006 J	0.012 J	220	3.3	0.98	14	1.0 U	5.0 U	6.08	0.061	2.10	0.20	10.5	215.3
Area 5		12/14/2005	1.0 U	**36**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1.0 U	15 U	0.007 J	0.016 J	550	21	1.6	11	1.0 U	5.0 U	6.10	0.091	0.30	0.23	11.3	179.3
Area 5		3/22/2006	1.0 U	**330**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 U	15 U	0.025 U	0.019 J	2,200	13	1.1	9.3	1.0 U	3.4 J	6.21	0.062	0.86	0.77	11.1	343.3
Area 5		6/22/2006	1.0 U	**38**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 U	15 U	0.025 U	0.082	33	22 J	1.8	9.0	1.0 U	5.0 U	4.40	0.083	< 0.01	2.55	11.6	760.6
Area 5		9/22/2006	1.0 U	**30**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 U	15 U	0.009 J	0.084	140	15	1.5	11	1.0 U	5.0 U	5.78	0.123	0.34	1.48	11.6	-127.3
Area 5		3/29/2007	1.0 U	**16**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.12	15 U	0.025 U	0.022 J	460	-	-	-	-	1.4 J	5.79	0.185	0.01	0.13	-	57.9
Area 5		6/12/2007	1.0 U	**12**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 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		9/10/2007	1.0 U	**43**	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.1 U	15 U	0.24	0.089	340	20	1.6	17	1.0 U	5.0 U	5.89	0.103	3.90	2.60	12.8	142.8
Area 5		12/11/2007	1.0 U	**7.2**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.19	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		3/13/2008	1.0 U	2.5	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 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		10/20/2008	0.5 U	3.7	0.5 U	0.5 U	0.5 U	0.5 U	8.0 U	0.2 U	50 U	1.3 U	1.6 U	3,300	30	1.5	10	0.03 U	10 U	5.92	0.152	< 0.01	0.73	15.2	80.0
Area 5		5/6/2009	0.5 U	**16**	0.5 U	0.38 J	0.84	0.27 J	8.0 U	0.2 U	50 U	1.3 U	1.6 U	2,200	59 J	0.37	17	0.03 U	10 U	5.72	0.187	< 0.01	0.20	11.9	125.5
Area 5		10/14/2009	0.5 U	**8.2**	0.5 U	0.5 U	0.29 J	0.5 U	8.0 U	0.127 U	60 U	1.3 U	1.6 U	2,000 J	29	0.39	15	0.03 U	10 U	5.62	0.203	< 0.01	0.50	14.1	184.0
Area 5		4/20/2010	0.5 U	2.3 J	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.1 U	25 U	1.2 U	1.5 U	3,200	80	0.30	15	0.03 U	10 U	5.92	0.144	0.20	0.40	17.7	152.5
Area 5		10/4/2010	0.5 U	0.28 J	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.1 U	25 U	1.2 U	1.5 U	18	30	1.7	13	0.03 U	10 U	5.67	0.131	0.80	1.51	15.3	145.5
Area 5		6/8/2011	-	-	-	-	-	-	5.0 U	0.1 U	12.7	-	-	-	-	-	-	-	-	5.78	0.193	1.00	0.12	13.2	134.1
Area 5		10/3/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.2 U	11 J	1.2 U	1.5 U	2,000	39	0.47	19	0.03 U	2.3 J	5.76	0.174	0.44	0.20	14.1	158.9
Area 5		5/8/2012	-	-	-	-	-	-	5.0 U	0.1 U	11 J	-	-	-	-	-	-	-	-	6.01	0.160	0.56	0.83	14.8	157.2
Area 5		10/9/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.1 U	22 J	1.3 U	1.6 U	1,800	32	0.063 J	16	0.03 U	10 U	5.76	0.171	0.84	0.27	14.4	108.4
Area 5		5/22/2013	-	-	-	-	-	-	2.7 J	0.1 U	25 U	-	-	-	-	-	-	-	-	5.90	0.156	1.75	0.25	13.2	134.1
Area 5		10/15/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.1 U	15 J	1.3 U	1.6 U	28,000	60	0.13 U	18	0.03 U	10 U	6.01	0.199	< 0.01	0.47	14.2	145.8

Appendix D
Historical Groundwater Analytical Results
2022 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	PCE	trans-1,2-DCE	TCE	cis-1,2-DCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	TOC	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/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	5	70	5	70	2	10	3.129	1,460					10,000									
Area	Well ID	Date Sampled																							
Area 5		6/12/2014	-	-	-	-	-	-	2.4 J	0.195 U	13 J	-	-	-	-	-	-	-	-	6.09	0.193	0.68	0.41	12.3	86.2
Area 5		10/28/2014	0.5 U	0.42 J	0.5 U	0.5 U	0.5 U	0.5 U	4.1 J	0.029	12 J	2.8	1.6	48	39	0.31	13	0.03 U	10 U	6.49	0.182	0.48	0.62	11.6	81.9
Area 5		6/17/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.0 U	0.05 U	12 J	5.0 U	5.0 U	22 J	23	0.29	23	1.0 U	0.81 U	-	-	-	-	-	-
Area 5		9/10/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	0.1 U	7.5 J	10 U	10 U	10 U	-	0.21	25	2.0 U	1.0 U	5.75	0.245	2.08	0.95	12.1	67.6
Area 5		10/15/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	0.1 U	20	10 U	10 U	53	32	0.20	22	2.0 U	1.1	5.96	0.264	2.44	0.50	11.8	116.4
Area 5		2/22/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	0.1 U	22	10 U	10 U	305	35	0.11 U	27	2.0 U	1.0 U	5.93	0.187	1.92	1.03	10.4	112.9
Area 5		11/14/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.05 U	20	1.1 U	1.0 U	15	36	0.19	24	1.0 U	0.75 J	6.33	0.176	4.16	1.22	9.6	23.9
Area 5		10/17/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.075 U	15	1.1 U	1.0 U	260	31	0.17	16	1.0 U	1.0 U	5.66	0.171	3.27	0.19	11.2	185.7
Area 5		10/23/2018	1.0 U	1.2	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	-	-	-	-	-	-	-	-	6.03	0.187	2.10	0.37	11.0	18.9
Area 5		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		10/10/2022	1.0 U	1.0 U	1.0 U	0.5 U	1.0 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	**160**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1.0 U	15 U	0.056	0.005 U	3.4	110	5.3	8.7	2.0 U	1.0 U	11.01	0.341	1.34	9.17	11.4	-0.6
Area 5		12/16/2004	1.0 U	**24**	2.0 U	2.0 U	2.0 U	2.0 U	**21**	1.0 U	15 U	0.017	0.028	0.47	54	7.9	10	2.9	5.0 U	10.89	0.254	2.26	9.42	13.1	106.9
Area 5		3/30/2005	1.0 U	**37**	2.0 U	2.0 U	2.0 U	2.0 U	7.5	1.0 U	15 U	0.009	0.051	0.58	37	2.0	12	2.0 U	5.0 U	9.47	0.235	0.32	10.5	11.6	10.6
Area 5		7/1/2005	1.0 U	**140**	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	190	0.034	0.056	9.7	10	1.5	25	1.0 U	2.8 J	9.08	0.214	0.95	9.77	11.8	457.2
Area 5		9/29/2005	1.0 U	**32**	2.0 U	2.0 U	2.0 U	2.0 U	**11**	1.0 U	15 U	0.009 J	0.018 J	0.70	70	1.9	12	1.0 U	5.4	9.32	0.192	1.99	9.43	11.5	390.6
Area 5		12/15/2005	1.0 U	**26**	2.0 U	2.0 U	2.0 U	2.0 U	**81**	1.0 U	150	0.009 J	0.022 J	3.3	39	1.9	12	1.0 U	7.6	9.74	0.226	0.30	10.2	14.6	151.2
Area 5		3/23/2006	1.0 U	**100**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 U	15 U	0.006 J	0.036	3.1	23	1.7	9.3	1.0 U	5.0 U	8.94	0.188	1.72	9.46	10.3	452.5
Area 5		6/23/2006	1.0 U	**190**	2.0 U	2.0 U	2.0 U	2.0 U	**13 J**	0.1 U	15 U	0.012 J	0.041	10	41	1.7	9.4	1.0 U	5.0 U	8.66	0.254	3.55	9.75	12.8	165.3
Area 5		9/21/2006	1.0 U	**45**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 U	15 U	0.016 J	0.11	6.3	31	1.0	11	1.0 U	1.9 J	9.46	0.347	1.45	9.75	17.9	66.6
Area 5		12/11/2006	1.0 U	**37**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 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		12/13/2006	1.0 U	2.8	2.0 U	2.0 U	3.4	2.0 U	5.0 U	0.27	**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		3/29/2007	1.0 U	**18**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 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		6/12/2007	1.0 U	**25**	2.0 U	2.0 U	3.5	2.0 U	5.0 U	0.1 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		9/10/2007	1.0 U	**23**	2.0 U	2.0 U	3.0	2.0 U	8.0 U	0.1 U	15 U	0.005 J	0.007 J	0.13	38	1.3	82	1.0 U	5.0 U	8.14	0.248	9.90	6.73	16.1	50.1
Area 5		12/12/2007	1.0 U	**22**	2.0 U	2.0 U	6.3	2.0 U	5.0 U	0.1 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		3/14/2008	1.0 U	**14**	2.0 U	2.0 U	2.4	2.0 U	5.0 U	0.1 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		10/16/2008	0.5 U	**24**	0.5 U	0.68	2.2	0.5 U	8.5	0.2 U	12 J	1.3 U	1.6 U	2.0	34	1.5 U	11	0.03 U	10 U	7.69	0.198	1.00	9.11	13.0	209.6
Area 5		5/6/2009	0.5 U	**13**	0.5 U	0.51	1.8	0.5 U	6.9	0.2 U	50 U	1.3 U	1.6 U	1.6	44	1.3	14	0.03 U	10 U	7.35	0.209	1.90	9.41	15.3	9.2
Area 5		10/14/2009	0.5 U	**10**	0.5 U	0.46 J	1.8	0.5 U	7.4 U	0.2 U	50 U	1.3 U	1.6 U	22 J	44	1.3	11	0.03 U	10 U	7.15	0.197	< 0.01	9.40	13.7	150.0
Area 5		4/20/2010	0.5 U	3.0 J	0.5 U	0.5 U	0.5 U	0.5 U	7.3	0.1 U	25 U	1.2 U	1.5 U	150	60	1.8	11	0.03 U	10 U	6.75	0.147	< 0.01	2.86	12.9	27.1
Area 5		10/4/2010	0.5 U	0.95	0.5 U	0.5 U	0.5 U	0.5 U	6.1	0.1 U	25 U	1.2 U	1.5 U	2,000	57	1.8	9.1	0.03 U	10 U	6.50	0.216	< 0.01	0.38	14.0	121.6
Area 5		10/3/2011	0.5 U	4.0	0.5 U	0.5 U	2.0	0.5 U	4.7 J	0.2 U	11 J	1.2 U	1.5 U	9,200	71	0.74	11	0.03 U	10 U	6.06	0.133	0.24	1.46	12.0	70.2
Area 5		10/9/2012	0.5 U	3.7	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.1 U	21 J	1.2 U	1.5 U	14,000	62	0.48	16	0.03 U	10 U	6.05	0.239	< 0.01	0.31	11.6	135.7
Area 5		10/15/2013	0.5 U	4.5	0.5 U	0.37 J	0.55	0.5 U	5.0 U	0.1 U	88	1.2 U	1.5 U	36,000	140	0.13 U	12	0.03 U	10 U	6.09	0.242	0.04	1.07	10.6	171.1
Area 5		10/28/2014	0.5 U	1.2	0.5 U	0.78	0.41 J	0.5 U	2.5 U	0.024 J	157 J	8.1 J	1.5 U	1,200	70	0.29	15	0.03 U	5.0 U	6.51	0.205	1.63	0.29	11.3	164.7
Area 5		10/19/2015	1.0 U	1.7	1.0 U	0.70 J	1.0 U	1.0 U	4.0 U	0.1 U	74	10 U	10 U	10 U	60	0.11 U	13	2.0 U	1.0	-	-	-	-	-	-
Area 5		11/14/2016	1.0 U	1.5	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.017 J	77	1.1 U	1.0 U	0.82	62	0.05 U	15	2.0	1.0	6.47	0.189	5.87	1.01	10.0	-8.6
Area 5		10/17/2017	1.0 U	1.8	1.0 U	1.0 U	0.60 J	1.0 U	3.0 U	0.03 U	98	1.1 U	1.0 U	1.6	58	0.07 J	16	1.0 U	1.0 U	6.42	0.271	5.72	0.28	11.0	81.7
Area 5		10/22/2018	1.0 U	1.4	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.05 U	62	-	-	-	-	-	-	-	-	5.90	0.246	8.69	0.53	10.9	51.1
Area 5		10/10/2019	1.0 U	1.1	1.0 U	1.0 U	0.54 J	1.0 U	0.55	0.13	17	-	-	-	-	-	-	-	-	6.10	0.190	2.40	0.20	11.0	100.0
Area 5		10/14/2020	1.0 U	1.7	1.0 U	2.1	0.94 J	1.0 U	3.0 U	0.086 U	140	-	-	-	-	-	-	-	-	6.39	0.132	2.51	0.64	11.4	228.0
Area 5		10/14/2021	1.0 U	1.5 J	1.0 U	1.1	0.82 J	1.0 U	3.0 U	0.026 J	100	-	-	-	-	-	-	-	-	6.32	0.174	0.25	0.89	12.1	104.8
Area 5		10/6/2022	1.0 U	0.52 J	1.0 U	0.5 U	1.0 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-04-07X	9/22/2004	1.0 U	**900**	2.0 U	2.7	8.4	2.0 U	5.0 U	1.0 U	260	0.061	0.12	3.1	56	5.4	32	2.0 U	1.0 U	7.10	0.243	9.28	3.42	12.0	110.1
Area 5		12/17/2004	1.0 U	**1,100**	2.0 U	2.0	9.3	2.0 U	**28**	1.0 U	47	0.11	2.2	2.1	43	6.4	14	2.0 U	0.6 J	7.51	0.246	74.7	1.98	11.9	-38.9
Area 5		3/29/2005	5.0 U	**240**	10 U	10U	10 U	10 U	**12**	1.0 U	27	0.031	0.64	1.9	43	1.5	14	2.0 U	0.5 J	6.88	0.229	4.20	4.19	10.8	22.0
Area 5		7/5/2005	1.0 U	**170**	2.0 U	2.0 U	2.0 U	2.0 U	4.0	1.0 U	37	0.070	0.042	1.8	41	1.7	14	1.0 U	5.0 U	5.83	0.186	23.4	5.44	11.5	369.9
Area 5		9/29/2005	1.0 U	**470**	2.0 U	3.0	8.3	2.0 U	5.0 U	1.0 U	43	0.010 J	0.010 J	2.4	1.0 U	1.9	16	1.0 U	5.0 U	6.19	0.277	6.62	0.86	11.3	478.3
Area 5		12/14/2005	1.0 U	**390**	2.0 U	2.0 U	2.0	2.0 U	3.8	1.0 U	18	0.006	0.016	7.9	40	1.6	13	1.0 U	6.1	6.65	0.218	34.1	4.72	11.7	149.3
Area 5		3/23/2006	1.0 U	**260**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 U	15 U	0.005 J	0.029	250	36	1.6	13	1.0 U	5.0 U	6.28	0.267	4.09	2.14	12.1	619.7
Area 5		6/23/2006	1.0 U	**150**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 U	24	0.005 J	0.022 J	22	30	1.3	13	1.0 U	0.3 J	6.29	0.240	8.07	5.50	11.8	117.8
Area 5		9/21/2006	1.0 U	**110**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 U	19	0.014 J	0.088	2.4	32	2.5	10	1.0 U	3.4 J	6.34	0.197	2.63	4.43	14.5	99.8
Area 5		12/12/2006	1.0 U	**8.7**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 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		12/12/2006	1.0 U	2.0 U	16	3.1	3.1	**7.1**	**490**	**92**	**3,700**	0.032	170	24,000	-	-	1.0 U	1.0 U	7.8	6.60	0.990	4.36	0.17	12.3	-116.0
Area 5		3/29/2007	1.0 U	**45**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 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		6/12/2007	1.0 U	**44**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.67	18	0.010 J	0.079	46	-	-	-	-	1.2 J	6.26	0.129	16.1	8.12	13.2	162.7
Area 5		9/10/2007	1.0 U	**25**	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.1 U	15 U	0.006 J	0.006 J	0.11	19	1.9	45	1.0 U	5.0 U	6.20	0.130	31.2	8.68	14.7	117.7
Area 5		12/12/2007	1.0 U	**23**	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 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
Area 5		3/13/2008	1.0 U	**19**	2.0 U	2.0 U	2.0 U	2.0 U	5.2	0.1 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		10/16/2008	0.5 U	**11**	0.5 U	0.5 U	0.5 U	0.5 U	8.0 U	0.2 U	15 J	1.2 U	1.5 U	390	28	1.8 U	10	0.03 U	10 U	5.85	0.129	0.45	1.62	10.7	205.0
Area 5		5/6/2009	0.5 U	2.2	0.5 U	0.5 U	0.5 U	0.5 U	2.9 J	0.2 U	50 U	1.3 U	1.6 U	660	41 J	2.3	12	0.03 U	10 U	5.90	0.103	1.25	0.70	13.2	119.2
Area 5		10/14/2009	0.5 U	1.3	0.5 U	0.5 U	0.5 U	0.5 U	8.0 U	0.2 U	50 U	1.3 U	1.6 U	2,500 J	32	1.9	15	0.03 U	10 U	6.00	0.104	< 0.01	0.35	10.8	141.6
Area 5		4/20/2010	0.5 U	**13 J**	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.1 U	31.8 U	1.3 U	1.6 U	630	50	1.5	12	0.03 U	10 U	5.90	0.167	< 0.01	1.11	10.3	24.2
Area 5		10/4/2010	0.5 U	**19**	0.5 U	2.2	4.5	0.5 U	5.0 U	0.1 U	25 U	1.2 U	1.5 U	5,100	43	1.1	10	0.03 U	10 U	6.06	0.181	0.32	0.94	10.5	116.9
Area 5		6/8/2011	-	-	-	-	-	-	5.0 U	0.15	68	-	-	-	-	-	-	-	-	5.81	0.172	< 0.01	1.06	10.4	34.1
Area 5		10/3/2011	0.5 U	**8.7**	0.5 U	1.2	2.2	0.5 U	20 U	0.2 U	68	1.2 U	1.5 U	8,300	53	0.59	12	0.03 U	10 U	5.76	0.105	0.96	0.28	10.7	-57.7
Area 5		5/8/2012	-	-	-	-	-	-	4.0 J	0.1 U	27	-	-	-	-	-	-	-	-	6.26	0.198	0.48	0.35	10.5	122.0
Area 5		10/9/2012	0.5 U	**31 J**	0.5 U	**6.2**	33 J	0.97	5.0 U	0.1 U	35	1.2 U	1.5 U	6,400	99	0.50	10	0.03 U	10 U	6.05	0.264	< 0.01	0.41	10.3	138.9
Area 5		5/22/2013	-	-	-	-	-	-	3.9 J	0.1 U	51	-	-	-	-	-	-	-	-	6.14	0.220	< 0.01	0.39	14.0	154.1
Area 5		10/15/2013	0.5 U	**26**	0.5 U	**5.7**	16	0.5 U	3.8 J	0.1 U	**3,480**	1.2 U	1.5 U	37,000	110	0.30	11	0.03 U	10 U	6.24	0.262	0.05	0.37	13.6	218.4

