United States Army Corps of Engineers
New England District

Final
2020 Annual Operations, Maintenance, and Monitoring Report

Area of Contamination 50

Former Fort Devens Army Installation

Devens, Massachusetts

Contract No. W912WJ-19-D-0014

Contract Delivery Order No. W912WJ-20-F-0022

August 2021

Final
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Prepared By:
SERES-Arcadis 8(a) JV 2, LLC
669 Marina Drive, Suite B-7
Charleston, South Carolina 29492
Tel 843 216 8531

Prepared For:
United States Army Corps of Engineers,
New England District

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 U.S. Army Corps of Engineers (USACE) Scope of Work and is hereby submitted for Government approval.

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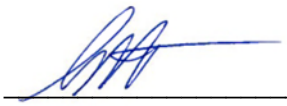
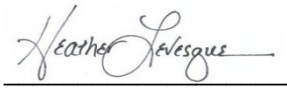


Andy Vitolins, PG
Project Manager



Heather Levesque, PMP
Deputy Project Manager

Received By:

Penelope Reddy
USACE Project Manager

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

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Acronyms and Abbreviations

µg/L	microgram per liter
1,1-DCE	1,1-dichloroethene
1,2-DCA	1,2-dichloroethane
1,2-DCP	1,2-dichloropropane
ABC®	Anoxic BioChem®
ABC® Ole’	Anoxic BioChem® plus oleic acid
ABC® Ole’+	Anoxic BioChem® plus oleic acid plus zero valent iron
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
cis-1,2-DCE	cis-1,2-dichloroethene
CL	cleanup level
COC	contaminant of concern
CVOC	chlorinated volatile organic compound
DL	detection limit
DO	dissolved oxygen
DoD	Department of Defense
DPT	direct-push technology
DRFTA	Devens Reserve Forces Training Area
ERD	enhanced reductive dechlorination
ESTCP	Environmental Security Technology Certification Program
Fort Devens	Fort Devens Army Installation
CL	cleanup level
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
MassDEP	Massachusetts Department of Environmental Protection
MassDevelopment	Massachusetts Development and Finance Agency
mg/L	milligram per liter
MiHPT	membrane interface probe-hydraulic profiling tool
mL/min	milliliter per minute
MPE	measuring point elevation
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
QA	quality assurance
QAPP	Quality Assurance Project Plan
QC	quality control
RAWP	Remedial Action Work Plan
redox	reduction-oxidation
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 and 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 2020 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 Final Long-Term Monitoring and Maintenance Plan (LTMMP) for AOC 50 (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 2020b).

1.1 Purpose

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 2020.

1.2 Site Description and History

AOC 50 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 14 acres of the former MAAF (approximately 246 acres total) were transferred to MassDevelopment for reuse in 1997. 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. The Devens Army Installation retained approximately 9 acres of the former airfield for vehicle storage and maintenance and approximately 4 acres in and around the source area for remediation activities.

The primary area of groundwater contamination at the site is a chlorinated volatile organic compound (CVOC) plume which extends from the source area approximately 3,000 feet downgradient towards the Nashua River. Sources of groundwater contamination at the site include two World War II fueling systems, a drywell formerly connected to the parachute shakeout tower, and the tetrachloroethene (PCE) former drum storage area; these sources are collectively referred to as the AOC 50 source area (Area 1). The source area comprises less than 2 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). Although these sources have been removed or taken out of commission, groundwater underlying AOC 50 contains elevated concentrations of volatile organic compounds (VOCs), most notably PCE. The site layout with existing monitoring wells is shown on Figures 2 and 3.

The Final 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 (1,2-DCA)	5	Methylene chloride	5
1,1-dichloroethene (1,1-DCE)	7	Nitrate	10,000
cis-1,2-dichloroethene (cis-1,2-DCE)	70	PCE	5
1,2-dichloropropane (1,2-DCP)	5	Trichloroethene (TCE)	5
Iron	3,129	Vinyl chloride (VC)	2

Notes:

µg/L = microgram per liter

CL = cleanup level

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, iron, methylene chloride, and 1,2-DCP). 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. 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 U.S., Inc./G&M, Inc. [Arcadis] 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, even though it was not predicted to pose significant risks under baseline conditions.

1.3 Site Hydrogeology

An unconfined groundwater aquifer is present within the overburden deposits at the former MAAF and AOC 50. Restrictions to vertical groundwater flow, such as silty clay layers, are present but not prevalent or continuous in soil borings conducted within the kame glacial deposit or along the Nashua River.

Depth to groundwater measurements have been collected from a network of monitoring wells and sampling points routinely since 1997. In 2020 the average depth to groundwater ranged from approximately 11 feet below ground surface (bgs) in the upgradient (northern) portion of Area 1 to approximately 61 feet bgs in Area 5. Hydraulic conductivities at the site range from 1 to more than 50 feet per day, with seepage velocities ranging from 0.024 to 1.19 feet per day (USEPA 2004). Groundwater recharges near the AOC 50 source area, travels below the MAAF, and discharges to the Nashua River.

1.4 Summary of Historical Groundwater Remediation

The selected remedy for AOC 50, 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, and Institutional Controls. In addition, geochemical additives and in-situ chemical oxidation were included as contingencies to address inorganic compounds and VOCs, respectively, if monitoring data indicate that implementation of these contingencies is warranted.

Portions of the CVOC plume are referred to as being in Areas 1 through 5. 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 2013). In 2017, an assessment of the IWS system was performed and revealed corrosion of pumps and blowers. While the IWS system is not needed at this time, it is likely the central processing unit along with various pumps, blowers, and other system components would need to be replaced if it needed to be reactivated 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). The July 2015 injection event used ABC® and modified substrates Anoxic BioChem® plus oleic acid (ABC® Ole’) and Anoxic BioChem® plus oleic acid plus zero valent iron (ABC® Ole’+). 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 directly injected using direct push technology (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 injected directly into soils using DPT via Geoprobe®, respectively. The details of these injection events are presented in the 2017, 2018, and 2019 Annual 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. As a result of performing ERD at this site since 2004, the total area of exceedances of the CL for PCE has decreased in size (estimated 15.5 acres in 2004 [Figure 4] to approximately 4 acres in 2020 [Figure 5]) and in concentration (maximum PCE concentration 14,000 µg/L in 2014 to 110 µg/L in 2020). The need for additional treatment will be assessed further in 2021. Approximately 27 years were estimated as the amount of time necessary to meet the criteria for unrestricted land use and potable use of groundwater (USEPA 2004).

2 Remedial System Update

As described in greater detail

Section 4, CVOC and geochemical data collected in spring and fall 2020 indicate that complete dechlorination is occurring at many areas of the site, with improvements in groundwater quality observed at most monitoring wells compared to data collected in spring and fall 2019 (KGS 2020). Elevated concentrations of total organic carbon (TOC; greater than 10 milligrams per liter [mg/L]) remain in wells within and adjacent to 2019 injection areas, and elevated concentrations of methane at many site wells indicate that geochemical conditions remain conducive for reductive dechlorination of CVOCs. Based on these data, as provided in memorandums to the USEPA and Massachusetts Department of Environmental Protection (MassDEP; S-A JV 2020, 2021), ERD injections were not performed in 2020. The overall remedial system configuration and approach at the site will continue to be adjusted over time to achieve optimum remedial performance.

3 Long-Term Monitoring Event Methodology

The LTM program at AOC 50 was conducted by the S-A JV in accordance with the most recent update of the LTMMP (KGS 2017) in the spring 2020 (May) and fall 2020 (October through November).

3.1 Groundwater Sampling and Analysis

The groundwater sampling events were performed in accordance with the QAPP (S-A JV 2020b) and low-flow procedures documented in *Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells* (USEPA 2017). Dissolved metals samples were field-filtered using 0.45-micron filters before being containerized for laboratory analysis. Completed groundwater low-flow sampling forms and equipment calibration records for the 2020 groundwater sampling events are presented in Appendix A.

Groundwater samples were collected from the monitoring wells for the analytical parameters discussed in Section 4. Information on the analytical methods, sample containers, preservatives, and holding times for the parameters sampled are presented in Table 2.

3.2 Decontamination Procedures

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

3.3 Investigation-Derived Waste

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.

4 Groundwater Monitoring Results

Sampling and analysis of chemical and geochemical parameters in AOC 50 groundwater was performed in 2020 in accordance with the LTMMP (KGS 2017). Analytical results for the spring 2020 (May) and fall 2020 (October through November) monitoring events are discussed in the following subsections.

The laboratory analytical reports for the 2020 monitoring events are included as Appendix B. The effects of contamination in the laboratory and field blanks, as well as the effects of other quality control (QC) issues associated with the analytical results, are reported in the associated data validation reports (Appendix C).

4.1 Groundwater Chemistry

The spring and fall 2020 monitoring events consisted of sampling 13 wells and 48 wells, respectively. The frequency, sampling locations, and analytical parameters for LTM sampling conducted in 2020 are summarized in Table 3. The spring and fall 2020 LTM analytical results and field parameters are presented in Tables 4 and 5, respectively. Historical analytical results and groundwater field parameters, including the 2020 sampling results, are presented in Appendix D.

4.1.1 Field Parameters

A summary of field groundwater quality measurements collected during the fall 2020 monitoring event is summarized below. Results of the fall 2020 monitoring event are discussed because more wells were sampled during the fall 2020 monitoring event (48 total wells) than the spring 2020 monitoring event (13 total wells). The spring 2020 field parameters were generally consistent with conditions in fall 2020 but slightly less anoxic and reducing. Field parameters from fall 2020 are provided on Table 4.

- pH levels in groundwater were within the acceptable pH range for bioremediation (pH of 5 to 8 standard units [SU]) (Interstate Technology and Regulatory Council 2008) in all but two wells. Wells G6M-18-01 (8.23 SU) and G6M-06-01X (4.18 SU) were outside of this range, but are located northwest of the CVOC plume, where all CVOCs are below the CLs.
- In general, low DO levels (less than 1 mg/L) indicating anoxic conditions and negative ORP values indicating reducing conditions were recorded downgradient and within the in-situ reactive zones where reduction-oxidation (redox) conditions are strongly reducing because of ERD treatment. These conditions indicate that the aquifer is anoxic, allowing for reductive dechlorination of CVOCs. Oxic or moderately anoxic/reducing conditions are present outside of areas affected by ERD treatment.
    - In Area 1, anoxic conditions were recorded at 11 of the 14 wells sampled, with DO ranging from 0.37 to 0.61 mg/L in the 11 wells. Negative ORP was recorded at 11 of the 14 wells sampled, with ORP ranging from -124 to -14.6 millivolts (mV) in these 11 wells.
    - In Area 2, anoxic conditions were measured at three of the four wells sampled, with DO ranging from 0.16 to 0.29 mg/L, and ORP ranging from -103 to -73.4 mV in these three wells.
    - In Area 3, anoxic conditions persist in all the four wells sampled, with DO ranging from 0.10 to 0.42 mg/L. Negative ORP was recorded at three of the four wells sampled, with ORP ranging from -79.4 to -56.9 mV in these three wells.

- In Area 4, anoxic conditions persist in five of the six wells, with DO ranging from 0.43 to 0.63 mg/L. Negative ORP was recorded at four of the six wells, ranging from -157 to -7.60 in these four wells.
- In Area 5, anoxic conditions persist in 16 out of 18 wells, with DO ranging from 0.23 to 0.86 mg/L at these 16 wells. Negative ORP was recorded at 13 of the 18 wells, ranging from -401 to -5.30 mV in these 13 wells.
- Of the two monitoring wells sampled adjacent to the Nashua River, one is slightly anoxic and one is oxic, with DO ranging from 0.67 to 8.55 mg/L and ORP ranging from 14.4 to 224 mV.

4.1.2 Volatile Organic Compounds

Groundwater samples collected from 13 wells during the spring 2020 monitoring event and 48 wells during the fall 2020 monitoring event were submitted for VOC analysis. PCE, TCE, cis-1,2-DCE, and VC were the only VOCs detected above the established AOC 50 CLs during the fall 2020 monitoring event. Concentrations of these CVOCs are shown in Tables 4 and 5 (spring 2020 and fall 2020 monitoring events, respectively) and Appendix E. Historical analytical results, including the 2020 sampling results, are presented in Appendix D PCE results from the fall 2020 monitoring event and the associated PCE plume are shown on Figure 5, and a cross-section map is provided as Figure 6. Fall 2020 monitoring event results are described in more detail than those for spring 2020, due to the number of wells sampled in fall 2020 (48) compared to spring 2020 (13).

4.1.2.1 Spring 2020

Results of spring 2020 sampling at 13 monitoring wells were compared to fall 2019 results to determine if anaerobic/anoxic conditions resulting from the 2019 injection event conducted by KGS before the fall 2019 monitoring event were still present in the aquifer. Fall 2019 results indicated that the July/August 2019 ERD injections had reduced CVOC concentrations at target wells (KGS 2020). Generally, locations where PCE was greater than 100 µg/L had been targeted for treatment. As shown in Appendix D, spring 2020 CVOC results indicate that treatment continued to occur in the CVOC plume following the 2019 injections, and groundwater quality had continued to improve since fall 2019. Additional information was included in the Area of Contamination 50, Spring 2020 Performance Evaluation and Recommendations Memorandum (S-A JV 2020a).

4.1.2.2 Fall 2020

The fall 2020 groundwater quality monitoring results indicate that the 2019 injections continue to have the intended impact on CVOC concentrations at target wells. A total of 48 wells were sampled in fall 2020. The list of locations sampled is included in Table 3.

Area-specific summaries of locations that exceeded the CL for PCE, TCE, cis-1,2-DCE, and VC in fall 2020 are included in Table 6, below. Results are included in Table 5 and on Figures 7 (Area 1), 8 (Areas 2, 3, and 4), and 9 (Area 5). Figure 5 includes the results for PCE and depicts the associated area where PCE exceeds the CL.

Table 6 - 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 that Exceeded the Interim CL
1	14	2	• G6M-04-09X – PCE, TCE, and VC • G6M-04-10A – PCE, TCE, cis-1,2-DCE, VC
2	4	2	• G6M-02-01X – PCE, TCE, and VC • G6M-07-01X – PCE
3	4	1	• G6M-04-02X – PCE, TCE, cis-1,2-DCE, VC
4	6	1	• G6M-13-02X – PCE, TCE, VC
5	18	4	• G6M-04-07X – PCE, TCE, cis-1,2-DCE, VC • G6M-97-05B – PCE, cis,1-2-DCE, VC • XSA-12-95X – PCE • XSA-12-96X – PCE, TCE, VC
Nashua River	2	0	• None

Notes:

cis-1,2-DCE = cis-1,2-dichloroethene

CL = cleanup level

PCE = tetrachloroethene

TCE = trichloroethene

VC = vinyl chloride

VOC = volatile organic compound

A summary results for each CVOC is provided below:

- PCE was detected above the CL of 5 µg/L at 10 of the 48 sampled locations (compared to 11 locations out of 38 sampled locations in the fall 2019 monitoring event), with a maximum detection of 110 µg/L at G6M-04-09X (Area 1). This location, in the vicinity of the former source in Area 1, was the only detected PCE value above 100 µg/L.
- TCE was detected above the CL of 5 µg/L at seven of the 48 sampled locations (compared to nine of 38 locations in the fall 2019 monitoring event), with a maximum detection of 110 µg/L at G6M-04-09X (Area 1). TCE exceedances were localized and occurred at locations with concurrent PCE exceedances.
- Concentrations of cis-1,2-DCE were detected above the CL of 70 µg/L at four of the 48 sampled locations (similar to four of 38 locations in the fall 2019 monitoring event), with a maximum detection of 120 µg/L at G6M-04-02X (Area 3) and G6M-04-10A (Area 1). Most cis-1,2-DCE exceedances occurred at wells adjacent to 2019 injection locations.
- VC was detected above the CL of 2 µg/L at eight of the 48 sampled locations and was equal to the CL at one location (compared to 11 of 38 locations in the fall 2019 monitoring event) with a maximum detection of 34 µg/L at G6M-04-09X (Area 1).

When compared to prior CVOC concentrations at the site, these results indicate significant improvements to groundwater quality have been made because of ERD remediation performed to date. In 2021, the monitoring well network will be evaluated to determine if it can be optimized. Recommended optimizations to the monitoring program will be included in a revised LTMMP to be submitted to the USEPA and MassDEP.

4.1.2.3 Concentration Trends

Trend graphs showing PCE and the associated daughter products (TCE, cis-1,2-DCE, VC, and ethene) for 12 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 2019 ERD injections. 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 declining 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 concentrations have declined and all target CVOCs are below applicable CLs (Figure 7 and Appendix E, Figure E-1). This well had a TOC concentration of 230 mg/L when sampled in fall 2020. CVOC concentrations in groundwater will continue to be monitored as the TOC concentration decreases over time.
- At monitoring well G6M-04-10A, located adjacent to 2019 DPT injections, overall concentrations have decreased substantially (the PCE concentration at monitoring well G6M-04-10A was 6,100 µg/L in June 2006 and 35 µg/L in October 2020). CVOC concentrations have fluctuated recently, with higher concentrations observed in October 2019 and October 2020 when compared to 2014 to 2018 data (Appendix D and Appendix E, Figure E-2). This monitoring location will continue to be sampled on a semiannual basis.
- At monitoring well G6M-04-09X, located outside and down/cross gradient to the 2019 DPT injection area, CVOC concentrations decreased two orders of magnitude from June 2004 (7,400 µg/L PCE) to October 2018 (PCE not detected). In fall 2020, CVOC concentrations in this well have rebounded to 110 µg/L PCE and 110 µg/L TCE (Appendix E, Figure E-3). This location will be sampled in spring 2021 and analyzed for VOCs in addition to TOC and other geochemical parameters to assess whether reductive dechlorination is likely to continue without injection of additional carbon substrate.
- CVOC concentrations at monitoring well G6M-13-05X, located outside and cross gradient to the area influenced by 2019 injections, have decreased steadily since 2017 (Appendix E, Figure E-4).

Area 2

- At monitoring well G6M-02-01X, there was a slight increase in CVOC concentrations in Fall 2020 compared to those in Fall 2019, though concentrations remain 1 to 2 orders of magnitude lower than the previously detected maximum values (Appendix E, Figure E-5).

Area 3

- At monitoring well G6M-04-02X, located within the 2019 DPT injection area, PCE and TCE concentrations have declined since spring 2019 prior to the July/August 2019 injection event; cis-1,2-DCE and, to a lesser extent, VC have been generated because of reductive dechlorination. The total molar CVOC concentration (i.e., the sum of the moles of PCE and its daughter products) has declined by about 40% since spring 2019 (Appendix E, Figure E-6).

- At monitoring well G6M-03-07X, CVOC concentrations have generally remained below applicable CLs since 2010 (Appendix E, Figure E-7).

Area 4

- Monitoring well G6M-13-02X is located hydraulically downgradient of permanent wells used in the 2019 injections. CVOC concentrations are similar to concentrations before the injection event. It may take additional time for groundwater treated upgradient of monitoring well G6M-13-02X in 2019 to reach this location (Appendix E, Figure E-8).

Area 5

- Monitoring well G6M-13-04X is located immediately downgradient of a 2019 injection area. Since injections, CVOC concentrations have declined and all CVOCs are below applicable CLs (Appendix E, Figure E-9).
- Monitoring well G6M-97-05B is located along the centerline of the CVOC plume, and the area surrounding it was treated via DPT injections in 2019. The previous increasing PCE concentration has declined from 180 µg/L in spring 2019 (pre-2019 injections) to 13 µg/L in fall 2020. The TCE concentration at this location has also decreased, while cis-1,2-DCE and VC concentrations have increased due to reductive dechlorination. Ethene concentrations increased to 22 µg/L in fall 2020, indicating complete dechlorination in the vicinity of this well location (Appendix E, Figure E-10).
- PCE concentrations at downgradient well XSA-12-96X continue to follow a long-term decreasing trend. VC and ethene concentrations have increased since spring 2019. While injections are not performed adjacent to this well, the effect of treatment upgradient is apparent in the PCE concentration trend at this location (Appendix E, Figure E-11).
- PCE concentrations have also declined at downgradient monitoring well G6M-04-07X since spring 2019 and are anticipated to continue declining as treated groundwater arrives. The PCE concentration at monitoring well G6M-04-07X was 1,100 µg/L in December 2004 and 9.1 µg/L in October 2020 (Appendix E, Figure E-12).

4.1.3 Geochemical Analytes

Groundwater samples were submitted for analysis of dissolved gases (methane, ethene, and ethane), TOC, alkalinity, nitrate, sulfide, and sulfate for select wells during the spring and fall 2020 monitoring events in accordance with the LTMMP (KGS 2017) (Table 3). These general chemistry parameters are 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:

- 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).
- The presence of ethene/ethane indicate 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 17 monitoring wells were sampled for all general chemistry parameters during the fall 2020 monitoring event. A summary of the fall 2020 monitoring event results is provided below, and dissolved gas/TOC concentrations are provided in Table 5 and on Figures 7 through 9.

4.1.3.1 Dissolved Gases

The presence of methane, ethene, and ethane at many locations within the CVOC plume at AOC 50 indicates that conditions in the aquifer support continued reductive dechlorination of CVOCs. Methane concentrations were above 500 µg/L in 14 of 17 wells and were highly elevated (above 10 mg/L; AFCEE, NAVFAC, and ESTCP 2004) in eight monitoring wells. Methane concentrations were highest in wells within or adjacent to the 2019 injections (wells G6M-03-07X, G6M-04-03X, and G6M-13-04X). These elevated methane concentrations indicate conditions are sufficiently reducing to allow for continued reductive dechlorination to occur in site groundwater.

Ethene and/or ethane are present in most monitoring wells sampled, particularly within and immediately downgradient of injection areas. The presence of ethene and ethane indicate the microbes required for complete reductive dechlorination are active and present within site groundwater and indicate that PCE is being completely degraded.

4.1.3.2 Organic Carbon Distribution

Concentrations of TOC measured in and downgradient of former ERD injection areas indicate that carbon is available in the aquifer to continue to support reductive dechlorination of CVOCs. TOC concentrations at wells not influenced by historical ERD injections have historically been below 10 mg/L, and typically below 5 mg/L; therefore, any concentration greater than 10 mg/L is elevated above background. Three wells located within or immediately downgradient of a 2019 injection location (G6M-07-02X in Area 1, G6M-04-02X in Area 3, and G6M-97-05B in Area 5) continue to exhibit elevated TOC concentrations (greater than 100 mg/L). One additional well, located to the west of injections performed in Area 1 in 2019, G6M-13-06X, also had greater than 100 mg/L TOC detected when sampled in fall 2020. The most recent injection conducted adjacent to well G6M-13-06X in Area 1 was performed in July 2017.

An additional three wells located downgradient of a 2019 injection location (G6M-04-10A in Area 1, G6M-03-07X in Area 2, and G6M-13-04X in Area 5), contained moderate TOC concentrations (between 10 and 100 mg/L). Two wells located in Area 1 to the west of where injections were performed in 2019 (G6M-02-08X and G6M-13-05X) also had TOC detected at greater than 10 mg/L. The most recent injections performed upgradient or adjacent to these locations in Area 1 were conducted in 2017 (G6M-02-08X) and 2018 (G6M-13-05X).

The organic carbon substrates 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), and a less soluble portion (vegetable oils and fatty acid esters) that more slowly release organic carbon over a period of years. ABC-Ole' has been typically injected into permanent injection wells and ABC-Ole'+ has been used in DPT injections. ABC-Ole'+ also includes reactive iron to provide direct reduction and treatment of CVOCs in groundwater. These 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 these locations.

4.1.4 Inorganic Metals

Groundwater samples from both 2020 monitoring events were submitted for dissolved metals (arsenic, iron, and manganese) analysis (Table 3). Results are included in Tables 4 and 5 for spring 2020 and fall 2020, respectively. Of the three dissolved metals sampled, arsenic is of primary interest. The fall 2020 monitoring event data for arsenic are shown on Figure 10.

As noted in Section 1.2, 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 Mn^{4+} minerals are reduced to more soluble 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 2020 monitoring events are presented on Figure 10. Arsenic concentrations in groundwater exceeded the CL of 10 µg/L at 30 of 44 wells sampled in fall 2020. These wells are within and downgradient of former injection locations, where geochemical conditions in groundwater are reducing. In 2020, the maximum concentration of dissolved arsenic detected was 780 µg/L at monitoring well G6M-04-22X (Area 1) in October 2020. In wells where conditions are primarily oxidizing and/or locations that are outside of the areas where ERD has resulted in reducing geochemical conditions in the aquifer, the fall 2020 dissolved arsenic concentrations are generally non-detect or below the CL of 10 µg/L (Figure 10).