Appendix D
Historical Groundwater Analytical Results
2022 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	PCE	trans-1,2-DCE	TCE	cis-1,2-DCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	TOC	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/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	5	70	5	70	2	10	3.129	1,460					10,000									
Area	Well ID	Date Sampled																							
Area 5		6/10/2014	-	-	-	-	-	-	3.0 J	0.021 J	6,710	-	-	-	-	-	-	-	-	6.01	0.257	5.18	0.32	8.8	210.9
Area 5		10/28/2014	0.5 U	55	0.31 J	11	54	0.61	9.5	0.195 J	4,370 J	1.3 U	1.6 U	4,900	130	0.13	9.6	0.03 U	5.0 U	6.57	0.254	4.69	0.24	10.6	108.0
Area 5		10/19/2015	1.0 U	59	1.0 U	12	1.0 U	1.0	14	564	4,590	10 U	10 U	3,120	143	0.11 U	11	2.0 U	0.98 J	6.35	0.324	1.68	0.05	10.7	23.3
Area 5		11/14/2016	1.0 U	78	0.42 J	18	73	1.8	29	1.9	4,400	1.1 U	1.0 U	1,000	160	0.05 U	9.4	1.0 U	1.2	6.42	0.278	6.77	1.01	10.2	-28.3
Area 5		10/17/2017	1.0 U	38	0.39 J	20	56	3.1	18	1.7	5,200	1.1 U	1.0 U	760	170	0.05 U	7.6	1.0 U	1.1	6.47	0.409	9.59	0.38	10.8	37.8
Area 5		4/3/2018	1.0 U	4.2	1.0 U	3.4	7.7	1.0 U	7.2	0.05 U	2,100	-	-	-	-	-	-	-	-	7.16	0.508	2.90	1.14	10.5	39.4
Area 5		10/22/2018	2.0 U	15	2.0 U	47	120	4.4	18	1.5	4,200	-	-	-	-	-	-	-	-	6.15	0.538	4.21	0.28	11.2	33.7
Area 5		4/4/2019	1.0 U	25	0.52 J	48	78	5.7	14	1.2	4,100	-	-	-	-	-	-	-	0.89 J	6.40	0.560	4.50	0.89	11.0	7.9
Area 5		10/10/2019	1.0 U	36	0.77 J	53	110	8.5	9.3	0.86	4,000	-	-	-	-	-	-	-	1.2	6.20	0.610	8.40	0.42	11.0	51.0
Area 5		05/12/2020	1.0 U	18	0.59 J	38	110	10	8.3	0.95	3,800	1.1 U	1.0 U	360	220	0.10 U	9.4	0.83 U	1.1	6.91	1.260	18.4	10.4	11.8	-83.9
Area 5		10/14/2020	1.0 U	9.1	0.58 J	37	76	11	7.6	1.0	3,800	1.1 U	0.54 J	540	230	0.05 U	9.9	0.81 U	1.1	6.43	0.397	4.78	0.72	11.6	57.0
Area 5		5/12/2021	1.0 U	2.0 U	0.96 J	22	89	10	6.9	1.1	3,600	0.76 U	0.57 J	350	230	0.05 U	7.4	0.81 U	1.4 U	6.46	0.402	2.68	1.09	11.3	12.2
Area 5		10/14/2021	1.0 U	4.8	0.66 J	38	120	14	8.0	1.2	4,200	0.34 J	0.64 J	520	260	0.05 U	7.5	0.81 U	1.4	6.24	0.536	0.03	1.04	12.0	55.4
Area 5		5/2/2022	1.0 U	4.1	0.82 J	31	79	12	7.2	0.95	3,800	0.42 J	0.48 J	280 J	230	0.05 U	6.3	1.2 U	1.4	6.34	0.560	4.40	0.72	11.2	23.3
Area 5		10/5/2022	1.0 U	0.42 J	1.3 J	24 J	150 J	28 J	7.4	1.10	4,200	0.54 J	0.46 J	270	260	0.025 U	5.6	3.7	1.4	6.56	0.754	2.49	2.85	12.5	71.9
Area 5	G6M-13-01X	1/30/2014	0.5 U	12	0.5 U	0.42 J	0.73	0.5 U	-	-	-	-	-	-	-	-	-	-	-	6.21	0.860	38.0	1.64	16.4	188.4
Area 5		10/28/2014	0.5 U	150	0.5 U	2.8	7.8	0.5 U	2.5 U	0.025 U	27 J	-	-	-	-	-	-	-	-	6.25	0.495	9.14	1.77	12.8	100.3
Area 5		6/22/2015	0.5 U	16	0.5 U	0.65 J	1.3	0.5 U	2.3 J	0.05 U	8.7 J	-	-	-	-	-	-	-	-	5.80	0.848	1.11	0.89	17.5	172.2
Area 5		10/16/2015	1.0 U	26	1.0 U	1.1	1.0 U	1.0 U	4.0 U	0.061 J	16	-	-	-	-	-	-	-	-	5.57	0.727	22.1	0.52	13.7	42.7
Area 5		2/11/2016	1.0 U	10	1.0 U	0.69 J	1.6	1.0 U	4.0 U	0.1 U	10 J	10 U	10 U	126	32	0.31	17	2.0 U	1.0 U	6.05	0.880	1.02	0.57	10.3	38.8
Area 5		6/15/2016	1.0 U	18	1.0 U	1.1	2.8	1.0 U	2.1 J	0.083	14	-	-	-	-	-	-	-	-	6.09	0.891	25.0	0.65	15.6	36.9
Area 5		11/11/2016	1.0 U	27	1.0 U	3.5	6.5	2.8	3.5	1.2	29	-	-	-	-	-	-	-	-	5.63	0.638	22.1	1.11	12.4	83.3
Area 5		12/12/2006	1.0 U	750	2.0 U	45	120	7.8	5.0 U	1.0 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		5/18/2017	1.0 U	13	1.0 U	0.85 J	3.4	1.0 U	3.0 U	0.039 J	19	1.1 U	1.0 U	830	36	0.14	14	1.0 U	1.0 U	6.02	0.631	5.47	0.37	14.5	127.6
Area 5		10/16/2017	1.0 U	10	1.0 U	0.79 J	0.65 J	1.0 U	3.6	0.83	34	-	-	-	-	-	-	-	-	6.09	0.809	38.9	0.40	12.1	49.7
Area 5		4/4/2018	1.0 U	3.4	1.0 U	0.99 J	1.2	1.0 U	10	1.5	260	1.1 U	1.0 U	3,200	31	0.05 U	15	1.0 U	1.8	6.15	0.907	3.35	0.71	11.1	41.9
Area 5		10/29/2018	1.0 U	0.85 J	1.0 U	1.3	3.6	1.0 U	13	1.5	200	1.1 U	1.0 U	2,300	35	0.05 U	14	1.0 U	6.7	5.63	0.975	23.6	0.46	12.1	-1.9
Area 5		4/3/2019	1.0 U	1.0 U	1.0 U	1.0 U	3.1	1.0 U	3.4	0.46	3,300	0.66 J	1.5	4,500	-	0.05 U	13	1.0 U	36	6.00	1.000	29.0	1.40	12.0	-140.0
Area 5		10/21/2019	1.0 U	1.8	1.0 U	7.1	30	4.0	6.2	1.3	2,700	1.1 U	2.2	6,200	34	0.21	12	0.85 U	14	5.70	0.790	190	0.15	12.0	33.0
Area 5		05/11/2020	1.0 U	0.85 J	1.0 U	0.69 J	4.4	1.0 U	6.2	0.62	5,100	1.1 U	0.78 J	8,000	66	0.10 U	10	0.81 U	11	5.90	0.941	94.2	0.88	12.7	3.8
Area 5		10/13/2020	1.0 U	2.0	1.0 U	1.6	2.2	1.0 U	1.8 J	0.18	2,600	1.1 U	1.0 U	3,100	45	0.05 U	15	0.83 U	3.8	6.20	0.639	322	1.53	11.8	-88.1
Area 5		5/11/2021	1.0 U	2.0 U	1.0 U	1.0 U	24	6.7	14	1.1	6,000	2.5	6.8	9,300	170	0.05 U	8.3	0.81 U	3.0	6.50	0.686	291.9	0.89	11.9	-99.8
Area 5		10/12/2021	1.0 U	2.0 U	1.0 U	1.6	1.9	1.0 U	160	1.4	5,800	0.76 U	0.60 J	2,200	98	0.05 U	11	0.81 U	1.3	6.48	1.620	8.77	0.69	12.2	-38.6
Area 5		5/3/2022	1.0 U	1.0 U	1.0 U	0.50 J	0.73 J	1.0 U	180	2.9	4,500	0.76 U	0.71 U	1,400 J	68	0.05 U	14	1.2 U	1.4	6.47	0.987	3.11	0.37	12.0	-29.3
Area 5		10/12/2022	1.0 U	1.0 U	1.0 U	0.5 U	10	3.8	160	8.0	8,500	0.57 J	2.7	910	180	0.025 U	7.1	1.8 U	1.9	6.38	1.007	30.21	1.54	17.0	-40.4
Area 5	G6M-13-04X	12/11/2006	1.0 U	87	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 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		1/30/2014	0.90 J	41	2.7	51	68	150	-	-	-	-	-	-	-	-	-	-	-	6.57	1.414	4.60	0.98	12.6	-36.4
Area 5		6/10/2014	0.66	25	2.7	31	29	130	360	49 J	5,900	2.7 J	12 J	3,600 J	280 J	0.13 U	9.3	0.03 U	2.5 J	6.42	1.212	12.9	0.58	-	-49.4
Area 5		10/29/2014	0.56	1.7	1.6	17	69	72	321	5.5 J	6,170 J	4.7	41	32,000	310	0.13 U	3.5 J	0.03 U	13	6.65	1.081	5.55	0.42	12.1	-95.2
Area 5		6/22/2015	0.5 U	0.5 U	0.5 U	1.8	2.2	1.4	360	29	3,840 J	5.0 U	5.0 U	719	129	0.11 U	30.5 J	1.0 U	3.2	6.95	0.800	0.80	0.70	17.3	-156.6
Area 5		10/15/2015	1.0 U	19	0.76 J	19	52	33	388	33	7,930	10 U	19	9,470	269	0.16	5.8 J	2.0 U	2.8	6.60	1.595	7.50	0.29	12.3	-69.4
Area 5		2/11/2016	1.0 U	0.70 J	1.5	5.9	15	51	392	34	7,390	10 U	19	5,690	261	0.099 J	6.1 J	2.0 U	3.2	6.66	1.086	9.50	1.23	8.5	-2.9
Area 5		6/15/2016	0.73 J	12	1.2	18	19	55	340	27	6,800	2.8	20 J	9,300	280	0.05 U	3.6	1.0 U	1.7	6.69	1.669	11.5	0.59	14.9	-54.2
Area 5		11/11/2016	0.62 J	4.9	0.86 J	17	17	36	340	28	7,600	2.2	12	7,000	250	0.05 U	4.0	1.0 U	1.6	7.21	1.175	24.1	0.88	12.7	-80.4
Area 5		10/16/2017	0.71 J	40	0.81 J	40	25	33	340 J	27	7,100	1.5	7.6	2,500	190	0.05 U	4.1	1.0 U	1.8	6.76	1.410	4.96	0.65	12.1	-79.1
Area 5		4/5/2018	1.0 U	1.0 U	1.6	4.1	6.9	8.6	350	34	7,500	8.6	14	20,000	210	0.062 J	4.5	1.0 U	1.8	6.65	1.579	1.28	0.90	10.6	-31.2
Area 5		10/29/2018	1.0 U	1.0 U	0.67 J	6.9	7.7	6.1	330	23	8,700	1.8	4.4	2,700	160	0.055 J	6.9	1.0 U	1.5	6.42	1.619	9.47	0.91	11.2	-53.9
Area 5		4/4/2019	1.0 U	1.0 J	0.52 J	12	13	6.5	350 J	35	10,000	2.4	12	21,000	-	0.05 U	5.7 J	1.0 U	4.4	6.80	1.700	2.00	1.40	10.0	-97.0
Area 5		10/23/2019	1.0 U	1.0 U	1.0 U	0.61 J	8.5	4.5	440	81	13,000	3.2	16	13,000	310	0.042 J	4.1	0.86 U	55	6.60	2.000	11.0	1.80	12.0	-95.0
Area 5		05/11/2020	1.0 U	1.0 U	1.0 U	1.0 U	0.68 J	0.52 J	430	44	9,000	1.5	2.5	21,000	240	0.10 U	5.5	0.81 U	6.3	6.83	1.700	0.86	0.87	11.4	-83.4
Area 5		10/16/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.2	1.3	550	100	10,000	3.3	3.6	25,000	250	0.055 J	4.4 J	0.96 U	10	6.54	1.450	94.8	0.61	12.2	-117.0
Area 5		10/12/2021	1.0 U	2.0 U	1.0 U	0.88 J	0.91 J	1.0 U	450	41	8,300	-	-	-	-	-	-	-	-	6.98	1.140	32.4	0.65	13.2	-135.0
Area 5		10/12/2022	1.0 U	1.0 U	1.0 U	0.5 U	1.2 J	0.83 J	580	68	8,100	-	-	-	-	-	-	-	-	6.86	1.204	1.24	0.76	16.8	-124.7
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		10/14/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.054	14	1.1 U	1.0 U	0.33 J	26	0.50	7.1	0.93 U	0.57 J	6.00	0.140	5.50	6.80	13.0	130.0
Area 5		11/05/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.05 U	4.7 J	1.1 U	1.0 U	0.40	22	0.51	6.1	0.81 U	1.0 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		10/18/2019	1.0 U	0.80 J	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.017 J	90	1.1 U	1.0 U	2.6	18	1.9	11	0.88 U	1.0 U	5.80	0.840	1.30	2.50	12.0	210.0
Area 5		10/14/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.05 U	23	1.1 U	1.0 U	0.51 J	22	1.9	14	0.81 U	1.4	6.08	0.645	1,060	4.28	17.0	201.0
Area 5	G6M-97-05B	10/3/2011	0.5 U	5.7	0.5 U	0.58	0.5 U	0.5 U	5.0 U	0.1 U	25 U	-	-	-	-	-	-	-	-	6.21	0.357	1.48	3.91	12.4	166.4
Area 5		10/12/2012	0.5 U	13	0.5 U	0.73	0.5 U	0.5 U	5.0 U	0.017 J	25 U	-	-	-	-	-	-	-	-	6.19	0.649	0.41	4.13	14.6	132.0
Area 5		10/16/2013	0.5 U	26	0.5 U	0.70	0.63	0.5 U	5.0 U	0.1 U	25 U	-	-	-	-	-	-	-	-	6.15	0.513	3.86	3.88	13.8	123.8
Area 5		10/28/2014	0.5 U	83	0.5 U	1.8	1.7	0.5 U	2.5 U	0.029 J	25 U	-	-	-	-	-	-	-	-	6.21	0.499	2.78	3.38	11.1	112.1
Area 5		6/19/2015	0.5 U	89	0.5 U	4.8	2.3	0.5 U	3.1 J	0.05 U	7.5 U	5.0 U	5.0 U	5.0 U	27	1.0	7.8 J	1.0 U	-	6.26	0.630	1.72	2.73	17.2	106.3
Area 5		10/15/2015	1.0 U	117	1.0 U	6.9	3.4	1.0 U	4.0 U	0.061 J	19	-	-	-	-	-	-	-	-	5.43	0.687	1.05	3.41	18.9	86.9
Area 5		2/11/2016	1.0 U	97	1.0 U	11	3.8	1.0 U	4.0 U	0.1 U	15 U	10 U	10 U	10 U	29	1.0	7.8 J	2.0 U	1.0 U	6.33	0.430	16.7	4.72	7.3	131.7
Area 5		6/15/2016	1.0 U	87	1.0 U	13	4.2	1.0 U	3.0 U	0.05 U	3.0 U	-	-	-	-	-	-	-	-	6.26	0.669	1.15	2.75	15.9	81.7
Area 5		11/15/2016	1.0 U	140	1.0 U	13	4.2	1.0 U	3.0 U	0.021 J	2.4 J	-	-	-	-	-	-	-	-	6.39	0.469	0.87	3.37	11.7	129.4
Area 5		5/17/2017	1.0 U	190	1.0 U	15	8.6	1.0 U	3.0 U	0.05 U	3.0 U	1.1 U	1.0 U	0.84	31	0.94	7.0	1.0 U	1.0 U	6.20	0.547	9.59	2.00	15.2	120.8
Area 5		10/11/2017	1.0 U	140	1.0 U	16	4.4	1.0 U	3.0 U	0.1 U	3.3 J	1.1 U	1.0 U	0.58 U	32	0.89	7.4	1.0 U	1.0 U	6.20	0.710	5.27	1.65	14.0	100.1
Area 5		4/3/2018	1.0 U	240	1.0 U	19	9.0	1.0 U	3.0 U	0.05 U	1.4 J	1.1 U	1.0 U	34	33	0.79	7.4	1.0 U	1.5	6.60	0.671	1.13	1.85	10.9	47.4

Appendix D
Historical Groundwater Analytical Results
2022 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	PCE	trans-1,2-DCE	TCE	cis-1,2-DCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	TOC	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/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	5	70	5	70	2	10	3.129	1,460					10,000									
Area	Well ID	Date Sampled																							
Area 5		10/30/2018	2.0 U	**190**	2.0 U	**16**	9.6	2.0 U	3.0 U	0.05 U	1.5 J	1.1 U	1.0 U	530 J	35	0.59	8.6	1.0 U	0.5 U	5.74	0.758	9.85	1.29	9.1	105.0
Area 5		4/3/2019	1.0 U	**180**	1.0 U	**22**	9.8	1.0 U	3.0 U	0.05 U	4.3 J	1.1 U	1.0 U	1,100	-	0.58	7.6	1.0 U	0.5 U	6.20	0.760	0.69	1.50	13.0	45.0
Area 5		10/21/2019	1.0 U	**26**	1.0 U	**7.8**	17	1.0 U	**56**	**22**	**5,800**	4.7	1.4	820	110	0.05 U	2.0	0.83 U	270	6.00	0.980	140	0.11	12.0	5.8
Area 5		05/11/2020	1.0 U	**6.4**	1.0 U	0.97 J	**77**	0.56 J	**220**	**100**	**16,000**	6.5	1.6	13,000	250	0.10 U	0.48 J	0.81 U	260	5.86	1.230	23.1	1.04	13.4	-61.2
Area 5		10/13/2020	1.0 U	**13**	1.0 U	3.1	**73**	**2.4**	**130**	**61**	**5,800**	25	22	10,000	150	0.10 U	1.0 U	0.81 U	210	5.32	0.655	2,600	0.42	11.8	181.0
Area 5		5/11/2021	1.0 U	1.9 J	1.0 U	3.4	32	**10**	**250**	**74**	**13,000**	5.7	24	27,000	170	0.046 J	1.0 U	0.81 U	67	6.40	0.806	330	0.56	14.0	-83.9
Area 5		10/13/2021	1.0 U	2.0 U	1.0 U	3.1	21	**8.0**	**170**	**52**	**6,600**	6.3	23	28,000	110	0.05 U	0.67 J	0.81 U	34	6.49	1.625	11.96	0.7	89.0	-105.1
Area 5		5/2/2022	1.0 U	1.0 U	1.0 U	0.52 J	5.8	**3.5**	**300**	**62**	**7,500**	14	23	27,000 J	170	0.05 U	0.85 J	1.2 U	36	6.84	0.974	118	0.27	11.9	-154.0
Area 5		10/10/2022	1.0 U	1.0 U	1.0 U	0.5 U	1.1 J	0.62 J	**270**	**62**	**11,000**	19	9.0	26,000	170	0.025 U	1.0 U	1.9 U	20	6.69	1.131	6.94	0.59	12.5	-149.1
Area 5	MW-3	10/17/2001	10 U	**4,300**	20 U	**1,500**	**540**	20 U	-	-	-	-	-	-	-	-	-	-	-	5.70	1.400	3.10	0.90	13.7	-127.0
Area 5		12/19/2001	6.5 J	**26**	20 U	**4,000**	**2,200**	20 U	-	-	-	-	-	-	-	-	0.43 J	-	92	6.28	0.912	7.28	0.43	13.0	-46.0
Area 5		1/3/2002	-	-	-	-	-	-	**180**	**30**	-	0.063	0.21	18	-	-	-	-	44	4.77	2.795	4.40	1.33	11.2	-48.0
Area 5		1/31/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38	6.64	0.999	-	0.00	12.2	-293.0
Area 5		2/13/2002	3.7	**4,400**	1.6 J	**1,700**	**1,600**	2.0 U	**190**	**20**	**8,300**	0.079	0.29	53	-	0.10 U	14	1.0 J	15	6.65	0.893	1.30	0.75	13.5	-71.0
Area 5		3/13/2002	2.8	**5,200**	1.4 J	**640**	**1,400**	2.0 U	**180**	**16**	**8,400**	0.093	0.37	66	-	0.10 U	15	2.0 U	7.3	6.72	0.795	1.04	0.25	12.2	-75.0
Area 5		4/2/2002	4.0	**3,100**	2.2	**1,000**	**1,700**	2.0 U	-	-	-	-	-	-	-	-	-	-	3.3 J	6.74	0.634	2.08	4.28	13.2	-120.0
Area 5		4/17/2002	3.4	**1,200**	1.2 J	**1,300**	**1,600**	2.0 U	**240**	**37**	**17,000**	0.025	0.087	54	-	3.0	7.9 J	1.6 J	6.1	6.60	0.771	0.81	4.39	12.7	-102.0
Area 5		5/15/2002	6.7	**31**	3.5	**23**	**2,600**	2.0 U	**260**	**42**	**19,000**	0.052	0.24	560	-	0.10 U	3.9	1.6 J	96	6.66	1.460	1.68	0.31	14.2	-124.0
Area 5		6/27/2002	100 U	200 U	200 U	200 U	**1,800**	200 U	**490 J**	**140**	**37,000 J**	0.021	0.082	3,900	-	14	4.4 J	2.0 U	270	6.70	3.804	2.90	1.64	13.8	-107.0
Area 5		7/31/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31	6.76	1.606	-	0.15	13.9	-225.0
Area 5		8/26/2002	4.4	**990**	2.1	**640**	**580**	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		10/28/2002	4.2	**1,900**	3.9	**820**	**1,700**	2.0 U	**330**	**39**	**9,700**	0.30	0.23	6,300	190	0.10 U	10	2.0 U	6.3	6.70	1.129	5.01	0.40	15.7	-129.0
Area 5		2/3/2003	**7.1**	3.0	2.0 U	2.0 U	**2,900**	2.0 U	**330**	**120**	-	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		7/16/2003	**7.5**	2.4	2.0 U	2.0 U	**2,700**	**2.5**	**520**	**170**	-	0.005 U	0.10	23,000	450	-	4.0 U	2.0 U	17	7.02	1.464	39.2	1.09	16.1	-138.0
Area 5		9/24/2003	6.9	**670**	2.4	**1,100**	**1,900**	2.0 U	**460**	**89**	**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		1/9/2004	5.6	**9.7**	2.0 U	**64**	**2,000**	2.0 U	**530**	**200 J**	**15,000**	0.005 U	0.005 U	45,000	500 J	-	1.0 U	2.0 U	130	6.73	1.347	14.6	0.40	-	-195.0
Area 5		3/11/2004	**7.6**	**680**	2.0 U	**620**	**4,700**	2.0 U	**420**	**11**	**8,400**	0.005 U	0.005 U	27,000	200	-	4.4	2.0 U	6.1	6.58	0.972	4.30	0.62	13.9	-161.0
Area 5		6/2/2004	4.5	2.0 U	2.0 U	2.0 U	**1,800**	2.0 U	**670**	**150**	**23,000**	0.005 U	0.014	31,000	810	-	0.98 J	2.0 U	290	6.95	1.905	38.7	0.10	15.7	-149.0
Area 5		9/21/2004	5.2	**210**	2.0 U	**250**	**1,900**	**3.5**	**660**	**200 J**	**7,200**	0.086	0.005 U	28,000	310	1.0 J	4.3 J	2.0 U	17	6.66	0.725	2.27	0.95	11.1	-153.6
Area 5		12/13/2004	1.0 U	2.0 U	2.0 U	2.0 U	**750**	**610**	**510**	**160**	**5,400**	0.092	3.5	17,000	210	1.1	1.4 J	2.0 U	8.0	6.62	1.009	15.1	1.60	13.9	-103.3
Area 5		3/28/2005	50 U	**23 J**	50 U	**16 J**	**1,000**	**280**	**670**	**150**	**7,300**	0.005 U	5.1	25,000	405	0.2 U	1.0 U	7.5 J	21	6.49	1.260	2.37	0.34	14.4	-134.9
Area 5		8/10/2005	5.1	**440**	2.0 U	**80**	**120**	**760**	**680**	**180**	**4,400**	0.061 J	13	22,000	338	0.05 U	2.0 U	8.0	43	11.13	1.401	28.9	0.71	15.7	-118.5
Area 5		9/27/2005	**9.1**	**1,100**	1.8	**240**	**180**	**360**	**480**	**71 J**	**2,500**	0.020 J	40	22,000	97	0.05 U	9.9J	3.4	5.6	6.36	0.660	2.80	0.21	14.5	-91.2
Area 5		12/12/2005	10 U	**37**	20 U	**67**	52	**480**	**566**	**100**	-	0.055	100	26,000	180	0.083 J	2.0 U	5.6	18	6.66	1.087	8.00	0.11	15.7	-152.7
Area 5		3/20/2006	3.9	**620**	3.1	**350**	**120**	**220**	**440**	**85**	**3,600**	0.025 U	130	25,000	110	0.2 U	6.3	1.0 U	13	6.95	0.871	3.71	0.77	14.9	-106.2
Area 5		6/22/2006	1.0 U	2.0 U	7.6	2.0 U	4.0	**6.1**	**520**	**87**	**3,300**	0.023 J	180	20,000	98	0.2 U	1.0 U	1.0 U	4.0 J	6.40	1.012	4.18	0.22	13.0	-127.0
Area 5		9/20/2006	5.6	**360**	12	**420**	**130**	**200**	**580**	**70**	**3,300**	0.015 J	95	17,000	70	0.2 U	7.9	1.4	9.6	6.52	0.729	3.56	0.28	13.3	-108.5
Area 5		3/27/2007	1.0 U	2.0 U	12	**31**	19	**27**	**560**	**110**	**3,300 J**	0.025 U	130	18,000	-	-	3.2	1.0 U	5.2	6.28	0.944	2.64	0.19	13.6	21.0
Area 5		6/11/2007	1.0 U	2.0 U	15	5.0	5.4	**8.0**	**570**	**190**	**5,000**	0.038	150	32,000	-	-	12	2.2	67	6.56	1.405	17.3	0.58	12.3	-124.7
Area 5		9/11/2007	2.6	**610**	6.4	**470**	**100**	**97**	**530**	**100**	**3,600**	-	-	-	150	0.2 U	400	1.0 U	-	6.76	1.016	6.80	0.23	13.5	-130.0
Area 5		10/12/2007	-	-	-	-	-	-	-	-	-	0.025 U	120	34,000	-	-	-	-	3.8 J	-	-	-	-	12.5	-
Area 5		12/13/2007	2.4	**250**	8.8	**180**	59	**78**	**420**	**91**	**4,400**	0.016 J	130	30,000	-	-	10	1.0 U	4.1 J	6.60	1.040	15.7	0.27	19.2	-159.8
Area 5		3/10/2008	1.0 U	2.0 U	8.3	2.0 U	2.0 U	2.0 U	**530**	**140**	**3,300**	18	35	29,000	-	-	5.0 U	2.4	16	6.46	1.402	5.50	0.12	14.3	-113.0
Area 5		10/6/2008	5.0 U	5.0 U	11	5.0 U	5.0 U	5.0 U	**482**	**112**	**3,720**	1.3 U	72	28,000	210	0.13 U	7.0 U	0.03 U	10 U	6.49	1.070	9.30	0.24	21.5	-158.6
Area 5		1/21/2009	1.2 U	1.4 U	9.2	2.3 U	1.6 J	1.9	**556**	**114 J**	**3,350**	3.2	58	40,000	160	0.13 U	7.0 U	0.03 U	10 U	6.69	1.044	4.01	0.50	15.5	-79.9
Area 5		5/7/2009	2.0 U	2.0 U	17	**59**	48	**66**	**519**	**115**	**3,630**	1.3	70	47,000	360 J	0.13 U	22	0.03 U	7.0 J	6.26	1.205	4.54	1.03	18.9	-89.9
Area 5		10/19/2009	2.0 U	2.0 U	9.4	**35**	25	**40**	**551**	**120**	**5,330**	1.2 U	36	25,000	490	0.13 U	28	0.03 U	6.7 J	6.24	1.494	25.6	0.60	15.5	-62.6
Area 5		4/20/2010	0.5 U	0.5 U	4.7 J	0.48 J	0.47 J	**2.5 J**	**526**	**136 J**	**3,200**	10	19	47,000	440	0.13 U	3.4 J	0.03 U	9.0 J	6.33	1.445	0.09	0.16	11.1	5.4
Area 5		10/5/2010	0.5 U	0.5 U	7.5	4.8	3.4	**20**	**444**	**76**	**3,560**	1.2 U	69	32,000	750	0.13 U	4.5 J	0.03 U	10 U	6.20	1.799	0.58	0.20	11.9	-85.9
Area 5		6/8/2011	0.5 U	0.5 U	4.4	0.66	0.93	**17**	**374**	**54**	**2,570**	4.5	18	100,000	690	0.13 U	1.7 J	0.03 U	12	6.34	1.232	3.56	0.30	12.0	-91.1
Area 5		10/3/2011	0.5 U	0.5 U	1.7	0.5 U	0.52	1.0	**385**	**46**	**2,760**	1.2 U	1.5 U	40,000	730	0.13 U	0.74 J	0.03 U	10	6.47	1.544	0.90	0.13	12.1	-88.1
Area 5		5/8/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**276**	**27**	**3,140**	51	110	66,000	600	0.13 U	0.82 J	0.03 U	7.5 J	6.77	1.856	4.60	0.08	12.2	-107.2
Area 5		10/10/2012	0.5 U	0.5 U	0.54	0.5 U	0.5 U	1.2	**267**	**26**	**4,810**	61	100	36,000	520	0.13 U	1.4 J	0.03 U	5.6 J	6.45	1.738	0.92	0.51	12.1	-87.6
Area 5		5/21/2013	0.5 U	0.5 U	0.39 J	0.5 U	0.30 J	0.75	**281**	**25**	**6,460**	1.2 U	1.5 U	10,000	530 J	0.13 U	0.64 J	0.03 U	4.3 J	6.76	1.277	2.75	0.12	11.5	-105.2
Area 5		10/16/2013	0.5 U	0.5 U	0.32 J	0.21 J	0.36 J	0.94	**298**	**27**	**7,970**	12	11	38,000	510	0.13 U	1.9 J	0.03 U	5.2 J	6.75	1.437	< 0.01	0.40	12.0	-87.4
Area 5		6/11/2014	0.5 U	0.5 U	0.37 J	0.5 U	0.5 U	0.83	**354**	**34 J**	**11,100**	2.9 J	1.6 U	5,100 J	330 J	0.13 U	1.2 U	0.03 U	8.3 J	6.70	1.062	6.18	0.51	11.8	-67.6
Area 5		10/29/2014	0.5 U	0.5 U	0.38 J	0.27 J	0.68	0.53	**334**	**30 J**	**10,500 J**	3.8	1.5 U	13,000	370	0.13 U	2.4 J	0.03 U	5.2 J	6.80	0.756	3.79	0.34	12.0	-110.1
Area 5		6/23/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**409**	**37**	**11,000**	5.0 U	5.0 U	4,830	366	0.11 U	5.1 J	1.0 U	5.0	6.34	1.262	5.85	1.07	14.2	-89.4
Area 5		10/15/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.54 J	**420**	**42**	**12,600**	10 U	10 U	4,570	349	0.071	10 U	2.0 U	4.9	6.97	1.215	1.38	0.48	13.9	-112.1
Area 5		2/10/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0	0.88 J	**423**	**49**	**12,000**	10 U	10 U	7,260	341	0.094 J	10 U	2.0 U	5.4	6.72	0.851	10.5	1.12	9.1	-109.7
Area 5		6/16/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.5	0.89 J	**410**	**45**	**9,800**	3.0	1.0 U	20,000	350	0.05 U	1.3	1.0 U	6.1	6.81	1.360	4.93	0.66	14.3	-77.4
Area 5		11/11/2016	1.0 U	1.0 U	1.0 U	0.96 J	1.7	1.6	**410**	**47**	**9,500**	2.9	1.0 U	7,000	370	0.05 U	1.4	1.0 U	6.4	7.22	0.871	7.77	0.83	12.7	-97.8
Area 5		5/17/2017	1.0 U	1.0 U	1.0 U	1.0 U	0.75 J	1.0 U	**500**	**56**	**9,400**	1.8	1.0 U	10,000	310	0.073 J	2.2	1.0 U	5.2	6.78	0.909	6.29	0.63	12.7	-112.4
Area 5		10/11/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0	0.60 J	**440**	**56**	**9,200**	1.9	1.0 U	5,500	280	0.06 J	0.62 J	1.0 U	5.0	6.60	1.200	4.33	0.69	13.4	-102.3
Area 5		10/29/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**470**	**51**	**8,300**	-	-	-	-	-	-	-	-	6.80	1.211	4.13	1.05	11.6	-102.0
Area 5		10/17/2019	1.0 U	1.0 U	1.0 U	1.0 U	0.71 J	1.0 U	**510**	**42**	**7,000**	-	-	-	-	-	-	-	-	6.70	1.100	7.60	1.10	12.0	-100.0
Area 5		10/15/2020	1.0 U	1.0 U	1.0 U	1.0 U	0.49 J	1.0 U	**610**	**43**	**7,300**	-	-	-	-	-	-	-	-	6.91	0.716	1.89	0.23	13.9	-120.0
Area 5		10/12/2021	1.0 U	2.0 U	1.0 U	1.0 U	0.51 J	1.0 U	**530**	**41**	**8,900**	-	-	-	-	-	-	-	-	6.82	1.641	13.87	1.12	12.6	-108.0
Area 5		10/6/2022	1.0 U	1.0 U	1.0 U	0.5 U	0.31 J	0.40 J	**650**	**42**	**8,200**	-	-	-	-	-	-	-	-	6.90	0.804	2.81	0.81	19.3	-129.3
Area 5	MW-7	2/14/2002	1.0 U	**5,900**	2.0 U	4.5	2.0 U	2.0 U	5.0 U	1.0 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		3/14/2002	1.0 U	**5,700**	2.0 U	4.2	2.0 U	2.0 U	5.0 U	1.0 U	1,000 U	0.094	0.18	5.9 J	-	4.1	22 J	2.0 U	2.0 J	6.12	0.808	8.85	2.29	12.8	203.0

Appendix D
Historical Groundwater Analytical Results
2022 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	PCE	trans-1,2-DCE	TCE	cis-1,2-DCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	TOC	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/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	5	70	5	70	2	10	3.129	1,460					10,000									
Area	Well ID	Date Sampled																							
Area 5		4/17/2002	1.0 U	**4,200**	2.0 U	2.9	2.0 U	2.0 U	2.3 J	1.0 U	1,000 U	0.072	0.20	6.0	-	4.2	18 J	1.6 J	5.0 U	6.11	0.656	19.5	0.50	-	145.0
Area 5		5/16/2002	1.0 U	**5,700**	2.0 U	4.3	2.0 U	2.0 U	5.0 U	1.0 U	1,000 U	0.097	0.20	9.0	-	4.3	18 J	2.0 U	5.0 U	6.05	0.759	23.9	0.21	10.9	185.0
Area 5		6/27/2002	10 U	**5,300**	2.0 U	3.8 J	2.0 U	2.0 U	5.0 U	1.0 U	170 J	-	-	-	-	4.2	19 J	2.0 U	5.0 U	6.13	1.198	100	0.73	11.1	163.0
Area 5		8/27/2002	1.0 U	**4,700**	2.0 U	3.5	2.0 U	2.0 U	5.0 U	-	-	-	-	-	29	-	-	-	5.0 U	6.13	0.632	1.86	0.29	12.0	136.0
Area 5		10/30/2002	1.0 U	**5,400**	2.0 U	2.7	2.0 U	2.0 U	5.0 U	1.0 U	200 J	0.047	0.18	20	23	4.9	16	2.0 U	5.0 U	6.05	0.779	3.63	0.37	11.9	66.0
Area 5		12/14/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.0 U	-	-	-	-	12.0	-
Area 5		1/30/2003	1.0 U	**4,700**	2.0 U	3.1	2.0 U	2.0 U	5.0 U	1.0 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		9/24/2003	1.0 U	**4,200**	2.0 U	3.3	2.0 U	2.0 U	5.0 U	1.0 U	140	0.015	0.027	58	-	-	-	-	5.0 U	3.40	0.691	0.30	1.43	-	522.0
Area 5		1/8/2004	1.0 U	**4,300**	2.0 U	2.8	2.0 U	2.0 U	5.0 U	1.0 U	130	0.011	0.026	25	27	-	14 J	2.0 U	5.0 U	6.02	0.481	15.0	0.00	11.6	198.0
Area 5		3/12/2004	1.0 U	**3,100**	2.0 U	2.7	2.0 U	2.0 U	5.0 U	1.0 U	120	0.020	0.28	6.3	24	-	15 J	2.0 U	1.0 U	6.04	0.556	1.00	0.47	14.0	162.0
Area 5		6/3/2004	1.0 U	**2,900**	2.0 U	2.6	2.0 U	2.0 U	5.0 U	1.0 U	110	0.012	0.034	34	24	-	15 J	2.0 U	1.5 J	5.96	0.580	1.92	0.31	-	205.2
Area 5		9/21/2004	1.0 U	**2,900**	2.0 U	3.4	3.1	2.0 U	5.0 U	1.0 U	110	-	-	-	-	-	-	-	-	5.98	0.580	< 0.01	0.21	11.1	240.4
Area 5		9/27/2005	2.5 U	**1,600**	2.5 U	3.7	5.8	2.5 U	5.0 U	0.2 J	110	-	-	-	-	-	-	-	-	4.49	0.593	3.39	0.93	11.9	304.1
Area 5		9/22/2006	1.0 U	**4,400**	2.0 U	**9.8**	7.7	2.0 U	5.0 U	0.1 U	100	-	-	-	-	-	-	-	-	5.99	0.503	3.01	1.19	12.7	140.9
Area 5		9/11/2007	1.0 U	**1,200**	2.0 U	**11**	22	2.0 U	6.0 U	0.1 U	110	-	-	-	-	-	-	-	-	5.98	0.691	5.90	0.32	-	139.9
Area 5		10/20/2008	20 U	**600**	20 U	**40**	**150**	20 U	8.0 U	0.2 U	166	-	-	-	-	-	-	-	-	5.97	0.804	2.00	1.39	14.7	71.9
Area 5		10/19/2009	10 U	**97**	10 U	**33**	**270**	10 U	4.2 J	1.7	**2,170**	-	-	-	-	-	-	-	-	6.03	1.686	1.91	0.47	14.6	76.7
Area 5		10/6/2010	2.5 U	**45**	2.5 U	**9.5**	**120**	**3.1**	5.7	1.5	**2,090**	-	-	-	-	-	-	-	-	6.53	2.072	4.81	0.21	11.5	-21.6
Area 5		10/6/2011	0.5 U	1.6	0.5 U	3.7	20	**6.8**	**53**	**5.4**	**5,070**	-	-	-	-	-	-	-	-	6.60	1.717	3.00	0.49	-	-48.8
Area 5		10/12/2012	0.5 U	2.3	0.70	2.3	9.9	**11**	**140**	**21**	**9,900**	-	-	-	-	-	-	-	-	6.38	1.253	< 0.01	0.65	-	-65.0
Area 5		10/17/2013	0.5 U	1.5	0.24 J	**6.9**	13	**2.2**	**156**	**21**	**9,360**	-	-	-	-	-	-	-	-	6.72	1.152	< 0.01	0.58	10.5	-68.2
Area 5		11/3/2014	0.5 U	1.7	0.27 J	**8.4**	13	1.5	**205**	**30**	**15,300**	-	-	-	-	-	-	-	-	6.62	0.878	1.94	0.41	10.3	-74.2
Area 5		10/15/2015	1.0 U	1.0 U	1.0 U	1.7	12	1.1	**198**	**30**	**15,100**	-	-	-	-	-	-	-	-	6.83	0.926	1.50	0.84	11.3	-68.2
Area 5		11/14/2016	1.0 U	1.0 U	1.0 U	1.4	22	**37**	**110**	**19**	**13,000**	-	-	-	-	-	-	-	-	6.01	0.770	7.42	1.24	13.2	-63.5
Area 5		10/11/2017	1.0 U	1.0 U	1.0 U	0.53 J	1.4	**15**	**160**	**20**	**19,000**	-	-	-	-	-	-	-	-	6.37	0.730	2.75	0.67	12.7	-30.1
Area 5		10/29/2018	1.0 U	1.0 U	1.0 U	1.0 U	0.95 J	1.0 U	**250**	**20**	**14,000**	-	-	-	-	-	-	-	-	6.17	1.018	19.6	0.46	12.8	-56.8
Area 5		10/30/2019	-	-	-	-	-	-	**400**	**23**	**12,000**	-	-	-	-	-	-	-	-	6.40	0.980	96.0	0.41	13.0	-52.0
Area 5		12/20/2019	1.0 U	1.0 U	1.0 U	0.79 J	1.3	1.0 U	-	-	-	-	-	-	-	-	-	-	-	6.79	0.626	15.2	2.43	9.9	-110.7
Area 5		10/15/2020	1.0 U	1.0 U	1.0 U	1.0 U	2.2 J	2.0 J	**470**	**22**	**10,000**	-	-	-	-	-	-	-	-	6.80	0.602	2.59	0.27	14.1	-94.9
Area 5		10/12/2021	1.0 U	2.0 U	1.0 U	0.65 J	3.0	1.6	**490**	**26**	**11,000**	-	-	-	-	-	-	-	-	6.61	1.398	30.98	0.72	11.1	-93.5
Area 5		10/6/2022	1.0 U	1.0 U	1.0 U	0.63 J	3.1	**2.7**	**130**	**8.6**	**13,000**	-	-	-	-	-	-	-	-	6.68	0.711	4.12	0.84	21.9	-89.9
Area 5	XSA-12-95X	10/12/2012	5.0 U	**290**	5.0 U	**36**	66	**10**	4.6 J	**9.5**	**11,800**	-	-	-	-	-	-	-	-	6.53	1.247	45.0	2.04	12.8	-63.9
Area 5		10/15/2013	5.0 U	**160**	4.7 J	**51**	**100**	**6.5**	**13**	**5.2**	**9,890**	-	-	-	-	-	-	-	-	6.59	1.411	24.4	0.30	13.1	-254.4
Area 5		10/28/2014	0.47 J	**110**	5.0	**39**	**94**	**9.0**	8.3	**4.5 J**	**9,310 J**	-	-	-	-	-	-	-	-	6.90	0.906	20.2	0.18	14.2	-315.7
Area 5		10/19/2015	6.7	**27**	1.0 U	**20**	1.0 U	**7.2**	4.0 U	**4.8**	**10,600**	-	-	-	-	-	-	-	-	7.97	1.385	15.3	1.77	-	-103.6
Area 5		11/14/2016	1.0 U	**23**	4.3	**9.8**	**78**	**7.4**	3.0 U	1.9	**8,400**	-	-	-	-	-	-	-	-	6.58	1.048	28.1	1.21	12.7	-59.7
Area 5		10/10/2017	1.0 U	**36**	3.1	**11**	26	**5.6**	3.2	**7.8**	**9,700**	-	-	-	-	-	-	-	-	6.65	1.410	19.5	0.35	14.7	-85.3
Area 5		10/23/2018	1.0 U	**13**	2.2	5.0	11	1.9	3.2	**3.3**	**11,000**	-	-	-	-	-	-	-	-	6.58	1.198	29.4	0.21	9.6	-2.1
Area 5		10/15/2020	1.0 U	**6.9**	2.2	3.9	6.1	1.0 U	3.0	1.9	**11,000**	-	-	-	-	-	-	-	-	6.79	1.230	202.0	0.61	15.7	-89.7
Area 5		10/13/2021	1.0 U	2.8	1.7	2.7	4.3	0.86 J	2.2 J	3.5	**11,000**	-	-	-	-	-	-	-	-	6.83	1.179	30.7	0.02	13.6	-99.5
Area 5		10/6/2022	1.0 U	0.63 J	0.65 J	0.77 J	1.5 J	1.0 U	1.9 J	1.6	**12,000**	-	-	-	-	-	-	-	-	6.95	1.383	107.1	1.15	12.7	-45.4
Area 5	XSA-12-96X	10/10/2012	2.0 U	**120**	2.0 U	4.4	14	2.0 U	5.0 U	3.1	97	-	-	-	-	-	-	-	-	6.52	0.782	3.90	0.72	12.3	-87.1
Area 5		10/15/2013	2.5 U	**100**	2.5 U	**11**	17	**3.7**	3.7 J	0.94	**2,840**	-	-	-	-	-	-	-	-	6.46	0.824	0.90	0.27	15.9	-271.6
Area 5		10/28/2014	0.36 J	**84**	2.3	**14**	22	**6.0**	3.2 J	0.925 J	**5,720 J**	-	-	-	-	-	-	-	-	6.73	0.625	4.83	0.14	12.1	-300.6
Area 5		10/26/2015	3.4	**30**	1.0 U	**14**	1.0 U	**10**	4.0 U	2.2	**7,340**	-	-	-	-	-	-	-	-	6.34	0.787	9.41	0.66	13.0	-77.9
Area 5		11/14/2016	0.59 J	**29**	4.9	**19**	20	**11**	3.0 U	1.2	**6,300**	-	-	-	-	-	-	-	-	5.63	0.733	9.26	0.66	11.7	-25.5
Area 5		10/10/2017	0.64 J	**26**	5.0	**20**	20	**16**	3.0 U	**8.2**	**6,200**	-	-	-	-	-	-	-	-	6.48	1.120	9.27	0.69	14.2	-38.6
Area 5		4/3/2018	0.69 J	**27**	5.7	**22**	23	**16**	3.0 U	**3.2**	**4,400**	-	-	-	-	-	-	-	-	7.15	0.988	14.2	1.31	9.1	-187.3
Area 5		10/31/2018	1.0 U	**24**	3.2	**9.1**	21	**4.7**	2.9 J	**5.1**	**10,000**	-	-	-	-	-	-	-	-	6.53	1.221	20.8	0.38	10.5	-54.7
Area 5		4/19/2019	0.48 J	**10**	2.9	**13**	9.9	**8.0**	3.0 U	**3.3**	**3,900**	2.9	1.0 U	270	-	-	-	-	4.8	6.90	1.000	10.0	1.20	17.0	-100.0
Area 5		10/30/2019	-	-	-	-	-	-	5.5	**3.5**	**9,900**	-	-	-	-	-	-	-	-	6.70	1.500	11.0	0.43	12.0	-56.0
Area 5		11/6/2019	0.90 J	**13 J**	6.7	**24**	20	**23**	3.0 U	2.2	**5,300**	-	-	-	-	-	-	-	-	6.92	1.032	10.1	1.15	17.1	-100.9
Area 5		12/26/2019	1.0 U	**11**	2.7	4.9	11	1.8	-	-	-	-	-	-	-	-	-	-	-	6.61	1.298	3.80	0.86	9.2	-55.9
Area 5		05/12/2020	0.88 J	4.2	7.0	**20 J**	25	**21**	3.0 U	**4.2**	**5,800**	11	1.1	780	240	0.10 U	6.2	1.0 U	1.5	6.76	1.240	8.94	9.89	11.5	-64.3
Area 5		10/15/2020	1.0 U	**7.4**	5.4	**16**	12	**15**	3.0 U	**3.2**	**5,900**	18	1.3	1,800	220	0.05 U	9.2	0.81 U	1.5	6.56	1.080	24.8	0.63	15.3	-75.8
Area 5		5/14/2021	1.0 U	2.9	4.6	**10**	10	**9.5**	1.8 J	2.3	**5,400**	-	-	-	-	-	-	-	-	6.71	1.183	90.5	0.11	13.2	-49.1
Area 5		10/13/2021	1.0 U	2.1	3.1	**8.3**	8.6	**4.4**	1.6 J	2.2	**5,600**	0.66 J	0.71 U	25	250	0.05 U	5.7	0.81 U	0.8 U	7.43	1.212	330.0	0.01	14.8	-131.2
Area 5		5/2/2022	1.0 U	**5.9**	3.9	**9.3**	9.4	**8.0**	1.4 J	2.1	**5,400**	-	-	-	-	-	-	-	-	6.43	1.120	170.0	0.53	10.7	-43.8
Area 5		10/7/2022	1.0 U	1.4 J	2.8	4.2	4.5	**4.0**	1.7 J	1.9	**5,200**	-	-	-	-	-	-	-	-	6.87	1.400	59.9	0.97	12.8	-63.6
Area 5	XSA-12-97X	10/9/2012	0.5 U	2.1	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	1.4 J	44	-	-	-	-	-	-	-	-	6.66	0.673	33.8	1.30	11.7	-11.9
Area 5		10/16/2013	0.5 U	2.9	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	2.3	29	-	-	-	-	-	-	-	-	6.74	0.721	19.6	1.74	12.1	-21.9
Area 5		10/30/2014	0.5 U	**5.6**	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.44	9.1 J	-	-	-	-	-	-	-	-	6.51	0.522	17.5	1.52	17.2	51.8
Area 5		10/19/2015	1.0 U	**7.4**	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	0.77	15	-	-	-	-	-	-	-	-	6.62	0.614	13.9	1.39	10.0	31.9
Area 5		11/14/2016	1.0 U	**10**	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.77	12	-	-	-	-	-	-	-	-	7.62	0.526	18.4	1.68	11.6	-57.9
Area 5		10/10/2017	1.0 U	**8.0**	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	1.5	78	-	-	-	-	-	-	-	-	7.88	0.813	9.83	0.28	16.8	-130.3
Area 5		10/29/2018	1.0 U	**6.1**	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	2.3	49	-	-	-	-	-	-	-	-	9.82	0.682	27.2	0.34	7.9	-283.0
Area 5		10/15/2019	1.0 U	**9.2**	1.0 U	0.98 J	2.9	1.0 U	2.2 J	2.4	200	-	-	-	-	-	-	-	-	6.90	0.980	19.0	0.72	12.0	-47.0
Area 5		11/22/2020	1.0 U	2.0 U	1.0 U	1.0 U	6.2	1.0 U	**51**	2.7	**2,700**	-	-	-	-	-	-	-	-	7.13	0.561	4.73	0.69	10.0	-401.0
Area 5		10/14/2021	1.0 U	2.0 U	1.0 U	1.0 U	11	**3.3**	**21**	**4.8**	**7,400**	-	-	-	-	-	-	-	-	7.07	0.902	124.7	0.01	14.0	-81.2
Area 5		10/7/2022	1.0 U	1.0 U	1.0 U	0.5 U	0.39 J	1.0 U	**200**	**7.6**	**10,000**	-	-	-	-	-	-	-	-	7.07	0.985	102.5	0.81	15.6	-120.0
Area 5	XSA-12-98X	10/11/2012	0.5 U	**10**	0.5 U	0.59	0.50	0.5 U	5.0 U	1.4	18 J	-	-	-	-	-	-	-	-	7.75	0.308	8.89	0.76	13.1	-60.1

Appendix D
Historical Groundwater Analytical Results
2022 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	PCE	trans-1,2-DCE	TCE	cis-1,2-DCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	TOC	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/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	5	70	5	70	2	10	3.129	1,460					10,000									
Area	Well ID	Date Sampled																							
Area 5		10/16/2013	0.5 U	**5.2**	0.5 U	0.34 J	0.47 J	0.5 U	3.1 J	0.1 U	6.6 J	-	-	-	-	-	-	-	-	7.89	0.413	51.0	0.51	10.5	-39.8
Area 5		10/29/2014	0.5 U	**5.5**	0.5 U	0.37 J	0.76	0.5 U	2.5 U	0.31	5.6 J	-	-	-	-	-	-	-	-	8.00	0.258	44.8	0.46	10.6	-293.1
Area 5		10/19/2015	1.0 U	**6.3**	1.0 U	0.66 J	1.0 U	1.0 U	4.0 U	0.17	15 U	-	-	-	-	-	-	-	-	8.04	0.310	3.62	0.42	10.7	-194.4
Area 5		11/11/2016	1.0 U	**5.6**	1.0 U	0.69 J	0.81 J	1.0 U	3.0 U	0.095	3.1 J	-	-	-	-	-	-	-	-	7.98	0.233	16.1	0.52	9.7	-140.7
Area 5		10/23/2017	1.0 U	5.0	1.0 U	0.60 J	0.70 J	1.0 U	3.0 U	0.088 J	2.8 J	-	-	-	-	-	-	-	-	7.35	0.387	5.42	0.26	11.5	-55.5
Area 5		10/23/2018	1.0 U	2.8	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.05 U	3.0 U	-	-	-	-	-	-	-	-	7.71	0.948	4.99	0.25	12.0	-141.6
Area 5		10/9/2019	1.0 U	**5.5**	1.0 U	0.52 J	0.47 J	1.0 U	3.0 U	0.088	1.7 J	-	-	-	-	-	-	-	-	7.70	0.380	3.50	0.62	11.0	-65.0
Area 5		10/16/2020	1.0 U	4.1	1.0 U	1.0 U	0.61 J	1.0 U	3.0 U	0.15	4.9 J	-	-	-	-	-	-	-	-	7.72	0.360	4.10	0.86	12.3	-129.0
Area 5		10/14/2021	1.0 U	0.83 J	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.41	30	-	-	-	-	-	-	-	-	8.20	1.200	69.90	0.01	15.9	-147.0
Area 5		10/7/2022	1.0 U	3.4	1.0 U	0.5 U	1.0 U	1.0 U	3.0 U	0.071 J	4.1 J	-	-	-	-	-	-	-	-	7.85	0.347	2.80	0.70	13.1	423.4
Nashua River	G6M-04-08X	9/24/2004	1.0 U	4.2	2.0 U	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	**12**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14.3	-
Nashua River		9/27/2005	1.0 U	**6.9**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	7.88	0.263	18.0	1.60	13.2	333.0
Nashua River		9/21/2006	1.0 U	**9.4**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	7.98	0.211	15.7	3.00	11.1	26.1
North Plume		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
Nashua River		10/1/2007	1.0 U	**7.1**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	7.69	0.363	13.9	2.56	10.7	80.4
Nashua River		10/21/2008	0.5 U	**7.1 J**	0.5 U	0.21 J	0.5 U	0.5 U	-	-	-	-	-	-	-	-	-	-	-	7.78	0.237	45.0	2.51	13.0	138.8
Nashua River		10/15/2009	10 U	4.5 J	10 U	**250**	10 U	10 U	-	-	-	-	-	-	-	-	-	-	-	7.56	0.250	4.58	3.60	11.5	-69.7
Nashua River		1/15/2010	0.75 U	4.5	0.75 U	0.22 J	0.5 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-	7.73	0.293	12.5	25.3	11.6	166.2
Nashua River		10/8/2010	0.5 U	2.4	0.5 U	0.25 J	0.5 U	0.5 U	-	-	-	-	-	-	-	-	-	-	-	7.55	0.307	100	1.92	12.5	72.7
Nashua River		10/5/2011	0.5 U	2.2	0.5 U	0.5 U	0.5 U	0.5 U	6.8	0.1 U	25 U	-	-	-	-	-	-	-	-	7.68	0.172	20.4	2.62	11.1	99.9
Nashua River		10/15/2012	0.5 U	3.3	0.5 U	0.5 U	0.5 U	0.5 U	9.6	0.19	7.7 J	-	-	-	-	-	-	-	-	7.71	0.297	21.7	2.58	16.3	-10.9
Nashua River		10/18/2013	0.5 U	1.7	0.5 U	0.34 J	0.5 U	0.5 U	8.2	0.1 U	7.5 U	-	-	-	-	-	-	-	-	7.89	0.479	27.1	1.25	15.0	94.0
Nashua River		10/31/2014	0.5 U	1.8	0.5 U	0.40 J	0.5 U	0.5 U	2.5 U	0.05 U	7.5 U	-	-	-	-	-	-	-	-	7.93	0.423	8.26	0.40	15.6	54.4
Nashua River		10/26/2015	1.0 U	1.7	1.0 U	1.0 U	1.0 U	1.0 U	9.8	0.073 J	15 U	-	-	-	-	-	-	-	-	7.89	0.482	18.9	1.44	13.1	79.2
Nashua River		11/11/2016	1.0 U	2.5	1.0 U	1.4	1.2	1.0 U	8.3	0.05 U	2.1 J	-	-	-	-	-	-	-	-	7.48	0.350	10.1	0.84	10.5	-106.7
Nashua River		10/6/2017	1.0 U	1.0	1.0 U	1.0 U	1.0 U	1.0 U	7.1	0.017 J	3.2 J	-	-	-	-	-	-	-	-	7.50	0.997	5.26	0.46	12.9	69.9
Nashua River		10/25/2018	1.0 U	1.1	1.0 U	1.0 U	1.0 U	1.0 U	8.1	0.05 U	1.7 J	-	-	-	-	-	-	-	-	7.65	0.767	1.56	0.36	12.7	102.7
Nashua River		10/15/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	8.4	0.021 J	7.1 J	-	-	-	-	-	-	-	-	7.70	0.600	13.0	0.74	12.0	-59.0
Nashua River		10/19/2020	1.0 U	0.80 J	1.0 U	1.0 U	1.0 U	1.0 U	7.1	0.05 U	3.0 J	-	-	-	-	-	-	-	-	7.55	0.752	1.42	0.67	13.0	14.4
Nashua River		10/15/2021	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	6.3	0.054	6.4 J	-	-	-	-	-	-	-	-	7.55	0.752	1.42	0.67	13.0	14.4
Nashua River		10/4/2022	1.0 U	0.54 J	1.0 U	0.29 J	1.0 U	1.0 U	9.7	0.026 J	6.8 J	-	-	-	-	-	-	-	-	8.37	0.572	5.60	1.37	13.4	-61.5
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		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		9/21/2004	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1.0 U	54	-	-	-	-	-	-	-	-	5.75	1.885	1.59	6.73	11.6	187.9
North Plume		9/29/2005	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1.0 U	52	-	-	-	-	-	-	-	-	5.95	3.180	0.38	4.90	10.8	223.1
North Plume		9/20/2006	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 U	42	-	-	-	-	-	-	-	-	5.68	1.814	1.85	4.78	11.0	176.3
North Plume		9/12/2007	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	6.0 U	0.1 U	78	-	-	-	-	-	-	-	-	5.50	1.404	5.00	6.95	12.4	-101.1
North Plume		10/17/2008	0.5 U	0.55	0.5 U	0.5 U	0.5 U	0.5 U	8.0 U	0.2 U	**2,240**	-	-	-	-	-	-	-	-	5.57	1.378	1.80	1.41	10.1	123.8
North Plume		10/16/2009	0.5 U	0.25 J	0.5 U	**29**	0.27 J	0.5 U	8.0 U	0.2 U	**7,120**	-	-	-	-	-	-	-	-	5.91	2.288	< 0.01	0.25	11.3	228.5
North Plume		10/7/2010	0.5 U	0.22 J	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.1 U	**7,670**	-	-	-	-	-	-	-	-	5.72	3.623	< 0.01	0.21	9.3	141.2
North Plume		10/7/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.1 U	**6,860**	-	-	-	-	-	-	-	-	5.60	2.144	< 0.01	0.18	10.1	59.9
North Plume		10/15/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.1 U	**12,400**	-	-	-	-	-	-	-	-	5.82	2.915	< 0.01	0.36	14.6	110.5
North Plume		10/18/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.1 U	**6,010**	-	-	-	-	-	-	-	-	6.05	1.524	< 0.01	0.58	11.1	177.1
North Plume		11/4/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.017 J	**3,160**	-	-	-	-	-	-	-	-	6.12	0.774	0.86	3.75	-	203.7
North Plume		10/14/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	0.1 U	**3,810**	-	-	-	-	-	-	-	-	6.11	1.333	0.21	2.77	-	122.9
North Plume		11/8/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.05 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		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		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		9/21/2004	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1.0 U	44	-	-	-	-	-	-	-	-	5.83	1.941	2.76	6.15	13.9	193.9
North Plume		9/29/2005	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	1.0 U	48	-	-	-	-	-	-	-	-	6.12	3.020	1.43	5.57	11.2	187.7
North Plume		9/20/2006	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	5.0 U	0.1 U	44	-	-	-	-	-	-	-	-	5.53	2.183	0.67	6.51	10.2	179.0
North Plume		9/12/2007	1.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	6.0 U	0.1 U	40	-	-	-	-	-	-	-	-	5.73	2.618	13.9	16.1	11.9	-112.1
North Plume		10/17/2008	0.5 U	0.91	0.5 U	0.5 U	0.24 J	0.5 U	8.0 U	0.2 U	67	-	-	-	-	-	-	-	-	5.40	1.020	0.85	1.77	11.6	121.3
North Plume		10/16/2009	0.5 U	0.39 J	0.5 U	**23**	0.32 J	0.5 U	8.0 U	0.135 U	**25,500**	-	-	-	-	-	-	-	-	6.08	1.683	0.04	0.31	11.5	209.1
North Plume		10/7/2010	0.5 U	0.25 J	0.5 U	0.5 U	0.5 U	0.5 U	3.3 J	0.1 U	**14,600**	-	-	-	-	-	-	-	-	6.00	2.295	0.49	0.48	12.9	115.1
North Plume		10/7/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.1 U	**9,320**	-	-	-	-	-	-	-	-	5.98	1.899	< 0.01	0.16	11.3	30.7
North Plume		10/15/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.0 U	0.120 U	**9,980**	-	-	-	-	-	-	-	-	6.14	2.358	1.17	0.25	12.4	16.4
North Plume		10/18/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.2 J	0.1 U	**14,100**	-	-	-	-	-	-	-	-	6.17	2.288	0.31	0.81	13.8	142.0
North Plume		11/4/2014	0.5 U	0.21 J	0.5 U	0.5 U	0.5 U	0.5 U	4.6 J	0.017 J	**7,180**	-	-	-	-	-	-	-	-	6.58	1.087	3.55	0.45	17.2	137.4
North Plume		10/14/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	0.1 U	**5,610**	-	-	-	-	-	-	-	-	6.53	1.457	2.18	1.34	15.0	93.5
North Plume		11/8/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U	0.05 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	**18**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.37	0.420	19.0	0.00	14.4	81.0
North Plume		3/1/2002	1.0 U	**11**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.35	0.430	2.80	0.00	17.0	106.7
North Plume		1/31/2003	1.0 U	**7.5**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.6	-
North Plume		1/12/2004	1.0 U	**11**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14.4	-
North Plume		9/24/2004	1.0 U	**13**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.17	0.422	0.44	0.20	19.3	152.2
North Plume		12/17/2004	1.0 U	**8.1**	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	6.05	0.384	2.43	0.46	15.1	259.6
North Plume		4/13/2005	1.0 U	**8.2**	1.0 U	1.0 U	2.8	1.0 U	-	-	-	-	-	-	-	-	-	-	-	5.32	0.429	2.49	0.20	10.8	216.6
North Plume		7/6/2005	1.0 U	**7.6**	2.0 U	2.0 U	3.0	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.69	0.770	0.02	1.34	14.1	242.8