Arsenic concentrations exceeding the CL had previously been detected near the southeastern edge of the plume downgradient of Area 5. In Fall 2020, wells located within 400 ft downgradient of Area 5 (i.e., G6M-02-11X, G6M 02-12X, G6M-03-08X, G6M-03-10X, G6M-13-04X, and MW-3) contained arsenic above the CL of 10 ug/L. At each of these wells, arsenic concentrations have been greater than the CL since at least 2014, presumably due to upgradient ERD injection activities in Area 5. The one exception is G6M-03-08X, which is located downgradient of G6M-02-12X, and first exceeded the arsenic CL in 2018. At locations farther downgradient of these wells (i.e., G6M-04-06X, G6M-04-07X, XSA-12-95X), arsenic concentrations have generally been below the CL historically, including in Fall 2020, indicating that arsenic is attenuating with greater distance from former injection areas and time since injections have been performed.

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. Redox conditions were generally oxic before injections being performed at the site (DO above 1 mg/L and positive ORP) 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 both that redox-sensitive metals are being solubilized at the site. These metals re-precipitate when 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 form and precipitate and the arsenic sorbs to the particulate iron.

4.2 Additional Long-Term Monitoring Event Activities

A summary of the methodology used during the 2020 monitoring events is outlined below.

4.2.1 Monitoring Well Inspection and Maintenance

Before sampling, the following procedures were used to inspect the LTM wells at AOC 50:

- 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 before well inspection.

No damage to the wells was apparent during the 2020 monitoring events. Several wells had missing protective casing locks or missing bolts, which were subsequently replaced before completing the monitoring events.

4.2.2 Groundwater Level Measurements

Groundwater level measurements were collected from a total of 54 wells during both the spring and fall 2020 events. The depth to water in the AOC 50 monitoring wells was measured with a downhole water level indicator and recorded within one field day, to the extent possible. A few locations in both spring 2020 and fall 2020 were gauged at a later date due to access restrictions. A summary of the groundwater level measurements and the corresponding groundwater elevation data are presented in Table 7 for the spring 2020 monitoring event, and in Table 8 for the fall 2020 monitoring event. Groundwater elevation contours are presented on Figures 11 and 12 for spring and fall 2020, respectively.

Consistent with previous monitoring events, the observed groundwater flow direction was toward the Nashua River, from northeast to southwest. In general, groundwater elevations were higher in the spring compared to the fall. 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 0.0030 foot per foot in both spring and fall 2020. In general, the horizontal hydraulic gradient is steeper between Area 1 and Area 3, and downgradient of Area 3, the hydraulic gradient decreases.

4.3 Quality Assurance/Quality Control

Eurofins TestAmerica Laboratories, Inc. of Savannah, Georgia, was the primary contract laboratory used for the analysis of groundwater samples for the spring and fall 2020 monitoring events. This laboratory is compliant with the *United States Department of Defense (DoD) Quality Systems Manual for Environmental Laboratories, version 5.3* (DoD 2019) under the DoD National Environmental Laboratory Accreditation Program and holds current National Environmental Laboratory Accreditation Program accreditation for all applicable analytical methods.

As part of the 2020 monitoring events, quality assurance (QA)/QC 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 sampling events to evaluate field precision at the rate of 10% (1 per 10 samples). Matrix spike (MS)/matrix spike duplicate (MSD) pairs were also submitted at a rate of 5% (1 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 the sampling and shipping process.

Data validation was completed on all laboratory deliverables by Laboratory Data Consultants, Inc. of Carlsbad, California. The analytical results from the 2020 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 2020b), and the *DoD General Data Validation Guidelines* (DoD 2018). The method requirements from the *DoD Quality Systems Manual for Environmental Laboratories, version 5.3* (DoD 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 2020 monitoring events are presented in Appendix C. Appropriate qualifiers, if needed, have been added to the 2020 analytical data in the project database and are included in Tables 4 and 5 and Appendix C. Some values were J-qualified (analyte detected at estimated concentration below the laboratory reporting limits) or UJ-qualified (analyte not detected, laboratory reporting limit is estimated). Sample results that were qualified as estimated (UJ/J) due to quality control exceedances are usable with caution. The data from all of the 2020 spring and fall monitoring events are acceptable for use with minimal QC deviations with no data being rejected. The following laboratory quality control deficiencies were noted during data validation:

- Spring 2020
  - Low-level calibration blank and lab method blank detections of nitrate-nitrite as N resulted in qualification of all samples reported with laboratory job 680-183803-1 as not detected.
  - The matrix spike and matrix spike duplicate performed using samples G6M-04-02X-SPR20 and G6M-13-05X-SPR20 exhibited recoveries for nitrate-nitrite as N less than the acceptance criteria. The nitrate-nitrite as N results in these samples were qualified as estimated (UJ) with a potential for low bias in the reported result.
  - The continuing calibration verifications associated with TOC analysis exhibited results above the acceptance criteria. The TOC result in sample AOC-50-DUP01-SPR20 was qualified as estimated (J).
  - Low-level calibration blank detections of iron resulted in qualification of sample G6M-07-01X-SPR20 as not detected.
  - The initial calibration verification or continuing calibration verifications associated with VOC analyses exhibited results for chloroethane above the acceptance criteria and dichlorodifluoromethane and vinyl acetate below the acceptance criteria. The results in the associated samples were qualified as estimated (UJ/J).
  - The recovery of the VOC surrogate compound toluene-d8 was greater than the control limit in sample G6M-04-02X-SPR20. The results for all detected VOCs in this sample were qualified as estimated (J) with a potential for high bias in the reported results.
  - Due to a detection of trichloroethene (TCE) in the associated method blank, samples G6M-13-05X-SPR, Trip Blank1-051220, and XSA-12-96X-SPR20 were reanalyzed for TCE outside of the method specified 14-day holding time (analyzed 15 days from sample collection). The results for all TCE in these samples were qualified as estimated (UJ/J) with a potential for low bias in the reported concentrations.
- **Fall 2020**
  - Low-level lab blank detections of nitrate-nitrite as N resulted in qualification of samples G6M-13-05X-FAL20, G6M-13-06X-FAL20, and G6M-97-05B-FAL20 as not detected.
  - Low-level calibration blank detections of TOC resulted in qualification of sample G6M-18-01-FAL20 as not detected.
  - Low-level lab method blank, equipment blank, or calibration blank detections of iron resulted in qualification of samples G6M-04-06X-FAL20, G6M-04-14X-FAL20, and G6M-18-01-FAL20 as not detected.

- Low-level trip blank detections of acetone, 2-butanone, and/or tetrachloroethene resulted in qualification of sample results as not detected in sample G6M-04-02X-FAL20 (acetone and 2-butanone); G6M-04-05X-FAL20, G6M-04-15X-FAL20, and G6M-04-31X-FAL20 (tetrachloroethene); and field duplicate sample AOC50-DUP04-FAL20 (acetone).
- The initial calibration verification and/or continuing calibration verifications associated with VOC analyses exhibited results for 1,2-dibromo-3-chloropropane, 1,2,3-trichlorobenzene, 1,2,4-trichlorobenzene, 2-butanone, 2-hexanone, 4-methyl-2-pentanone, acetone, bromoform, bromomethane, carbon disulfide, chloroethane, dichlorodifluoromethane, and/or naphthalene below the acceptance criteria. The results in the associated samples were qualified as estimated (UJ/J).
- The matrix spike and matrix spike duplicate performed using sample G6M-02-13X-FAL20 exhibited recoveries for iron less than the acceptance criteria. The iron result in the sample was qualified as estimated (J) with a potential for low bias in the reported result.
- The matrix spike performed using sample G6M-04-31X-FAL20 exhibited a recovery for dissolved arsenic greater than the acceptance criteria. The dissolved arsenic result in the sample was qualified as estimated (J) with a potential for high bias in the reported result.
- The recoveries of the VOC surrogate compound toluene-d8 were less than the control limits in samples G6M-02-07X-FAL20, MW-7-FLA20, G6M-07-01X-FAL20, G6M-13-02X-FAL20, G6M-04-01X-FAL20, and G6M-04-02X-FAL20. The results for all reported VOCs in these samples were qualified as estimated (UJ/J) with a potential for low bias in the reported results.
- The recovery of the VOC surrogate compound 1,2-DCE-d4 was less than the control limits in trip blank sample AOC50-TB5-FAL20. The results for all reported VOCs in the sample were qualified as estimated (UJ/J) with a potential for low bias in the reported results.
- The recoveries of the VOC surrogate compound 4-bromofluorobenzene were greater than the control limit in samples G6M-04-31X-FAL20 and G6M-07X-FAL20. The results for all 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 4-bromofluorobenzene were greater than the control limit in sample G6M-06-01X-FAL20. The results for all detected VOCs in the sample was qualified as estimated (J) with a potential for high bias in the reported results.
- Due to a laboratory error, the VOC analysis for samples G6M-04-13X-FAL20, G6M-18-02-FAL20, and trip blank sample AOC50-TB2-FAL20 were performed outside of the method specified 14-day holding time (analyzed 15 days from sample collection). The results for all reported VOCs in the samples were qualified as estimated (UJ/J) with a potential for low bias in the reported concentrations.

4.4 Laboratory and Field Corrective Actions

Analyses were performed in general compliance with the precision, accuracy, representativeness, completeness, comparability, and sensitivity requirements listed in the QAPP (S-A JV 2020b). Standard analytical practices and method requirements were followed, and the laboratory was determined to be performing properly. Although some results required qualification based on the issues listed in Section 4.3, useable analyte results are reported for 100% of samples from the 2020 monitoring events.

There were no major field corrective actions required in 2020. Discrepancy issues were identified real time by review of chains of custody and laboratory logins as they were received by the project chemist. If discrepancies

were noted, the project chemist notified the laboratory project manager via email and/or verbal communication, and the issue was resolved immediately.

5 Land-Use Control Monitoring

Land-use controls (LUCs) are a key component of the ROD (USEPA 2004) and Remedial Action Work Plan (RAWP) for AOC 50 (Arcadis 2005) and were developed to restrict or prevent potential human exposure to groundwater COCs at AOC 50. The RAWP outlined the plan for implementation of the 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 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 storm water 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 objectives of the LUCs for AOC 50 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 (USEPA 2004) requirements, which include:

- 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.

Furthermore, 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 F.

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 F.

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 F.

Monitoring activities performed for the 2020 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.

AOC 50 was inspected by S-A JV field personnel in December 2020 (Appendix F). There were no issues encountered related to site access for monitoring and remediation activities during the 2020 physical site inspection.

5.2 Land-Use Control Interview

Telephone interviews were conducted in January 2021 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 AOC 50.

As summarized in Appendix F, each interviewee (Roy Herzig and Neil Angus 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 2020.

5.3 Land-Use Control Monitoring Summary

Results of the annual compliance monitoring indicate that no breaches to the LUCs were evident and corrective action(s) 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 2020 in accordance with the LTMMP (KGS 2017) and QAPP (S-A JV 2020b). LTM activities included semiannual groundwater sampling with 13 samples collected in spring 2020 and 48 samples collected in fall 2020. Locks and missing bolts were replaced at wells where they were missing. No further additional maintenance activities were performed in 2020. The LUCs were verified through inspection and interviews.

As a result of performing ERD at the site since 2004, the total area exceeding the CL for PCE has decreased in size (15.5 acres in 2004 [Figure 4] to approximately 4 acres in 2020 [Figure 5]), and concentration (maximum concentration 14,000 µg/L in 2014 to 110 µg/L in 2020). 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 (former drum storage 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 were observed at several locations in both 2019 (KGS 2020) and 2020. The generation of daughter products including ethene/ethane provide evidence that late-stage reductive dechlorination and an overall reduction in CVOC contaminant mass is occurring. In addition, geochemical conditions in these areas (elevated methane concentrations, TOC at concentrations supportive of continued reductive dechlorination, pH between 5 and 8 SU, and low DO levels and negative ORP values) remained suitable throughout 2020 to support the transformation of chlorinated ethenes into harmless by-products.

While most wells have shown positive CVOC degradation trends, concentrations have slightly rebounded in a few wells. Particularly, PCE and TCE concentrations at G6M-04-09X, located adjacent to the 2017, 2018, and 2019 Area 1 injections, have increased from non-detect in October 2018 to 110 µg/L PCE and 110 µg/L TCE in October 2020. This well has been sampled on an annual basis since October 2017.

The following activities will be performed in 2021 based on the conclusions drawn from this report:

- Continue O&M and groundwater sampling in accordance with the LTMMP (KGS 2017).
- Prepare an updated LTMMP that accounts for the improved groundwater quality at the site and optimizes sampling frequency and analyses where appropriate.
- Sample well G6M-04-09X during the next monitoring event (spring 2021) for both biogeochemical parameters (including TOC and dissolved gases) and VOCs.
- Continue to monitor metals (in particular arsenic) concentrations and distribution in the CVOC plume and balance ERD injections in areas of interest (such as the downgradient portion of the plume near the Nashua River) with the intent to maintain arsenic and other redox-sensitive metal concentrations in groundwater below the CLs. Redox conditions resulting from ERD injections generally correlate with local increases in dissolved arsenic concentrations in groundwater, a factor to be considered in future injection planning, particularly in areas adjacent to the Nashua River.
- The need for additional injection activities will be reevaluated following analysis of data from the Spring 2021 sampling event. 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 MassDEP outlining the type of organic carbon substrate to be injected, sample depths, and injection volumes.

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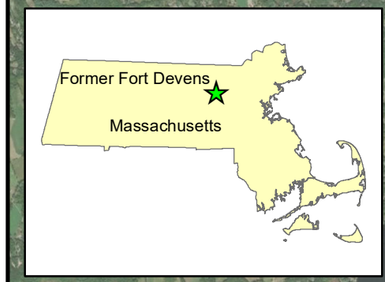
Figures



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

2020 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50
Former Fort Devens Army Installation
Devens, Massachusetts

Site Location

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Figure 1



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

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

0 200 400
Feet

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Site Layout

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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

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

0 50 100
Feet

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Site Layout
Source Area

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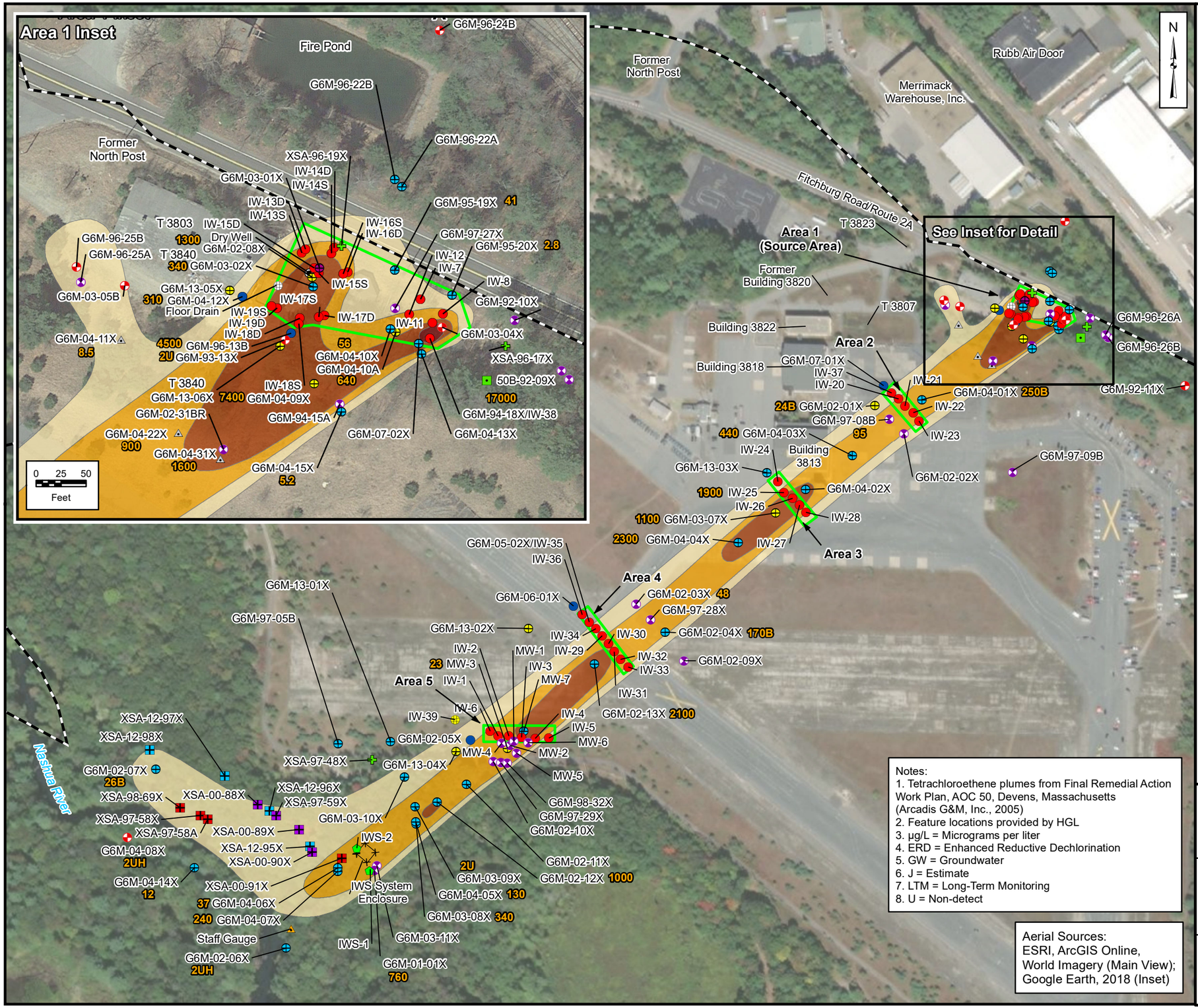
Figure
3

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
- 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. GW = Groundwater
6. J = Estimate
7. LTM = Long-Term Monitoring
8. U = Non-detect

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

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Tetrachloroethene Concentrations in Groundwater - Fall 2004

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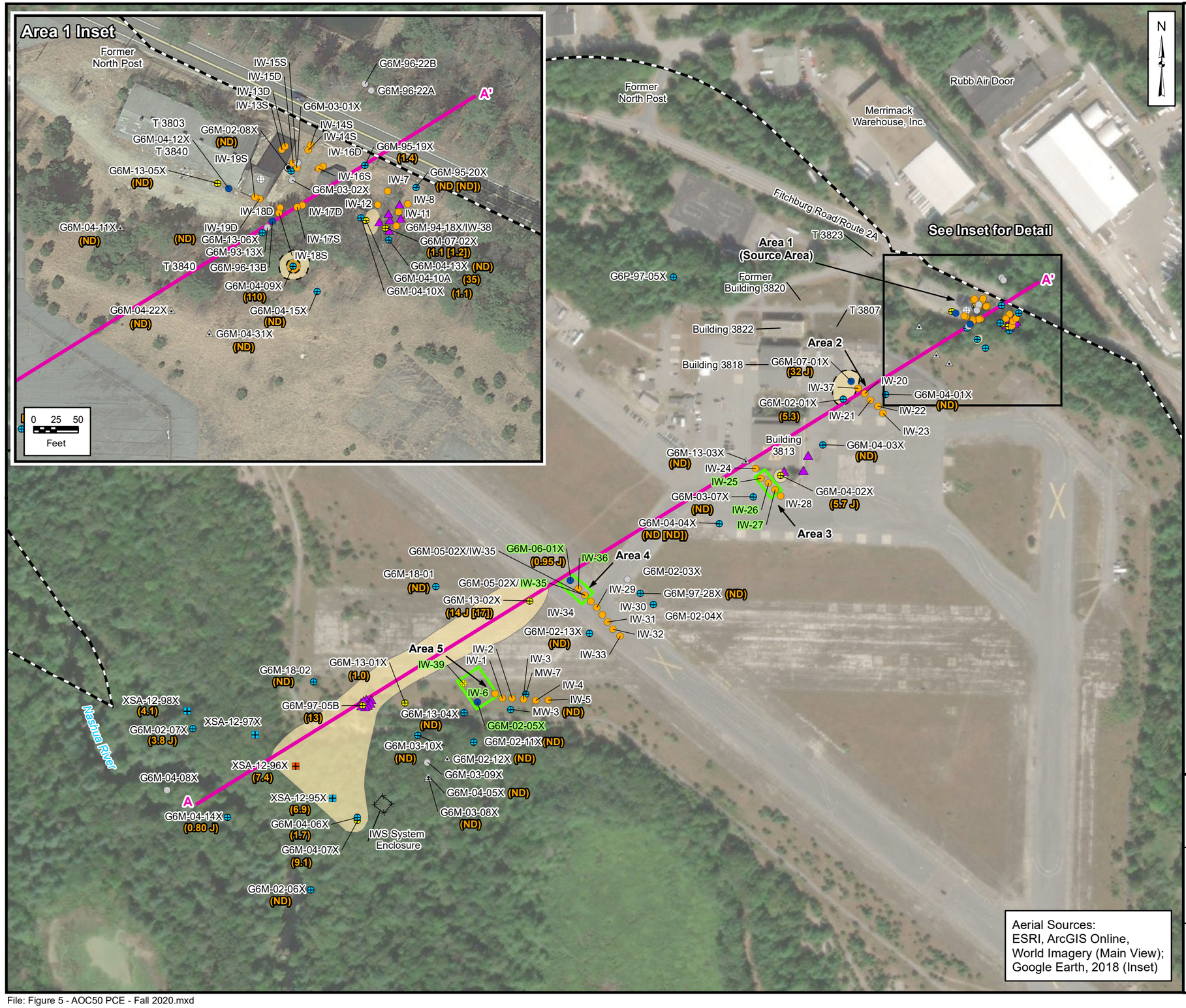
Figure 4

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

Interpretive Tetrachloroethene (PCE) Plumes (dashed where inferred)

- 5 - 100 (µg/L)
- 100 - 1,000 (µg/L)
- IW-25 — Well Used for Injection in July/Aug. 2019
- 16 — Fall 2020 PCE Result

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.

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

0 200 400
Feet

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Tetrachloroethene Concentrations in Groundwater - Fall 2020

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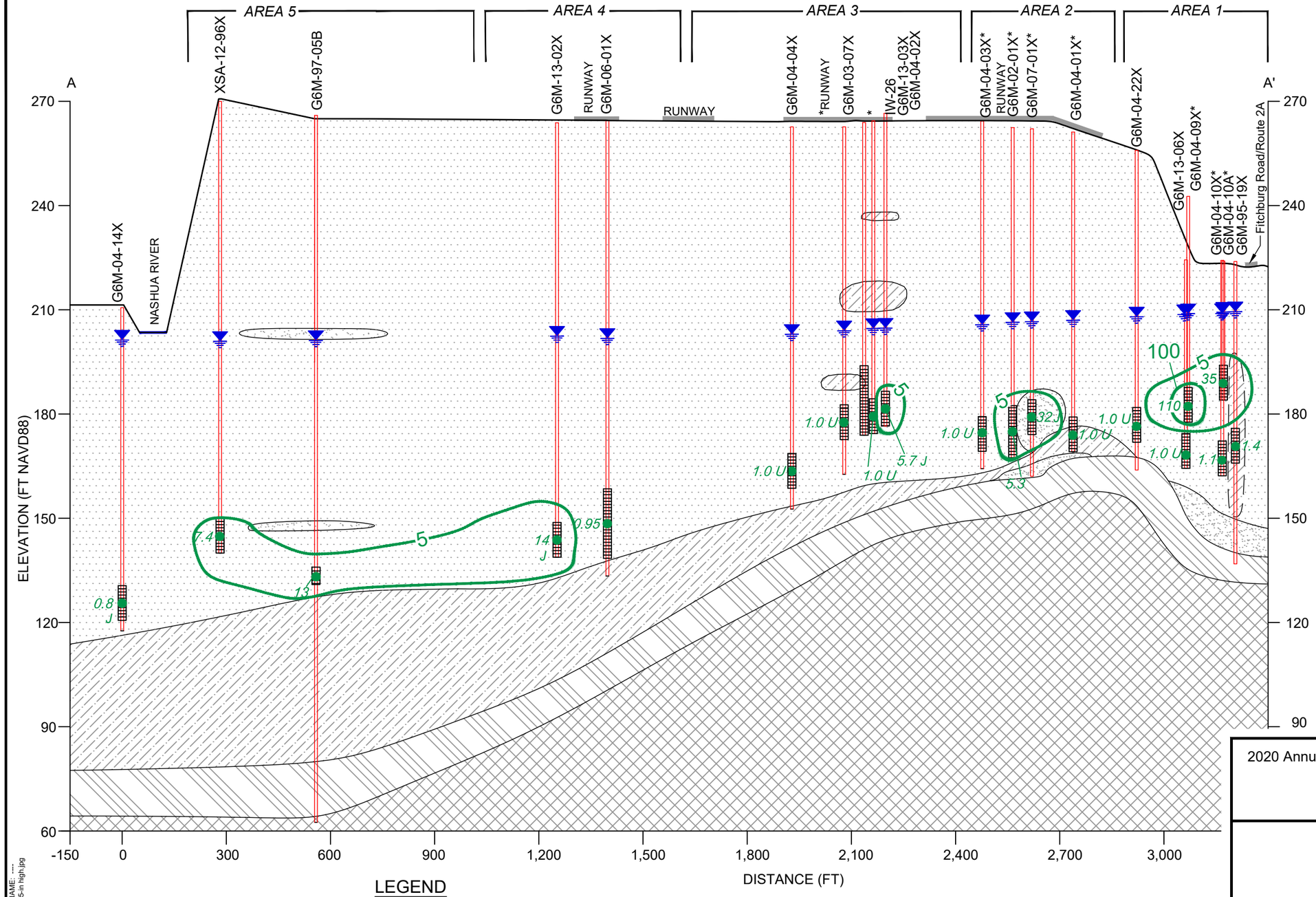
Figure 5

File: Figure 5 - AOC50 PCE - Fall 2020.mxd

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\mwasilewski\BIM 360\Arcadis\ANA-USACE\Project Files\DEVENS MA\2021\01-DWG\USACE_SHL - CROSS SECTION AOC-50 PCE.dwg LAYOUT: 6 SAVED: 3/18/2021 5:10 PM ACADVER: 23.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 3/19/2021 10:09 AM
BY: WASILEWSKI, MATT
XREFS: IMAGES: PROJECTNAME: ----
Seres-Arcadis_jvLogo_0.5-in high.jpg



NOTES:
1. FT = FEET.

2. FT NAVD88 = NORTH AMERICAN VERTICAL DATUM 1988 (FT).

3. J = THE ANALYTE WAS DETECTED AT THE REPORTED CONCENTRATIO N;THE VALUE IS AN ESTIMATE.

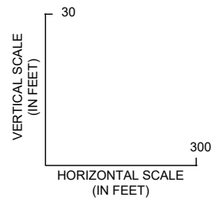
4. U = THE ANALYTE WAS NOT DETECTED

5. µg/L = MICROGRAMS PER LITER.

6. * = WELL LOCATION PROJECTED AGAINST CROSS-SECTION TRANSECT GROUND SURFACE; SLIGHT DIFFERENCES OBSERVED.

7. LITHOLOGY IN WELL G6M-95-19X INFERRED DUE TO PROJECTION ALONG CROSS-SECTION LINE; SILTY SAND WAS NOT OBSERVED IN LOGS FOR ADJACENT WELLS G6M-04-10X AND G6M-04-10A.

8. WHERE STRATIGRAPHIC DATA ARE UNAVAILABLE, INFORMATION SHOWN ON FIGURE 4-8 OF THE FINAL 2019 ANNUAL OPERATIONS, MAINTENANCE, AND MONITORING REPORT BY KOMAN GOVERNMENT SOLUTIONS, LLC. HAS BEEN USED.



LEGEND

- FINE SAND
- COARSE SAND
- SILTY SAND
- GLACIAL TILL
- BEDROCK
- GW ELEVATION (2020)
- WELL SCREEN INTERVAL
- BORING
- G6M-13-02X BORING/WELL IDENTIFICATION
- 13 TETRACHLOROETHENE SAMPLE CONCENTRATION (µg/L)
- 2020 TETRACHLOROETHENE CONTOUR (µg/L)

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CROSS-SECTION A-A'

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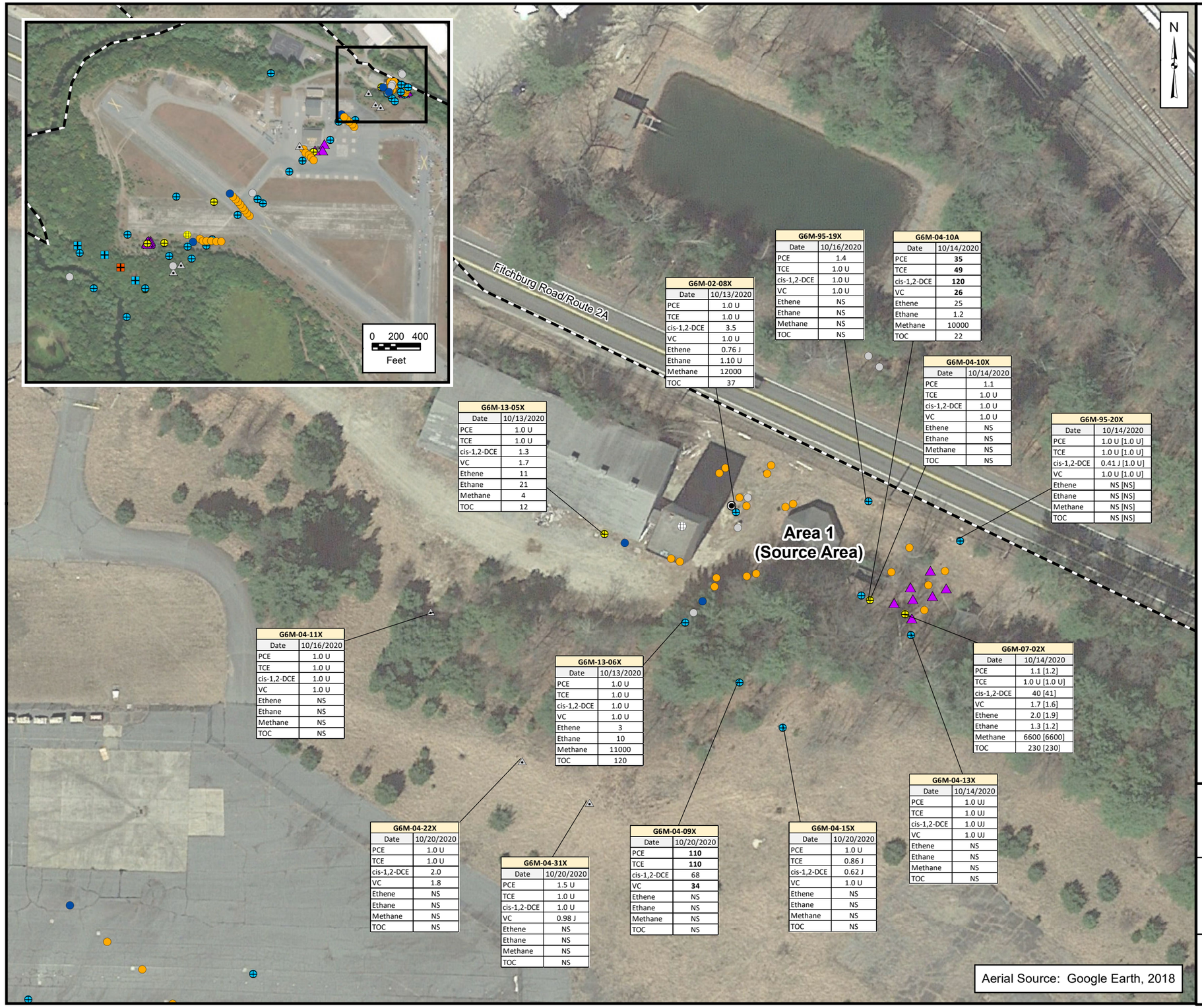
Figure
6



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, which is in milligrams per liter (mg/L).
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

0 100 200
Feet

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CVOC, Dissolved Gas, and TOC Data - Fall 2020, Area 1

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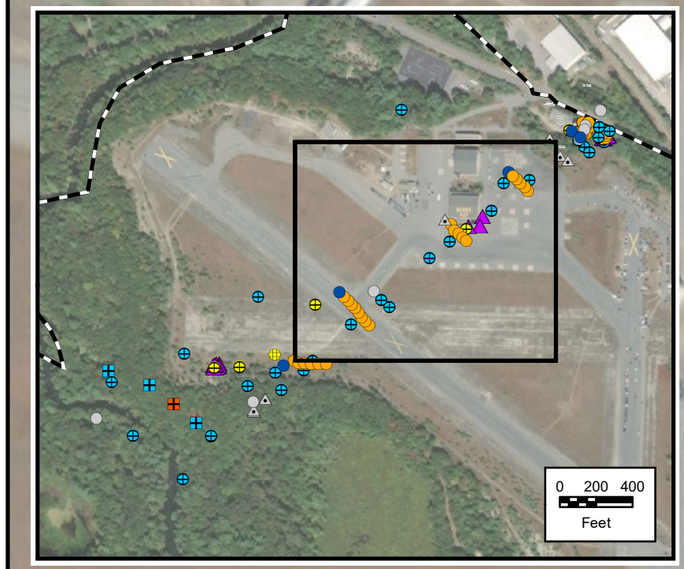
Figure 7



Building 3818

Building 3813

Area 2

Area 3

Area 4

G6M-07-01X	
Date	10/19/2020
PCE	**32 J**
TCE	0.71 J
cis-1,2-DCE	1.0 UJ
VC	1.0 UJ
Ethene	1.0 U
Ethane	1.10 U
Methane	34
TOC	3.3

G6M-02-01X	
Date	10/20/2020
PCE	**5.30**
TCE	**25.0**
cis-1,2-DCE	4.50
VC	**2.80**
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS

G6M-13-03X	
Date	10/16/2020
PCE	1.0 U
TCE	1.0 U
cis-1,2-DCE	1.0 U
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS

G6M-04-01X	
Date	10/19/2020
PCE	1.0 UJ
TCE	1.0 UJ
cis-1,2-DCE	1.0 UJ
VC	1.0 UJ
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS

G6M-04-04X	
Date	10/21/2020
PCE	1.0 U [1.0 U]
TCE	1.0 U [1.0 U]
cis-1,2-DCE	0.64 J [0.67 J]
VC	1.0 U [1.0 U]
Ethene	NS [NS]
Ethane	NS [NS]
Methane	NS [NS]
TOC	NS [NS]

G6M-04-03X	
Date	10/20/2020
PCE	1.0 U
TCE	0.80 J
cis-1,2-DCE	0.70 J
VC	1.0 U
Ethene	1.5
Ethane	1.10 U
Methane	22000
TOC	6

G6M-04-02X	
Date	10/20/2020
PCE	**5.7 J**
TCE	**6.1 J**
cis-1,2-DCE	**120 J**
VC	**5.1 J**
Ethene	8.6
Ethane	3.7
Methane	2600
TOC	220

G6M-06-01X	
Date	11/5/2020
PCE	0.95 J
TCE	1.1 J
cis-1,2-DCE	9.0 J
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS

G6M-13-02X	
Date	10/19/2020
PCE	**14 J [17]**
TCE	**8.4 J [10]**
cis-1,2-DCE	8.9 J [9.4]
VC	**3.8 J [4.9]**
Ethene	1.0 U [1.4]
Ethane	1.0 J [1.0 J]
Methane	18000 [19000]
TOC	4.5 [4.8]

G6M-03-07X	
Date	10/21/2020
PCE	1.0 U
TCE	1.0 U
cis-1,2-DCE	0.58 J
VC	1.0 U
Ethene	12
Ethane	4.3
Methane	34000
TOC	14

G6M-97-28X	
Date	10/15/2020
PCE	1.0 U
TCE	1.0 U
cis-1,2-DCE	1.0 U
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS

G6M-02-04X	
Date	10/15/2020
PCE	1.0 U
TCE	1.0 U
cis-1,2-DCE	1.0 U
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS

G6M-02-13X	
Date	10/16/2020
PCE	1.0 U
TCE	1.0 U
cis-1,2-DCE	0.90 J
VC	0.96 J
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS

N

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, which is in milligrams per liter (mg/L).
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

0 100 200
Feet

Aerial Source:
ESRI, ArcGIS Online,
World Imagery

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Former Fort Devens Army Installation
Devens, Massachusetts

CVOC, Dissolved Gas, and TOC Data - Fall 2020, Areas 2 through 4

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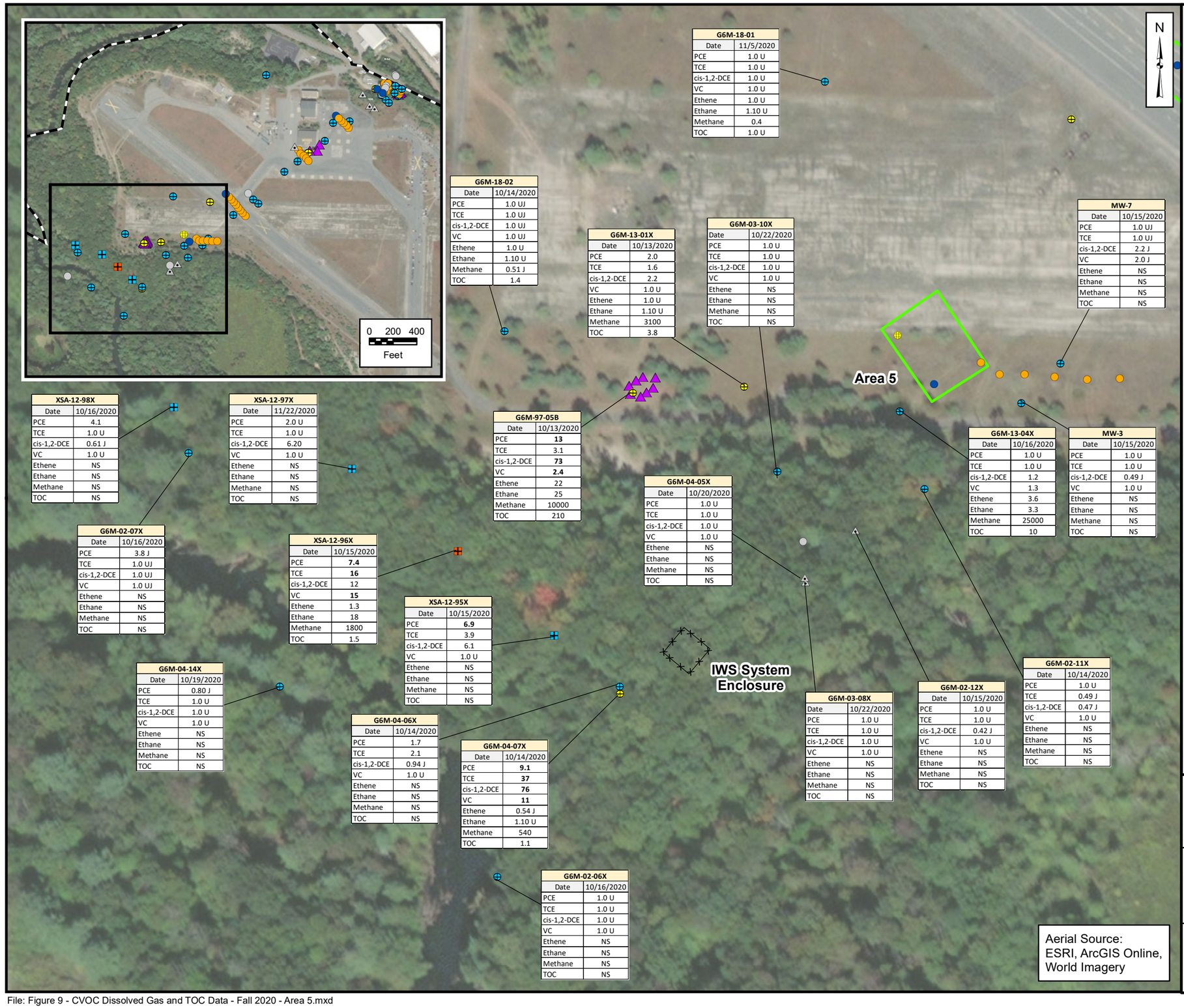
Figure 8



G6M-18-01	
Date	11/5/2020
PCE	1.0 U
TCE	1.0 U
cis-1,2-DCE	1.0 U
VC	1.0 U
Ethene	1.0 U
Ethane	1.10 U
Methane	0.4
TOC	1.0 U

G6M-18-02	
Date	10/14/2020
PCE	1.0 UJ
TCE	1.0 UJ
cis-1,2-DCE	1.0 UJ
VC	1.0 UJ
Ethene	1.0 U
Ethane	1.10 U
Methane	0.51 J
TOC	1.4

G6M-13-01X	
Date	10/13/2020
PCE	2.0
TCE	1.6
cis-1,2-DCE	2.2
VC	1.0 U
Ethene	1.0 U
Ethane	1.10 U
Methane	3100
TOC	3.8

G6M-03-10X	
Date	10/22/2020
PCE	1.0 U
TCE	1.0 U
cis-1,2-DCE	1.0 U
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS

MW-7	
Date	10/15/2020
PCE	1.0 UJ
TCE	1.0 UJ
cis-1,2-DCE	2.2 J
VC	2.0 J
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS

XSA-12-98X	
Date	10/16/2020
PCE	4.1
TCE	1.0 U
cis-1,2-DCE	0.61 J
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS

XSA-12-97X	
Date	11/22/2020
PCE	2.0 U
TCE	1.0 U
cis-1,2-DCE	6.20
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS

G6M-97-05B	
Date	10/13/2020
PCE	**13**
TCE	3.1
cis-1,2-DCE	**73**
VC	**2.4**
Ethene	22
Ethane	25
Methane	10000
TOC	210

G6M-04-05X	
Date	10/20/2020
PCE	1.0 U
TCE	1.0 U
cis-1,2-DCE	1.0 U
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS

G6M-13-04X	
Date	10/16/2020
PCE	1.0 U
TCE	1.0 U
cis-1,2-DCE	1.2
VC	1.3
Ethene	3.6
Ethane	3.3
Methane	25000
TOC	10

MW-3	
Date	10/15/2020
PCE	1.0 U
TCE	1.0 U
cis-1,2-DCE	0.49 J
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS

G6M-02-07X	
Date	10/16/2020
PCE	3.8 J
TCE	1.0 UJ
cis-1,2-DCE	1.0 UJ
VC	1.0 UJ
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS

XSA-12-96X	
Date	10/15/2020
PCE	**7.4**
TCE	**16**
cis-1,2-DCE	12
VC	**15**
Ethene	1.3
Ethane	18
Methane	1800
TOC	1.5

XSA-12-95X	
Date	10/15/2020
PCE	**6.9**
TCE	3.9
cis-1,2-DCE	6.1
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS

G6M-04-14X	
Date	10/19/2020
PCE	0.80 J
TCE	1.0 U
cis-1,2-DCE	1.0 U
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS

G6M-04-06X	
Date	10/14/2020
PCE	1.7
TCE	2.1
cis-1,2-DCE	0.94 J
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS

G6M-04-07X	
Date	10/14/2020
PCE	**9.1**
TCE	**37**
cis-1,2-DCE	**76**
VC	**11**
Ethene	0.54 J
Ethane	1.10 U
Methane	540
TOC	1.1

G6M-02-06X	
Date	10/16/2020
PCE	1.0 U
TCE	1.0 U
cis-1,2-DCE	1.0 U
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS

G6M-03-08X	
Date	10/22/2020
PCE	1.0 U
TCE	1.0 U
cis-1,2-DCE	1.0 U
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS

G6M-02-12X	
Date	10/15/2020
PCE	1.0 U
TCE	1.0 U
cis-1,2-DCE	0.42 J
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS

G6M-02-11X	
Date	10/14/2020
PCE	1.0 U
TCE	0.49 J
cis-1,2-DCE	0.47 J
VC	1.0 U
Ethene	NS
Ethane	NS
Methane	NS
TOC	NS

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, which is in milligrams per liter (mg/L).
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

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Devens, Massachusetts

CVOC, Dissolved Gas, and TOC Data - Fall 2020, Area 5

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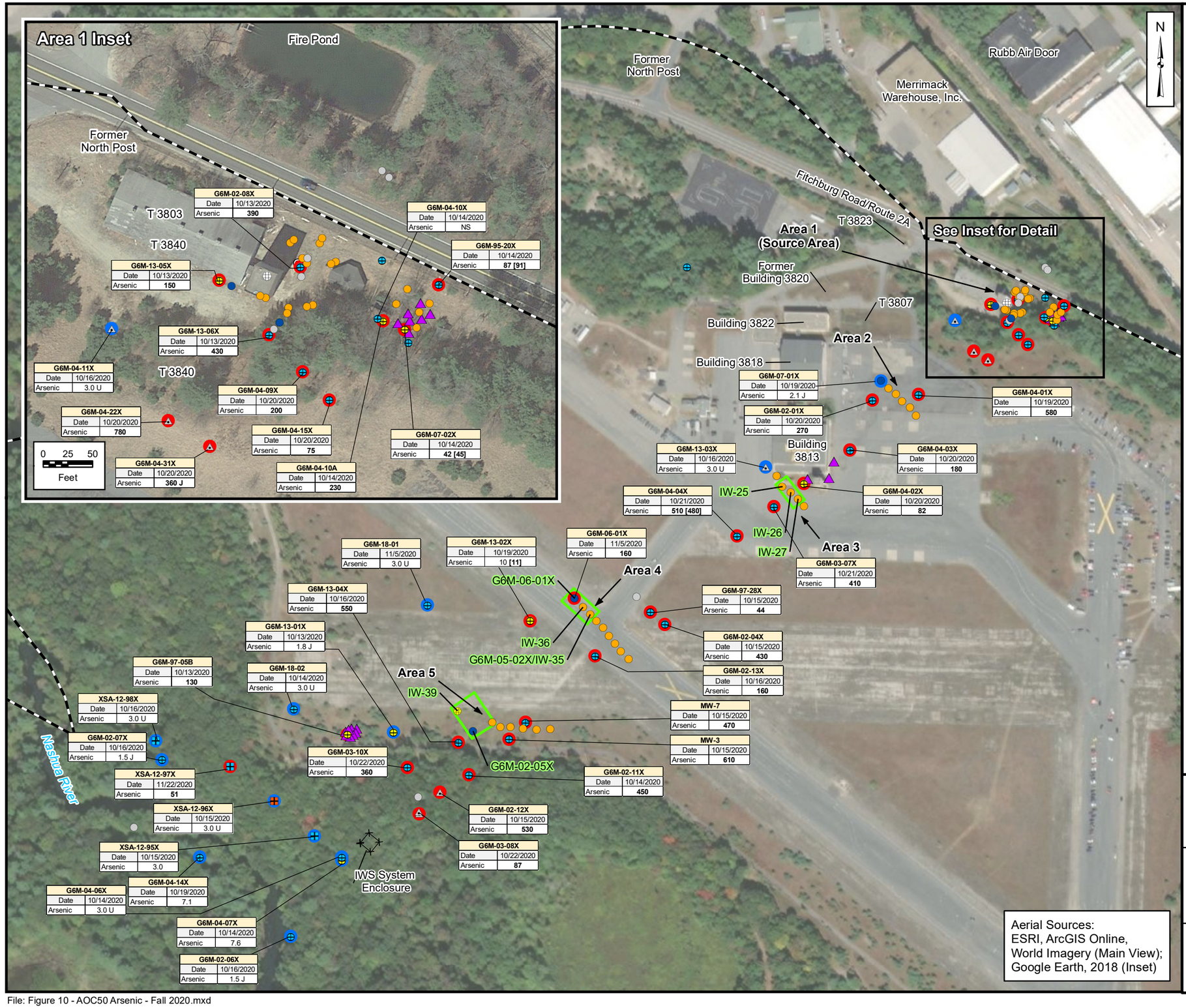
Figure 9

File: Figure 9 - CVOC Dissolved Gas and TOC Data - Fall 2020 - 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 Below Cleanup Level
- Arsenic Above Cleanup Level
- 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 level = 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)