Appendix D
Historical Groundwater Analytical Results
2022 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	PCE	trans-1,2-DCE	TCE	cis-1,2-DCE	VC	Arsenic	Iron	Manganese	Ethane	Ethene	Methane	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	TOC	pH	SpC	Turbidity	DO	Temp	ORP
		Unit	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/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	5	70	5	70	2	10	3.129	1,460					10,000									
Area	Well ID	Date Sampled																							
North Plume		9/30/2005	1.0 U	**7.2**	2.0 U	2.0 U	3.6	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.77	1.022	7.70	0.29	16.3	198.3
North Plume		12/15/2005	1.0 U	**7.4**	2.0 U	2.0 U	3.1	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.97	0.900	2.10	0.14	19.1	242.8
North Plume		3/23/2006	1.0 U	4.2	2.0 U	2.0 U	2.0 U	2.0 U	-	-	-	-	-	-	-	-	-	-	-	5.99	0.458	1.31	0.23	12.8	404.5
North Plume		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		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		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		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		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		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		10/7/2008	0.5 U	0.40 J	0.5 U	0.5 U	0.5 U	0.5 U	8.0 U	0.352 U	448	1.3 U	1.6 U	15	46	0.13 U	10	0.03 U	10 U	6.04	0.510	30.0	0.54	14.4	92.4
North Plume		1/22/2009	1.2 U	1.4 U	1.3 U	2.3 U	1.8 U	1.3 U	8.0 U	**226 J**	315	1.2 U	1.5 U	4.2	32	0.13 U	9.3	0.03 U	10 U	6.16	0.479	65.0	0.45	13.4	149.6
North Plume		5/11/2009	0.5 U	0.29 J	0.5 U	0.5 U	0.5 U	0.5 U	-	-	-	-	-	-	-	-	-	-	-	5.87	0.304	23.1	0.20	12.0	90.8

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 2022 sampling result
= Fall 2022 sampling result

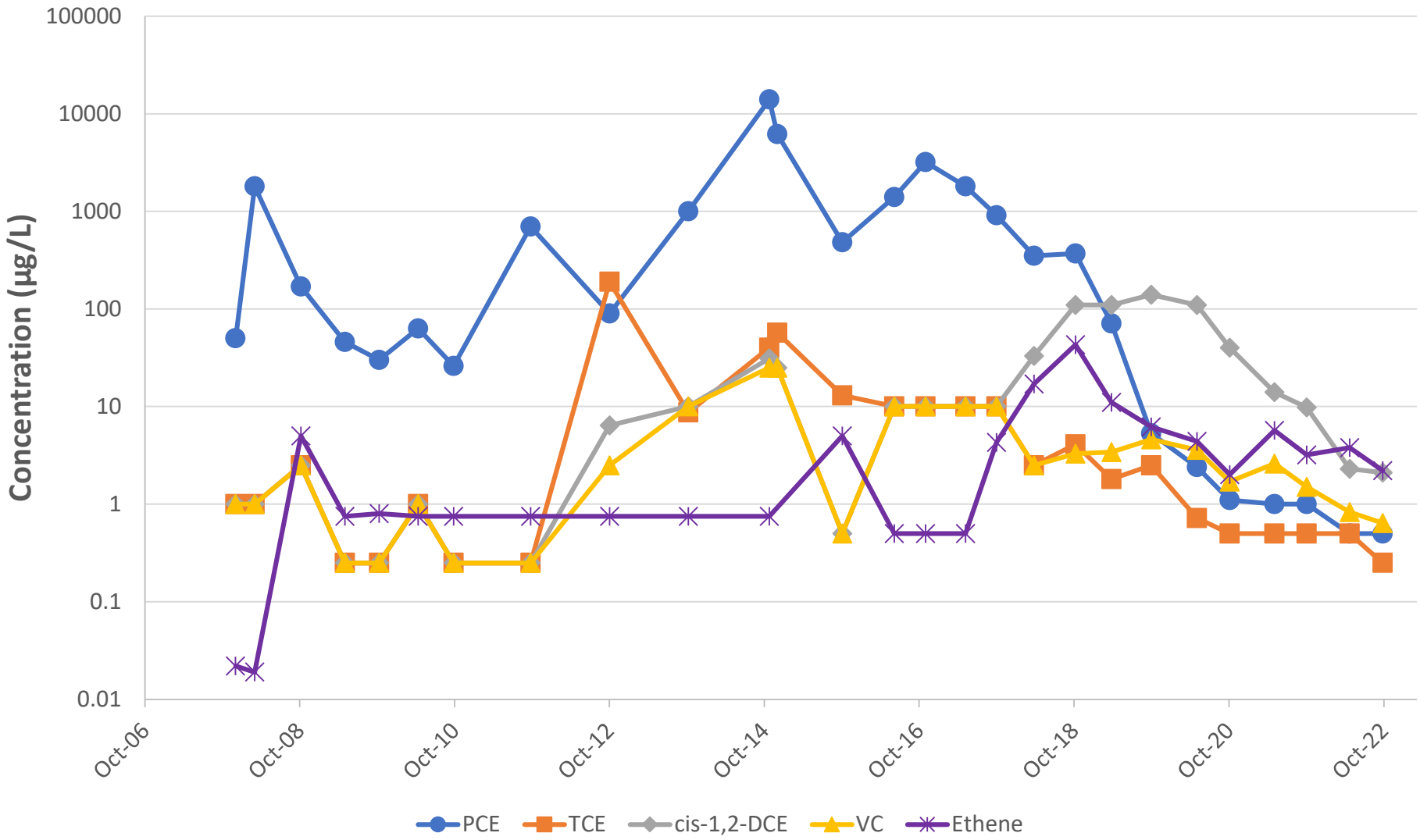
Acronyms and Abbreviations:

°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

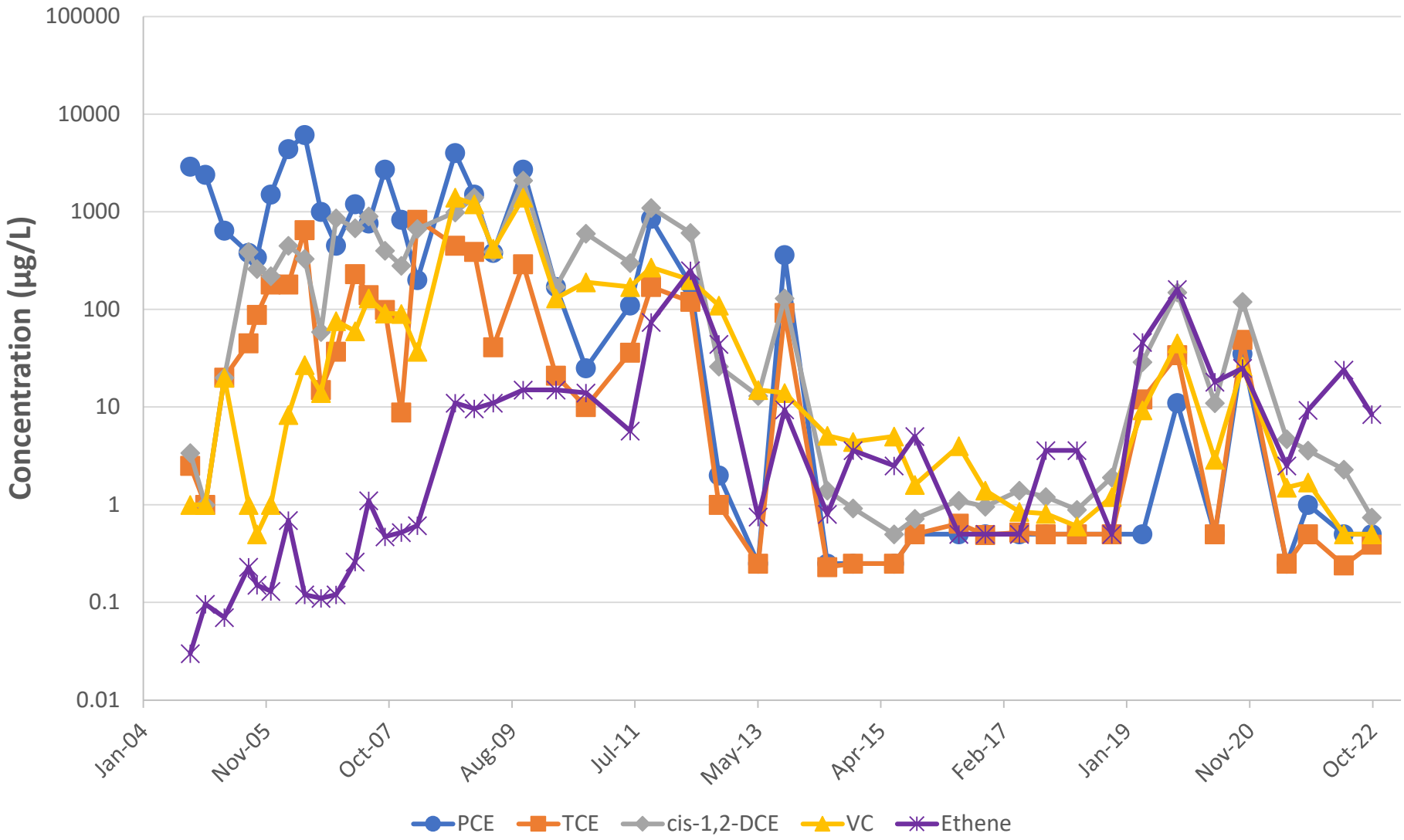
CVOC TREND GRAPH
G6M-07-02X (AREA 1)

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.
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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FORMER FORT DEVENS ARMY INSTALLATION
DEVENS, MASSACHUSETTS

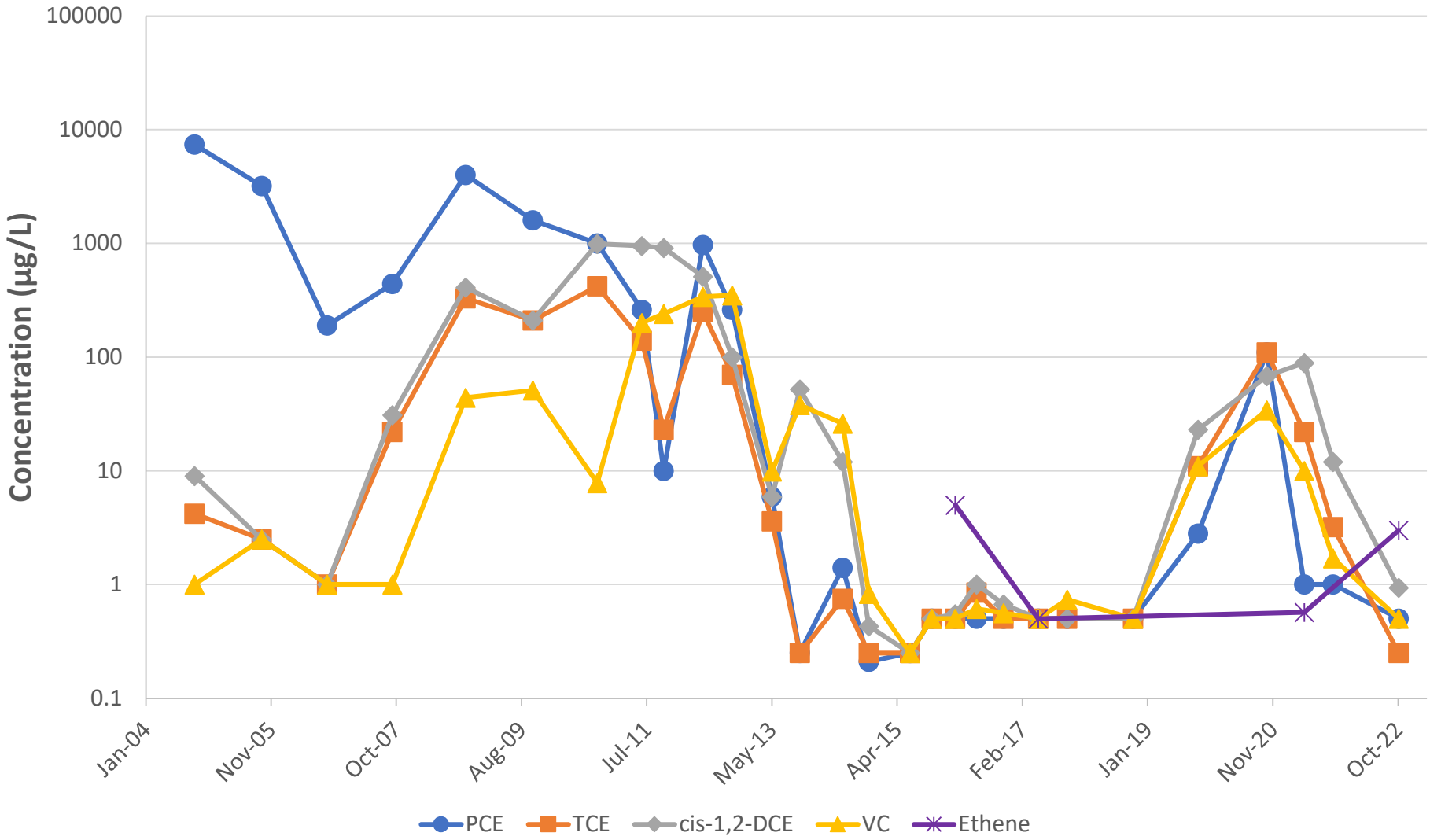
CVOC TREND GRAPH
G6M-04-10A (AREA 1)

SERES Engineering & Services, LLC
ARCADIS a joint venture

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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FORMER FORT DEVENS ARMY INSTALLATION
DEVENS, MASSACHUSETTS

CVOC TREND GRAPH
G6M-04-09X (AREA 1)

SERES Engineering & Services, LLC
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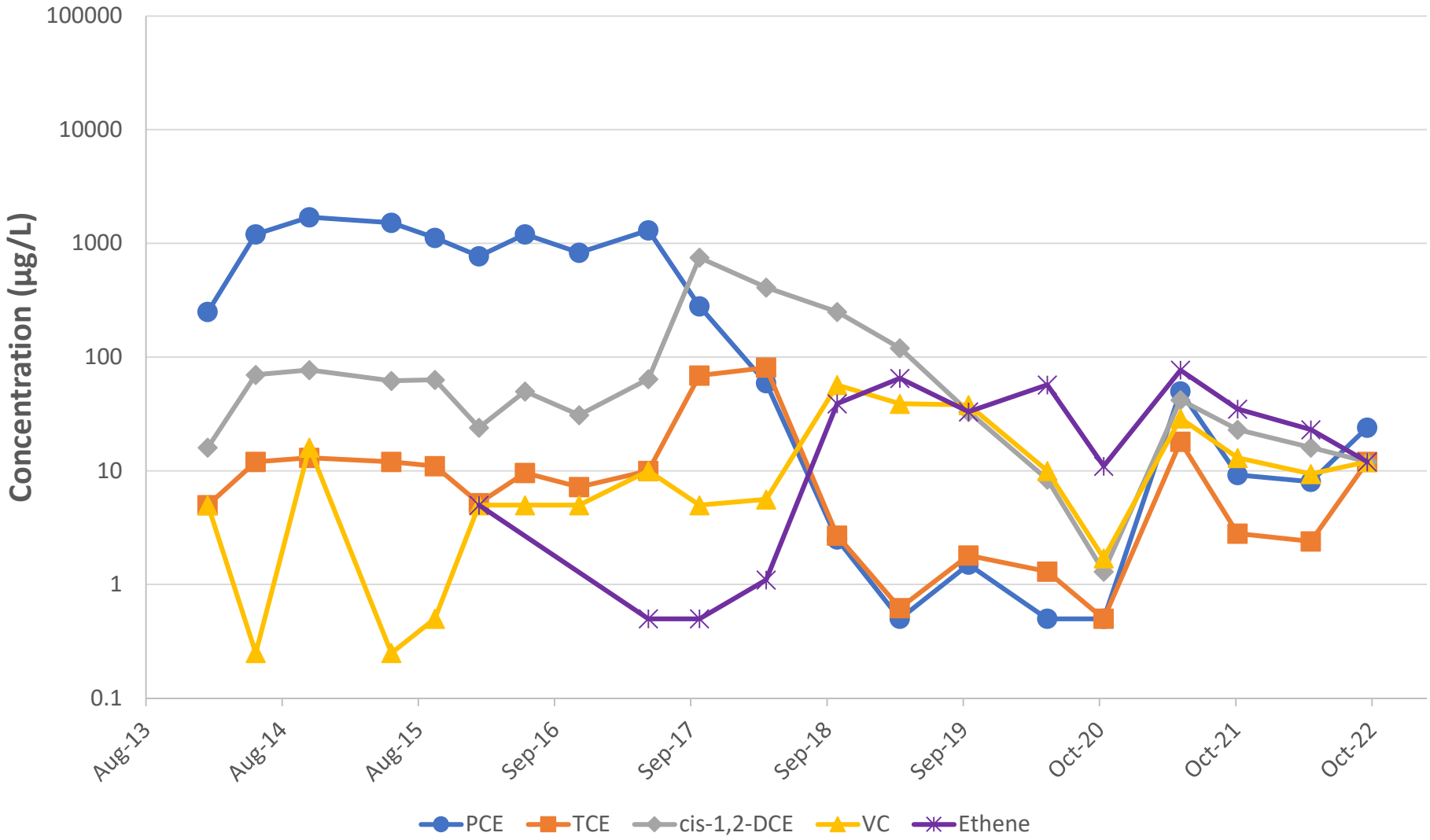
FIGURE
E-3

\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

2022 ANNUAL OPERATIONS, MAINTENANCE, AND MONITORING REPORT
AREA OF CONTAMINATION 50
FORMER FORT DEVENS ARMY INSTALLATION
DEVENS, MASSACHUSETTS

CVOC TREND GRAPH
G6M-13-05X (AREA 1)

SERES Engineering & Services, LLC
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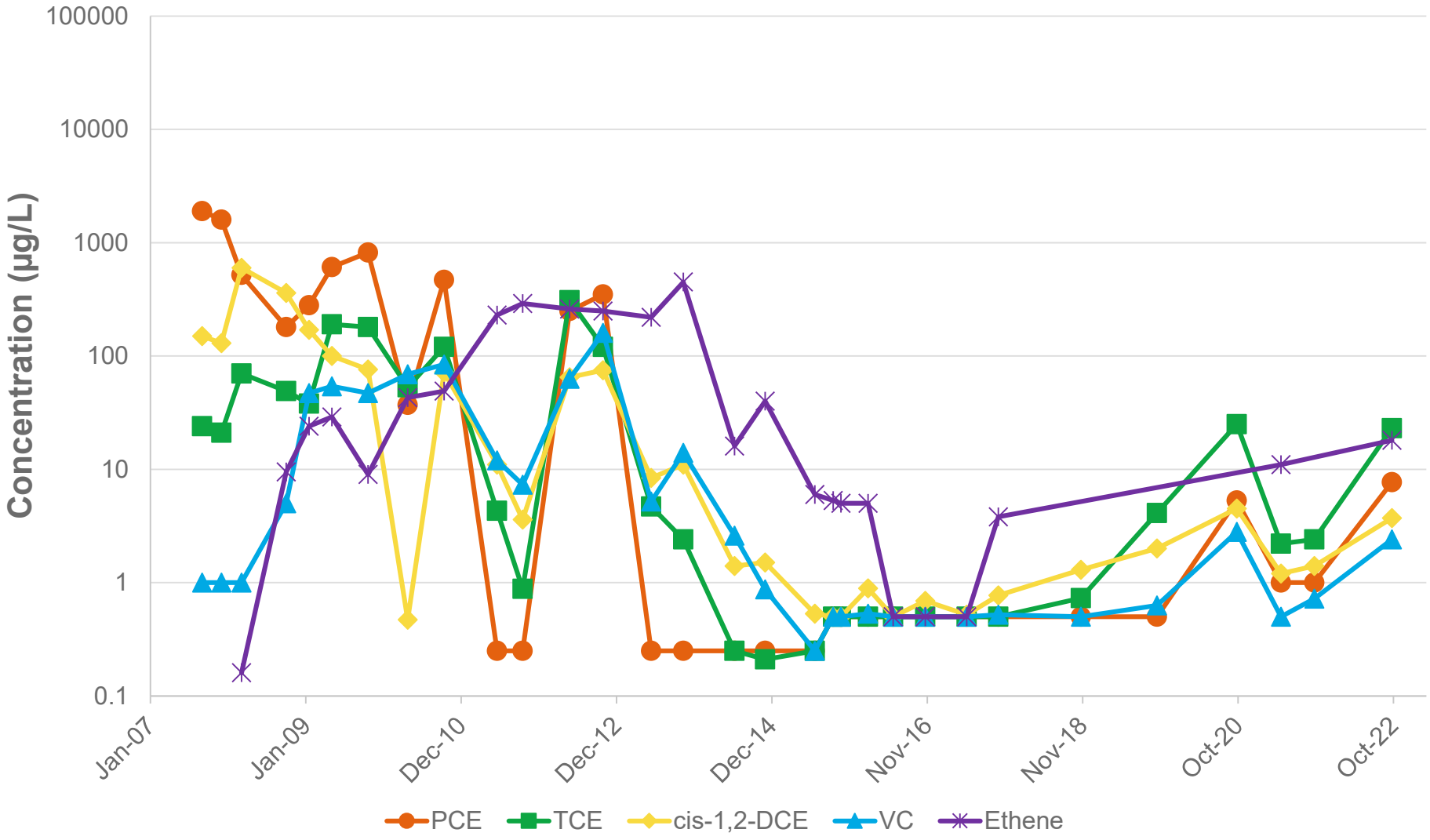
FIGURE
E-4

\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

2022 ANNUAL OPERATIONS, MAINTENANCE, AND MONITORING REPORT
AREA OF CONTAMINATION 50
FORMER FORT DEVENS ARMY INSTALLATION
DEVENS, MASSACHUSETTS