2020 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50
Former Fort Devens Army Installation
Devens, Massachusetts

Arsenic Concentrations in Groundwater Fall 2020

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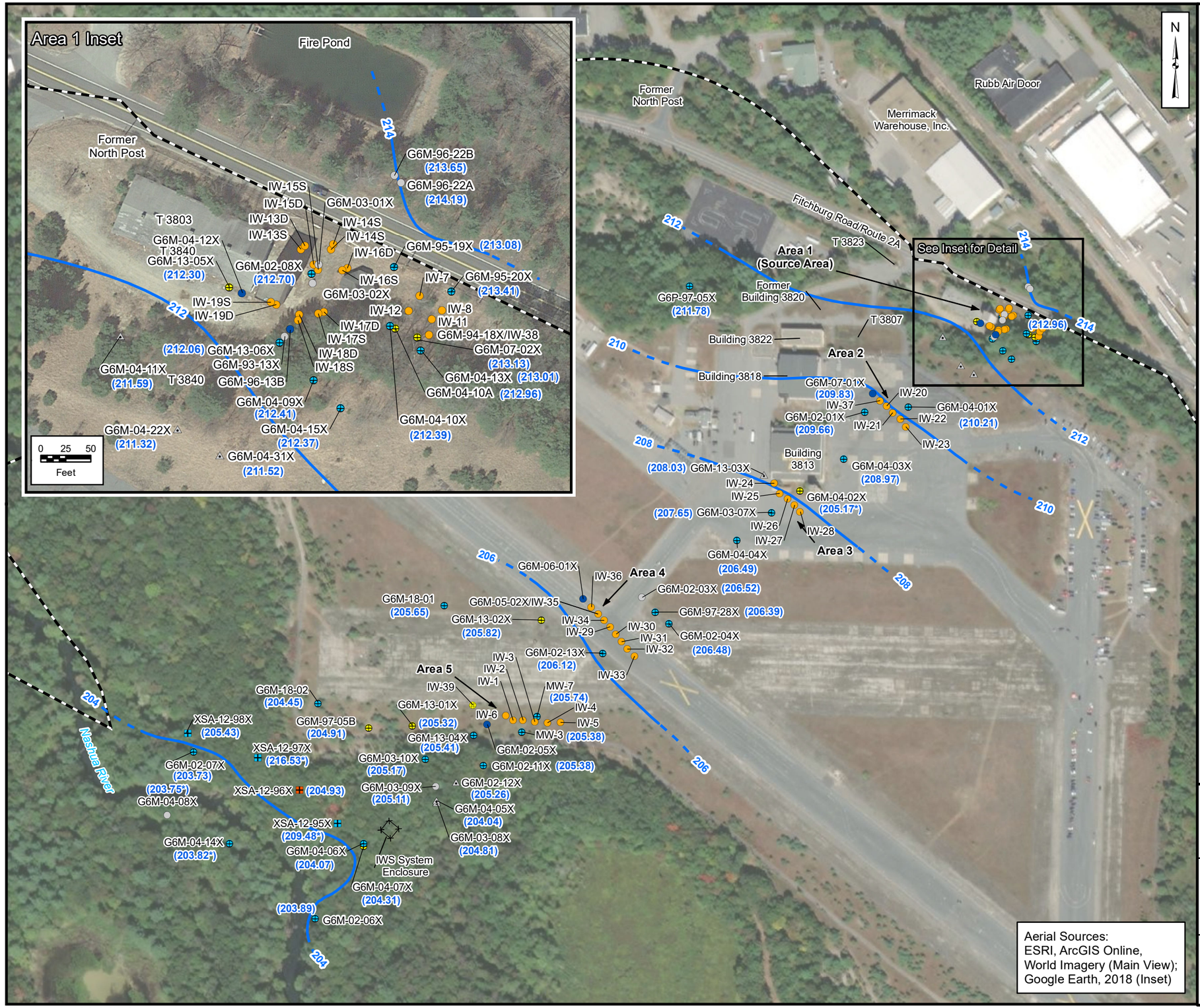
Figure 10

File: Figure 10 - AOC50 Arsenic - Fall 2020.mxd



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Devens, Massachusetts

Groundwater Contour Map - May 11, 2020

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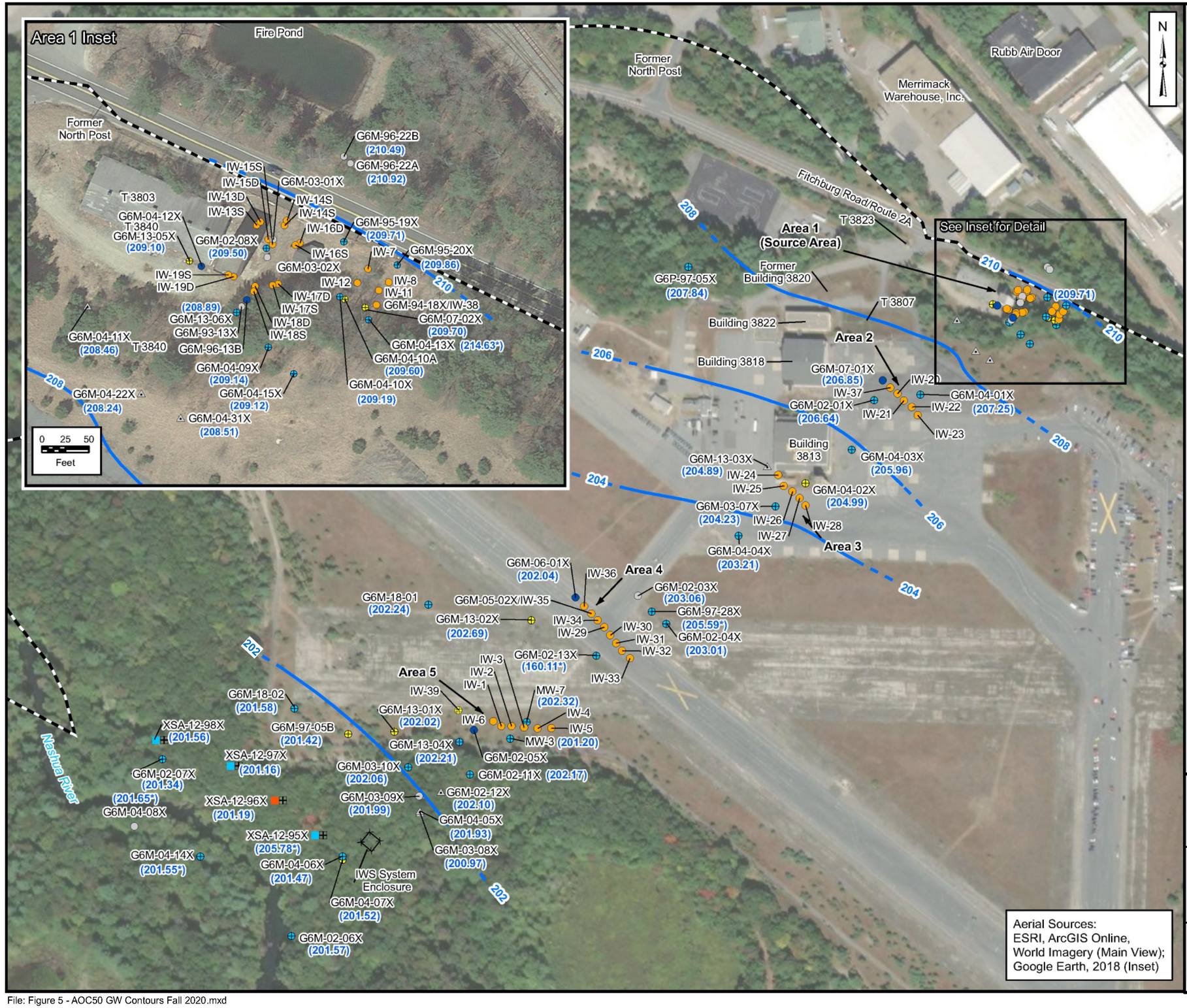
Figure 11

File: Figure 4 - AOC50 GW Contours May 2020.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-02-13X, G6M-04-08X, G6M-04-13X, G6M-04-14X, G6M-97-28X, and XSA-12-95X 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

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

2020 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50
Former Fort Devens Army Installation
Devens, Massachusetts

Groundwater Contour Map - October 21, 2020

SERES Engineering & Services, LLC
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Figure 12

File: Figure 5 - AOC50 GW Contours Fall 2020.mxd

Tables

Table 2
Sample Preparation and Analysis Methods, Containers, Holding Times, and Preservation
2020 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

Parameter	Analytical Method	Contaminant of Concern	Sample Container	Preservative	Holding Time
Organic					
Volatile Organic Compounds	SW8260B	TCL	3 x 40-mL vials with Teflon® septa screw caps; no headspace	HCl to pH < 2; 4° ± 2°C	14 Days
Dissolved Gases	RSK-175	MEE	3 x 40-mL VOA vials	HCl to pH < 2; 4°± 2°C	14 Days
Metals					
Dissolved Metals (field filtered)	SW6010B/ 6020A (As)	As, Fe, Mn	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 N)	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
As, Fe, Mn = arsenic, iron, and manganese
H_2SO_4 = sulfuric acid
HCl = hydrochloric acid
HNO_3 = nitric acid
MEE = methane, ethane, and ethene
mL = milliliter
NaOH = sodium hydroxide
TCL = Target Compound List
TOC = total organic carbon
VOA = volatile organic analysis

Table 3
Monitoring Wells Sampled in 2020
2020 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

Location	Well ID	Well Screen Interval (feet bgs)	Well Screen Elevation (NAVD 88)	Sample Parameters	Sampling Frequency	LTMMP Sampling Requirements (if different)
Area1 / FDSA	G6M-04-10A	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	60-70	162.4-152.4	Full Suite	Annual	--
	G6M-04-09X	55-65	187.66-177.66	VOCs and Metals	Annual	--
	G6M-04-11X	35-45	193.67-183.67	VOCs and Metals	Annual	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	Annual	VOCs and Metals / Biennial
	G6M-04-31X	68-78	187.11-177.11	VOCs and Metals	Annual	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	80-95	183-168	VOCs and Metals	Annual	--
	G6M-04-01X	82-92	179.69-169.69	VOCs and Metals	Annual	--
	G6M-04-03X	85-95	179.81-169.81	Full Suite	Semiannual	VOCs and Metals / Annual
	G6M-07-01X	78-98	184.1-164.1	Full Suite	Semiannual	Well not included in LTMMP, EPA requested sampling of this injection well in 2020
Area 3	G6M-03-07X	80-90	182.8-172.8	Full Suite	Semiannual	Annual
	G6M-04-02X	80-90	183.69-174.18	Full Suite	Semiannual	--
	G6M-04-04X	94-104	158.87-168.87	VOCs and Metals	Annual	--
	G6M-13-03X	80-90	183.57-173.57	VOCs and Metals	Biennial	VOCs / Biennial
Area 4	G6M-02-04X	90-105	172.8-157.8	VOCs and Metals	Annual	--
	G6M-02-13X	110-120	154-144	VOCs and Metals	Annual	--
	G6M-06-01X	106-126	157.74-137.74	VOCs and Metals	One-Time	Well not included in LTMMP, EPA requested sampling of this injection well in 2020
	G6M-13-02X	115-125	148.82-138.82	Full Suite	Semiannual	--
	G6M-97-28X	100-105	164.89-159.89	VOCs and Metals	Annual	Metals / Annual
Area 5	G6M-02-06X	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	125-135	139.2-129.2	VOCs and Metals	Annual	--
	G6M-02-12X	125-135	136.66-126.66	VOCs and Metals	Biennial	--
	G6M-03-08X	125-140	132.80-117.80	VOCs and Metals	Biennial	--
	G6M-03-10X	120-135	143.4-128.4	VOCs and Metals	Annual	--
	G6M-04-05X	100-110	157.33-147.33	VOCs	Biennial	--
	G6M-04-06X	95-105	167.27-157.27	VOCs and Metals	Annual	--
	G6M-04-07X	120-130	141.88-131.88	VOCs and Metals	Semiannual	--

Table 3
Monitoring Wells Sampled in 2020
2020 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

Location	Well ID	Well Screen Interval (feet bgs)	Well Screen Elevation (NAVD 88)	Sample Parameters	Sampling Frequency	LTMMP Sampling Requirements (if different)
Area 5	G6M-13-01X	125-135	139.35-129.35	Full Suite	Semiannual	--
	G6M-13-04X	125-135	138.81-128.81	VOCs and Metals	Semiannual	VOCs and Metals / Annual
	G6M-18-01	116-126	148.58-138.58	Full Suite	Annual*	--
	G6M-18-02	124-134	142.69-132.69	Full Suite	Annual*	--
	G6M-97-05B	130-135	135.94-130.94	Full Suite	Semiannual	--
	MW-3	126-136	137.9-127.9	VOCs and Metals	Annual	--
	MW-7	125-135	138.9-128.9	VOCs and Metals	Annual	--
	XSA-12-95X	121-131	146.63-136.63	VOCs and Metals	Annual	--
	XSA-12-96X	121-131	147.02-137.02	Full Suite	Semiannual	VOCs and Metals
	XSA-12-97X	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	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. * : Sampling of wells G6M-18-01 and G6M-18-02 is only required annually through 2020.
3. "Metals" analyses include dissolved arsenic, iron, and manganese.
4. "Full Suite" analyses include VOCs, metals, nitrate/nitrite, sulfate, sulfide, alkalinity (fall only), methane, ethane, ethene, and total organic carbon.
5. Field parameters include pH, dissolved oxygen, oxidation-reduction potential, specific conductivity, turbidity, and temperature.

Acronyms and Abbreviations:
bgs = below ground surface
COC = contaminant of concern
DPT = direct-push technology
EPA = United States Environmental Protection Agency
ERD = enhanced reductive dechlorination
FDSA = former drum storage area
LTMMP = Long-Term Maintenance and Monitoring Plan
NAVD 88 = North American Vertical Datum of 1988
TOC = total organic carbon
VOC = volatile organic compound

References:
KGS. 2017. Final Long-Term Monitoring and Maintenance Plan (LTMMP) Area of Contamination 50, Former Fort Devens Army Installation, Devens, Massachusetts. November.

Table 4
Groundwater Analytical Results, Spring 2020
2020 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

	Location	G6M-03-07X	G6M-04-02X	G6M-04-03X	G6M-04-07X	G6M-04-10A	G6M-07-01X	G6M-07-02X		G6M-13-01X	G6M-13-02X	G6M-13-04X	G6M-13-05X	G6M-97-05B	XSA-12-96X
	Sample ID	G6M-03-07X-SPR20	G6M-04-02X-SPR20	G6M-04-03X-SPR20	G6M-04-07X-SPR20	G6M-04-10A-PR20	G6M-07-01X-SPR20	G6M-07-02X-SPR20	AOC50-DUP01-SPR20	G6M-13-01X-SPR20	G6M-13-02X-SPR20	G6M-13-04X-SPR20	G6M-13-05X-SPR20	G6M-97-05B-SPR20	XSA-12-96X- SPR20
	Sample Date	05/13/2020	05/12/2020	05/12/2020	05/12/2020	05/12/2020	05/13/2020	05/12/2020	05/12/2020	05/11/2020	05/12/2020	05/11/2020	05/12/2020	05/11/2020	05/12/2020
	Sample Area	Area 3	Area 3	Area 2	Area 5	Area 1/FDSA	Area 2	Area 1/FDSA	Area 1/FDSA	Area 5	Area 4	Area 5	Area 1	Area 5	Area 5
Analyte	**Unit**	**Cleanup Level**													
Dissolved Gases															
Ethane	µg/L		**6.10**	**1.30**	1.10 U	1.10 U	**0.900 J**	1.10 U	**3.60**	**3.40**	1.10 U	**1.30**	**1.50**	**27.0**	**6.50**	**11.0**
Ethene	µg/L		1.00 U	**31.0**	**2.10**	1.00 U	**18.0**	1.00 U	**4.40**	**4.60**	**0.780 J**	**2.10**	**2.50**	**57.0**	**1.60**	**1.10**
Methane	µg/L		**11,000**	**18,000**	**11,000**	**360**	**14,000**	**1.40**	**14,000**	**14,000**	**8,000**	**16,000**	**21,000**	**19,000**	**13,000**	**780**
General Chemistry																
Alkalinity, Total (as CaCO3)	mg/L		**160**	**130**	**140**	**220**	**300**	**35.0**	**250**	**250**	**66.0**	**66.0**	**240**	**160**	**250**	**240**
Nitrate-Nitrite (as N)	mg/L	10,000*	**0.0320 J**	0.100 UJ	0.100 U	0.100 U	0.100 U	**1.20**	0.130 U	0.140 U	0.100 U	0.100 U	0.100 U	0.100 UJ	0.100 U	0.100 U
Sulfate	mg/L		1.00 U	**2.00 J**	**13.0**	**9.40**	**3.80 J**	**7.60**	5.00 U	5.00 U	**10.0**	**4.10**	**5.50**	5.00 U	**0.480 J**	**6.20**
Sulfide	mg/L		0.960 U	0.880 U	0.810 U	0.830 U	0.830 U	0.830 U	**1.90**	**1.90**	0.810 U	**1.40**	0.810 U	0.810 U	0.810 U	1.00 U
Total Organic Carbon	mg/L		**19.0**	**100**	**4.00**	**1.10**	**44.0**	**0.470 J**	**290**	**290 J**	**11.0**	**5.20**	**6.30**	**27.0**	**260**	**1.50**
Metals																
Arsenic	µg/L	10*	**340**	**93.0**	**73.0**	**8.30**	**270**	3.00 U	**43.0**	**56.0**	**6.20**	3.00 U	**430**	**120**	**220**	3.00 U
Iron	µg/L	3,129*	**95,000**	**52,000**	**47,000**	**950**	**130,000**	93.0 U	**250,000**	**250,000**	**620**	**150**	**44,000**	**100,000**	**100,000**	**4,200**
Manganese	µg/L	1,460*	**2,100**	**6,900**	**5,600**	**3,800**	**3,700**	**19.0**	**4,900**	**4,600**	**5,100**	**16.0**	**9,000**	**16,000**	**16,000**	**5,800**
Volatile Organic Compounds																
1,1,1,2-Tetrachloroethane	µg/L		50.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,1,1-Trichloroethane	µg/L		50.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,1,2,2-Tetrachloroethane	µg/L		50.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,1,2-Trichloroethane	µg/L		25.0 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
1,1-Dichloroethane	µg/L		50.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,1-Dichloroethene	µg/L	7*	50.0 U	**0.880 J**	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	**0.880 J**
1,1-Dichloropropene	µg/L		50.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2,3-Trichlorobenzene	µg/L		250 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
1,2,3-Trichloropropane	µg/L		50.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	µg/L		250 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
1,2,4-Trimethylbenzene	µg/L		50.0 U	1.00 U	1.00 U	1.00 U	**1.20**	1.00 U	**1.20**	**1.20**	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dibromo-3-chloropropane	µg/L		100 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
1,2-Dibromoethane (EDB)	µg/L		50.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichlorobenzene	µg/L		50.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichloroethane	µg/L	5*	50.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichloroethene	µg/L		50.0 U	**290 J**	**10.0**	**110**	**12.0**	1.00 U	**110**	**110**	**4.40**	**33.0**	1.00 U	**9.30**	**77.0**	**32.0**
1,2-Dichloropropane	µg/L	5*	50.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,3,5-Trimethylbenzene	µg/L		25.0 U	0.500 U	0.500 U	0.500 U	**0.580 J**	0.500 U	0.500 U	**0.320 J**	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
1,3-Dichlorobenzene	µg/L		50.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,3-Dichloropropane	µg/L		50.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,4-Dichlorobenzene	µg/L		50.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
2,2-Dichloropropane	µg/L		50.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
2-Butanone (MEK)	µg/L		500 U	10.0 U	10.0 U	10.0 U	**12.0**	10.0 U	**60.0**	**62.0**	10.0 U	10.0 U	10.0 U	**56.0**	**95.0**	10.0 U
2-Chlorotoluene	µg/L		25.0 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
2-Hexanone	µg/L		250 U	5.00 U	5.00 U	5.00 U	**2.40 J**	5.00 U	**4.10 J**	**4.80 J**	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
4-Chlorotoluene	µg/L		50.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
4-Methyl-2-pentanone (MIBK)	µg/L		**150 J**	**2.40 J**	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	**16.0**	5.00 U
Acetone	µg/L		**450 J**	10.0 U	10.0 U	10.0 U	**11.0**	10.0 U	**14.0**	**9.70 J**	**7.00 J**	**51.0**	10.0 U	**28.0**	**31.0**	10.0 U
Benzene	µg/L	5*	50.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Bromobenzene	µg/L		50.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Bromochloromethane	µg/L		50.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Bromodichloromethane	µg/L		50.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Bromoform	µg/L		50.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Bromomethane	µg/L		250 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
Carbon disulfide	µg/L		100 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Carbon tetrachloride	µg/L		25.0 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Chlorobenzene	µg/L		25.0 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U

Table 4
Groundwater Analytical Results, Spring 2020
2020 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

	Location	G6M-03-07X	G6M-04-02X	G6M-04-03X	G6M-04-07X	G6M-04-10A	G6M-07-01X	G6M-07-02X		G6M-13-01X	G6M-13-02X	G6M-13-04X	G6M-13-05X	G6M-97-05B	XSA-12-96X
	Sample ID	G6M-03-07X-SPR20	G6M-04-02X-SPR20	G6M-04-03X-SPR20	G6M-04-07X-SPR20	G6M-04-10A-PR20	G6M-07-01X-SPR20	G6M-07-02X-SPR20	AOC50-DUP01-SPR20	G6M-13-01X-SPR20	G6M-13-02X-SPR20	G6M-13-04X-SPR20	G6M-13-05X-SPR20	G6M-97-05B-SPR20	XSA-12-96X- SPR20
	Sample Date	05/13/2020	05/12/2020	05/12/2020	05/12/2020	05/12/2020	05/13/2020	05/12/2020	05/12/2020	05/11/2020	05/12/2020	05/11/2020	05/12/2020	05/11/2020	05/12/2020
	Sample Area	Area 3	Area 3	Area 2	Area 5	Area 1/FDSA	Area 2	Area 1/FDSA	Area 1/FDSA	Area 5	Area 4	Area 5	Area 1	Area 5	Area 5
Analyte	**Unit**	**Cleanup Level**													
Chloroethane	µg/L		250 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	**2.60 J**	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	**5.70 J**
Chloroform	µg/L		50.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Chloromethane	µg/L		50.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
cis-1,2-Dichloroethene	µg/L	70*	50.0 U	**290 J**	**10.0**	**110**	**11.0**	1.00 U	**110**	**110**	**4.40**	**32.0**	**0.680 J**	**8.40**	**77.0**	**25.0**
cis-1,3-Dichloropropene	µg/L		50.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Dibromochloromethane	µg/L		25.0 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Dibromomethane	µg/L		50.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Dichlorodifluoromethane	µg/L		50.0 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Ethylbenzene	µg/L		25.0 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	**0.350 J**	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Hexachlorobutadiene	µg/L		250 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
Isopropylbenzene (Cumene)	µg/L		50.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
m,p-Xylene	µg/L		**31.0 J**	1.00 U	1.00 U	1.00 U	**0.580 J**	1.00 U	**0.820 J**	**0.920 J**	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Methyl tert-butyl ether (MTBE)	µg/L		25.0 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Methylene chloride	µg/L	5*	**260**	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
n-Butylbenzene	µg/L		250 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	**6.60**	**2.90 J**	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
n-Propylbenzene	µg/L		50.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Naphthalene	µg/L		50.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
o-Xylene	µg/L		25.0 U	0.500 U	0.500 U	0.500 U	**0.260 J**	0.500 U	**0.490 J**	**0.530 J**	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
p-Cymene (p-Isopropyltoluene)	µg/L		50.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
sec-Butylbenzene	µg/L		50.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Styrene	µg/L		25.0 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
tert-Butylbenzene	µg/L		50.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Tetrachloroethene (PCE)	µg/L	5*	50.0 U	**1.70**	**6.90**	**18.0**	1.00 U	**27.0**	**2.40**	**2.90**	**0.850 J**	**5.60**	1.00 U	1.00 U	**6.40**	**4.20**
Toluene	µg/L		**96.0**	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	**0.640 J**	**0.670 J**	1.00 U	1.00 U	1.00 U	**0.480 J**	1.00 U	1.00 U
trans-1,2-Dichloroethene	µg/L		50.0 U	**0.920 J**	1.00 U	**0.590 J**	**0.930 J**	1.00 U	1.00 U	1.00 U	1.00 U	**1.10**	1.00 U	**0.880 J**	1.00 U	**7.00**
trans-1,3-Dichloropropene	µg/L		50.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Trichloroethene (TCE)	µg/L	5*	**26.0 J**	**2.30**	**4.50**	**38.0**	1.00 U	**0.970 J**	**0.720 J**	**0.730 J**	**0.690 J**	**12.0**	1.00 U	**1.30 J**	**0.970 J**	**20.0 J**
Trichlorofluoromethane	µg/L		50.0 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Vinyl acetate	µg/L		100 UJ	2.00 UJ	2.00 U	2.00 U	2.00 U	2.00 UJ	2.00 U	2.00 UJ	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Vinyl chloride	µg/L	2*	50.0 U	**28.0**	**3.50**	**10.0**	**2.90**	1.00 U	**3.60**	**3.60**	1.00 U	**17.0**	**0.520 J**	**10.0**	**0.560 J**	**21.0**
Xylenes, Total	µg/L		**31.0 J**	0.500 U	0.500 U	0.500 U	**0.840 J**	0.500 U	**1.30 J**	**1.50 J**	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Field Parameters																
Dissolved Oxygen	mg/L		0.510	1.19	1.11	10.4	0.250	2.30	0.320	0.320	0.880	0.820	0.870	0.600	1.04	9.89
Oxidation-Reduction Potential	mv		32.1	31.6	28.6	-83.9	29.8	101	7.00	7.00	3.80	-13.9	-83.4	-54.2	-61.2	-64.3
pH	SU		6.01	5.54	5.92	6.91	6.26	6.12	6.58	6.58	5.90	5.98	6.83	6.30	5.86	6.76
Specific Conductivity	µS/cm		498	1,380	1,600	1,l260	628	972	620	620	941	1,010	1,700	1,010	1,230	1,240
Temperature	°C		11.9	11.9	12.8	11.8	9.88	13.8	9.79	9.79	12.7	11.9	11.4	12.7	13.4	11.5
Turbidity	NTU		8.60	344	5.51	18.4	30.8	3.81	27.8	27.8	94.2	12.7	0.860	7.30	23.1	8.94

Notes:

*Area of Contamination (AOC) 50 Cleanup Levels from the Record of Decision (United States Environmental Protection Agency 2004).

Yea
Gold = Above Cleanup Level

Acronyms and Abbreviations:

°C = degree Celsius
µg/L = microgram per liter
µS/cm = microsiemen per centimeter
FDSA = former drum storage area
mg/L = milligram per liter
mv = millivolt
NTU = nephelometric turbidity units
SU = standard units

Qualifiers:

J The analyte was positively identified, the quantitation is an estimation.
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 5
Groundwater Analytical Results, Fall 2020
2020 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

		Location	G6M-02-01X	G6M-02-04X	G6M-02-06X	G6M-02-07X	G6M-02-08X	G6M-02-11X	G6M-02-12X	G6M-02-13X	G6M-03-07X	G6M-03-08X	G6M-03-10X	G6M-04-01X	G6M-04-02X	G6M-04-03X	G6M-04-04X	
		Sample ID	G6M-02-01X-FAL20	G6M-02-04X-FAL20	G6M-02-06X-FAL20	G6M-02-07X-FAL20	G6M-02-08X-FAL20	G6M-02-11X-FAL20	G6M-02-12X-FAL20	G6M-02-13X-FAL20	G6M-03-07X-FAL20	G6M-03-08X-FAL20	G6M-03-10X-FAL20	G6M-04-01X-FAL20	G6M-04-02X-FAL20	G6M-04-03X-FAL20	G6M-04-04X-FAL20	AOC50-DUP03-FAL20
		Sample Date	10/20/2020	10/15/2020	10/16/2020	10/16/2020	10/13/2020	10/14/2020	10/15/2020	10/16/2020	10/21/2020	10/22/2020	10/22/2020	10/19/2020	10/20/2020	10/16/2020	10/21/2020	10/21/2020
		Sample Area	Area 2	Area 4	Nashua River	Area 5	Area 1	Area 5	Area 5	Area 4	Area 3	Area 5	Area 5	Area 2	Area 3	Area 2	Area 3	
Analyte	**Unit**	**Cleanup Level**																
Dissolved Gases																		
Ethane	µg/L		-	-	-	-	1.10 U	-	-	-	**4.30**	-	-	-	**3.70**	1.10 U	-	-
Ethene	µg/L		-	-	-	-	**0.760 J**	-	-	-	**12.0**	-	-	-	**8.60**	**1.50**	-	-
Methane	µg/L		-	-	-	-	**12,000**	-	-	-	**34,000**	-	-	-	**2,600**	**22,000**	-	-
General Chemistry																		
Alkalinity, Total (as CaCO3)	mg/L		-	-	-	-	**95.0**	-	-	-	**150**	-	-	-	**100**	**190**	-	-
Nitrate-Nitrite (as N)	mg/L	10,000*	-	-	-	-	**0.120**	-	-	-	**0.0570 J**	-	-	-	**0.0670 J**	**0.0820 J**	-	-
Sulfate	mg/L		-	-	-	-	5.00 U	-	-	-	1.00 U	-	-	-	10.0 U	**6.40**	-	-
Sulfide	mg/L		-	-	-	-	0.810 U	-	-	-	0.890 U	-	-	-	**4.00**	0.810 U	-	-
Total Organic Carbon	mg/L		-	-	-	-	**37.0**	-	-	-	**14.0**	-	-	-	**220**	**6.00**	-	-
Metals																		
Arsenic	µg/L	10*	**270**	**430**	**1.5 J**	**1.5 J**	**390**	**450**	**530**	**160**	**410**	**87**	**360**	**580**	**82**	**180**	**510**	**480**
Iron	µg/L	3,129*	**27,000**	**63,000**	50 U	**17 J**	**78,000**	**37,000**	**44,000**	**12,000 J**	**110,000**	**1,600**	**59,000**	**45,000**	**44,000**	**27,000**	**130,000**	**120,000**
Manganese	µg/L	1,460*	**2,000**	**3,400**	**1.3 J**	**6.1 J**	**420**	**10,000**	**8,100**	**26,000**	**2,900**	**7,800**	**2,000**	**13,000**	**8,200**	**3,100**	**16,000**	**15,000**
Volatile Organic Compounds																		
1,1,1,2-Tetrachloroethane	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U
1,1,1-Trichloroethane	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U
1,1,2,2-Tetrachloroethane	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U
1,1,2-Trichloroethane	µg/L		0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 UJ	0.500 U	0.500 U	0.500 U
1,1-Dichloroethane	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U
1,1-Dichloroethene	µg/L	7*	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U
1,1-Dichloropropene	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U
1,2,3-Trichlorobenzene	µg/L		5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 UJ	5.00 U	5.00 U	5.00 U
1,2,3-Trichloropropane	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	µg/L		5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 UJ	5.00 U	5.00 U	5.00 U
1,2,4-Trimethylbenzene	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	**3.50**	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U
1,2-Dibromo-3-chloropropane	µg/L		2.00 U	2.00 U	2.00 U	2.00 UJ	2.00 U	2.00 U	2.00 U	2.00 U	2.00 UJ	2.00 U	2.00 U	2.00 UJ	2.00 UJ	2.00 U	2.00 U	2.00 U
1,2-Dibromoethane (EDB)	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U
1,2-Dichlorobenzene	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U
1,2-Dichloroethane	µg/L	5*	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U
1,2-Dichloroethene	µg/L		**4.50**	1.00 U	1.00 U	1.00 UJ	**3.50**	1.00 U	1.00 U	**1.10 J**	**0.910 J**	1.00 U	**1.00 J**	1.00 UJ	**120 J**	**0.940 J**	**1.00 J**	1.00 U
1,2-Dichloropropane	µg/L	5*	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U
1,3,5-Trimethylbenzene	µg/L		0.500 U	0.500 U	0.500 U	0.500 UJ	**1.10**	0.500 U	0.500 U	0.500 U	**0.610 J**	0.500 U	0.500 U	0.500 UJ	0.500 UJ	0.500 U	0.500 U	0.500 U
1,3-Dichlorobenzene	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U
1,3-Dichloropropane	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U
1,4-Dichlorobenzene	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U
2,2-Dichloropropane	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U
2-Butanone (MEK)	µg/L		10.0 U	10.0 U	10.0 U	10.0 UJ	10.0 U	10.0 U	10.0 U	10.0 U	10.0 UJ	10.0 U	10.0 U	10.0 UJ	39.0 UJ	10.0 U	10.0 U	10.0 U
2-Chlorotoluene	µg/L		0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 UJ	0.500 U	0.500 U	0.500 U
2-Hexanone	µg/L		5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 U	5.00 U	5.00 UJ	**14.0 J**	5.00 U	5.00 U	5.00 U
4-Chlorotoluene	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U
4-Methyl-2-pentanone (MIBK)	µg/L		5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 U	5.00 U	5.00 U	**15.0**	5.00 UJ	5.00 U	5.00 U	5.00 UJ	**4.20 J**	5.00 U	5.00 U	5.00 U
Acetone	µg/L		10.0 U	10.0 U	10.0 U	10.0 UJ	**8.20 J**	10.0 UJ	10.0 U	10.0 U	10.0 UJ	10.0 U	10.0 U	10.0 UJ	47.0 UJ	10.0 U	10.0 U	10.0 U
Benzene	µg/L	5*	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U
Bromobenzene	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U
Bromochloromethane	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U
Bromodichloromethane	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U
Bromoform	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U
Bromomethane	µg/L		5.00 U	5.00 UJ	5.00 U	5.00 UJ	5.00 UJ	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 UJ	5.00 UJ	5.00 UJ	5.00 U	5.00 U	5.00 U
Carbon disulfide	µg/L		2.00 U	2.00 U	2.00 U	2.00 UJ	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 UJ	2.00 UJ	2.00 U	2.00 U	2.00 U
Carbon tetrachloride	µg/L		0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 UJ	0.500 U	0.500 U	0.500 U
Chlorobenzene	µg/L		0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 UJ	0.500 U	0.500 U	0.500 U
Chloroethane	µg/L		5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 U	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 UJ	5.00 U	5.00 U	5.00 U

Table 5
Groundwater Analytical Results, Fall 2020
2020 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

			Location	G6M-02-01X	G6M-02-04X	G6M-02-06X	G6M-02-07X	G6M-02-08X	G6M-02-11X	G6M-02-12X	G6M-02-13X	G6M-03-07X	G6M-03-08X	G6M-03-10X	G6M-04-01X	G6M-04-02X	G6M-04-03X	G6M-04-04X	
			Sample ID	G6M-02-01X-FAL20	G6M-02-04X-FAL20	G6M-02-06X-FAL20	G6M-02-07X-FAL20	G6M-02-08X-FAL20	G6M-02-11X-FAL20	G6M-02-12X-FAL20	G6M-02-13X-FAL20	G6M-03-07X-FAL20	G6M-03-08X-FAL20	G6M-03-10X-FAL20	G6M-04-01X-FAL20	G6M-04-02X-FAL20	G6M-04-03X-FAL20	G6M-04-04X-FAL20	AOC50-DUP03-FAL20
			Sample Date	10/20/2020	10/15/2020	10/16/2020	10/16/2020	10/13/2020	10/14/2020	10/15/2020	10/16/2020	10/21/2020	10/22/2020	10/22/2020	10/19/2020	10/20/2020	10/16/2020	10/21/2020	10/21/2020
			Sample Area	Area 2	Area 4	Nashua River	Area 5	Area 1	Area 5	Area 5	Area 4	Area 3	Area 5	Area 5	Area 2	Area 3	Area 2	Area 3	
Analyte	**Unit**	**Cleanup Level**																	
Chloroform	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U
Chloromethane	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U
cis-1,2-Dichloroethene	µg/L	70*	**4.50**	1.00 U	1.00 U	1.00 UJ	**3.50**	**0.470 J**	**0.420 J**	**0.900 J**	**0.580 J**	1.00 U	1.00 U	1.00 UJ	**120 J**	**0.700 J**	**0.640 J**	**0.670 J**	
cis-1,3-Dichloropropene	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U	
Dibromochloromethane	µg/L		0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 UJ	0.500 U	0.500 U	0.500 U	
Dibromomethane	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U	
Dichlorodifluoromethane	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U	
Ethylbenzene	µg/L		0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 UJ	0.500 U	0.500 U	0.500 U	
Hexachlorobutadiene	µg/L		5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 UJ	5.00 U	5.00 U	5.00 U	
Isopropylbenzene (Cumene)	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U	
m,p-Xylene	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U	
Methyl tert-butyl ether (MTBE)	µg/L		0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 UJ	0.500 U	0.500 U	0.500 U	
Methylene chloride	µg/L	5*	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 UJ	5.00 U	5.00 U	5.00 U	
n-Butylbenzene	µg/L		5.00 UJ	5.00 UJ	5.00 U	5.00 UJ	5.00 U	5.00 UJ	5.00 U	5.00 U	5.00 UJ	5.00 U	5.00 U	5.00 UJ	5.00 UJ	5.00 U	5.00 U	5.00 U	
n-Propylbenzene	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	**0.610 J**	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U	
Naphthalene	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	**0.720 J**	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U	
o-Xylene	µg/L		0.500 U	0.500 U	0.500 U	0.500 UJ	**0.300 J**	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 UJ	0.500 U	0.500 U	0.500 U	
p-Cymene (p-Isopropyltoluene)	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U	
sec-Butylbenzene	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U	
Styrene	µg/L		0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 UJ	0.500 U	0.500 U	0.500 U	
tert-Butylbenzene	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U	
Tetrachloroethene (PCE)	µg/L	5*	**5.30**	1.00 U	1.00 U	**3.80 J**	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	**5.70 J**	1.00 U	1.00 U	1.00 U	
Toluene	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	**120**	1.00 U	1.00 U	1.00 U	**2.20 J**	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U	
trans-1,2-Dichloroethene	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	**0.390 J**	1.00 U	
trans-1,3-Dichloropropene	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U	
Trichloroethene (TCE)	µg/L	5*	**25.0**	1.00 U	1.00 U	1.00 UJ	1.00 U	**0.490 J**	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	**6.10 J**	**0.800 J**	1.00 U	1.00 U	
Trichlorofluoromethane	µg/L		1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U	
Vinyl acetate	µg/L		2.00 U	2.00 U	2.00 U	2.00 UJ	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 UJ	2.00 UJ	2.00 U	2.00 U	2.00 U	
Vinyl chloride	µg/L	2*	**2.80**	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	**0.960 J**	1.00 U	1.00 U	1.00 U	1.00 UJ	**5.10 J**	1.00 U	1.00 U	1.00 U	
Xylenes, Total	µg/L		0.500 U	0.500 U	0.500 U	0.500 UJ	**0.300 J**	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 UJ	0.500 U	0.500 U	0.500 U	
Field Parameters																			
Dissolved Oxygen	mg/L		0.200	0.460	8.55		0.730	0.510	0.730	0.620	0.630	0.420	0.750	0.660	0.290	0.100	0.160	0.150	0.150
Oxidation Reduction Potential	mv		-103	-157	224		-5.30	-93.1	-127	-137	-79.7	-79.4	-20.0	-128	-73.4	-63.1	-84.1	-56.9	-56.9
pH	SU		6.95	6.91	7.37		7.81	6.61	7.08	6.95	6.79	6.07	6.85	6.94	6.56	6.09	6.55	6.23	6.23
Specific Conductivity	µS/cm		1450	731	95		217	522	1070	871	958	816	391	853	2840	1030	772	2460	2460
Temperature	°C		13.7	13.7	11.8		12.0	11.6	12.9	12.1	13.0	17.4	12.4	12.4	12.9	14.1	13.1	15.1	15.1
Turbidity	NTU		17.8	3.10	3.93		39.1	8.12	15.2	2.03	0.00	5.61	20.4	11.3	34.7	313	3.43	3.79	3.79

Notes:

*Area of Contamination (AOC) 50 Cleanup Levels (United States Environmental Protection Agency 2004).

Detection
Above Cleanup Level

Acronyms and Abbreviations:

°C = degrees Celsius
µg/L = micrograms per liter
µS/cm = microsiemens per centimeter
FDSA = Former Drum Storage Area
mg/L = milligrams per liter
mv = millivolts
NTU = Nephelometric Turbidity Units

Qualifiers:

J	The analyte was positively identified, the quantitation is an estimation.
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 5
Groundwater Analytical Results, Fall 2020
2020 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

		Location	G6M-04-05X	G6M-04-06X	G6M-04-07X	G6M-04-09X	G6M-04-10A	G6M-04-10X	G6M-04-11X	G6M-04-13X	G6M-04-14X	G6M-04-15X	G6M-04-22X	G6M-04-31X	G6M-06-01X	G6M-07-01X	G6M-07-02X	
		Sample ID	G6M-04-05X-FAL20	G6M-04-06X-FAL20	G6M-04-07X-FAL20	G6M-04-09X-FAL20	G6M-04-10A-FAL20	G6M-04-10X-FAL20	G6M-04-11X-FAL20	G6M-04-13X-FAL20	G6M-04-14X-FAL20	G6M-04-15X-FAL20	G6M-04-22X-FAL20	G6M-04-31X-FAL20	G6M-06-01X-FAL20	G6M-07-01X-FAL20	G6M-07-02X-FAL20	AOC50-DUP02-FAL20
		Sample Date	10/20/2020	10/14/2020	10/14/2020	10/20/2020	10/14/2020	10/14/2020	10/16/2020	10/14/2020	10/19/2020	10/20/2020	10/20/2020	10/20/2020	11/05/2020	10/19/2020	10/14/2020	10/14/2020
		Sample Area	Area 5	Area 5	Area 5	Area 1	Area 1/ FDSA	Area 1/ FDSA	Area 1	Area 1/ FDSA	Nashua River	Area 1	Area 1	Area 1	Area 4	Area 2	Area 1/ FDSA	
Analyte	**Unit**	**Cleanup Level**																
Dissolved Gases																		
Ethane	µg/L		-	-	1.10 U	-	**1.20**	-	-	-	-	-	-	-	-	1.10 U	**1.30**	**1.20**
Ethene	µg/L		-	-	**0.540 J**	-	**25.0**	-	-	-	-	-	-	-	-	1.00 U	**2.00**	**1.90**
Methane	µg/L		-	-	**540**	-	**10,000**	-	-	-	-	-	-	-	-	**34.0**	**6,600**	**6,600**
General Chemistry																		
Alkalinity, Total (as CaCO3)	mg/L		-	-	**230**	-	**210**	-	-	-	-	-	-	-	-	**31.0**	**190**	**200**
Nitrate-Nitrite (as N)	mg/L	10,000*	-	-	0.0500 U	-	**0.0870 J**	-	-	-	-	-	-	-	-	**1.50**	**0.170**	**0.210**
Sulfate	mg/L		-	-	**9.90**	-	**6.20**	-	-	-	-	-	-	-	-	**3.60**	5.00 U	5.00 U
Sulfide	mg/L		-	-	0.810 U	-	0.810 U	-	-	-	-	-	-	-	-	0.810 U	0.810 U	0.810 U
Total Organic Carbon	mg/L		-	-	**1.10**	-	**22.0**	-	-	-	-	-	-	-	-	**3.30**	**230**	**230**
Metals																		
Arsenic	µg/L	10*	-	3 U	**7.6**	**200**	**230**	-	3 U	-	**7.1**	**75**	**780**	**360 J**	**160**	**2.1 J**	**42**	**45**
Iron	µg/L	3,129*	-	86 U	**1,000**	**44,000**	**96,000**	-	50 U	-	50 U	**5,200**	**120,000**	**30,000**	**140,000**	**120**	**220,000**	**220,000**
Manganese	µg/L	1,460*	-	**140**	**3,800**	**2,100**	**3,000**	-	**1.6 J**	-	**3 J**	**630**	**890**	**2,100**	**2,600**	**30**	**4,500**	**4,500**
Volatile Organic Compounds																		
1,1,1,2-Tetrachloroethane	µg/L		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
1,1,1-Trichloroethane	µg/L		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
1,1,2,2-Tetrachloroethane	µg/L		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
1,1,2-Trichloroethane	µg/L		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U
1,1-Dichloroethane	µg/L		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
1,1-Dichloroethene	µg/L	7*	1.00 U	1.00 U	1.00 U	**0.940 J**	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
1,1-Dichloropropene	µg/L		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
1,2,3-Trichlorobenzene	µg/L		5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 U	5.00 U
1,2,3-Trichloropropane	µg/L		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
1,2,4-Trichlorobenzene	µg/L		5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 U	5.00 U
1,2,4-Trimethylbenzene	µg/L		1.00 U	1.00 U	1.00 U	**0.720 J**	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	**1.10 J**	1.00 UJ	**0.520 J**	**0.600 J**
1,2-Dibromo-3-chloropropane	µg/L		2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 UJ	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 UJ	2.00 U	2.00 U
1,2-Dibromoethane (EDB)	µg/L		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
1,2-Dichlorobenzene	µg/L		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
1,2-Dichloroethane	µg/L	5*	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
1,2-Dichloroethene	µg/L		1.00 U	**0.940 J**	**76.0**	**70.0**	**120**	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	**2.00**	1.00 U	**9.00 J**	1.00 UJ	**40.0**	**41.0**
1,2-Dichloropropane	µg/L	5*	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
1,3,5-Trimethylbenzene	µg/L		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	**0.360 J**	0.500 UJ	0.500 U	0.500 U
1,3-Dichlorobenzene	µg/L		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
1,3-Dichloropropane	µg/L		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
1,4-Dichlorobenzene	µg/L		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
2,2-Dichloropropane	µg/L		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
2-Butanone (MEK)	µg/L		10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 UJ	10.0 U	10.0 U	10.0 U	10.0 U	**70.0 J**	10.0 UJ	**41.0**	**43.0**
2-Chlorotoluene	µg/L		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U
2-Hexanone	µg/L		5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 UJ	**10.0**	**11.0**
4-Chlorotoluene	µg/L		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
4-Methyl-2-pentanone (MIBK)	µg/L		5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 UJ	5.00 U	5.00 U
Acetone	µg/L		10.0 U	10.0 UJ	10.0 UJ	10.0 U	10.0 UJ	10.0 UJ	10.0 U	10.0 UJ	10.0 U	10.0 U	10.0 U	10.0 U	**130 J**	10.0 UJ	**91.0 J**	**90.0 J**
Benzene	µg/L	5*	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
Bromobenzene	µg/L		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
Bromochloromethane	µg/L		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
Bromodichloromethane	µg/L		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
Bromoform	µg/L		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
Bromomethane	µg/L		5.00 U	5.00 UJ	5.00 UJ	5.00 U	5.00 UJ	5.00 UJ	5.00 U	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 UJ	5.00 UJ	5.00 UJ
Carbon disulfide	µg/L		2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 UJ	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 UJ	2.00 U	2.00 U
Carbon tetrachloride	µg/L		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U
Chlorobenzene	µg/L		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U
Chloroethane	µg/L		5.00 U	5.00 UJ	5.00 UJ	5.00 U	5.00 UJ	5.00 UJ	5.00 U	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 UJ	5.00 UJ

Table 5
Groundwater Analytical Results, Fall 2020
2020 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