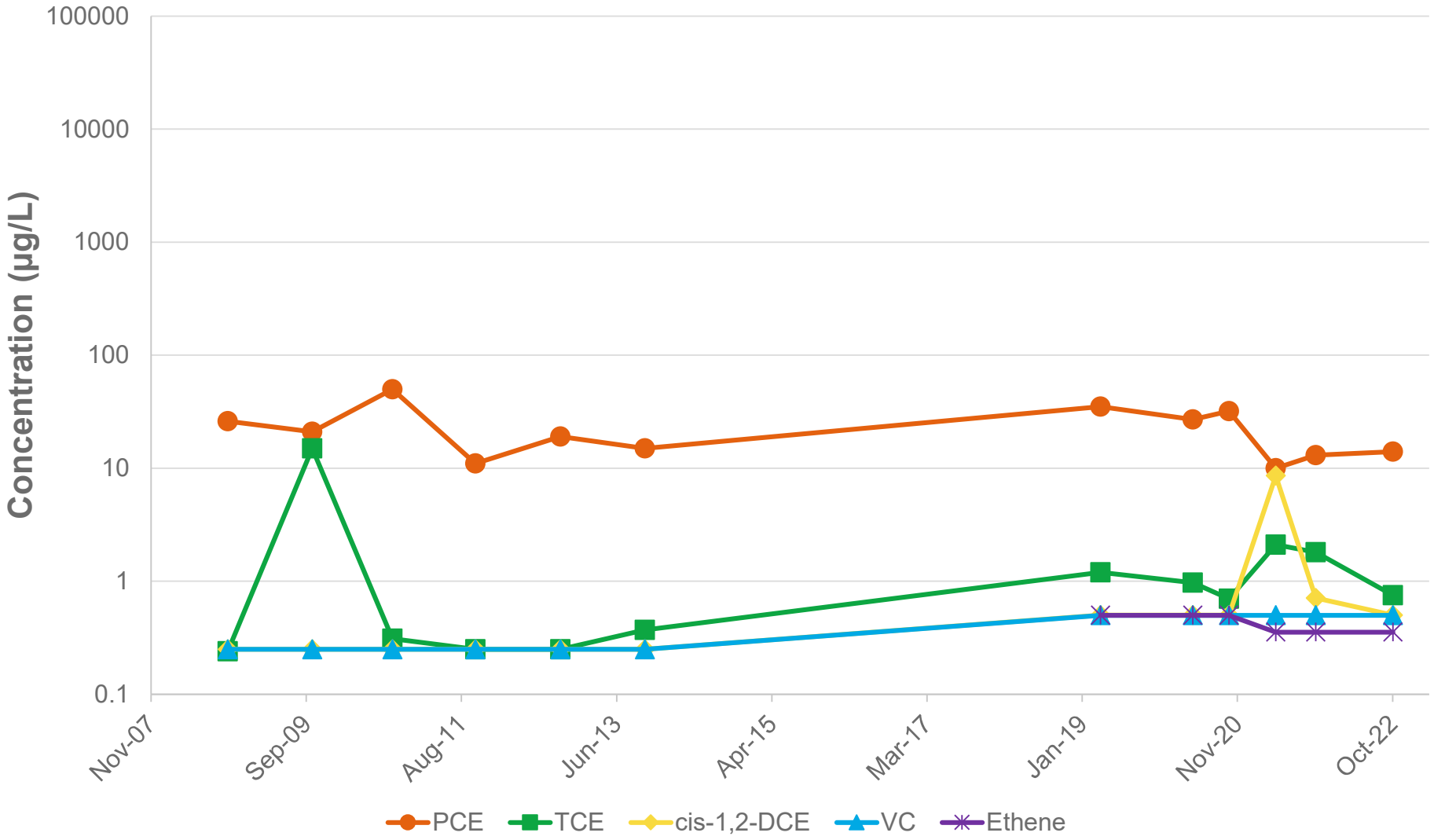
CVOC TREND GRAPH
G6M-02-01X (AREA 2)

SERES Engineering & Services, LLC
ARCADIS a joint venture

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:

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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

2022 ANNUAL OPERATIONS, MAINTENANCE, AND MONITORING REPORT
AREA OF CONTAMINATION 50
FORMER FORT DEVENS ARMY INSTALLATION
DEVENS, MASSACHUSETTS

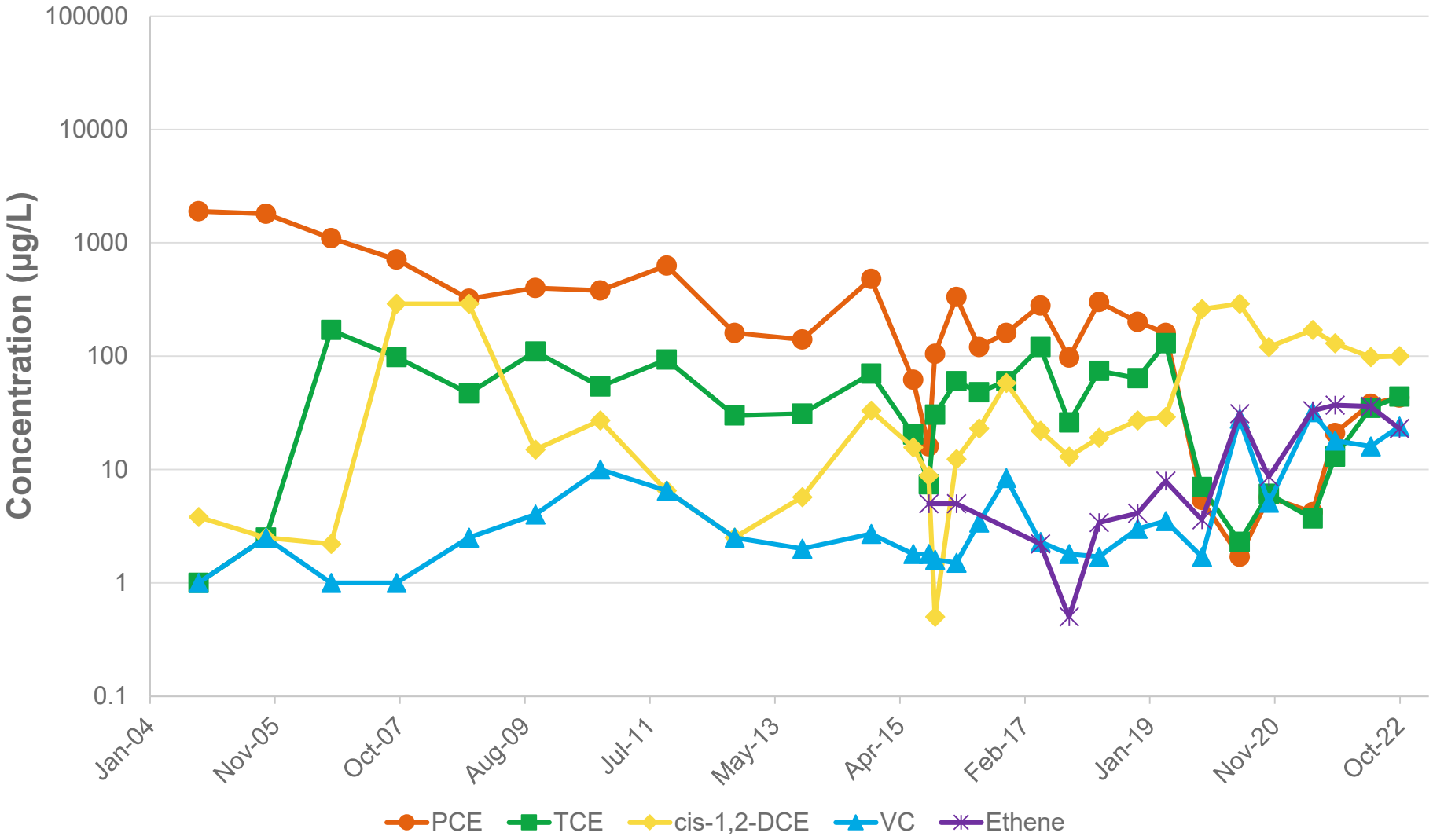
CVOC TREND GRAPH
G6M-07-01X (AREA 2)

SERES Engineering & Services, LLC
ARCADIS a joint venture

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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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

2022 ANNUAL OPERATIONS, MAINTENANCE, AND MONITORING REPORT
AREA OF CONTAMINATION 50
FORMER FORT DEVENS ARMY INSTALLATION
DEVENS, MASSACHUSETTS

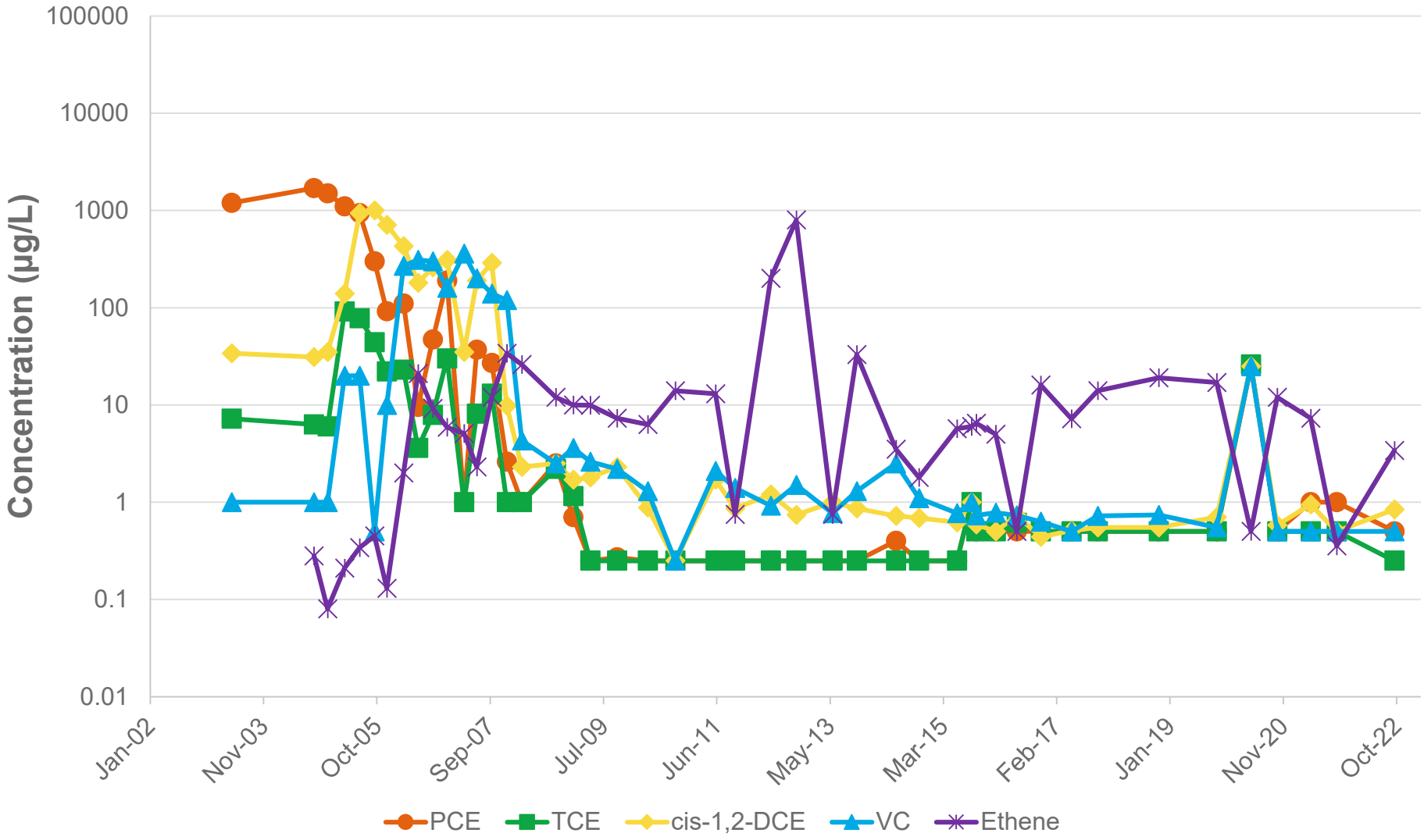
CVOC TREND GRAPH
G6M-04-02X (AREA 3)

SERES Engineering & Services, LLC
ARCADIS a joint venture

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

2022 ANNUAL OPERATIONS, MAINTENANCE, AND MONITORING REPORT
AREA OF CONTAMINATION 50
FORMER FORT DEVENS ARMY INSTALLATION
DEVENS, MASSACHUSETTS

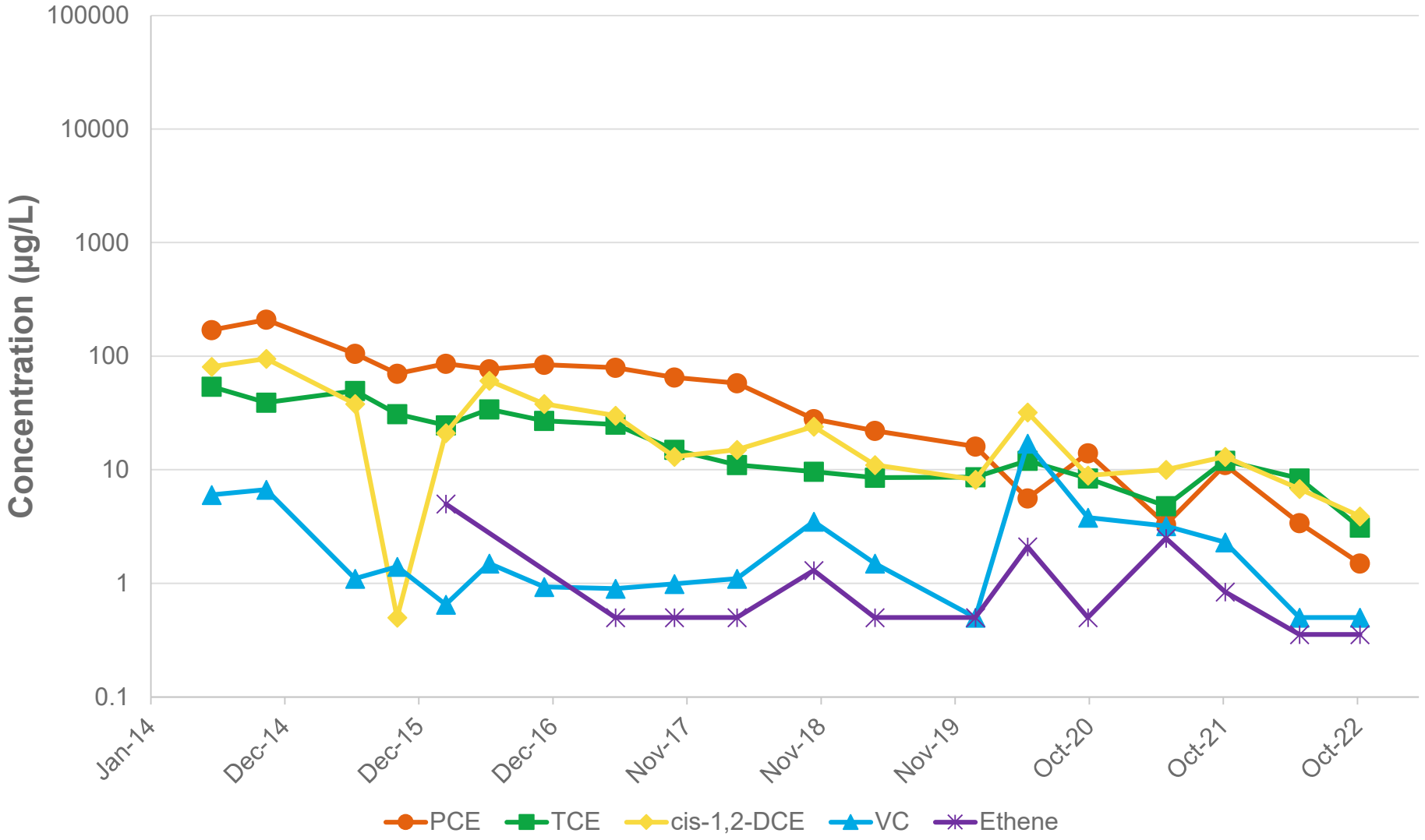
CVOC TREND GRAPH
G6M-03-07X (AREA 3)

SERES Engineering & Services, LLC
ARCADIS a joint venture

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
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6. PCE = tetrachloroethene
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8. VC = vinyl chloride

COC	AOC 50 Cleanup Level (µg/L)
PCE	5
TCE	5
cis-1-2-DCE	70
VC	2

2022 ANNUAL OPERATIONS, MAINTENANCE, AND MONITORING REPORT
AREA OF CONTAMINATION 50
FORMER FORT DEVENS ARMY INSTALLATION
DEVENS, MASSACHUSETTS

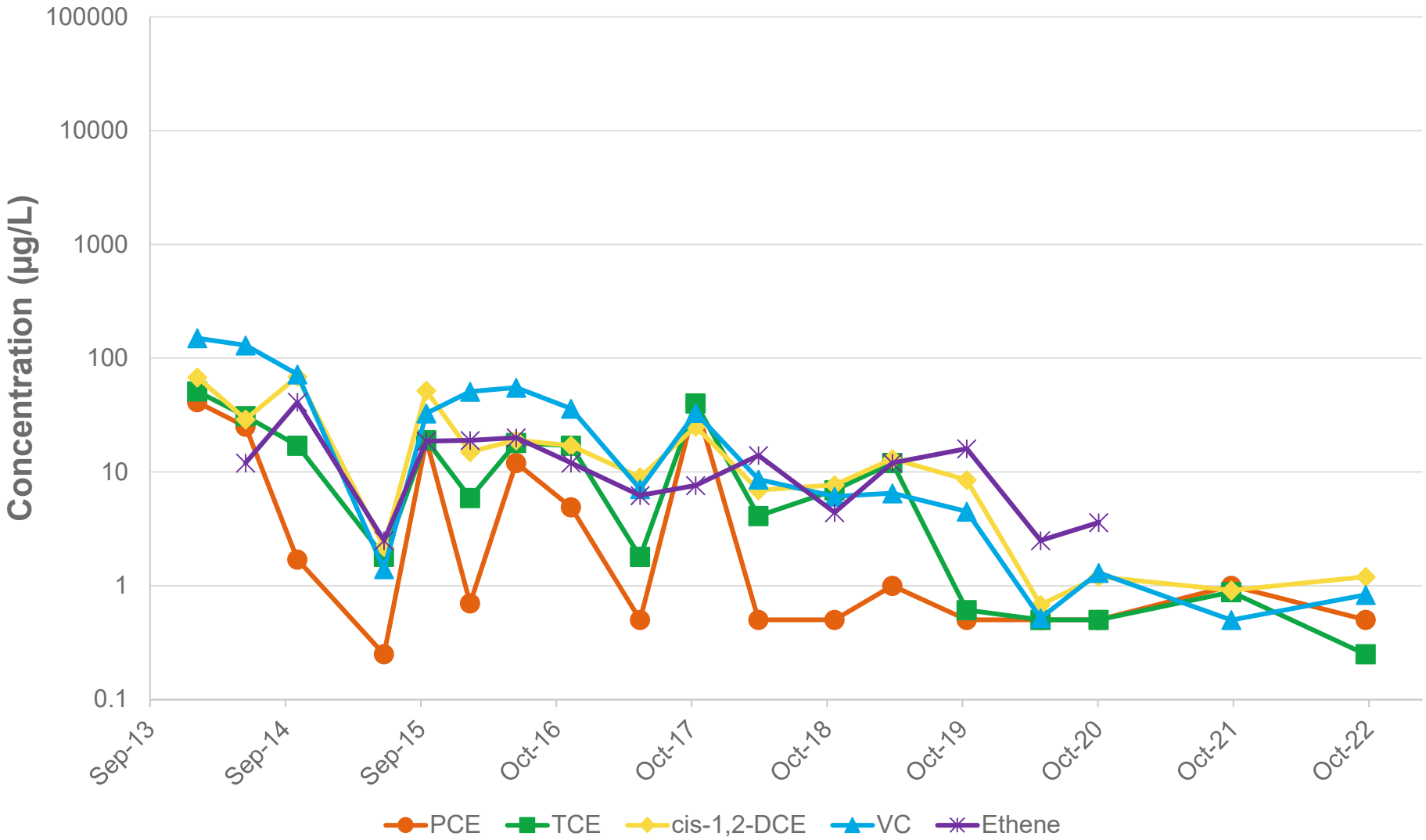
CVOC TREND GRAPH
G6M-13-02X (AREA 4)

SERES Engineering & Services, LLC
ARCADIS a joint venture

FIGURE
E-9

\ARCADIS\SERES-Arcadis JV - _NE Dist Devens Task Orders\TO 1 - Seed Task\AOC 50\Reports\2. Fall 2020 Memo\Attachments

G6M-13-04X



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

2022 ANNUAL OPERATIONS, MAINTENANCE, AND MONITORING REPORT
AREA OF CONTAMINATION 50
FORMER FORT DEVENS ARMY INSTALLATION
DEVENS, MASSACHUSETTS

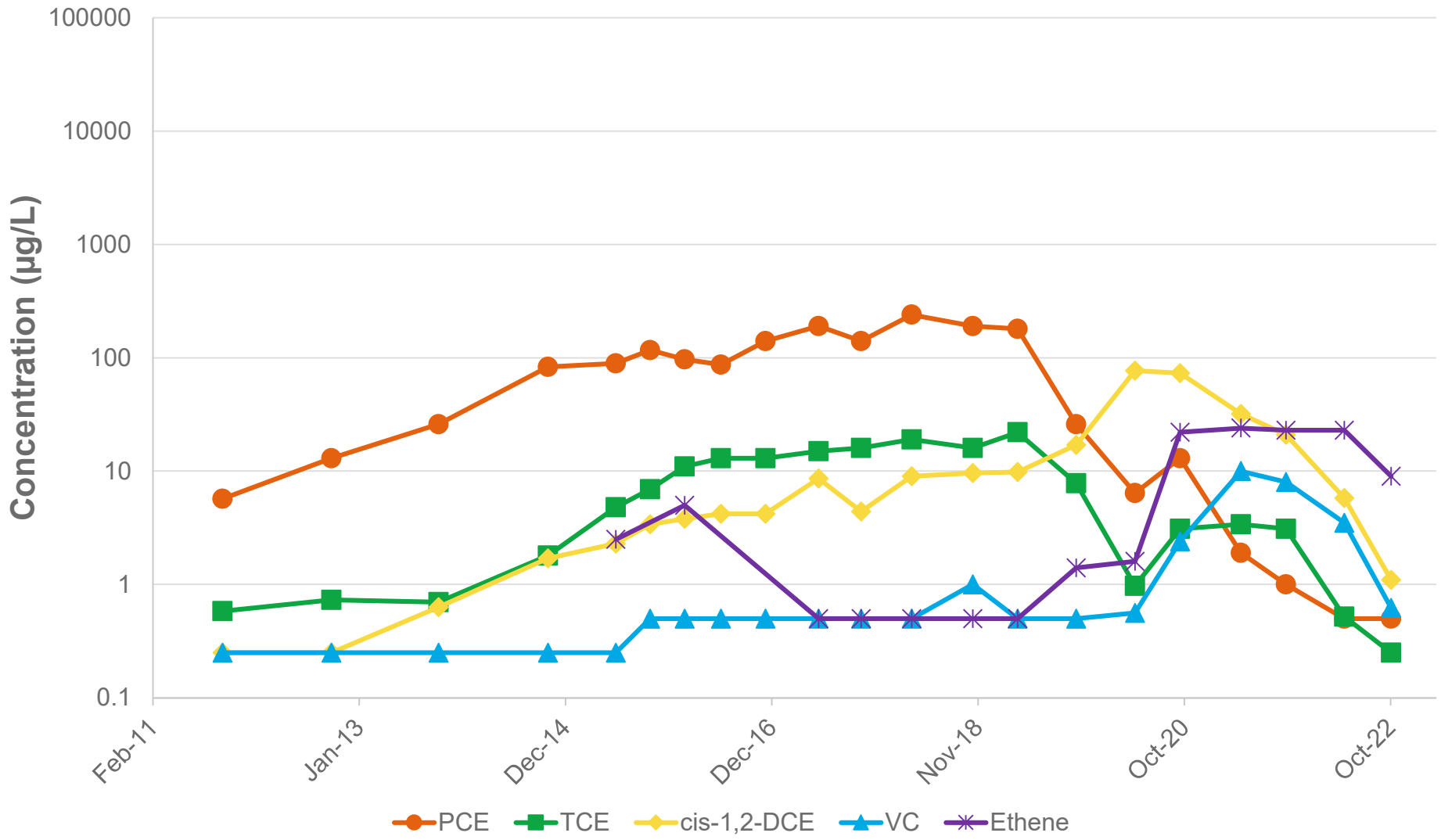
CVOC TREND GRAPH
G6M-13-04X (AREA 5)

SERES Engineering & Services, LLC
ARCADIS a joint venture

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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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

2022 ANNUAL OPERATIONS, MAINTENANCE, AND MONITORING REPORT
AREA OF CONTAMINATION 50
FORMER FORT DEVENS ARMY INSTALLATION
DEVENS, MASSACHUSETTS

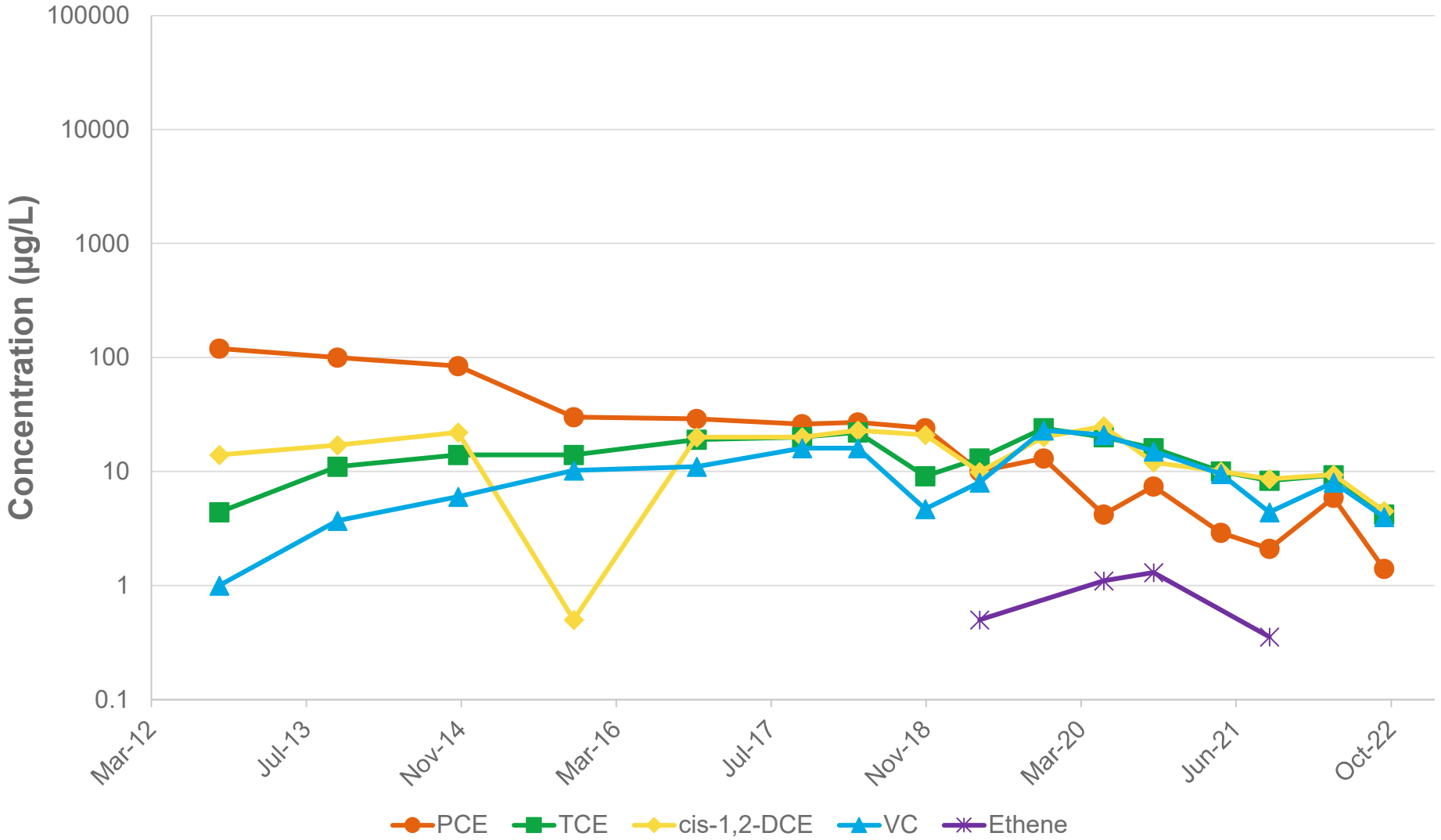
CVOC TREND GRAPH
G6M-97-05B (AREA 5)

SERES Engineering & Services, LLC
ARCADIS a joint venture

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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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

2022 ANNUAL OPERATIONS, MAINTENANCE, AND MONITORING REPORT
AREA OF CONTAMINATION 50
FORMER FORT DEVENS ARMY INSTALLATION
DEVENS, MASSACHUSETTS

CVOC TREND GRAPH
XSA-12-96X (AREA 5)

SERES Engineering & Services, LLC
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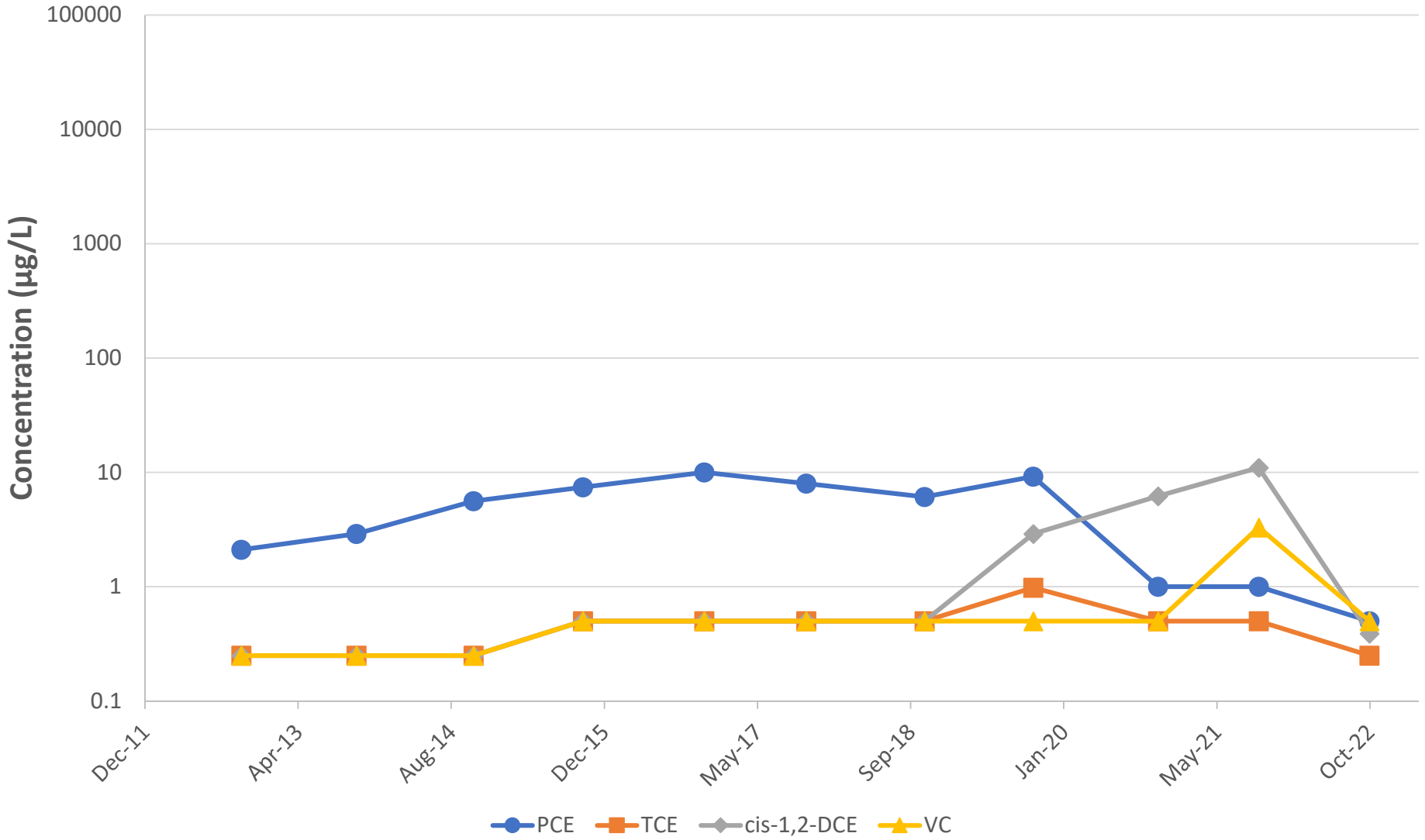
FIGURE
E-12

\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

2022 ANNUAL OPERATIONS, MAINTENANCE, AND MONITORING REPORT
AREA OF CONTAMINATION 50
FORMER FORT DEVENS ARMY INSTALLATION
DEVENS, MASSACHUSETTS

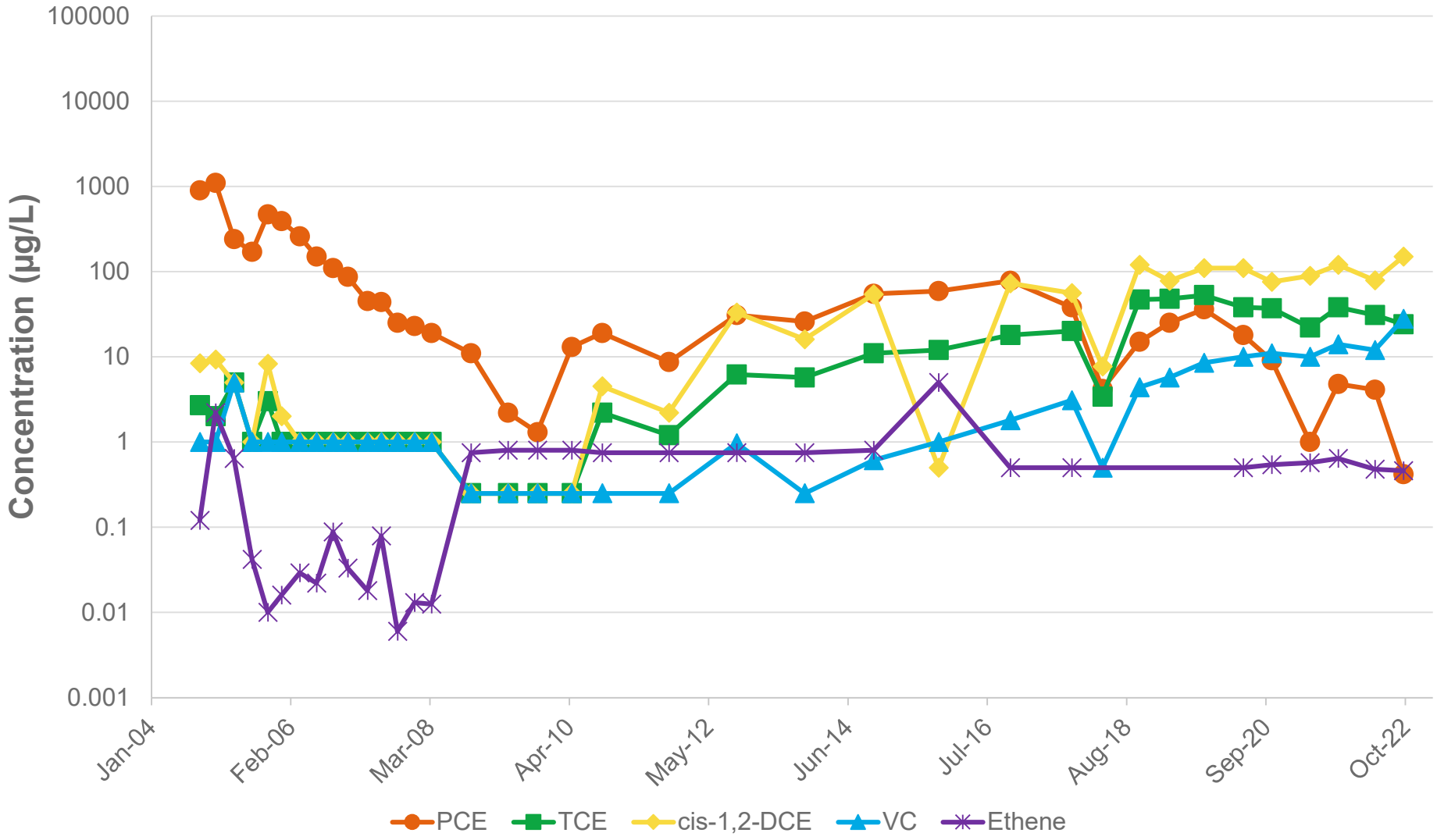
CVOC TREND GRAPH
XSA-12-97X (AREA 5)

SERES Engineering & Services, LLC
ARCADIS a joint venture

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

2022 ANNUAL OPERATIONS, MAINTENANCE, AND MONITORING REPORT
AREA OF CONTAMINATION 50
FORMER FORT DEVENS ARMY INSTALLATION
DEVENS, MASSACHUSETTS

CVOC TREND GRAPH
G6M-04-07X (AREA 5)

SERES Engineering & Services, LLC
ARCADIS a joint venture

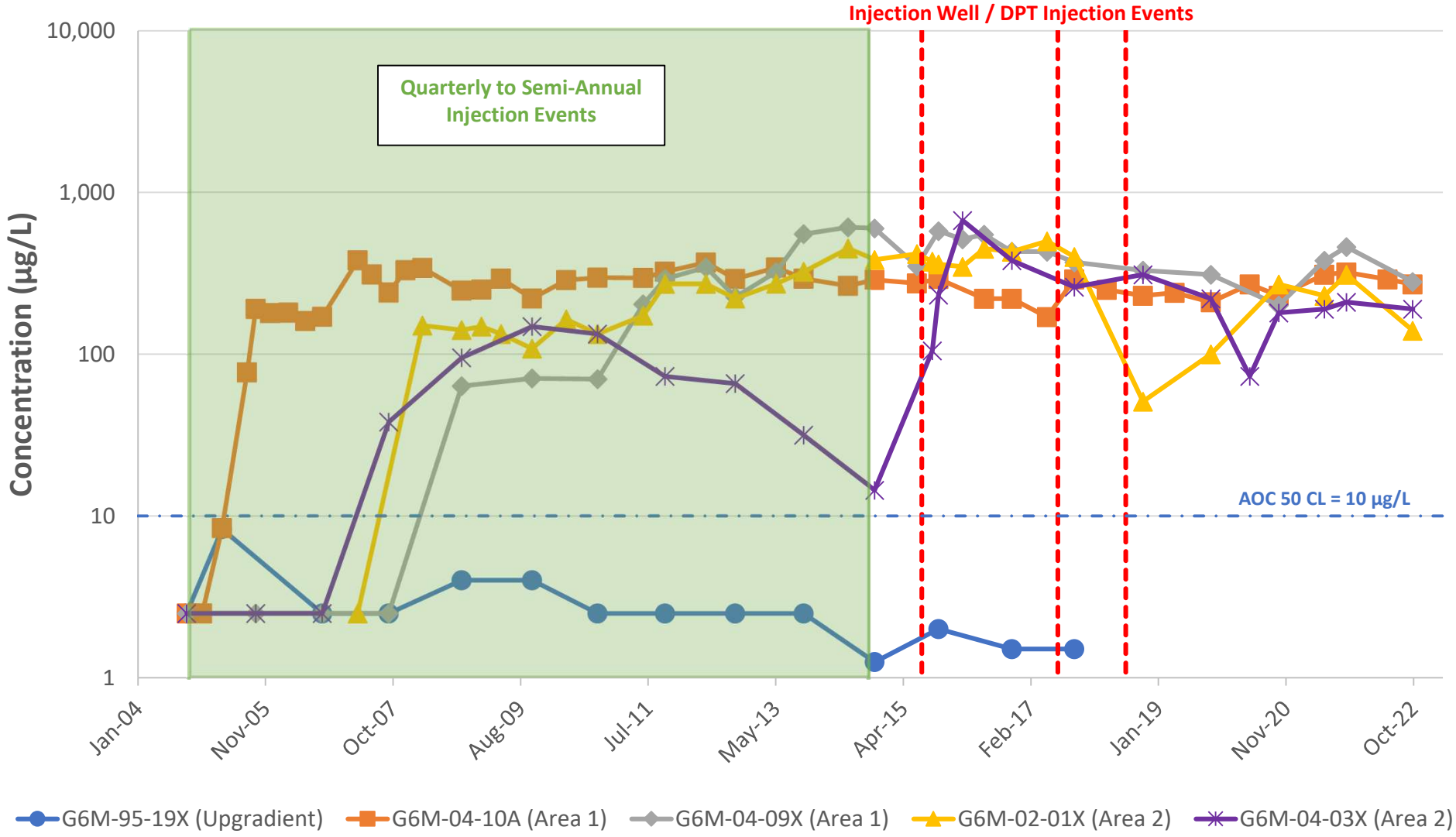
FIGURE
E-14

\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

2022 ANNUAL OPERATIONS, MAINTENANCE, AND MONITORING REPORT
AREA OF CONTAMINATION 50
FORMER FORT DEVENS army INSTALLATION
DEVENS, MASSACHUSETTS

DISSOLVED ARSENIC TREND GRAPH
AREAS 1 AND 2

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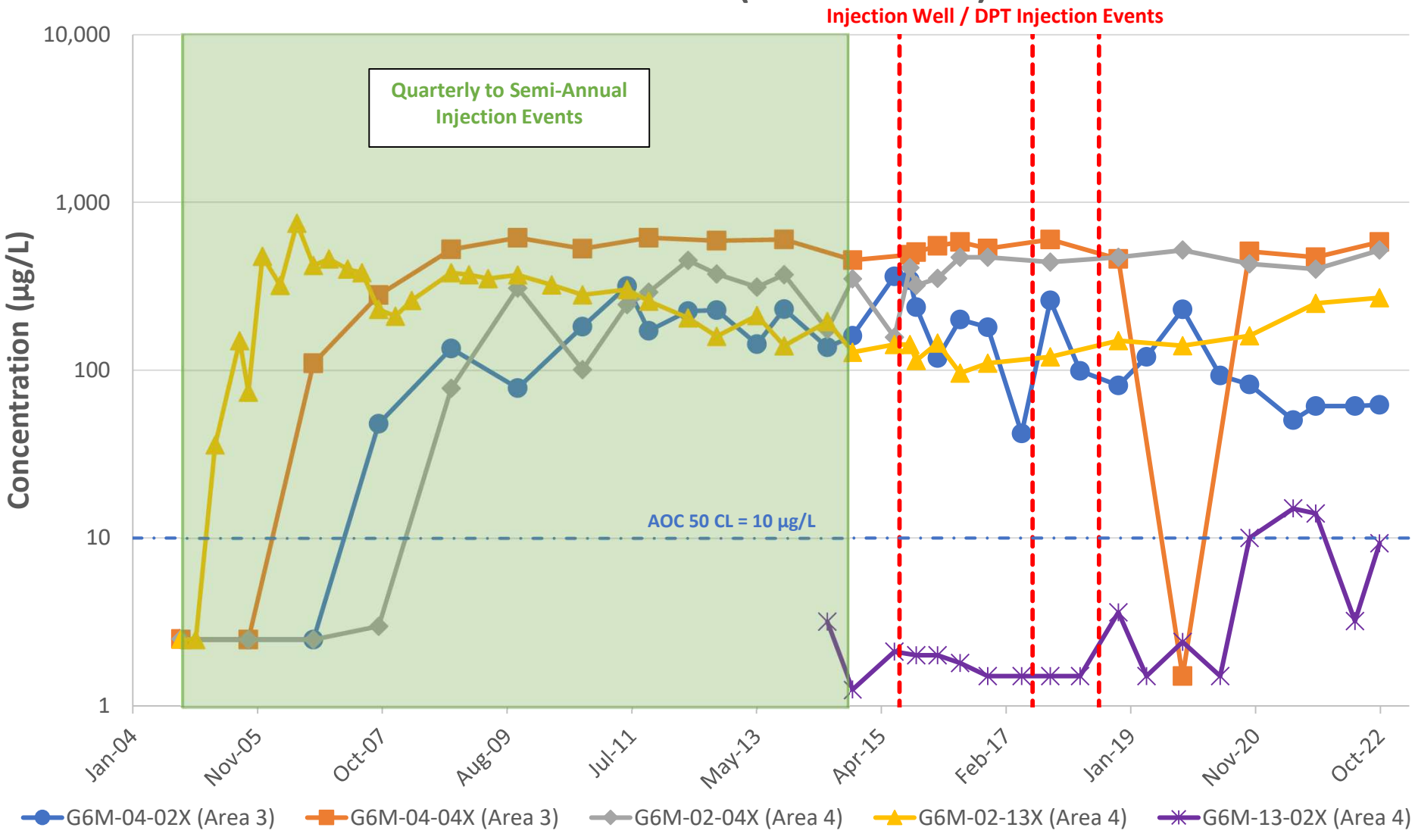
FIGURE
F-1

\ARCADIS\SERES-Arcadis JV - _NE Dist Devens Task Orders\TO 1 - Seed Task\AOC 50\Reports\2_ Fall 2020 Memo\Attachments

Dissolved Arsenic (Areas 3 and 4)



Notes:

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3. CL = Cleanup Level
4. DPT = direct push technology

2022 ANNUAL OPERATIONS, MAINTENANCE, AND MONITORING REPORT
AREA OF CONTAMINATION 50
FORMER FORT DEVENS ARMY INSTALLATION
DEVENS, MASSACHUSETTS

DISSOLVED ARSENIC TREND GRAPH
AREAS 3 AND 4

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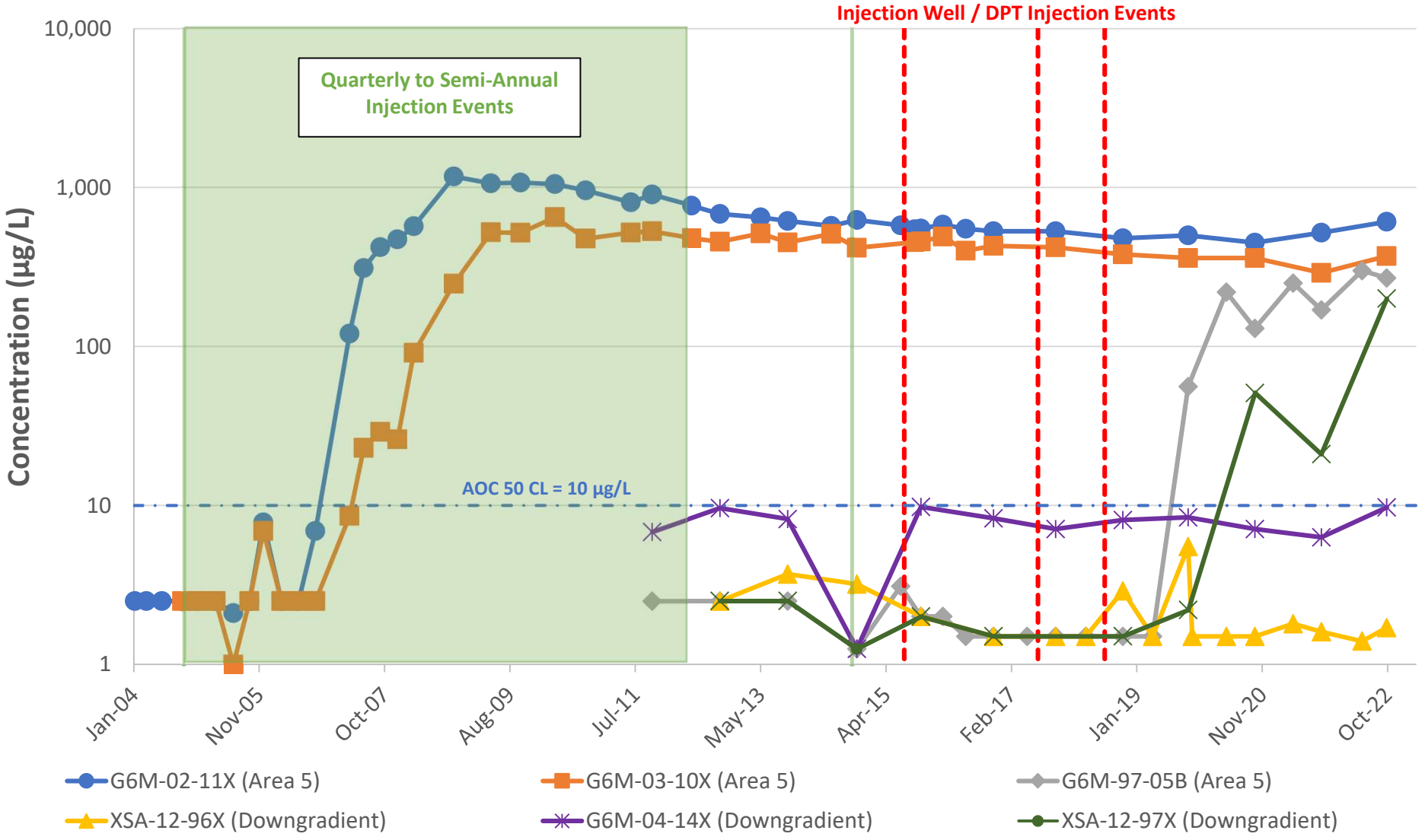
FIGURE
F-2

\ARCADIS\SERES-Arcadis JV - _NE Dist Devens Task Orders\TO 1 - Seed Task\AOC 50\Reports\2. Fall 2020 Memo\Attachments

Dissolved Arsenic (Area 5 and Downgradient)



Notes:

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3. CL = Cleanup Level
4. DPT = direct push technology

2022 ANNUAL OPERATIONS, MAINTENANCE, AND MONITORING REPORT
AREA OF CONTAMINATION 50
FORMER FORT DEVENS ARMY INSTALLATION
DEVENS, MASSACHUSETTS

DISSOLVED ARSENIC TREND GRAPH
AREA 5 AND DOWNGRADIENT

SERES Engineering & Services, LLC | ARCADIS a joint venture

FIGURE
F-3

\ARCADIS\SERES-Arcadis JV - _NE Dist Devens Task Orders\TO 1 - Seed Task\AOC 50\Reports\2. Fall 2020 Memo\Attachments

Appendix G

Annual Land-Use Control Plan Checklist, Reinforcement Letters, and Real Property Master Plan

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 4, 2022

Contact:
Ian Martz

Phone:
978.322.4526

Email:
ian.martz@arcadis.com

Our ref:
30130800

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 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, 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 in order 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,

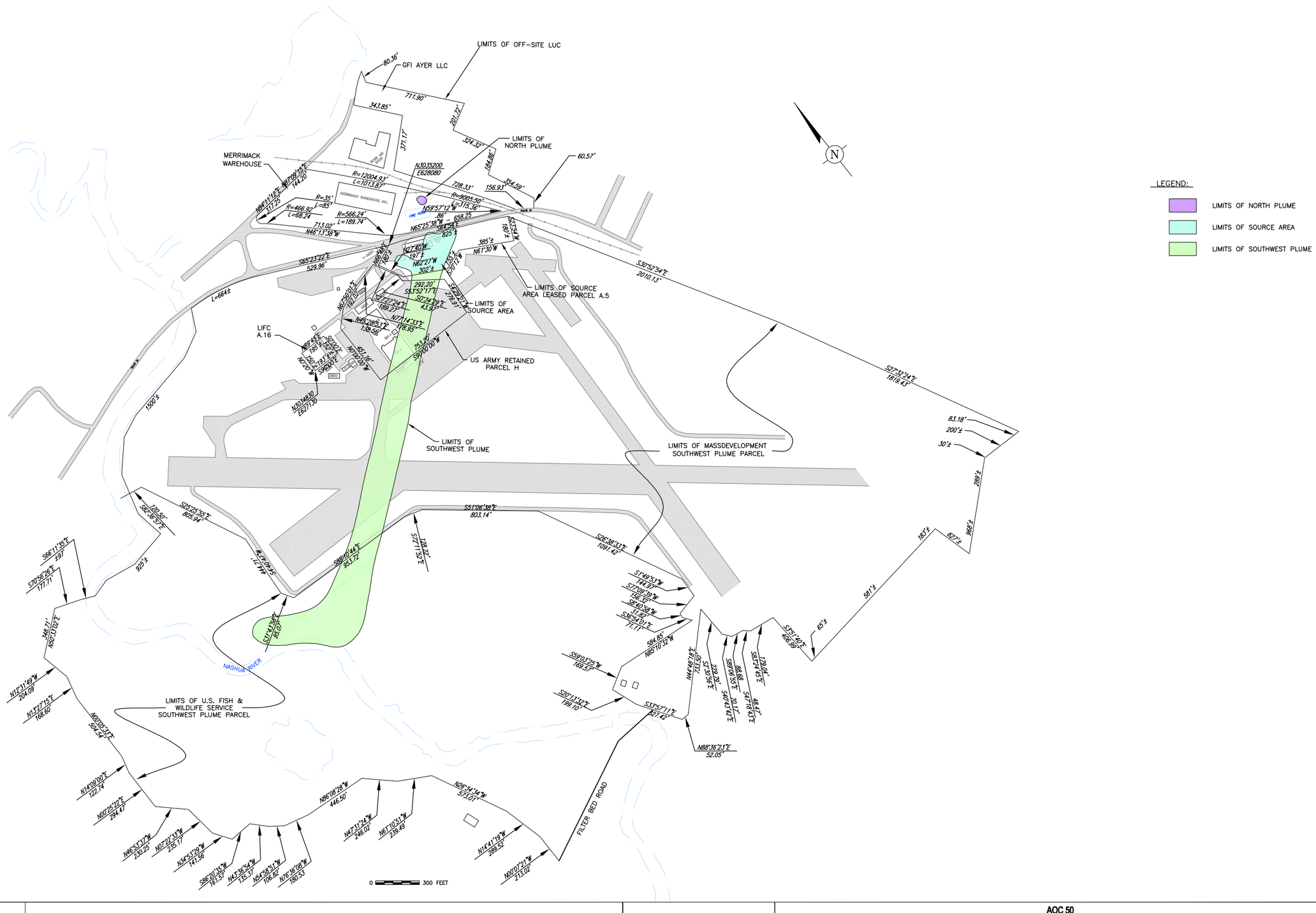
SERES-Arcadis



Ian A. Martz, P.G.
Senior Geologist

Attachments:
Limits of Land Use Controls Map

Copies:
Tom Lineer – U.S. Army
Penelope Reddy – USACE
Carol Keating – USEPA
Joanne Dearden – MassDEP
Roy Herzig - MassDevelopment