			Location	G6M-04-05X	G6M-04-06X	G6M-04-07X	G6M-04-09X	G6M-04-10A	G6M-04-10X	G6M-04-11X	G6M-04-13X	G6M-04-14X	G6M-04-15X	G6M-04-22X	G6M-04-31X	G6M-06-01X	G6M-07-01X	G6M-07-02X	
			Sample ID	G6M-04-05X-FAL20	G6M-04-06X-FAL20	G6M-04-07X-FAL20	G6M-04-09X-FAL20	G6M-04-10A-FAL20	G6M-04-10X-FAL20	G6M-04-11X-FAL20	G6M-04-13X-FAL20	G6M-04-14X-FAL20	G6M-04-15X-FAL20	G6M-04-22X-FAL20	G6M-04-31X-FAL20	G6M-06-01X-FAL20	G6M-07-01X-FAL20	G6M-07-02X-FAL20	AOC50-DUP02-FAL20
			Sample Date	10/20/2020	10/14/2020	10/14/2020	10/20/2020	10/14/2020	10/14/2020	10/16/2020	10/14/2020	10/19/2020	10/20/2020	10/20/2020	10/20/2020	11/05/2020	10/19/2020	10/14/2020	10/14/2020
			Sample Area	Area 5	Area 5	Area 5	Area 1	Area 1/ FDSA	Area 1/ FDSA	Area 1	Area 1/ FDSA	Nashua River	Area 1	Area 1	Area 1	Area 4	Area 2	Area 1/ FDSA	
Analyte	**Unit**	**Cleanup Level**																	
Chloroform	µg/L			1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
Chloromethane	µg/L			1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
cis-1,2-Dichloroethene	µg/L	70*		1.00 U	**0.940 J**	**76.0**	**68.0**	**120**	1.00 U	1.00 U	1.00 UJ	1.00 U	**0.620 J**	**2.00**	1.00 U	**9.00 J**	1.00 UJ	**40.0**	**41.0**
cis-1,3-Dichloropropene	µg/L			1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
Dibromochloromethane	µg/L			0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U
Dibromomethane	µg/L			1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
Dichlorodifluoromethane	µg/L			1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U
Ethylbenzene	µg/L			0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	**0.500 J**	0.500 U	**0.490 J**	0.500 UJ	0.500 U	0.500 U
Hexachlorobutadiene	µg/L			5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 U	5.00 U
Isopropylbenzene (Cumene)	µg/L			1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
m,p-Xylene	µg/L			1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	**0.350 J**	1.00 U	**1.50 J**	1.00 UJ	**0.600 J**	**0.590 J**
Methyl tert-butyl ether (MTBE)	µg/L			0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U
Methylene chloride	µg/L	5*		5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 U	5.00 U
n-Butylbenzene	µg/L			5.00 UJ	5.00 UJ	5.00 UJ	5.00 UJ	5.00 UJ	5.00 UJ	5.00 U	5.00 UJ	5.00 UJ	5.00 UJ	5.00 UJ	5.00 UJ	5.00 U	5.00 UJ	5.00 UJ	5.00 UJ
n-Propylbenzene	µg/L			1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	**2.80 J**	1.00 UJ	1.00 U	1.00 U
Naphthalene	µg/L			1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
o-Xylene	µg/L			0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	**0.580 J**	0.500 UJ	**0.340 J**	**0.370 J**
p-Cymene (p-Isopropyltoluene)	µg/L			1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
sec-Butylbenzene	µg/L			1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
Styrene	µg/L			0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U
tert-Butylbenzene	µg/L			1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
Tetrachloroethene (PCE)	µg/L	5*		1.00 U	**1.70**	**9.10**	**110**	**35.0**	**1.10**	1.00 U	1.00 UJ	**0.800 J**	1.00 U	1.00 U	1.50 U	**0.950 J**	**32.0 J**	**1.10**	**1.20**
Toluene	µg/L			1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	**70.0**	1.00 U	1.00 U	1.00 UJ	**0.610 J**	**0.650 J**
trans-1,2-Dichloroethene	µg/L			1.00 U	1.00 U	**0.580 J**	**2.30**	**0.650 J**	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
trans-1,3-Dichloropropene	µg/L			1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
Trichloroethene (TCE)	µg/L	5*		1.00 U	**2.10**	**37.0**	**110**	**49.0**	1.00 U	1.00 U	1.00 UJ	1.00 U	**0.860 J**	1.00 U	1.00 U	**1.10 J**	**0.710 J**	1.00 U	1.00 U
Trichlorofluoromethane	µg/L			1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
Vinyl acetate	µg/L			2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 UJ	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 UJ	2.00 U	2.00 U
Vinyl chloride	µg/L	2*		1.00 U	1.00 U	**11.0**	**34.0**	**26.0**	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	**1.80**	**0.980 J**	1.00 U	1.00 UJ	**1.70**	**1.60**
Xylenes, Total	µg/L			0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	**0.350 J**	0.500 U	**2.10 J**	0.500 UJ	**0.940 J**	**0.960 J**
Field Parameters																			
Dissolved Oxygen	mg/L			0.590	0.640	0.720	0.540	0.370	0.440	7.29	1.77	0.670	0.490	0.490	0.510	0.440	2.79	0.510	0.510
Oxidation Reduction Potential	mv			206	228	57.0	-122	-91.2	118	135	-14.6	14.4	-121	-81.1	-124	123	107	-111	-111
pH	SU			6.35	6.39	6.43	6.62	6.52	5.28	6.62	6.45	7.55	7.06	6.25	6.71	4.18	6.23	6.63	6.63
Specific Conductivity	µS/cm			123	132	397	298	530	1910	144	60	752	1000	717	1580	909	547	526	526
Temperature	°C			11.8	11.4	11.6	11.6	15.4	13.2	16.6	12.1	13.0	11.2	11.0	13.2	16.7	13.1	12.0	12.0
Turbidity	NTU			1.28	2.51	4.78	20.3	9.96	3.33	1.57	3.32	1.42	3.81	0.00	0.930	16500	6.92	20.9	20.9

Notes:

*Area of Contamination (AOC) 50 Cleanup Levels (United States Environmental Protection Agency 2004).

Detection
Above Cleanup Level

Qualifiers:

J	The analyte was positively identified, the quantitation is an estimation.
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.

Acronyms and Abbreviations:

°C = degrees Celsius
µg/L = micrograms per liter
µS/cm = microsiemens per centimeter
FDSA = Former Drum Storage Area
mg/L = milligrams per liter
mv = millivolts
NTU = Nephelometric Turbidity Units

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 5
Groundwater Analytical Results, Fall 2020
2020 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

		Location	G6M-13-01X	G6M-13-02X		G6M-13-03X	G6M-13-04X	G6M-13-05X	G6M-13-06X	G6M-18-01	G6M-18-02	G6M-95-19X	G6M-95-20X		G6M-97-05B	G6M-97-28X	MW-3	MW-7
		Sample ID	G6M-13-01X-FAL20	G6M-13-02X-FAL20	AOC50-DUP04-FAL20	G6M-13-03X-FAL20	G6M-13-04X-FAL20	G6M-13-05X-FAL20	G6M-13-06X-FAL20	G6M-18-01-FAL20	G6M-18-02-FAL20	G6M-95-19X-FAL20	G6M-95-20X-FAL20	AOC50-DUP01-FAL20	G6M-97-05B-FAL20	G6M-97-28X-FAL20	MW-3-FAL20	MW-7-FAL20
		Sample Date	10/13/2020	10/19/2020	10/19/2020	10/16/2020	10/16/2020	10/13/2020	10/13/2020	11/05/2020	10/14/2020	10/16/2020	10/14/2020	10/14/2020	10/13/2020	10/15/2020	10/15/2020	10/15/2020
		Sample Area	Area 5	Area 4		Area 3	Area 5	Area 1/ FDSA	Area 1/ FDSA	Area 4	Area 5	Area 1/ FDSA	Area 1/ FDSA		Area 5	Area 4	Area 5	Area 5
Analyte	**Unit**	**Cleanup Level**																
Dissolved Gases																		
Ethane	µg/L		1.10 U	**1.00 J**	**1.00 J**	-	**3.30**	**21.0**	**10.0**	1.10 U	1.10 U	-	-	-	**25.0**	-	-	-
Ethene	µg/L		1.00 U	1.00 U	**1.40**	-	**3.60**	**11.0**	**3.00**	1.00 U	1.00 U	-	-	-	**22.0**	-	-	-
Methane	µg/L		**3,100**	**18,000**	**19,000**	-	**25,000**	**4.00**	**11,000**	**0.400**	**0.510 J**	-	-	-	**10,000**	-	-	-
General Chemistry																		
Alkalinity, Total (as CaCO3)	mg/L		**45.0**	**78.0**	**71.0**	-	**250**	**130**	**540**	**22.0**	**22.0**	-	-	-	**150**	-	-	-
Nitrate-Nitrite (as N)	mg/L	10,000*	0.0500 U	0.0500 U	0.0500 U	-	**0.0550 J**	0.120 U	0.220 U	**0.510**	**1.90**	-	-	-	0.100 U	-	-	-
Sulfate	mg/L		**15.0**	**7.30**	**7.00**	-	**4.40 J**	1.00 U	1.00 U	**6.10**	**14.0**	-	-	-	1.00 U	-	-	-
Sulfide	mg/L		0.830 U	0.930 U	0.960 U	-	0.960 U	0.810 U	0.810 U	0.810 U	0.810 U	-	-	-	0.810 U	-	-	-
Total Organic Carbon	mg/L		**3.80**	**4.50**	**4.80**	-	**10.0**	**12.0**	**120**	1.00 U	**1.40**	-	-	-	**210**	-	-	-
Metals																		
Arsenic	µg/L	10*	**1.8 J**	**10**	**11**	3 U	**550**	**150**	**430**	3 U	3 U	-	**87**	**91**	**130**	**44**	**610**	**470**
Iron	µg/L	3,129*	**180**	**2,500**	**2,400**	50 U	**100,000**	**110,000**	**220,000**	50 U	50 U	-	**54,000**	**53,000**	**61,000**	**8,300**	**43,000**	**22,000**
Manganese	µg/L	1,460*	**2,600**	**540**	**500**	**430**	**10,000**	**15,000**	**2,500**	**4.7 J**	**23**	-	**2,200**	**2,200**	**5,800**	**12,000**	**7,300**	**10,000**
Volatile Organic Compounds																		
1,1,1,2-Tetrachloroethane	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 UJ
1,1,1-Trichloroethane	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
1,1,2,2-Tetrachloroethane	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
1,1,2-Trichloroethane	µg/L		0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ
1,1-Dichloroethane	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
1,1-Dichloroethene	µg/L	7*	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
1,1-Dichloropropene	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
1,2,3-Trichlorobenzene	µg/L		5.00 U	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ
1,2,3-Trichloropropane	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
1,2,4-Trichlorobenzene	µg/L		5.00 U	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ
1,2,4-Trimethylbenzene	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	**1.00**	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
1,2-Dibromo-3-chloropropane	µg/L		2.00 U	2.00 UJ	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 UJ	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 UJ
1,2-Dibromoethane (EDB)	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
1,2-Dichlorobenzene	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
1,2-Dichloroethane	µg/L	5*	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
1,2-Dichloroethene	µg/L		**2.20**	**9.70 J**	**10.0**	1.00 U	**1.30 J**	**1.80 J**	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	**73.0**	1.00 U	1.00 U	**2.20 J**
1,2-Dichloropropane	µg/L	5*	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
1,3,5-Trimethylbenzene	µg/L		0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ
1,3-Dichlorobenzene	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
1,3-Dichloropropane	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
1,4-Dichlorobenzene	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
2,2-Dichloropropane	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
2-Butanone (MEK)	µg/L		10.0 U	10.0 UJ	10.0 U	10.0 U	10.0 U	10.0 U	**450**	10.0 U	10.0 UJ	10.0 U	**12.0**	**11.0**	**140**	10.0 U	10.0 U	10.0 UJ
2-Chlorotoluene	µg/L		0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ
2-Hexanone	µg/L		5.00 U	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 U	**14.0**	**15.0**	5.00 U	5.00 U	5.00 U	5.00 UJ
4-Chlorotoluene	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
4-Methyl-2-pentanone (MIBK)	µg/L		5.00 U	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 U	5.00 U	5.00 U	**6.30 J**	5.00 U	5.00 U	5.00 UJ
Acetone	µg/L		10.0 U	10.0 UJ	11.0 U	10.0 U	10.0 U	10.0 U	**70.0**	10.0 U	10.0 UJ	10.0 U	**12.0 J**	**10.0 J**	**45.0**	10.0 U	10.0 U	10.0 UJ
Benzene	µg/L	5*	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	**1.40**	1.00 U	1.00 U	1.00 UJ
Bromobenzene	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
Bromochloromethane	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
Bromodichloromethane	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
Bromoform	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
Bromomethane	µg/L		5.00 UJ	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 UJ	5.00 U	5.00 UJ	5.00 U	5.00 UJ	5.00 UJ	5.00 UJ	5.00 U	5.00 U	5.00 UJ
Carbon disulfide	µg/L		2.00 U	**0.460 J**	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 UJ	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 UJ
Carbon tetrachloride	µg/L		0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ
Chlorobenzene	µg/L		0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ
Chloroethane	µg/L		5.00 U	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 U	5.00 UJ	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 UJ

Table 5
Groundwater Analytical Results, Fall 2020
2020 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

		Location	G6M-13-01X	G6M-13-02X		G6M-13-03X	G6M-13-04X	G6M-13-05X	G6M-13-06X	G6M-18-01	G6M-18-02	G6M-95-19X	G6M-95-20X		G6M-97-05B	G6M-97-28X	MW-3	MW-7
		Sample ID	G6M-13-01X-FAL20	G6M-13-02X-FAL20	AOC50-DUP04-FAL20	G6M-13-03X-FAL20	G6M-13-04X-FAL20	G6M-13-05X-FAL20	G6M-13-06X-FAL20	G6M-18-01-FAL20	G6M-18-02-FAL20	G6M-95-19X-FAL20	G6M-95-20X-FAL20	AOC50-DUP01-FAL20	G6M-97-05B-FAL20	G6M-97-28X-FAL20	MW-3-FAL20	MW-7-FAL20
		Sample Date	10/13/2020	10/19/2020	10/19/2020	10/16/2020	10/16/2020	10/13/2020	10/13/2020	11/05/2020	10/14/2020	10/16/2020	10/14/2020	10/14/2020	10/13/2020	10/15/2020	10/15/2020	10/15/2020
		Sample Area	Area 5	Area 4		Area 3	Area 5	Area 1/ FDSA	Area 1/ FDSA	Area 4	Area 5	Area 1/ FDSA	Area 1/ FDSA		Area 5	Area 4	Area 5	Area 5
Analyte	**Unit**	**Cleanup Level**																
Chloroform	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
Chloromethane	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
cis-1,2-Dichloroethene	µg/L	70*	**2.20**	**8.90 J**	**9.40**	1.00 U	**1.20**	**1.30**	1.00 U	1.00 U	1.00 UJ	1.00 U	**0.410 J**	1.00 U	**73.0**	1.00 U	**0.490 J**	**2.20 J**
cis-1,3-Dichloropropene	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
Dibromochloromethane	µg/L		0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ
Dibromomethane	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
Dichlorodifluoromethane	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
Ethylbenzene	µg/L		0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	**1.80**	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ
Hexachlorobutadiene	µg/L		5.00 U	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ
Isopropylbenzene (Cumene)	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
m,p-Xylene	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	**0.540 J**	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
Methyl tert-butyl ether (MTBE)	µg/L		0.500 U	0.500 UJ	0.500 U	**0.850 J**	0.500 U	0.500 U	**0.350 J**	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ
Methylene chloride	µg/L	5*	5.00 U	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ
n-Butylbenzene	µg/L		5.00 U	5.00 UJ	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 UJ	5.00 U	5.00 UJ	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 UJ
n-Propylbenzene	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
Naphthalene	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
o-Xylene	µg/L		0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	**0.330 J**	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ
p-Cymene (p-Isopropyltoluene)	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
sec-Butylbenzene	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
Styrene	µg/L		0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ
tert-Butylbenzene	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
Tetrachloroethene (PCE)	µg/L	5*	**2.00**	**14.0 J**	**17.0**	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	**1.40**	1.00 U	1.00 U	**13.0**	1.00 U	1.00 U	1.00 UJ
Toluene	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	**13.0**	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
trans-1,2-Dichloroethene	µg/L		1.00 U	**0.740 J**	**0.680 J**	1.00 U	1.00 U	**0.480 J**	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
trans-1,3-Dichloropropene	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
Trichloroethene (TCE)	µg/L	5*	**1.60**	**8.40 J**	**10.0**	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	**3.10**	1.00 U	1.00 U	1.00 UJ
Trichlorofluoromethane	µg/L		1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ
Vinyl acetate	µg/L		2.00 U	2.00 UJ	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 UJ	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 UJ
Vinyl chloride	µg/L	2*	1.00 U	**3.80 J**	**4.90**	1.00 U	**1.30**	**1.70**	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	**2.40**	1.00 U	1.00 U	**2.00 J**
Xylenes, Total	µg/L		0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	**0.870 J**	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ
Field Parameters																		
Dissolved Oxygen	mg/L		1.53	0.430	0.430	0.420	0.610	0.610	0.390	7.42	4.28	1.88	0.500	0.500	0.420	0.590	0.230	0.270
Oxidation Reduction Potential	mv		-88.1	-14.8	-14.8	172	-117	-104	-63.2	119	201	170	-52.1	-52.1	181	-7.60	-120	-94.9
pH	SU		6.20	6.04	6.04	5.33	6.54	6.82	6.26	8.23	6.08	5.54	6.49	6.49	5.32	6.08	6.91	6.80
Specific Conductivity	µS/cm		639	842	842	1820	1450	689	1080	149	645	3020	255	255	655	875	716	602
Temperature	°C		11.8	13.6	13.6	13.7	12.2	11.1	11.2	13.0	17.0	14.6	11.8	11.8	11.8	14.7	13.9	14.1
Turbidity	NTU		322	11.8	11.8	3.11	94.8	4.82	41.5	2.01	1060	3.38	3.45	3.45	2600	6.24	1.89	2.59

Notes:

*Area of Contamination (AOC) 50 Cleanup Levels (United States Environmental Protection Agency 2004).

Detection
Above Cleanup Level

Acronyms and Abbreviations:

°C = degrees Celsius
µg/L = micrograms per liter
µS/cm = microsiemens per centimeter
FDSA = Former Drum Storage Area
mg/L = milligrams per liter
mv = millivolts
NTU = Nephelometric Turbidity Units

Qualifiers:

J	The analyte was positively identified, the quantitation is an estimation.
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 5
Groundwater Analytical Results, Fall 2020
2020 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

		Location	XSA-12-95X	XSA-12-96X	XSA-12-97X	XSA-12-98X
		Sample ID	XSA-12-95X-FAL20	XSA-12-96X-FAL20	XSA-12-97X-FAL20	XSA-12-98X-FAL20
		Sample Date	10/15/2020	10/15/2020	11/22/2020	10/16/2020
		Sample Area	Area 5	Area 5	Area 5	Area 5
Analyte	**Unit**	**Cleanup Level**				
Dissolved Gases						
Ethane	µg/L		-	**18.0**	-	-
Ethene	µg/L		-	**1.30**	-	-
Methane	µg/L		-	**1,800**	-	-
General Chemistry						
Alkalinity, Total (as CaCO3)	mg/L		-	**220**	-	-
Nitrate-Nitrite (as N)	mg/L	10,000*	-	0.0500 U	-	-
Sulfate	mg/L		-	**9.20**	-	-
Sulfide	mg/L		-	0.810 U	-	-
Total Organic Carbon	mg/L		-	**1.50**	-	-
Metals						
Arsenic	µg/L	10*	**3**	3 U	**51**	3 U
Iron	µg/L	3,129*	**1,900**	**3,200**	**2,700**	**150**
Manganese	µg/L	1,460*	**11,000**	**5,900**	**2,700**	**4.9 J**
Volatile Organic Compounds						
1,1,1,2-Tetrachloroethane	µg/L		1.00 U	1.00 U	1.00 U	1.00 U
1,1,1-Trichloroethane	µg/L		1.00 U	1.00 U	1.00 U	1.00 U
1,1,2,2-Tetrachloroethane	µg/L		1.00 U	1.00 U	2.00 U	1.00 U
1,1,2-Trichloroethane	µg/L		0.500 U	0.500 U	1.00 U	0.500 U
1,1-Dichloroethane	µg/L		1.00 U	1.00 U	1.00 U	1.00 U
1,1-Dichloroethene	µg/L	7*	1.00 U	1.00 U	1.00 U	1.00 U
1,1-Dichloropropene	µg/L		1.00 U	1.00 U	1.00 U	1.00 U
1,2,3-Trichlorobenzene	µg/L		5.00 U	5.00 U	5.00 U	5.00 U
1,2,3-Trichloropropane	µg/L		1.00 U	1.00 U	1.00 U	1.00 U
1,2,4-Trichlorobenzene	µg/L		5.00 U	5.00 U	5.00 U	5.00 U
1,2,4-Trimethylbenzene	µg/L		1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dibromo-3-chloropropane	µg/L		2.00 U	2.00 U	4.00 UJ	2.00 U
1,2-Dibromoethane (EDB)	µg/L		1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichlorobenzene	µg/L		1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichloroethane	µg/L	5*	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichloroethene	µg/L		**8.30**	**17.0**	**6.20**	1.00 U
1,2-Dichloropropane	µg/L	5*	1.00 U	1.00 U	2.00 U	1.00 U
1,3,5-Trimethylbenzene	µg/L		0.500 U	0.500 U	1.00 U	0.500 U
1,3-Dichlorobenzene	µg/L		1.00 U	1.00 U	1.00 U	1.00 U
1,3-Dichloropropane	µg/L		1.00 U	1.00 U	1.00 U	1.00 U
1,4-Dichlorobenzene	µg/L		1.00 U	1.00 U	1.00 U	1.00 U
2,2-Dichloropropane	µg/L		1.00 U	1.00 U	1.00 U	1.00 U
2-Butanone (MEK)	µg/L		10.0 U	10.0 U	10.0 UJ	10.0 U
2-Chlorotoluene	µg/L		0.500 U	0.500 U	1.00 U	0.500 U
2-Hexanone	µg/L		5.00 U	5.00 U	5.00 U	5.00 U
4-Chlorotoluene	µg/L		1.00 U	1.00 U	1.00 U	1.00 U
4-Methyl-2-pentanone (MIBK)	µg/L		5.00 U	5.00 U	5.00 U	5.00 U
Acetone	µg/L		10.0 U	10.0 U	25.0 U	10.0 U
Benzene	µg/L	5*	1.00 U	1.00 U	1.00 U	1.00 U
Bromobenzene	µg/L		1.00 U	1.00 U	1.00 U	1.00 U
Bromochloromethane	µg/L		1.00 U	1.00 U	1.00 U	1.00 U
Bromodichloromethane	µg/L		1.00 U	1.00 U	1.00 U	1.00 U
Bromoform	µg/L		1.00 U	1.00 U	1.00 UJ	1.00 U
Bromomethane	µg/L		5.00 U	5.00 UJ	5.00 UJ	5.00 U
Carbon disulfide	µg/L		2.00 U	2.00 U	1.00 U	2.00 U
Carbon tetrachloride	µg/L		0.500 U	0.500 U	1.00 U	0.500 U
Chlorobenzene	µg/L		0.500 U	0.500 U	1.00 U	0.500 U
Chloroethane	µg/L		5.00 U	**5.70**	5.00 U	5.00 U

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Devens, Massachusetts

		Location	XSA-12-95X	XSA-12-96X	XSA-12-97X	XSA-12-98X
		Sample ID	XSA-12-95X-FAL20	XSA-12-96X-FAL20	XSA-12-97X-FAL20	XSA-12-98X-FAL20
		Sample Date	10/15/2020	10/15/2020	11/22/2020	10/16/2020
		Sample Area	Area 5	Area 5	Area 5	Area 5
Analyte	**Unit**	**Cleanup Level**				
Chloroform	µg/L		1.00 U	1.00 U	1.00 U	1.00 U
Chloromethane	µg/L		1.00 U	1.00 U	1.00 U	1.00 U
cis-1,2-Dichloroethene	µg/L	70*	**6.10**	**12.0**	**6.20**	**0.610 J**
cis-1,3-Dichloropropene	µg/L		1.00 U	1.00 U	1.00 U	1.00 U
Dibromochloromethane	µg/L		0.500 U	0.500 U	1.00 U	0.500 U
Dibromomethane	µg/L		1.00 U	1.00 U	1.00 U	1.00 U
Dichlorodifluoromethane	µg/L		1.00 U	1.00 U	2.00 U	1.00 U
Ethylbenzene	µg/L		0.500 U	0.500 U	1.00 U	0.500 U
Hexachlorobutadiene	µg/L		5.00 U	5.00 U	5.00 U	5.00 U
Isopropylbenzene (Cumene)	µg/L		1.00 U	1.00 U	1.00 U	1.00 U
m,p-Xylene	µg/L		1.00 U	1.00 U	1.00 U	1.00 U
Methyl tert-butyl ether (MTBE)	µg/L		0.500 U	0.500 U	1.00 U	0.500 U
Methylene chloride	µg/L	5*	5.00 U	5.00 U	5.00 U	5.00 U
n-Butylbenzene	µg/L		5.00 U	5.00 UJ	5.00 U	5.00 U
n-Propylbenzene	µg/L		1.00 U	1.00 U	1.00 U	1.00 U
Naphthalene	µg/L		1.00 U	1.00 U	1.00 U	1.00 U
o-Xylene	µg/L		0.500 U	0.500 U	0.500 U	0.500 U
p-Cymene (p-Isopropyltoluene)	µg/L		1.00 U	1.00 U	1.00 U	1.00 U
sec-Butylbenzene	µg/L		1.00 U	1.00 U	1.00 U	1.00 U
Styrene	µg/L		0.500 U	0.500 U	1.00 U	0.500 U
tert-Butylbenzene	µg/L		1.00 U	1.00 U	1.00 U	1.00 U
Tetrachloroethene (PCE)	µg/L	5*	**6.90**	**7.40**	2.00 U	**4.10**
Toluene	µg/L		1.00 U	1.00 U	1.00 U	1.00 U
trans-1,2-Dichloroethene	µg/L		**2.20**	**5.40**	1.00 U	1.00 U
trans-1,3-Dichloropropene	µg/L		1.00 U	1.00 U	1.00 U	1.00 U
Trichloroethene (TCE)	µg/L	5*	**3.90**	**16.0**	1.00 U	1.00 U
Trichlorofluoromethane	µg/L		1.00 U	1.00 U	1.00 U	1.00 U
Vinyl acetate	µg/L		2.00 U	2.00 U	2.00 U	2.00 U
Vinyl chloride	µg/L	2*	1.00 U	**15.0**	1.00 U	1.00 U
Xylenes, Total	µg/L		0.500 U	0.500 U	2.00 U	0.500 U
Field Parameters						
Dissolved Oxygen	mg/L		0.610	0.630	0.690	0.860
Oxidation Reduction Potential	mv		-89.7	-75.8	-401	-129
pH	SU		6.79	6.56	7.13	7.72
Specific Conductivity	µS/cm		1230	1080	561	360
Temperature	°C		15.7	15.3	10.0	12.3
Turbidity	NTU		202	24.8	4.73	4.10

Notes:

*Area of Contamination (AOC) 50 Cleanup Levels (United States Environmental Protection Agency 2004).