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Layout Tab : Layout1
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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

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 4, 2022

Contact:
Ian Martz

Phone:
978.322.4526

Email:
ian.martz@arcadis.com

Our ref:
30130800

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,

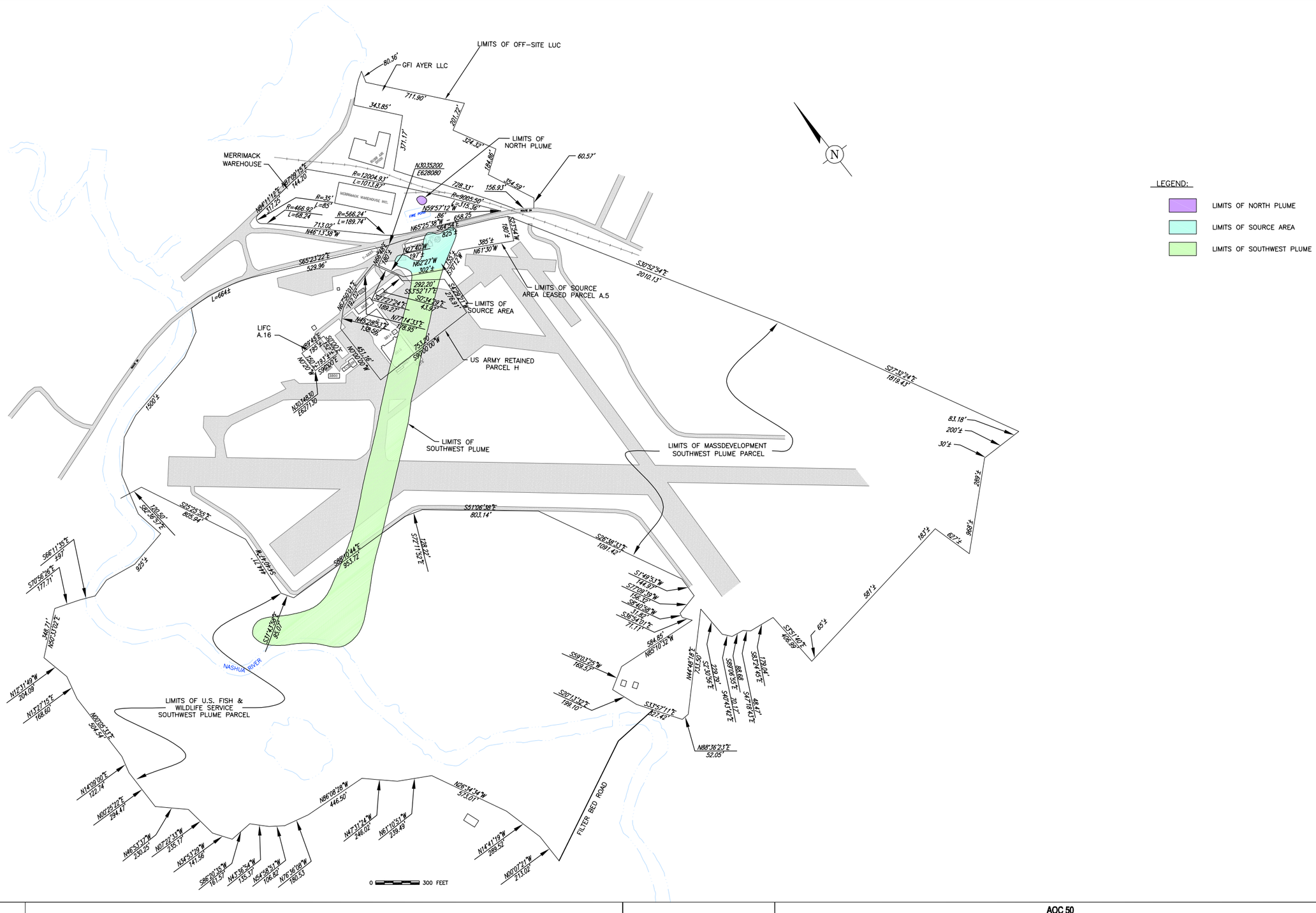
Seres-Arcadis



Ian A. Martz, P.G.
Senior Geologist

Attachments:
Limits of Land Use Controls Map

Copies:
Tom Lineer – U.S. Army
Penelope Reddy – USACE
Carol Keating – USEPA
Joanne Dearden – MassDEP
Linh Phu – USFWS



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Layout Tab : Layout1
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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

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: December 7, 2022	
Participants: Grace Sheckler (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	Temporary equipment and conex boxes currently being stored on-site by the US Air Force for a drone study. New monitoring wells / soil borings installed in fall 2022 as a part of ongoing PFAS investigation.
Any damage to on-site monitoring wells?	X		All wells appear to be functional; minimal damage observed. The concrete pad at one location along the southern fenceline was exposed/sticking up; this location will be marked for future repair. Some wells observed are old and no longer in use for sampling or remediation activities.
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

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Is there sufficient access to the site for monitoring?	X		A vegetation removal event was completed from November 8-10, 2022 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) is in need of repair; the property owner (MassDevelopment) was notified via email on September 27, 2022 (Shane Melone).
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 2021 LUC forms to the above contacts for review on 1/13/2023. Performed phone interview on 1/27/2023.			
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 stakeholders on October 8, 2022 (see Interview #2 and #3). MassDev was provided with a copy of the letter 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		Tentative plans to install a series of new utility poles around the perimeter of the airfield to support US Air Force activities.
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.
IV. Interview #2			
Name of Interviewer: Ian Martz (Arcadis)			
Name of Interviewee: Tom Eagle - Deputy Project Leader (USFWS)			

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.

Contact Information: tom_eagle@fws.gov, 978-579-4027			
Interview Notes: Emailed interview checklist to Tom Eagle on 1/23/2023. Received responses on 1/24/2023, 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 8, 2022.
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	
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 Jeffrey Woodle on 1/23/2023. Received responses via phone call on 2/28/2023, 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 8, 2022.
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	

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.

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	

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

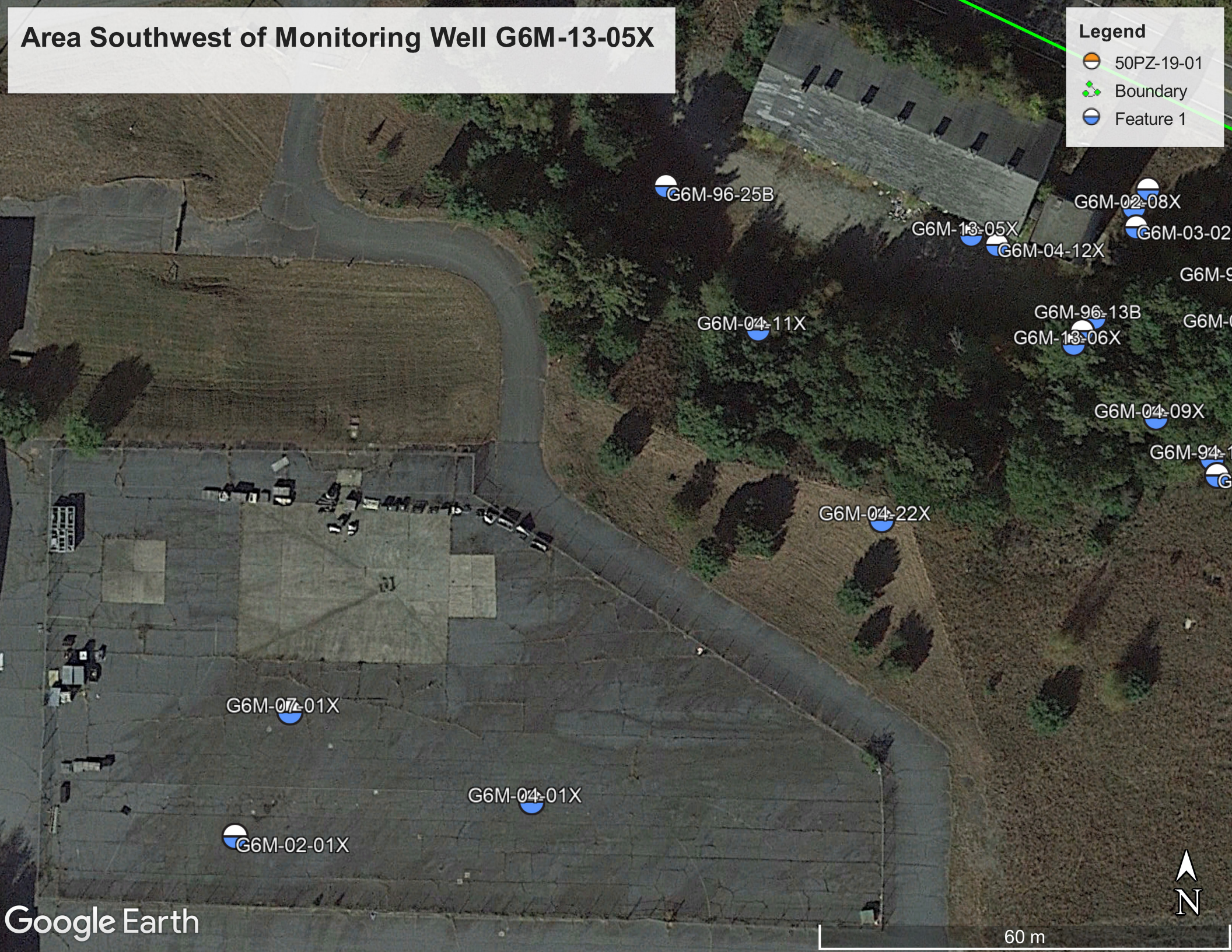
Response to Comments

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:	Joanne Dearden (MassDEP) and Michael Daly (USEPA)
Document Name: Draft 2022 Annual Operations, Maintenance, and Monitoring Report, Area of Contamination 50, Former Fort Devens Army Installation, Devens, Massachusetts, May 2023			

No.	Ref. Page / Para.	COMMENT	RESPONSE
		Joanne Dearden (MassDEP) (11 July 2023)	
1.	Figure 8	MassDEP recommends adding AOC 50 Area 1 (source area) monitoring well G6M-13-05X to the PCE cross-section A-A' provided as Figure 8 due to the PCE detection of 24 µg/L in this well during the reporting period.	Monitoring well G6M-13-05X has been added to PCE cross-section A-A' on Figure 8.
2.	Figures 4, 5, and 6	MassDEP requests that the report indicate which monitoring wells were used to establish the limits of PCE contamination in the groundwater at source area monitoring well C6M-13-05X, particularly to the west and southwest of this well. Based upon the groundwater contours provided on Figures 4 and 5 of the Report and the trajectory of the former PCE plume in 2004 presented as Figure 6 in the Report, the PCE contamination appears to be on a direct flow path to the PCE contamination detected in Area 2 at monitoring wells G6M-07-01X and G6M-02-01X. Monitoring wells G6M-07-01X and G6M-02-01X are located just to the west and southwest of the enhanced reductive dichlorination (ERD) injection well transect in Area 2 and residual PCE contamination may be bypassing the ERD injection well fence in Area 2.	The following text was added to Section 3.3.2.3: "PCE exceedances shown on Figure 7 at this monitoring well are bounded by groundwater results at: • Monitoring well G6M-96-25B, sampled most recently in October 2012, located approximately 155 feet west of G6M-13-05X; • Monitoring well G6M-04-11X, sampled most recently in October 2020, located approximately 120 feet southwest of G6M-13-05X; and • Monitoring well G6M-04-22X, sampled in Fall 2022, located approximately 150 feet south of G6M-13-05X." Please refer to the response to comment enclosure on the following pages showing these monitoring well locations and results.
		Michael Daly (USEPA)	
3.	N/A	EPA has no comments on the Draft 2022 Annual Operations, Maintenance, and Monitoring Report for AOC 50.	N/A
END OF COMMENTS			


Area Southwest of Monitoring Well G6M-13-05X
Legend
50PZ-19-01
Boundary
Feature 1
G6M-96-25B
G6M-02-08X
G6M-13-05X
G6M-03-02
G6M-04-12X
G6M-9
G6M-96-13B
G6M-04-11X
G6M-13-06X
G6M-04-09X
G6M-94-
G6M-04-22X
G6M-07-01X
G6M-04-01X
G6M-02-01X
N
Google Earth
60 m

Locations:	G6M-04-11X	G6M-04-11X	G6M-04-11X
Field Sample ID:	G6M-04-11X_10/08/2010	G6M-04-11X_10/06/2011	G6M-04-11X_10/16/2012
Sample Begin Depth:	35.00	35.00	35.00
Sample End Depth:	45.00	45.00	45.00
Sample Date:	10/08/2010	10/06/2011	10/16/2012
SW8260B			
1,1,1,2-Tetrachloroethane (µg/L)			
1,1,1-Trichloroethane (µg/L)	0.110 U	0.110 U	0.110 U
1,1,2,2-Tetrachloroethane (µg/L)	0.110 U	0.110 U	0.110 U
1,1,2-Trichloroethane (µg/L)	0.200 U	0.200 U	0.200 U
1,1-Dichloroethane (µg/L)	0.180 U	0.180 U	0.180 U
1,1-Dichloroethene (µg/L)	0.190 U	0.190 U	0.190 U
1,1-Dichloropropene (µg/L)			
1,2,3-Trichlorobenzene (µg/L)			
1,2,3-Trichloropropane (µg/L)			
1,2,4-Trichlorobenzene (µg/L)			
1,2,4-Trimethylbenzene (µg/L)			
1,2-Dibromo-3-chloropropane (µg/L)			
1,2-Dibromoethane (EDB) (µg/L)			
1,2-Dichlorobenzene (µg/L)	0.100 U	0.100 U	0.100 U
1,2-Dichloroethane (µg/L)	0.160 U	0.160 U	0.160 UJ
1,2-Dichloroethene (µg/L)			
1,2-Dichloropropane (µg/L)	0.120 U	0.120 U	0.120 U
1,3,5-Trimethylbenzene (µg/L)			
1,3-Dichlorobenzene (µg/L)	0.130 U	0.130 U	0.130 U
1,3-Dichloropropane (µg/L)			
1,4-Dichlorobenzene (µg/L)	0.150 U	0.150 U	0.150 U
2,2-Dichloropropane (µg/L)			
2-Butanone (MEK) (µg/L)			
2-Chlorotoluene (µg/L)			
2-Hexanone (µg/L)			
4-Chlorotoluene (µg/L)			
4-Methyl-2-pentanone (MIBK) (µg/L)			
Acetone (µg/L)			
Benzene (µg/L)	0.120 U	0.120 U	0.120 U
Bromobenzene (µg/L)			
Bromochloromethane (µg/L)			
Bromodichloromethane (µg/L)	0.120 U	0.120 U	0.120 U
Bromoform (µg/L)	0.390 U	0.390 U	0.390 U
Bromomethane (µg/L)	0.390 U	0.390 U	0.390 U
Carbon disulfide (µg/L)			
Carbon Tetrachloride (µg/L)	0.160 U	0.160 U	0.160 U
Chlorobenzene (µg/L)	0.130 U	0.130 U	0.130 U
Chloroethane (µg/L)	0.240 U	0.240 U	0.240 U
Chloroform (µg/L)	0.120 U	0.120 U	0.120 U

Locations:	G6M-04-11X	G6M-04-11X	G6M-04-11X
Field Sample ID:	G6M-04-11X_10/31/2014	G6M-04-11X	G6M-04-11X_FAL18
Sample Begin Depth:	35.00	35.00	35.00
Sample End Depth:	45.00	45.00	45.00
Sample Date:	10/31/2014	11/10/2016	10/22/2018
SW8260B			
1,1,1,2-Tetrachloroethane (µg/L)		0.370 U	1.00 U
1,1,1-Trichloroethane (µg/L)	0.110 U	0.370 U	1.00 U
1,1,2,2-Tetrachloroethane (µg/L)	0.110 U	0.620 U	1.00 U
1,1,2-Trichloroethane (µg/L)	0.200 U	0.330 U	0.500 U
1,1-Dichloroethane (µg/L)	0.180 U	0.380 U	1.00 U
1,1-Dichloroethene (µg/L)	0.190 U	0.360 U	1.00 U
1,1-Dichloropropene (µg/L)		0.340 U	1.00 U
1,2,3-Trichlorobenzene (µg/L)		2.50 U	5.00 U
1,2,3-Trichloropropane (µg/L)		0.390 U	1.00 U
1,2,4-Trichlorobenzene (µg/L)		2.50 U	5.00 U
1,2,4-Trimethylbenzene (µg/L)		0.470 U	1.00 U
1,2-Dibromo-3-chloropropane (µg/L)		1.10 U	2.00 U
1,2-Dibromoethane (EDB) (µg/L)		0.440 U	1.00 U
1,2-Dichlorobenzene (µg/L)	0.100 U	0.370 U	1.00 U
1,2-Dichloroethane (µg/L)	0.160 U	0.500 U	1.00 U
1,2-Dichloroethene (µg/L)		0.740 U	1.00 U
1,2-Dichloropropane (µg/L)	0.120 U	0.670 U	1.00 U
1,3,5-Trimethylbenzene (µg/L)		0.310 U	0.500 U
1,3-Dichlorobenzene (µg/L)	0.130 U	0.430 U	1.00 U
1,3-Dichloropropane (µg/L)		0.340 U	1.00 U
1,4-Dichlorobenzene (µg/L)	0.150 U	0.460 U	1.00 U
2,2-Dichloropropane (µg/L)		0.370 U	1.00 U
2-Butanone (MEK) (µg/L)		3.40 U	10.0 U
2-Chlorotoluene (µg/L)		0.270 U	0.500 U
2-Hexanone (µg/L)		2.00 U	5.00 U
4-Chlorotoluene (µg/L)		0.450 U	1.00 U
4-Methyl-2-pentanone (MIBK) (µg/L)		2.10 U	5.00 U
Acetone (µg/L)		7.00 U	10.0 U
Benzene (µg/L)	0.120 U	0.430 U	1.00 U
Bromobenzene (µg/L)		0.500 U	1.00 U
Bromochloromethane (µg/L)		0.450 U	1.00 U
Bromodichloromethane (µg/L)	0.120 U	0.440 U	1.00 U
Bromoform (µg/L)	0.390 U	0.430 U	1.00 U
Bromomethane (µg/L)	0.390 U	2.50 U	5.00 U
Carbon disulfide (µg/L)		0.430 U	2.00 U
Carbon Tetrachloride (µg/L)	0.160 U	0.330 U	0.500 U
Chlorobenzene (µg/L)	0.130 U	0.260 U	0.500 U
Chloroethane (µg/L)	0.240 U	2.50 U	5.00 U
Chloroform (µg/L)	0.120 U	0.500 U	1.00 U

Former Fort Devens, Long Term Monitoring

Locations:	G6M-04-11X
Field Sample ID:	G6M-04-11X-FAL20
Sample Begin Depth:	35.00
Sample End Depth:	45.00
Sample Date:	10/16/2020
SW8260B	
1,1,1,2-Tetrachloroethane (µg/L)	1.00 U
1,1,1-Trichloroethane (µg/L)	1.00 U
1,1,2,2-Tetrachloroethane (µg/L)	1.00 U
1,1,2-Trichloroethane (µg/L)	0.500 U
1,1-Dichloroethane (µg/L)	1.00 U
1,1-Dichloroethene (µg/L)	1.00 U
1,1-Dichloropropene (µg/L)	1.00 U
1,2,3-Trichlorobenzene (µg/L)	5.00 U
1,2,3-Trichloropropane (µg/L)	1.00 U
1,2,4-Trichlorobenzene (µg/L)	5.00 U
1,2,4-Trimethylbenzene (µg/L)	1.00 U
1,2-Dibromo-3-chloropropane (µg/L)	2.00 U
1,2-Dibromoethane (EDB) (µg/L)	1.00 U
1,2-Dichlorobenzene (µg/L)	1.00 U
1,2-Dichloroethane (µg/L)	1.00 U
1,2-Dichloroethene (µg/L)	1.00 U
1,2-Dichloropropane (µg/L)	1.00 U
1,3,5-Trimethylbenzene (µg/L)	0.500 U
1,3-Dichlorobenzene (µg/L)	1.00 U
1,3-Dichloropropane (µg/L)	1.00 U
1,4-Dichlorobenzene (µg/L)	1.00 U
2,2-Dichloropropane (µg/L)	1.00 U
2-Butanone (MEK) (µg/L)	10.0 U
2-Chlorotoluene (µg/L)	0.500 U
2-Hexanone (µg/L)	5.00 U
4-Chlorotoluene (µg/L)	1.00 U
4-Methyl-2-pentanone (MIBK) (µg/L)	5.00 U
Acetone (µg/L)	10.0 U
Benzene (µg/L)	1.00 U
Bromobenzene (µg/L)	1.00 U
Bromochloromethane (µg/L)	1.00 U
Bromodichloromethane (µg/L)	1.00 U
Bromoform (µg/L)	1.00 U
Bromomethane (µg/L)	5.00 U
Carbon disulfide (µg/L)	2.00 U
Carbon Tetrachloride (µg/L)	0.500 U
Chlorobenzene (µg/L)	0.500 U
Chloroethane (µg/L)	5.00 U
Chloroform (µg/L)	1.00 U

Locations:	G6M-04-11X	G6M-04-11X	G6M-04-11X
Field Sample ID:	G6M-04-11X_10/08/2010	G6M-04-11X_10/06/2011	G6M-04-11X_10/16/2012
Sample Begin Depth:	35.00	35.00	35.00
Sample End Depth:	45.00	45.00	45.00
Sample Date:	10/08/2010	10/06/2011	10/16/2012
SW8260B			
Chloroiodomethane (µg/L)	0.350 U	0.350 U	0.350 U
Chloromethane (µg/L)			
cis-1,2-Dichloroethene (µg/L)	0.190 U	0.190 U	0.190 U
cis-1,3-Dichloropropene (µg/L)	0.170 U	0.170 U	0.170 U
Cumene (µg/L)			
Dibromochloromethane (µg/L)	0.170 U	0.170 U	0.170 U
Dibromomethane (µg/L)			
Dichlorodifluoromethane (µg/L)			
Ethylbenzene (µg/L)			
Hexachlorobutadiene (µg/L)			
m,p-Xylene (µg/L)			
Methyl tert-butyl ether (MTBE) (µg/L)			
Methylene chloride (µg/L)	0.140 U	0.140 U	0.140 U
Naphthalene (µg/L)			
n-Butylbenzene (µg/L)			
n-Propylbenzene (µg/L)			
o-Xylene (µg/L)			
p-Cymene (p-Isopropyltoluene) (µg/L)			
sec-Butylbenzene (µg/L)			
Styrene (µg/L)			
tert-Butylbenzene (µg/L)			
Tetrachloroethene (PCE) (µg/L)	**0.410 J**	0.170 U	**0.620**
Toluene (µg/L)			
trans-1,2-Dichloroethene (µg/L)	0.140 U	0.140 U	0.140 U
trans-1,3-Dichloropropene (µg/L)	0.100 U	0.100 U	0.100 U
Trichloroethene (TCE) (µg/L)	0.130 U	0.130 U	0.130 U
Trichlorofluoromethane (µg/L)			
Vinyl acetate (µg/L)			
Vinyl chloride (µg/L)	0.150 U	0.150 U	0.150 U
Xylenes, Total (µg/L)	0.170 U	0.170 U	0.170 U

Detects are displayed in bold font
Non-detects are reported at the LOD when populated. If the LOD is not populated, it is reported at the LOQ.

Data Qualifier Definitions

J	Estimated Value
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.