Detection
Above Cleanup Level

Acronyms and Abbreviations:

°C = degrees Celsius
µg/L = micrograms per liter
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FDSA = Former Drum Storage Area
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NTU = Nephelometric Turbidity Units

Qualifiers:

J	The analyte was positively identified, the quantitation is an estimation.
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:

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Table 7
Groundwater Level Data, Spring 2020
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Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

SERES Engineering & Services, LLC
ARCADIS a joint venture

Area	Well ID	Date	DTW (ft below MPE)	MPE (NAVD 88)	GW Elevation (NAVD 88)
Area 1	G6M-02-08X	05/11/2020	11.53	224.23	212.70
	G6M-04-09X	05/11/2020	30.25	242.66	212.41
	G6M-04-11X	05/11/2020	17.88	229.47	211.59
	G6M-04-15X	05/11/2020	40.86	253.23	212.37
	G6M-04-22X	05/11/2020	44.57	255.89	211.32
	G6M-04-31X	05/11/2020	44.39	255.91	211.52
	G6M-13-05X	05/11/2020	12.70	225.00	212.30
	G6M-13-06X	05/11/2020	12.31	224.37	212.06
	G6M-95-19X	05/11/2020	10.81	223.89	213.08
	G6M-95-20X	05/11/2020	11.20	224.61	213.41
	G6M-96-22A	05/11/2020	3.40	217.59	214.19
	G6M-96-22B	05/11/2020	3.91	217.56	213.65
Area 1/FDSA	G6M-04-10A	05/11/2020	11.06	224.02	212.96
	G6M-04-10X	05/11/2020	11.83	224.22	212.39
	G6M-04-13X	05/11/2020	12.87	225.88	213.01
	G6M-07-02X	05/11/2020	11.97	225.10	213.13
Area 2	G6M-02-01X	05/11/2020	52.78	262.44	209.66
	G6M-04-01X	05/11/2020	50.94	261.15	210.21
	G6M-04-03X	05/11/2020	55.32	264.29	208.97
	G6M-07-01X	05/11/2020	52.27	262.10	209.83
	G6P-97-05X	05/11/2020	24.94	236.72	211.78
Area 3	G6M-03-07X	05/11/2020	55.01	262.66	207.65
	G6M-04-02X	05/11/2020	61.38	266.55	205.17*
	G6M-04-04X	05/11/2020	56.17	262.66	206.49
	G6M-13-03X	05/11/2020	56.34	264.37	208.03
Area 4	G6M-02-03X	05/11/2020	56.51	263.03	206.52
	G6M-02-04X	05/11/2020	58.44	264.92	206.48
	G6M-02-13X	05/11/2020	57.49	263.61	206.12
	G6M-13-02X	05/11/2020	58.00	263.82	205.82
	G6M-97-28X	05/11/2020	59.30	265.69	206.39
Area 5	G6M-02-06X	05/11/2020	5.84	209.73	203.89
	G6M-02-07X	05/11/2020	6.99	210.72	203.73
	G6M-02-11X	05/11/2020	58.55	263.93	205.38
	G6M-02-12X	05/11/2020	57.20	262.46	205.26
	G6M-03-08X	05/13/2020	53.79	258.60	204.81
	G6M-03-09X	05/11/2020	53.78	258.89	205.11
	G6M-03-10X	05/11/2020	60.64	265.81	205.17
	G6M-04-05X	05/13/2020	54.09	258.13	204.04
	G6M-04-06X	05/11/2020	59.90	263.97	204.07
	G6M-04-07X	05/11/2020	59.51	263.82	204.31
	G6M-04-08X	05/13/2020	5.80	209.55	203.75**
	G6M-13-01X	05/11/2020	61.50	266.82	205.32
	G6M-13-04X	05/11/2020	60.90	266.31	205.41

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Devens, Massachusetts

Area	Well ID	Date	DTW (ft below MPE)	MPE (NAVD 88)	GW Elevation (NAVD 88)
Area 5	G6M-18-01	05/11/2020	58.59	264.24	205.65
	G6M-18-02	05/11/2020	63.88	268.33	204.45
	G6M-97-05B	05/11/2020	63.21	268.12	204.91
	MW-3	05/13/2020	60.37	265.75	205.38
	MW-7	05/11/2020	59.23	264.97	205.74
	XSA-12-95X	05/11/2020	60.15	269.63	209.48*
	XSA-12-96X	05/11/2020	65.06	269.99	204.93
	XSA-12-97X	05/11/2020	54.25	270.78	216.53*
	XSA-12-98X	05/11/2020	4.18	209.61	205.43
Nashua River	G6M-04-14X	05/13/2020	6.79	210.61	203.82**

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
MPE = measuring point elevation
NAVD 88 = North American Vertical Datum of 1988

Table 8
Groundwater Level Data, Fall 2020
2020 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

SERES Engineering & Services, LLC
ARCADIS
a joint venture

Area	Well ID	Date	DTW (ft below MPE)	MPE (NAVD 88)	GW Elevation (NAVD 88)
Area 1	G6M-02-08X	10/21/2020	14.73	224.23	209.50
	G6M-04-09X	10/21/2020	33.52	242.66	209.14
	G6M-04-11X	10/21/2020	21.01	229.47	208.46
	G6M-04-15X	10/21/2020	44.11	253.23	209.12
	G6M-04-22X	10/21/2020	47.65	255.89	208.24
	G6M-04-31X	10/21/2020	47.40	255.91	208.51
	G6M-13-05X	10/21/2020	15.90	225.00	209.10
	G6M-13-06X	10/21/2020	15.48	224.37	208.89
	G6M-95-19X	10/21/2020	14.18	223.89	209.71
	G6M-95-20X	10/21/2020	14.75	224.61	209.86
	G6M-96-22A	10/21/2020	6.67	217.59	210.92
	G6M-96-22B	10/21/2020	7.07	217.56	210.49
Area 1/FDSA	G6M-04-10A	10/21/2020	14.42	224.02	209.60
	G6M-04-10X	10/21/2020	15.03	224.22	209.19
	G6M-04-13X	10/21/2020	11.25	225.88	214.63*
	G6M-07-02X	10/21/2020	15.40	225.10	209.70
Area 2	G6M-02-01X	10/21/2020	55.80	262.44	206.64
	G6M-04-01X	10/21/2020	53.90	261.15	207.25
	G6M-04-03X	10/21/2020	58.33	264.29	205.96
	G6M-07-01X	10/21/2020	55.25	262.10	206.85
	G6P-97-05X	10/21/2020	28.88	236.72	207.84
Area 3	G6M-03-07X	10/21/2020	58.43	262.66	204.23
	G6M-04-02X	10/21/2020	61.56	266.55	204.99
	G6M-04-04X	10/21/2020	59.45	262.66	203.21
	G6M-13-03X	10/21/2020	59.48	264.37	204.89
Area 4	G6M-02-03X	10/21/2020	59.97	263.03	203.06
	G6M-02-04X	10/21/2020	61.91	264.92	203.01
	G6M-02-13X	10/21/2020	103.50	263.61	160.11**
	G6M-06-01X	10/21/2020	62.50	264.54	202.04
	G6M-13-02X	10/21/2020	0.00	263.82	202.69
	G6M-97-28X	10/21/2020	60.10	265.69	205.59*
Area 5	G6M-02-06X	10/21/2020	8.16	209.73	201.57
	G6M-02-07X	10/21/2020	9.38	210.72	201.34
	G6M-02-11X	10/21/2020	61.76	263.93	202.17
	G6M-02-12X	10/21/2020	60.36	262.46	202.10
	G6M-03-08X	10/21/2020	57.63	258.60	200.97
	G6M-03-09X	10/21/2020	56.90	258.89	201.99
	G6M-03-10X	10/21/2020	63.75	265.81	202.06
	G6M-04-05X	10/21/2020	56.20	258.13	201.93
	G6M-04-06X	10/21/2020	62.50	263.97	201.47
	G6M-04-07X	10/21/2020	62.30	263.82	201.52
	G6M-04-08X	10/21/2020	7.90	209.55	201.65***
	G6M-13-01X	10/21/2020	64.80	266.82	202.02
	G6M-13-04X	10/21/2020	64.10	266.31	202.21
	G6M-18-01	10/21/2020	62.00	264.24	202.24
	G6M-18-02	10/21/2020	66.75	268.33	201.58

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Devens, Massachusetts

Area	Well ID	Date	DTW (ft below MPE)	MPE (NAVD 88)	GW Elevation (NAVD 88)
Area 5	G6M-97-05B	10/21/2020	66.70	268.12	201.42
	MW-3	10/21/2020	64.55	265.75	201.20
	MW-7	10/21/2020	62.65	264.97	202.32
	XSA-12-95X	10/21/2020	63.85	269.63	205.78*
	XSA-12-96X	10/21/2020	68.80	269.99	201.19
	XSA-12-97X	11/20/2020	69.62	270.78	201.16
	XSA-12-98X	11/05/2020	8.05	209.61	201.56
Nashua River	G6M-04-14X	10/21/2020	9.06	210.61	201.55***

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; erroneous water level measurement, well may require redevelopment.

*** 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
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Appendix A

Groundwater Monitoring Field Forms

ARCADIS Design & Consultancy for natural and built assets

Groundwater Gauging Log

Client:	USACE
Project Name/Location:	Devens, Massachusetts
Date(s):	5/11/2020
Sampler(s):	Desmond Bedard Gabriel O'Connor Diane Champagne
Equipment:	water probe

Well	Date	Time	Depth to Water (ft)	Well Depth (ft)	Depth to LNAPL (ft)	PID (ppmv)	Remarks
G6M-13-06X	5/11/2020	09:03:00	12.31	62.47	--	--	
G6M-02-08X	5/11/2020	09:34:00	11.53	71.99	--	--	
G6M-95-19X	5/11/2020	09:39:00	10.81	58.72	--	--	Well info provided says well depth is 87ft
G6M-95-20X	5/11/2020	09:46:00	11.2	25.01	--	--	Well data says depth to bottom should be 89ft.
G6M-04-13X	5/11/2020	09:49:00	12.87	42.02	--	--	
G6M-07-02X	5/11/2020	09:53:00	11.97	29.9	--	--	
G6M-04-10A	5/11/2020	09:56:00	11.06	42.11	--	--	
G6M-04-10X	5/11/2020	09:59:00	11.83	63.46	--	--	
G6M-13-05X	5/11/2020	10:05:00	12.7	56.66	--	--	
G6M-04-09X	5/11/2020	10:10:00	30.25	66.45	--	--	
G6M-04-31X	5/11/2020	10:19:00	44.39	80.95	--	--	
G6M-04-22X	5/11/2020	10:22:00	44.57	86.13	--	--	
G6M-04-11X	5/11/2020	10:27:00	17.88	47.01	--	--	
G6M-96-22B	5/11/2020	10:34:00	3.91	72.49	--	--	
G6M-96-22A	5/11/2020	10:36:00	3.4	52.49	--	--	
G6M-04-15X	5/11/2020	11:18:00	40.86	82.25	--	--	
G6M-02-01X	5/11/2020	11:38:00	52.78	90.8	--	--	
G6M-07-01X	5/11/2020	11:45:00	52.27	96.32	--	--	
G6M-04-01X	5/11/2020	11:52:00	50.94	91.89	--	--	
G6M-04-03X	5/11/2020	12:09:00	55.32	94.35	--	--	
G6M-04-02X	5/11/2020	12:16:00	61.38	93.09	--	--	
G6M-13-01X	5/11/2020	12:18:00	61.5	137.1	--	--	
G6M-13-03X	5/11/2020	12:34:00	56.34	91.57	--	--	

G6M-03-07X	5/11/2020	12:42:00	55.01	89.49	--	--	
G6M-04-04X	5/11/2020	12:49:00	56.17	100	--	--	Depth >100
G6M-02-03X	5/11/2020	12:56:00	56.51	104.74	--	--	
G6M-97-28X	5/11/2020	13:11:00	59.3	107.95	--	--	
G6M-02-04X	5/11/2020	13:15:00	58.44	107.61	--	--	
G6M-02-13X	5/11/2020	13:24:00	57.49	120.99	--	--	
G6M-13-02X	5/11/2020	13:31:00	58	126.04	--	--	
G6M-18-01	5/11/2020	13:42:00	58.59	126.85	--	--	
G6M-18-02	5/11/2020	13:53:00	63.88	137.09	--	--	
G6M-97-05B	5/11/2020	14:10:00	63.21	98.04	--	--	
G6M-13-04X	5/11/2020	14:27:00	60.9	135	--	--	
MW-7	5/11/2020	14:48:00	59.23	135.88	--	--	
G6M-02-11X	5/11/2020	15:09:00	58.55	128.45	--	--	
G6M-02-12X	5/11/2020	15:15:00	57.2	135.4	--	--	
G6M-03-09X	5/11/2020	15:20:00	53.78	124.14	--	--	
G6M-03-10X	5/11/2020	15:33:00	60.64	137.35	--	--	
G6M-04-07X	5/11/2020	15:49:00	59.51	132.88	--	--	
G6M-04-06X	5/11/2020	15:54:00	59.9	69.98	--	--	
XSA-12-95X	5/11/2020	16:05:00	60.15	161.55	--	--	Water level read inconsistently
G6M-02-06X	5/11/2020	16:21:00	5.84	67.25	--	--	
XSA-12-96X	5/11/2020	16:34:00	65.06	131.69	--	--	
XSA-12-97X	5/11/2020	16:42:00	54.25	145.61	--	--	
G6M-02-07X	5/11/2020	16:54:00	6.99	40.25	--	--	
MW-3	5/11/2020	16:56:00	--	--	--	--	Unable to open
XSA-12-98X	5/11/2020	16:58:00	4.18	72.9	--	--	
G6P-97-05X	5/11/2020	17:34:00	24.94	44.6	--	--	

Groundwater Sampling Form

ARCADIS Design & Consultancy for natural and built assets

Project Number	30048392	**Well ID**	G6M-13-01X			**Date**	5/11/2020
Project Name/Location	Devens, Massachusetts					**Weather(°F)**	Rain 63
Measuring Pt. Description	Top of Casing	**Screen Setting (ft-bmp)**	--	**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	62.7	**Total Depth (ft-bmp)**	130	**Water Column(ft)**	67	**Gallons in Well**	10.94
MP Elevation		**Pump Intake (ft-bmp)**	125	**Purge Method**	Low-Flow	**Sample Method**	Low-Flow
Sample Time	13:20	**Volumes Purged**	0.16	**Sample ID**	G6M-13-01	**Sampled by**	Diane Champagne
Purge Start	12:20	**Gallons Purged**	1.7	**Replicate/ Code No.**			
Purge End	13:46						

Time	Minutes Elapsed	Rate (mL/min)	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
											Color	Odor
12:23		120	61.7		5.95	0.932	568	3.51	10.82	18.8	Silty white/grey	Yes
12:34	11	120	61.65		5.81	0.905	662	3.81	11.15	14.7	Silty white/grey	Yes
12:40	6	120	61.65		5.53	0.877	117	1.18	11.77	9.8	Silty white/grey	Yes
12:46	6	100	61.65		5.53	0.877	167	0.93	11.73	7.2	Silty white/grey	Yes
12:50	4	100	61.7		5.54	0.876	87.7	0.88	11.63	6.5	Silty white/grey	Yes
12:55	5	100	61.7		5.56	0.881	88.1	0.87	11.7	4.2	Silty white/grey	Yes
13:00	5	100	61.7		5.6	0.892	90.2	0.77	11.7	3.3	Silty white/grey	Yes
13:06	6	100	61.66		5.71	0.919	91.4	0.88	12.07	3	Silty white/grey	Yes
13:11	5	100	61.67		5.85	0.935	93.7	0.9	12.4	3	Silty white/grey	Yes
13:16	5	100	61.67		5.9	0.941	94.2	0.88	12.65	3.8	Silty white/grey	Yes

Constituent Sampled	Container	Number	Preservative
VOCs			
Dissolved Metals			
Nitrate/Nitrite			
Sulfate			
Sulfide			
Alkalinity			
Methane/Ethane/Ethene			
TOC			

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

mS/cm = milliiSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

Comments:

Well Casing Volume Conversion

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

Well Information

Well Location:	Airstrip right	Well Locked at Arrival:	yes
Condition of Well:	Good	Well Locked at Departure:	yes
Well Completion:	Stick-up	Key Number To Well:	3753

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

mS/cm = milliiSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

ARCADIS Design & Consultancy for natural and built assets

Project Number	30048392	**Well ID**	G6M-13-04X			**Date**	5/11/2020
Project Name/Location	Devens, Massachusetts					**Weather(°F)**	Rain 63
Measuring Pt. Description	Top of Casing	**Screen Setting (ft-bmp)**	--	**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	60.9	**Total Depth (ft-bmp)**	135	**Water Column(ft)**	74	**Gallons in Well**	12.04
MP Elevation		**Pump Intake (ft-bmp)**	130	**Purge Method**	Low-Flow	**Sample Method**	Low-Flow
Sample Time	15:35	**Volumes Purged**	0.31	**Sample ID**	G6M-13-04X	**Sampled by**	Diane Champagne
Purge Start	14:10	**Gallons Purged**	3.8	**Replicate/ Code No.**			
Purge End	15:50						

Time	Minutes Elapsed	Rate (mL/min)	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
											Color	Odor
14:21		160	60.9		6.45	1.141	6.93	2.57	10.96	40.4	Pale black	Yes
14:25	4	160	60.9		6.54	1.21	6.04	1.6	11.33	25.5	Pale black	Yes
14:31	6	160	60.9		6.61	1.237	0.73	1.38	11.46	9.8	Pale black	Yes
14:35	4	160	60.9		6.63	1.255	0.81	1.12	11.43	5.2	Pale black	Yes
14:40	5	160	60.9		6.64	1.29	0.83	1.09	11.32	-0.3	Pale black	Yes
14:45	5	160	60.9		6.65	1.341	0.55	1.05	11.32	-5.3	Pale black	Yes
14:50	5	160	60.9		6.65	1.424	0.5	0.94	11.39	-11.6	Pale black	Yes
14:55	5	160	60.88		6.67	1.492	0.29	0.89	11.17	-22.7	Pale black	Yes
15:00	5	160	60.88		6.71	1.537	0.28	0.89	11.41	-35.3	Pale black	Yes
15:05	5	160	60.88		6.76	1.557	0.29	0.8	11.31	-41.6	Pale black	Yes
15:10	5	160	60.91		6.79	1.607	0.3	0.86	11.25	-58.9	Pale black	Yes
15:15	5	160	60.91		6.79	1.647	0.29	0.85	11.3	-67.9	Pale black	Yes
15:22	7	160	60.91		6.82	1.669	0.88	0.87	11.47	-79.1	Pale black	Yes
15:25	3	160	60.91		6.83	1.687	0.99	0.89	11.51	-82.1	Pale black	Yes
15:30	5	160	60.9		6.83	1.703	0.86	0.87	11.37	-83.4	Pale black	Yes

Constituent Sampled	Container	Number	Preservative
VOCs			
Dissolved Metals			
Nitrate/Nitrite			
Sulfate			
Sulfide			

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

mS/cm = milliiSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

Alkalinity			
Methane/Ethane/Ethene			
TOC			

Comments:

Well Casing Volume Conversion

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

Well Information

Well Location:	Back road at airstrip	Well Locked at Arrival:	yes
Condition of Well:	Good	Well Locked at Departure:	yes
Well Completion:	Stick-up	Key Number To Well:	3753m

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

mS/cm = milliiSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

ARCADIS Design & Consultancy for natural and built assets

Project Number	30048392	**Well ID**	G6M-97-05B			**Date**	5/11/2020
Project Name/Location	Devens, Massachusetts					**Weather(°F)**	Sun 56*
Measuring Pt. Description	Top of Casing	**Screen Setting (ft-bmp)**	--	**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	63.31	**Total Depth (ft-bmp)**	98	**Water Column(ft)**	35	**Gallons in Well**	5.64
MP Elevation		**Pump Intake (ft-bmp)**	95	**Purge Method**	Low-Flow	**Sample Method**	Low-Flow
Sample Time	11:20	**Volumes Purged**	0.59	**Sample ID**	G6M-97-05B	**Sampled by**	Diane Champagne
Purge Start	09:40	**Gallons Purged**	3.3	**Replicate/ Code No.**			
Purge End	11:46						

Time	Minutes Elapsed	Rate (mL/min)	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
											Color	Odor
09:41		120	63.41		4.84	0.827	556	1.73	13.75	43.2	Slightly silty grey	Yes
09:47	6	120	63.51		5.13	0.841	139	1.47	13.96	33.7	Slightly silty grey	Yes
09:51	4	120	63.53		5.22	0.846	127	1.21	14.22	23.5	Slightly silty grey	Yes
09:55	4	120	63.53		5.29	0.861	112	0.99	14.24	18	Slightly silty grey	Yes
10:01	6	120	63.53		5.32	0.935	112	0.8	13.43	18.4	Slightly silty grey	Yes
10:05	4	120	63.53		5.34	0.97	96.2	0.72	13.21	19	Slightly silty grey	Yes
10:10	5	120	63.53		5.47	1.02	81.1	0.71	13.01	-5.5	Slightly silty grey	Yes
10:15	5	120	63.55		5.49	1.077	65.6	0.84	12.98	-30.5	Slightly silty grey	Yes
10:20	5	120	63.55		5.59	1.087	59.1	0.93	12.99	-40.4	Slightly silty grey	Yes
10:25	5	120	63.59		5.73	1.108	49.9	0.9	13.28	-41.9	Slightly silty grey	Yes
10:30	5	120	63.59		5.8	1.136	44.6	0.91	13.77	-53.7	Slightly silty grey	Yes
10:35	5	120	63.61		5.79	1.152	35.4	0.95	13.86	-57.6	Slightly silty grey	Yes
10:49	14	120	63.61		5.98	1.203	25.7	1.03	13.09	-59.4	Slightly silty grey	Yes
10:53	4	120	63.51		5.83	1.21	25.4	1.58	13.32	-55.1	Slightly silty grey	Yes
11:03	10	120	63.51		5.77	1.205	24.9	1.12	13.24	-56.4	Slightly silty grey	Yes
11:07	4	120	63.55		5.8	1.23	23.9	1.06	13.29	-58.11	Slightly silty grey	Yes
11:11	4	120	63.55		5.83	1.228	22.9	1	13.39	-59.3	Slightly silty grey	Yes
11:16	5	120	63.6		5.86	1.232	23.1	1.04	13.43	-61.2	Slightly silty grey	Yes