Units

Locations:	G6M-04-11X	G6M-04-11X	G6M-04-11X
Field Sample ID:	G6M-04-11X_10/31/2014	G6M-04-11X	G6M-04-11X_FAL18
Sample Begin Depth:	35.00	35.00	35.00
Sample End Depth:	45.00	45.00	45.00
Sample Date:	10/31/2014	11/10/2016	10/22/2018
SW8260B			
Chloroiodomethane (µg/L)	0.350 U	0.400 U	
Chloromethane (µg/L)			1.00 U
cis-1,2-Dichloroethene (µg/L)	0.190 U	0.410 U	1.00 U
cis-1,3-Dichloropropene (µg/L)	0.170 U	0.400 U	1.00 U
Cumene (µg/L)		0.350 U	**10.0**
Dibromochloromethane (µg/L)	0.170 U	0.320 U	0.500 U
Dibromomethane (µg/L)		0.350 U	1.00 U
Dichlorodifluoromethane (µg/L)		0.600 U	1.00 U
Ethylbenzene (µg/L)		0.330 U	0.500 U
Hexachlorobutadiene (µg/L)		2.50 U	5.00 U
m,p-Xylene (µg/L)		0.350 U	1.00 U
Methyl tert-butyl ether (MTBE) (µg/L)		0.300 U	0.500 U
Methylene chloride (µg/L)	0.140 U	2.50 U	5.00 U
Naphthalene (µg/L)		2.50 U	5.00 U
n-Butylbenzene (µg/L)		0.470 U	1.00 U
n-Propylbenzene (µg/L)		0.380 U	1.00 U
o-Xylene (µg/L)		0.230 U	0.500 U
p-Cymene (p-Isopropyltoluene) (µg/L)		0.480 U	1.00 U
sec-Butylbenzene (µg/L)		0.420 U	1.00 U
Styrene (µg/L)		0.270 U	0.500 U
tert-Butylbenzene (µg/L)		0.450 U	1.00 U
Tetrachloroethene (PCE) (µg/L)	**0.540**	0.740 U	1.00 U
Toluene (µg/L)		0.480 U	1.00 U
trans-1,2-Dichloroethene (µg/L)	0.140 U	0.370 U	1.00 U
trans-1,3-Dichloropropene (µg/L)	0.100 U	0.420 U	1.00 U
Trichloroethene (TCE) (µg/L)	0.130 U	0.480 U	1.00 U
Trichlorofluoromethane (µg/L)		0.420 U	1.00 U
Vinyl acetate (µg/L)		0.810 U	2.00 U
Vinyl chloride (µg/L)	0.150 U	0.500 U	1.00 U
Xylenes, Total (µg/L)	0.170 U	0.230 U	0.500 U

Locations:	G6M-04-11X
Field Sample ID:	G6M-04-11X-FAL20
Sample Begin Depth:	35.00
Sample End Depth:	45.00
Sample Date:	10/16/2020

SW8260B	
Chloroiodomethane (µg/L)	
Chloromethane (µg/L)	1.00 U
cis-1,2-Dichloroethene (µg/L)	1.00 U
cis-1,3-Dichloropropene (µg/L)	1.00 U
Cumene (µg/L)	1.00 U
Dibromochloromethane (µg/L)	0.500 U
Dibromomethane (µg/L)	1.00 U
Dichlorodifluoromethane (µg/L)	1.00 U
Ethylbenzene (µg/L)	0.500 U
Hexachlorobutadiene (µg/L)	5.00 U
m,p-Xylene (µg/L)	1.00 U
Methyl tert-butyl ether (MTBE) (µg/L)	0.500 U
Methylene chloride (µg/L)	5.00 U
Naphthalene (µg/L)	5.00 U
n-Butylbenzene (µg/L)	1.00 U
n-Propylbenzene (µg/L)	1.00 U
o-Xylene (µg/L)	0.500 U
p-Cymene (p-Isopropyltoluene) (µg/L)	1.00 U
sec-Butylbenzene (µg/L)	1.00 U
Styrene (µg/L)	0.500 U
tert-Butylbenzene (µg/L)	1.00 U
Tetrachloroethene (PCE) (µg/L)	1.00 U
Toluene (µg/L)	1.00 U
trans-1,2-Dichloroethene (µg/L)	1.00 U
trans-1,3-Dichloropropene (µg/L)	1.00 U
Trichloroethene (TCE) (µg/L)	1.00 U
Trichlorofluoromethane (µg/L)	1.00 U
Vinyl acetate (µg/L)	2.00 U
Vinyl chloride (µg/L)	1.00 U
Xylenes, Total (µg/L)	0.500 U

µg/L Micrograms per Liter

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Locations:	G6M-04-11X
Field Sample ID:	G6M-04-11X-FAL22
Sample Begin Depth:	35.00
Sample End Depth:	45.00
Sample Date:	10/05/2022
SW8260D	
1,1,1,2-Tetrachloroethane (µg/L)	1.00 U
1,1,1-Trichloroethane (µg/L)	0.500 U
1,1,2,2-Tetrachloroethane (µg/L)	1.00 U
1,1,2-Trichloroethane (µg/L)	1.00 U
1,1-Dichloroethane (µg/L)	1.00 U
1,1-Dichloroethene (µg/L)	1.00 U
1,1-Dichloropropene (µg/L)	1.00 U
1,2,3-Trichlorobenzene (µg/L)	2.00 U
1,2,3-Trichloropropane (µg/L)	1.00 U
1,2,4-Trichlorobenzene (µg/L)	2.00 U
1,2,4-Trimethylbenzene (µg/L)	1.00 U
1,2-Dibromo-3-chloropropane (µg/L)	5.00 U
1,2-Dibromoethane (EDB) (µg/L)	1.00 U
1,2-Dichlorobenzene (µg/L)	1.00 U
1,2-Dichloroethane (µg/L)	1.00 U
1,2-Dichloroethene (µg/L)	1.00 U
1,2-Dichloropropane (µg/L)	0.500 U
1,3,5-Trimethylbenzene (µg/L)	1.00 U
1,3-Dichlorobenzene (µg/L)	1.00 U
1,3-Dichloropropane (µg/L)	1.00 U
1,4-Dichlorobenzene (µg/L)	1.00 U
2,2-Dichloropropane (µg/L)	1.00 U
2-Butanone (MEK) (µg/L)	20.0 U
2-Chlorotoluene (µg/L)	0.500 U
2-Hexanone (µg/L)	10.0 U
4-Chlorotoluene (µg/L)	1.00 U
4-Methyl-2-pentanone (MIBK) (µg/L)	10.0 U
Acetone (µg/L)	10.0 U
Benzene (µg/L)	1.00 U
Bromobenzene (µg/L)	0.500 U
Bromochloromethane (µg/L)	1.00 U
Bromodichloromethane (µg/L)	1.00 U
Bromoform (µg/L)	2.00 U
Bromomethane (µg/L)	10.0 U
Carbon disulfide (µg/L)	1.00 U
Carbon Tetrachloride (µg/L)	1.00 U
Chlorobenzene (µg/L)	0.500 U
Chloroethane (µg/L)	10.0 U
Chloroform (µg/L)	1.00 U

Locations:	G6M-04-11X
Field Sample ID:	G6M-04-11X-FAL22
Sample Begin Depth:	35.00
Sample End Depth:	45.00
Sample Date:	10/05/2022

SW8260D	
Chloromethane (µg/L)	2.00 U
cis-1,2-Dichloroethene (µg/L)	1.00 U
cis-1,3-Dichloropropene (µg/L)	1.00 U
Cumene (µg/L)	1.00 U
Dibromochloromethane (µg/L)	1.00 U
Dibromomethane (µg/L)	1.00 U
Dichlorodifluoromethane (µg/L)	1.00 U
Ethylbenzene (µg/L)	0.500 U
Hexachlorobutadiene (µg/L)	1.00 U
m,p-Xylene (µg/L)	1.00 U
Methyl tert-butyl ether (MTBE) (µg/L)	2.00 U
Methylene chloride (µg/L)	10.0 U
Naphthalene (µg/L)	5.00 U
n-Butylbenzene (µg/L)	2.00 U
n-Propylbenzene (µg/L)	1.00 U
o-Xylene (µg/L)	1.00 U
p-Cymene (p-Isopropyltoluene) (µg/L)	1.00 U
sec-Butylbenzene (µg/L)	2.00 U
Styrene (µg/L)	1.00 U
tert-Butylbenzene (µg/L)	1.00 U
Tetrachloroethene (PCE) (µg/L)	1.00 U
Toluene (µg/L)	**0.450 J**
trans-1,2-Dichloroethene (µg/L)	1.00 U
trans-1,3-Dichloropropene (µg/L)	1.00 U
Trichloroethene (TCE) (µg/L)	0.500 U
Trichlorofluoromethane (µg/L)	1.00 U
Vinyl acetate (µg/L)	2.00 U
Vinyl chloride (µg/L)	1.00 U
Xylenes, Total (µg/L)	1.00 U

Detects are displayed in bold font
Non-detects are reported at the LOD when populated. If the LOD is not populated, it is reported at the LOQ.

Data Qualifier Definitions

J	Estimated Value
U	Undetected: The analyte was analyzed for, but not detected.

Units

µg/L	Micrograms per Liter

Locations:	G6M-04-22X	G6M-04-22X	G6M-04-22X
Field Sample ID:	G6M-04-22X_10/08/2010	G6M-04-22X_10/06/2011	G6M-04-22X_10/12/2012
Sample Begin Depth:	74.00	74.00	74.00
Sample End Depth:	84.00	84.00	84.00
Sample Date:	10/08/2010	10/06/2011	10/12/2012
SW8260B			
1,1,1,2-Tetrachloroethane (µg/L)			
1,1,1-Trichloroethane (µg/L)	0.110 U	0.110 U	0.110 U
1,1,2,2-Tetrachloroethane (µg/L)	0.110 U	0.110 U	0.110 U
1,1,2-Trichloroethane (µg/L)	0.200 U	0.200 U	0.200 U
1,1-Dichloroethane (µg/L)	0.180 U	0.180 U	0.180 U
1,1-Dichloroethene (µg/L)	0.190 U	0.190 U	0.190 U
1,1-Dichloropropene (µg/L)			
1,2,3-Trichlorobenzene (µg/L)			
1,2,3-Trichloropropane (µg/L)			
1,2,4-Trichlorobenzene (µg/L)			
1,2,4-Trimethylbenzene (µg/L)			
1,2-Dibromo-3-chloropropane (µg/L)			
1,2-Dibromoethane (EDB) (µg/L)			
1,2-Dichlorobenzene (µg/L)	0.100 U	0.100 U	0.100 U
1,2-Dichloroethane (µg/L)	0.160 U	0.160 U	0.160 UJ
1,2-Dichloroethene (µg/L)			
1,2-Dichloropropane (µg/L)	0.120 U	0.120 U	0.120 U
1,3,5-Trimethylbenzene (µg/L)			
1,3-Dichlorobenzene (µg/L)	0.130 U	0.130 U	0.130 U
1,3-Dichloropropane (µg/L)			
1,4-Dichlorobenzene (µg/L)	0.150 U	0.150 U	0.150 U
2,2-Dichloropropane (µg/L)			
2-Butanone (MEK) (µg/L)			
2-Chlorotoluene (µg/L)			
2-Hexanone (µg/L)			
4-Chlorotoluene (µg/L)			
4-Methyl-2-pentanone (MIBK) (µg/L)			
Acetone (µg/L)			
Benzene (µg/L)	0.120 U	0.120 U	0.120 U
Bromobenzene (µg/L)			
Bromochloromethane (µg/L)			
Bromodichloromethane (µg/L)	0.120 U	0.120 U	0.120 U
Bromoform (µg/L)	0.390 U	0.390 U	0.390 U
Bromomethane (µg/L)	0.390 U	0.390 U	0.390 U
Carbon disulfide (µg/L)			
Carbon Tetrachloride (µg/L)	0.160 U	0.160 U	0.160 U
Chlorobenzene (µg/L)	0.130 U	0.130 U	0.130 U
Chloroethane (µg/L)	0.240 U	0.240 U	0.240 U
Chloroform (µg/L)	0.120 U	0.120 U	0.120 U

Locations:	G6M-04-22X	G6M-04-22X	G6M-04-22X
Field Sample ID:	G6M-04-22X_11/04/2014	G6M-04-22X_FAL18	G6M-04-22X-FAL20
Sample Begin Depth:	74.00	74.00	74.00
Sample End Depth:	84.00	84.00	84.00
Sample Date:	11/04/2014	10/22/2018	10/20/2020
SW8260B			
1,1,1,2-Tetrachloroethane (µg/L)		1.00 UJ	1.00 U
1,1,1-Trichloroethane (µg/L)	0.110 U	1.00 UJ	1.00 U
1,1,2,2-Tetrachloroethane (µg/L)	0.110 U	1.00 UJ	1.00 U
1,1,2-Trichloroethane (µg/L)	0.200 U	0.500 UJ	0.500 U
1,1-Dichloroethane (µg/L)	0.180 U	1.00 UJ	1.00 U
1,1-Dichloroethene (µg/L)	0.190 U	1.00 UJ	1.00 U
1,1-Dichloropropene (µg/L)		1.00 UJ	1.00 U
1,2,3-Trichlorobenzene (µg/L)		5.00 UJ	5.00 U
1,2,3-Trichloropropane (µg/L)		1.00 UJ	1.00 U
1,2,4-Trichlorobenzene (µg/L)		5.00 UJ	5.00 U
1,2,4-Trimethylbenzene (µg/L)		1.00 UJ	1.00 U
1,2-Dibromo-3-chloropropane (µg/L)		2.00 UJ	2.00 U
1,2-Dibromoethane (EDB) (µg/L)		1.00 UJ	1.00 U
1,2-Dichlorobenzene (µg/L)	0.100 U	1.00 UJ	1.00 U
1,2-Dichloroethane (µg/L)	0.160 U	1.00 UJ	1.00 U
1,2-Dichloroethene (µg/L)		**2.80 J**	**2.00**
1,2-Dichloropropane (µg/L)	**0.730**	1.00 UJ	1.00 U
1,3,5-Trimethylbenzene (µg/L)		0.500 UJ	0.500 U
1,3-Dichlorobenzene (µg/L)	0.130 U	1.00 UJ	1.00 U
1,3-Dichloropropane (µg/L)		1.00 UJ	1.00 U
1,4-Dichlorobenzene (µg/L)	0.150 U	1.00 UJ	1.00 U
2,2-Dichloropropane (µg/L)		1.00 UJ	1.00 U
2-Butanone (MEK) (µg/L)		10.0 UJ	10.0 U
2-Chlorotoluene (µg/L)		0.500 UJ	0.500 U
2-Hexanone (µg/L)		5.00 UJ	5.00 U
4-Chlorotoluene (µg/L)		1.00 UJ	1.00 U
4-Methyl-2-pentanone (MIBK) (µg/L)		5.00 UJ	5.00 U
Acetone (µg/L)		**14.0 J**	10.0 U
Benzene (µg/L)	0.120 U	1.00 UJ	1.00 U
Bromobenzene (µg/L)		1.00 UJ	1.00 U
Bromochloromethane (µg/L)		1.00 UJ	1.00 U
Bromodichloromethane (µg/L)	0.120 U	1.00 UJ	1.00 U
Bromoform (µg/L)	0.390 U	1.00 UJ	1.00 U
Bromomethane (µg/L)	0.390 U	5.00 UJ	5.00 U
Carbon disulfide (µg/L)		2.00 UJ	2.00 U
Carbon Tetrachloride (µg/L)	0.160 U	0.500 UJ	0.500 U
Chlorobenzene (µg/L)	0.130 U	0.500 UJ	0.500 U
Chloroethane (µg/L)	0.240 U	5.00 UJ	5.00 U
Chloroform (µg/L)	0.120 U	1.00 UJ	1.00 U

Locations:	G6M-04-22X	G6M-04-22X	G6M-04-22X
Field Sample ID:	G6M-04-22X_10/08/2010	G6M-04-22X_10/06/2011	G6M-04-22X_10/12/2012
Sample Begin Depth:	74.00	74.00	74.00
Sample End Depth:	84.00	84.00	84.00
Sample Date:	10/08/2010	10/06/2011	10/12/2012
SW8260B			
Chloroiodomethane (µg/L)	0.350 U	0.350 U	0.350 U
Chloromethane (µg/L)			
cis-1,2-Dichloroethene (µg/L)	**7.10**	**13.0**	**5.70**
cis-1,3-Dichloropropene (µg/L)	0.170 U	0.170 U	0.170 U
Cumene (µg/L)			
Dibromochloromethane (µg/L)	0.170 U	0.170 U	0.170 U
Dibromomethane (µg/L)			
Dichlorodifluoromethane (µg/L)			
Ethylbenzene (µg/L)			
Hexachlorobutadiene (µg/L)			
m,p-Xylene (µg/L)			
Methyl tert-butyl ether (MTBE) (µg/L)			
Methylene chloride (µg/L)	0.140 U	0.140 U	0.140 U
Naphthalene (µg/L)			
n-Butylbenzene (µg/L)			
n-Propylbenzene (µg/L)			
o-Xylene (µg/L)			
p-Cymene (p-Isopropyltoluene) (µg/L)			
sec-Butylbenzene (µg/L)			
Styrene (µg/L)			
tert-Butylbenzene (µg/L)			
Tetrachloroethene (PCE) (µg/L)	**0.390 J**	0.170 U	0.170 U
Toluene (µg/L)			
trans-1,2-Dichloroethene (µg/L)	**0.230 J**	0.140 U	0.140 U
trans-1,3-Dichloropropene (µg/L)	0.100 U	0.100 U	0.100 U
Trichloroethene (TCE) (µg/L)	**2.20**	0.130 U	0.130 U
Trichlorofluoromethane (µg/L)			
Vinyl acetate (µg/L)			
Vinyl chloride (µg/L)	**4.70**	**7.50**	**6.60**
Xylenes, Total (µg/L)	0.170 U	0.170 U	0.170 U

Detects are displayed in bold font
Non-detects are reported at the LOD when populated. If the LOD is not populated, it is reported at the LOQ.

Data Qualifier Definitions

J	Estimated Value
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.

Units

µg/L	Micrograms per Liter

Locations:	G6M-04-22X	G6M-04-22X	G6M-04-22X
Field Sample ID:	G6M-04-22X_11/04/2014	G6M-04-22X_FAL18	G6M-04-22X-FAL20
Sample Begin Depth:	74.00	74.00	74.00
Sample End Depth:	84.00	84.00	84.00
Sample Date:	11/04/2014	10/22/2018	10/20/2020
SW8260B			
Chloroiodomethane (µg/L)	0.350 U		
Chloromethane (µg/L)		1.00 UJ	1.00 U
cis-1,2-Dichloroethene (µg/L)	**2.00**	**2.80 J**	**2.00**
cis-1,3-Dichloropropene (µg/L)	0.170 U	1.00 UJ	1.00 U
Cumene (µg/L)		1.00 UJ	1.00 U
Dibromochloromethane (µg/L)	0.170 U	0.500 UJ	0.500 U
Dibromomethane (µg/L)		1.00 UJ	1.00 U
Dichlorodifluoromethane (µg/L)		1.00 UJ	1.00 U
Ethylbenzene (µg/L)		**0.580 J**	**0.500 J**
Hexachlorobutadiene (µg/L)		5.00 UJ	5.00 U
m,p-Xylene (µg/L)		1.00 UJ	**0.350 J**
Methyl tert-butyl ether (MTBE) (µg/L)		0.500 UJ	0.500 U
Methylene chloride (µg/L)	0.140 U	5.00 UJ	5.00 U
Naphthalene (µg/L)		5.00 UJ	5.00 UJ
n-Butylbenzene (µg/L)		1.00 UJ	1.00 U
n-Propylbenzene (µg/L)		1.00 UJ	1.00 U
o-Xylene (µg/L)		0.500 UJ	0.500 U
p-Cymene (p-Isopropyltoluene) (µg/L)		1.00 UJ	1.00 U
sec-Butylbenzene (µg/L)		1.00 UJ	1.00 U
Styrene (µg/L)		0.500 UJ	0.500 U
tert-Butylbenzene (µg/L)		1.00 UJ	1.00 U
Tetrachloroethene (PCE) (µg/L)	0.170 U	1.00 UJ	1.00 U
Toluene (µg/L)		**57.0 J**	**70.0**
trans-1,2-Dichloroethene (µg/L)	**0.720**	1.00 UJ	1.00 U
trans-1,3-Dichloropropene (µg/L)	0.100 U	1.00 UJ	1.00 U
Trichloroethene (TCE) (µg/L)	0.130 U	1.00 UJ	1.00 U
Trichlorofluoromethane (µg/L)		1.00 UJ	1.00 U
Vinyl acetate (µg/L)		2.00 UJ	2.00 U
Vinyl chloride (µg/L)	**4.60**	**3.40 J**	**1.80**
Xylenes, Total (µg/L)	0.170 U	0.500 UJ	**0.350 J**

Locations:	G6M-04-22X
Field Sample ID:	G6M-04-22X-FAL22
Sample Begin Depth:	74.00
Sample End Depth:	84.00
Sample Date:	10/10/2022
SW8260D	
1,1,1,2-Tetrachloroethane (µg/L)	1.00 U
1,1,1-Trichloroethane (µg/L)	0.500 U
1,1,2,2-Tetrachloroethane (µg/L)	1.00 U
1,1,2-Trichloroethane (µg/L)	1.00 U
1,1-Dichloroethane (µg/L)	1.00 U
1,1-Dichloroethene (µg/L)	1.00 U
1,1-Dichloropropene (µg/L)	1.00 U
1,2,3-Trichlorobenzene (µg/L)	2.00 U
1,2,3-Trichloropropane (µg/L)	1.00 U
1,2,4-Trichlorobenzene (µg/L)	2.00 U
1,2,4-Trimethylbenzene (µg/L)	**0.550 J**
1,2-Dibromo-3-chloropropane (µg/L)	5.00 UJ
1,2-Dibromoethane (EDB) (µg/L)	1.00 U
1,2-Dichlorobenzene (µg/L)	1.00 U
1,2-Dichloroethane (µg/L)	1.00 U
1,2-Dichloroethene (µg/L)	**1.40 J**
1,2-Dichloropropane (µg/L)	0.500 U
1,3,5-Trimethylbenzene (µg/L)	1.00 U
1,3-Dichlorobenzene (µg/L)	1.00 U
1,3-Dichloropropane (µg/L)	1.00 U
1,4-Dichlorobenzene (µg/L)	1.00 U
2,2-Dichloropropane (µg/L)	1.00 U
2-Butanone (MEK) (µg/L)	20.0 U
2-Chlorotoluene (µg/L)	0.500 U
2-Hexanone (µg/L)	10.0 UJ
4-Chlorotoluene (µg/L)	1.00 U
4-Methyl-2-pentanone (MIBK) (µg/L)	10.0 UJ
Acetone (µg/L)	10.0 U
Benzene (µg/L)	1.00 U
Bromobenzene (µg/L)	0.500 U
Bromochloromethane (µg/L)	1.00 U
Bromodichloromethane (µg/L)	1.00 U
Bromoform (µg/L)	2.00 U
Bromomethane (µg/L)	10.0 UJ
Carbon disulfide (µg/L)	1.00 U
Carbon Tetrachloride (µg/L)	1.00 U
Chlorobenzene (µg/L)	0.500 U
Chloroethane (µg/L)	10.0 U
Chloroform (µg/L)	1.00 U

Locations:	G6M-04-22X
Field Sample ID:	G6M-04-22X-FAL22
Sample Begin Depth:	74.00
Sample End Depth:	84.00
Sample Date:	10/10/2022

SW8260D	
Chloromethane (µg/L)	2.00 U
cis-1,2-Dichloroethene (µg/L)	**1.40 J**
cis-1,3-Dichloropropene (µg/L)	1.00 U
Cumene (µg/L)	1.00 U
Dibromochloromethane (µg/L)	1.00 U
Dibromomethane (µg/L)	1.00 U
Dichlorodifluoromethane (µg/L)	1.00 U
Ethylbenzene (µg/L)	**0.550 J**
Hexachlorobutadiene (µg/L)	1.00 U
m,p-Xylene (µg/L)	1.00 U
Methyl tert-butyl ether (MTBE) (µg/L)	2.00 U
Methylene chloride (µg/L)	10.0 U
Naphthalene (µg/L)	5.00 U
n-Butylbenzene (µg/L)	2.00 U
n-Propylbenzene (µg/L)	1.00 U
o-Xylene (µg/L)	1.00 U
p-Cymene (p-Isopropyltoluene) (µg/L)	1.00 U
sec-Butylbenzene (µg/L)	2.00 U
Styrene (µg/L)	1.00 U
tert-Butylbenzene (µg/L)	1.00 U
Tetrachloroethene (PCE) (µg/L)	1.00 U
Toluene (µg/L)	**7.50**
trans-1,2-Dichloroethene (µg/L)	1.00 U
trans-1,3-Dichloropropene (µg/L)	1.00 U
Trichloroethene (TCE) (µg/L)	0.500 U
Trichlorofluoromethane (µg/L)	1.00 U
Vinyl acetate (µg/L)	2.00 U
Vinyl chloride (µg/L)	1.00 U
Xylenes, Total (µg/L)	1.00 U

Detects are displayed in bold font
Non-detects are reported at the LOD when populated. If the LOD is not populated, it is reported at the LOQ.

Data Qualifier Definitions

J	Estimated Value
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.

Units

µg/L	Micrograms per Liter

Former Fort Devens, Long Term Monitoring

Locations:	G6M-96-25B	G6M-96-25B	G6M-96-25B
Field Sample ID:	G6M-96-25B_10/08/2010	G6M-96-25B_10/06/2011	G6M-96-25B_10/15/2012
Sample Begin Depth:	48.00	48.00	48.00
Sample End Depth:	58.00	58.00	58.00
Sample Date:	10/08/2010	10/06/2011	10/15/2012
SW8260B			
1,1,1-Trichloroethane (µg/L)	0.110 U	0.110 U	0.110 U
1,1,2,2-Tetrachloroethane (µg/L)	0.110 U	0.110 U	0.110 U
1,1,2-Trichloroethane (µg/L)	0.200 U	0.200 U	0.200 U
1,1-Dichloroethane (µg/L)	0.180 U	0.180 U	0.180 U
1,1-Dichloroethene (µg/L)	0.190 U	0.190 U	0.190 U
1,2-Dichlorobenzene (µg/L)	0.100 U	0.100 U	0.100 U
1,2-Dichloroethane (µg/L)	0.160 U	0.160 U	0.160 UJ
1,2-Dichloropropane (µg/L)	0.120 U	0.120 U	0.120 U
1,3-Dichlorobenzene (µg/L)	0.130 U	0.130 U	0.130 U
1,4-Dichlorobenzene (µg/L)	0.150 U	0.150 U	0.150 U
Benzene (µg/L)	0.120 U	0.120 U	0.120 U
Bromodichloromethane (µg/L)	0.120 U	0.120 U	0.120 U
Bromoform (µg/L)	0.390 U	0.390 U	0.390 U
Bromomethane (µg/L)	0.390 U	0.390 U	0.390 U
Carbon Tetrachloride (µg/L)	0.160 U	0.160 U	0.160 U
Chlorobenzene (µg/L)	0.130 U	0.130 U	0.130 U
Chloroethane (µg/L)	0.240 U	0.240 U	0.240 U
Chloroform (µg/L)	0.120 U	0.120 U	0.120 U
Chloroiodomethane (µg/L)	0.350 U	0.350 U	0.350 U
cis-1,2-Dichloroethene (µg/L)	0.190 U	0.190 U	0.190 U
cis-1,3-Dichloropropene (µg/L)	0.170 U	0.170 U	0.170 U
Dibromochloromethane (µg/L)	0.170 U	0.170 U	0.170 U
Methylene chloride (µg/L)	0.140 U	0.140 U	0.140 U
Tetrachloroethene (PCE) (µg/L)	**3.10**	**0.580**	**2.00**
trans-1,2-Dichloroethene (µg/L)	0.140 U	0.140 U	0.140 U
trans-1,3-Dichloropropene (µg/L)	0.100 U	0.100 U	0.100 U
Trichloroethene (TCE) (µg/L)	0.130 U	0.130 U	0.130 U
Vinyl chloride (µg/L)	0.150 U	0.150 U	0.150 U
Xylenes, Total (µg/L)	0.170 U	0.170 U	0.170 U

Detects are displayed in bold font
Non-detects are reported at the LOD when populated. If the LOD is not populated, it is reported at the LOQ.

Data Qualifier Definitions

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.

Units

µg/L	Micrograms per Liter