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

mS/cm = milliiSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

ARCADIS Design & Consultancy for natural and built assets

Constituent Sampled	Container	Number	Preservative
VOCs			
Dissolved Metals			
Nitrate/Nitrite			
Sulfate			
Sulfide			
Alkalinity			
Methane/Ethane/Ethene			
TOC			

Comments:

Well Casing Volume Conversion

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

Well Information

Well Location:	Right rear airfield	Well Locked at Arrival:	yes
Condition of Well:	Good	Well Locked at Departure:	yes
Well Completion:	Stick-up	Key Number To Well:	3753

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

mS/cm = milliiSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

ARCADIS Design & Consultancy for natural and built assets

Project Number	30048392	**Well ID**	G6M-04-02X			**Date**	5/12/2020
Project Name/Location	Devens, Massachusetts					**Weather(°F)**	Cloudy, very windy 46*
Measuring Pt. Description	Top of Casing	**Screen Setting (ft-bmp)**	--	**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	58.38	**Total Depth (ft-bmp)**	90	**Water Column(ft)**	32	**Gallons in Well**	5.14
MP Elevation		**Pump Intake (ft-bmp)**	86	**Purge Method**	Low-Flow	**Sample Method**	Low-Flow
Sample Time	11:45	**Volumes Purged**	0.73	**Sample ID**	G6!-04-02X	**Sampled by**	Diane Champagne
Purge Start	10:40	**Gallons Purged**	3.8	**Replicate/ Code No.**			
Purge End	12:15						

Time	Minutes Elapsed	Rate (mL/min)	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
											Color	Odor
10:44		150	58.38		5.12	1.377	1100	1.53	12.78	83.4	Milky white	Yes
10:50	6	180	58.88		5.32	1.366	736	1.15	11.84	58.5	Milky white	Yes
10:55	5	150	58.65		5.44	1.367	731	1.1	11.73	49.4	Milky white	Yes
11:00	5	150	59		5.35	1.379	1040	1.11	11.78	45.2	Milky white	Yes
11:05	5	150	58.9		5.35	1.378	802	0.95	11.68	47.7	Milky white	Yes
11:10	5	150	58.9		5.45	1.38	709	1.08	12.24	46.5	Milky white	Yes
11:15	5	150	59.01		5.45	1.452	502	1.2	11.97	45.3	Milky white	Yes
11:20	5	150	58.99		5.46	1.373	507	1.05	12.1	39.2	Milky white	Yes
11:26	6	150	58.94		5.48	1.355	392	1.26	11.9	33.3	Milky white	Yes
11:30	4	150	58.88		5.51	1.357	342	1.2	11.77	36.4	Milky white	Yes
11:35	5	150	58.78		5.49	1.366	325	1.26	11.99	31.4	Milky white	Yes
11:40	5	150	58.78		5.54	1.375	344	1.19	11.88	31.6	Milky white	Yes

Constituent Sampled	**Container**	**Number**	**Preservative**
VOCs			
Dissolved Metals			
Nitrate/Nitrite			
Sulfate			
Sulfide			
Alkalinity			
Methane/Ethane/Ethene			
TOC			

Comments:

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

mS/cm = milliiSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

Well Casing Volume Conversion

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

Well Information

Well Location:	Next to old control tower building	Well Locked at Arrival:	yes
Condition of Well:	Good	Well Locked at Departure:	yes
Well Completion:	Stick-up	Key Number To Well:	3753

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

mS/cm = milliiSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

ARCADIS Design & Consultancy for natural and built assets

Project Number	30048392	**Well ID**	G6M-04-03X			**Date**	5/12/2020
Project Name/Location	Devens, Massachusetts					**Weather(°F)**	Cloudy, very windy 46*
Measuring Pt. Description	Top of Casing	**Screen Setting (ft-bmp)**	--	**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	55.4	**Total Depth (ft-bmp)**	95	**Water Column(ft)**	40	**Gallons in Well**	6.43
MP Elevation		**Pump Intake (ft-bmp)**		**Purge Method**	Low-Flow	**Sample Method**	Low-Flow
Sample Time	14:00	**Volumes Purged**	0.66	**Sample ID**	G6M-04-03X	**Sampled by**	Diane Champagne
Purge Start	12:50	**Gallons Purged**	4.3	**Replicate/ Code No.**			
Purge End	14:20						

Time	Minutes Elapsed	Rate (mL/min)	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
											Color	Odor
12:55		180	55.4		6.74	0.074	12.6	8.15	12.99	108.01	Pale yellow	No
13:00	5	180	55.4		6.88	0.099	12.1	6.68	13.23	106.03	Pale yellow	No
13:05	5	180	55.41		6.14	0.637	8.69	1.7	12.62	115.2	Pale yellow	No
13:10	5	180	55.41		5.93	12.42	6.76	0.96	12.44	101.1	Pale yellow	No
13:15	5	180	55.41		5.9	1.307	6.42	0.98	12.53	77.8	Pale yellow	No
13:20	5	180	55.41		5.92	1.391	5.74	1.06	13.01	60.8	Pale yellow	No
13:25	5	180	55.41		5.96	1.439	5.59	1.05	13.37	49	Pale yellow	No
13:30	5	180	55.41		5.91	1.595	5.55	1.12	13.05	45.1	Pale yellow	No
13:35	5	180	55.41		5.86	1.526	5.45	1.05	12.65	42.1	Pale yellow	No
13:40	5	180	55.41		5.87	1.567	5.29	1.06	12.47	40.9	Pale yellow	No
13:45	5	180	55.41		5.9	1.588	5.27	1.1	12.48	33.7	Pale yellow	No
13:50	5	180	55.41		5.91	1.592	5.4	1.09	12.65	29.6	Pale yellow	No
13:55	5	180	55.41		5.92	1.599	5.51	1.11	12.75	28.6	Pale yellow	No

Constituent Sampled	Container	Number	Preservative
VOCs			
Dissolved Metals			
Nitrate/Nitrite			
Sulfate			
Sulfide			
Alkalinity			
Methane/Ethane/Ethene			
TOC			

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

mS/cm = milliiSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

Comments:

Well Casing Volume Conversion

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

Well Information

Well Location:		Well Locked at Arrival:	
Condition of Well:		Well Locked at Departure:	
Well Completion:	NA	Key Number To Well:	NA

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

mS/cm = milliiSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

ARCADIS Design & Consultancy for natural and built assets

Project Number	30048392	**Well ID**	G6M-04-07X			**Date**	5/12/2020
Project Name/Location	Devens, Massachusetts					**Weather(°F)**	50, cloudy
Measuring Pt. Description	Top of Casing	**Screen Setting (ft-bmp)**	--	**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	51.5	**Total Depth (ft-bmp)**	135	**Water Column(ft)**	84	**Gallons in Well**	13.57
MP Elevation		**Pump Intake (ft-bmp)**	127	**Purge Method**	Low-Flow	**Sample Method**	Low-Flow
Sample Time	11:55	**Volumes Purged**	0.09	**Sample ID**	G6M-04-07X	**Sampled by**	Gabriel O'Connor
Purge Start	10:57	**Gallons Purged**	1.24				
Purge End	#Error			**Replicate/ Code No.**			

Time	Minutes Elapsed	Rate (mL/min)	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
											Color	Odor
14:45		100	51.5		8.33	329	40	12.67	14.66	-77.3		
14:49	4	100	51.5		7.56	899	30.5	13.3	12.28	-110.9		
14:53	4	100	51.5		7.22	1142	23.6	13.48	11.71	-118.7		
14:58	5	100	51.5		7.17	1171	40	13.4	11.67	-116		
15:03	5	100	51.5		7.11	1231	34.6	12.33	11.52	-108.9		
15:08	5	100	51.5		6.97	1251	22.6	10.97	12.34	-93.6		
15:13	5	100	51.5		6.91	1257	18.4	10.44	11.8	-83.9		

Constituent Sampled	Container	Number	Preservative
VOCs			
Dissolved Metals			
Nitrate/Nitrite			
Sulfate			
Sulfide			
Alkalinity			
Methane/Ethane/Ethene			
TOC			

Comments: uS/cm turbidity unit

Well Casing Volume Conversion

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

Well Information

Well Location:
Condition of Well:
Well Completion: NA
Well Locked at Arrival: no
Well Locked at Departure: no
Key Number To Well: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
mS/cm = milliiSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

ARCADIS Design & Consultancy for natural and built assets

Project Number	30048392	**Well ID**	G6M-04-10A			**Date**	5/12/2020
Project Name/Location	Devens, Massachusetts					**Weather(°F)**	12C, Sunny, Light Breeze
Measuring Pt. Description	Top of Casing	**Screen Setting (ft-bmp)**	--	**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	11.12	**Total Depth (ft-bmp)**	41.92	**Water Column(ft)**	31	**Gallons in Well**	5
MP Elevation		**Pump Intake (ft-bmp)**	38	**Purge Method**	Low-Flow	**Sample Method**	Low-Flow
Sample Time	15:35	**Volumes Purged**	0.58	**Sample ID**	G6M-04-10A	**Sampled by**	Desmond Bedard
Purge Start	14:35	**Gallons Purged**	2.9	**Replicate/ Code No.**			
Purge End	16:00						

Time	Minutes Elapsed	Rate (mL/min)	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
											Color	Odor
14:35		130	11.15		6.22	0.637	48.2	1.63	10.22	50.9	None; clear	Nne
14:40	5	130	11.2		6.07	0.637	52	54	9.98	53.8	None; clear	Nne
14:45	5	130	11.2		6.22	0.628	58.3	0.57	9.95	44.1	None; clear	Nne
14:50	5	130	11.2		6.19	0.625	53.3	0.51	9.94	43.9	None; clear	Nne
14:55	5	130	11.2		6.19	0.62	41.4	0.4	9.81	42	None; clear	Nne
15:00	5	130	11.2		6.23	0.622	44.5	0.35	9.8	39.5	None; clear	Nne
15:05	5	130	11.2		6.23	0.622	58.7	0.32	9.77	38.8	None; clear	Nne
15:10	5	130	11.2		6.22	0.621	38.2	0.28	9.75	38.2	None; clear	Nne
15:15	5	130	11.2		6.23	0.63	39.9	0.26	9.78	35.2	None; clear	Nne
15:20	5	130	11.2		6.25	0.624	29.4	0.27	9.85	33.1	None; clear	Nne
15:25	5	130	11.2		6.25	0.626	31.1	0.25	9.8	30.1	None; clear	Nne
15:30	5	130	11.2		6.26	0.628	30.8	0.25	9.88	29.8	None; clear	Nne

Constituent Sampled	Container	Number	Preservative
VOCs			
Dissolved Metals			
Nitrate/Nitrite			
Sulfate			
Sulfide			
Alkalinity			
Methane/Ethane/Ethene			
TOC			

Comments:

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

mS/cm = milliiSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

Well Casing Volume Conversion

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

Well Information

Well Location:	AOC-50 Near former parachute facility	Well Locked at Arrival:	yes
Condition of Well:	Good	Well Locked at Departure:	yes
Well Completion:	NA	Key Number To Well:	NA

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

mS/cm = milliiSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

ARCADIS Design & Consultancy for natural and built assets

Project Number	30048392	**Well ID**	G6M-07-02X			**Date**	5/12/2020
Project Name/Location	Devens, Massachusetts					**Weather(°F)**	12C, Sunny, Light Breeze
Measuring Pt. Description	Top of Casing	**Screen Setting (ft-bmp)**	--	**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	12.15	**Total Depth (ft-bmp)**	29.9	**Water Column(ft)**	18	**Gallons in Well**	2.88
MP Elevation		**Pump Intake (ft-bmp)**	25	**Purge Method**	Low-Flow	**Sample Method**	Low-Flow
Sample Time	13:35	**Volumes Purged**	1.2	**Sample ID**	G6M-07-02X	**Sampled by**	Desmond Bedard
Purge Start	11:50	**Gallons Purged**	3.7	**Replicate/ Code No.**	DB-051220		
Purge End	13:25						

Time	Minutes Elapsed	Rate (mL/min)	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
											Color	Odor
11:50		180	12.15		6.31	0.646	51.4	1.1	9.63	50.8	None; clear	None
12:05	15	140	15.04		9.42	0.633	64.5	0.85	9.41	45.6	None; clear	None
12:10	5	140	15.48		6.44	0.625	58.2	0.71	9.64	38.4	None; clear	None
12:15	5	150	16.03		6.42	0.634	50.8	0.71	9.53	30.8	None; clear	None
12:20	5	150	16.38		6.41	0.636	45.7	0.74	9.82	29.3	None; clear	None
12:25	5	140	16.68		6.5	0.644	50.4	0.75	9.88	21.2	None; clear	None
12:30	5	149	16.86		6.51	0.637	49.2	0.81	9.8	20.6	None; clear	None
12:35	5	140	17.02		6.51	0.639	53.6	0.6	9.79	19.2	None; clear	None
12:40	5	140	17.29		6.51	0.632	51.2	0.47	9.68	18.3	None; clear	None
12:45	5	140	17.33		6.53	0.632	53.2	0.45	9.74	16.9	None; clear	None
12:50	5	140	17.38		6.56	0.626	53	0.43	9.72	15.8	None; clear	None
12:55	5	140	17.43		6.55	0.621	27.8	0.37	9.71	15.1	None; clear	None
13:00	5	140	17.46		6.61	0.625	28.2	0.36	9.88	7.9	None; clear	None
13:05	5	140	17.5		6.59	0.612	29.5	0.33	9.87	6.8	None; clear	None
13:10	5	140	17.55		6.58	0.617	28.9	0.33	9.8	6.9	None; clear	None
13:15	5	140	17.58		6.58	0.62	27.8	0.32	9.79	7	None; clear	None

Constituent Sampled	**Container**	**Number**	**Preservative**
VOCs			
Dissolved Metals			
Nitrate/Nitrite			
Sulfate			

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

mS/cm = milliiSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

Sulfide			
Alkalinity			
Methane/Ethane/Ethene			
TOC			

Comments: Initial 15min spent troubleshooting pump - pumped ~80% of that 15 min at ~180 mL/min

Well Casing Volume Conversion

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

Well Information

Well Location:	AOC 50 - By former parachute building	Well Locked at Arrival:	yes
Condition of Well:	Good	Well Locked at Departure:	yes
Well Completion:	Stick-up	Key Number To Well:	NA

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

mS/cm = milliiSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

ARCADIS Design & Consultancy for natural and built assets

Project Number	30048392	**Well ID**	G6M-13-02X			**Date**	5/12/2020
Project Name/Location	Devens, Massachusetts					**Weather(°F)**	Cloudy, very windy 46*
Measuring Pt. Description	Top of Casing	**Screen Setting (ft-bmp)**	--	**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	57.9	**Total Depth (ft-bmp)**	125	**Water Column(ft)**	67	**Gallons in Well**	10.9
MP Elevation		**Pump Intake (ft-bmp)**	120	**Purge Method**	Low-Flow	**Sample Method**	Low-Flow
Sample Time	09:45	**Volumes Purged**	0.29	**Sample ID**	G6M-13-02X	**Sampled by**	Diane Champagne
Purge Start	09:00	**Gallons Purged**	3.2	**Replicate/ Code No.**			
Purge End	10:00						

Time	Minutes Elapsed	Rate (mL/min)	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
											Color	Odor
09:20		160	57.9		6.24	1.008	8.77	1.5	12.06	0	Colorless	Yes
09:25	5	200	57.9		6.05	0.999	36.1	0.84	11.96	-7.6	Colorless	Yes
09:30	5	200	57.9		5.99	0.998	12.8	0.79	11.98	-10.1	Colorless	Yes
09:35	5	200	57.9		5.99	1.004	12.8	0.77	11.87	-11.9	Colorless	Yes
09:41	6	200	57.9		5.98	1.007	12.7	0.82	11.92	-13.9	Colorless	Yes

Constituent Sampled	**Container**	**Number**	**Preservative**
VOCs			
Dissolved Metals			
Nitrate/Nitrite			
Sulfate			
Sulfide			
Alkalinity			
Methane/Ethane/Ethene			
TOC			

Comments:

Well Casing Volume Conversion

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

Well Information

Well Location: Just off airstrip asphalt
Condition of Well: Good
Well Completion: Flush mount
Well Locked at Arrival: no
Well Locked at Departure: no
Key Number To Well: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
mS/cm = milliiSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

ARCADIS Design & Consultancy for natural and built assets

Project Number	30048392	**Well ID**	G6M-13-05X			**Date**	5/12/2020
Project Name/Location	Devens, Massachusetts					**Weather(°F)**	Cloudy, very windy 52*
Measuring Pt. Description	Top of Casing	**Screen Setting (ft-bmp)**	--	**Casing Diameter (in)**	2	**Well Casing Material**	NA
Static Water Level (ft-bmp)	12.78	**Total Depth (ft-bmp)**	55	**Water Column(ft)**	42	**Gallons in Well**	6.86
MP Elevation		**Pump Intake (ft-bmp)**	50	**Purge Method**	Low-Flow	**Sample Method**	Low-Flow
Sample Time	15:50	**Volumes Purged**	0.48	**Sample ID**	G6M-13-05X	**Sampled by**	Diane Champagne
Purge Start	14:50	**Gallons Purged**	3.3	**Replicate/ Code No.**			
Purge End	16:20						

Time	Minutes Elapsed	Rate (mL/min)	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
											Color	Odor
14:50		140	13.13		6.57	1.024	19.1	0.94	12.14	-5.3	Very pale orange	No
14:55	5	140	13.13		6.19	1.023	17.9	0.63	12.26	-25.4	Very pale orange	No
15:00	5	140	13.13		6.22	1.029	10.7	0.63	12.08	-35.3	Very pale orange	No
15:05	5	140	13.13		6.25	1.022	9.9	0.67	12.39	-40.2	Very pale orange	No
15:10	5	140	13.13		6.29	1.023	10.7	0.62	12.17	-46.5	Very pale orange	No
15:15	5	140	13.13		6.25	1.014	9.8	0.62	12.41	-49.2	Very pale orange	No
15:20	5	140	13.13		6.43	1.015	8.4	0.59	12.42	-50.6	Very pale orange	No
15:25	5	140	13.13		6.27	1.012	7.9	0.6	12.19	-50.5	Very pale orange	No
15:30	5	140	13.13		6.32	1.01	7.4	0.62	12.83	-55.2	Very pale orange	No
15:35	5	140	13.13		6.27	1.012	7.5	0.61	12.36	-54.7	Very pale orange	No
15:40	5	140	13.13		6.3	1.007	7.1	0.62	12.67	-56.9	Very pale orange	No
15:46	6	140	13.13		6.3	1.007	7.3	0.6	12.67	-54.2	Very pale orange	No

Constituent Sampled	**Container**	**Number**	**Preservative**
VOCs			
Dissolved Metals			
Nitrate/Nitrite			
Sulfate			
Sulfide			
Alkalinity			
Methane/Ethane/Ethene			
TOC			

Comments:

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

mS/cm = milliiSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

Well Casing Volume Conversion

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

Well Information

Well Location:	Near parachute tower	Well Locked at Arrival:	yes
Condition of Well:	Good	Well Locked at Departure:	yes
Well Completion:	Stick-up	Key Number To Well:	3753

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

mS/cm = milliiSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

ARCADIS Design & Consultancy for natural and built assets

Project Number	30048392	**Well ID**	XSA-12-96X			**Date**	5/12/2020
Project Name/Location	Devens, Massachusetts					**Weather(°F)**	50, cloudy
Measuring Pt. Description	Top of Casing	**Screen Setting (ft-bmp)**	--	**Casing Diameter (in)**	2	**Well Casing Material**	Steel
Static Water Level (ft-bmp)	51.5	**Total Depth (ft-bmp)**	131	**Water Column(ft)**	80	**Gallons in Well**	12.92
MP Elevation		**Pump Intake (ft-bmp)**		**Purge Method**	Low-Flow	**Sample Method**	Low-Flow
Sample Time	16:40	**Volumes Purged**	0.11	**Sample ID**	XSA-12-96X	**Sampled by**	Gabriel O'Connor
Purge Start	16:11	**Gallons Purged**	1.4	**Replicate/ Code No.**			
Purge End	17:03						

Time	Minutes Elapsed	Rate (mL/min)	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
											Color	Odor
16:11		100	51.5		6.82	1261	8.81	9.26	15.36	-69.2	Light brown; sheen	No
16:17	6	100	51.5		6.74	974	8.79	9.91	11.32	-58	Light brown; sheen	No
16:22	5	100	51.5		6.72	1240	9.29	10.04	11.69	-67.4	Light brown; sheen	No
16:26	4	100	51.5		6.71	1236	8.62	9.95	11.8	-64.9	Light brown; sheen	No
16:31	5	100	51.5		6.76	1237	8.94	9.89	11.5	-64.3	Light brown; sheen	No

Constituent Sampled	**Container**	**Number**	**Preservative**
VOCs			
Dissolved Metals			
Nitrate/Nitrite			
Sulfate			
Sulfide			
Alkalinity			
Methane/Ethane/Ethene			
TOC			

Comments: Fulcrum lost the record after initial 35 min purge. Started over at 1600, sampled when stable. Turbidity units uS/cm. Inconsistent tone from water level meter

Well Casing Volume Conversion

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

Well Information

Well Location:
Condition of Well:
Well Completion: NA
Well Locked at Arrival: no
Well Locked at Departure: no
Key Number To Well: NA

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
mS/cm = milliiSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter
mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

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

mS/cm = milliiSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

ARCADIS Design & Consultancy for natural and built assets

Project Number	30048392	**Well ID**	G6M-03-07X			**Date**	5/13/2020
Project Name/Location	Devens, Massachusetts					**Weather(°F)**	Cloudy, very windy 46*
Measuring Pt. Description	Top of Casing	**Screen Setting (ft-bmp)**	--	**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	55	**Total Depth (ft-bmp)**	90	**Water Column(ft)**	35	**Gallons in Well**	5.69
MP Elevation		**Pump Intake (ft-bmp)**	85	**Purge Method**	Low-Flow	**Sample Method**	Low-Flow
Sample Time	10:25	**Volumes Purged**	0.64	**Sample ID**	G6M-03-07x	**Sampled by**	Diane Champagne
Purge Start	09:00	**Gallons Purged**	3.6	**Replicate/ Code No.**			
Purge End	10:50						

Time	Minutes Elapsed	Rate (mL/min)	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
											Color	Odor
09:11		140	55		6.38	0.577	28.2	8.56	11.16	134.8	Pale orange	No
09:34	23	140	55		6.25	0.193	10.1	1.07	11.17	80	Pale orange	No
09:45	11	120	55		6.22	0.207	10.7	0.54	11.71	64	Pale orange	No
09:51	6	120	55		6.14	0.266	9.9	0.44	11.75	59.1	Pale orange	No
09:55	4	120	55		6.07	0.318	9.6	0.43	11.83	57.9	Pale orange	No
10:00	5	120	55		6.04	0.382	8.9	0.42	11.78	51.1	Pale orange	No
10:05	5	120	55		6	0.482	8.5	0.46	11.97	44.4	Pale orange	No
10:10	5	120	55		6.04	0.511	8.7	0.49	12.01	39.9	Pale orange	No
10:15	5	120	55		6.04	0.499	8.4	0.49	11.85	36.5	Pale orange	No
10:20	5	120	55		6.01	0.498	8.6	0.51	11.86	32.1	Pale orange	No

Constituent Sampled	**Container**	**Number**	**Preservative**
VOCs			
Dissolved Metals			
Nitrate/Nitrite			
Sulfate			
Sulfide			
Alkalinity			
Methane/Ethane/Ethene			
TOC			

Comments: Dedicated micro bladder pump installed

Well Casing Volume Conversion

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

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

mS/cm = milliiSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

Well Information

Well Location:	Area1	Well Locked at Arrival:	no
Condition of Well:		Well Locked at Departure:	no
Well Completion:	Flush mount	Key Number To Well:	NA

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

mS/cm = milliiSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

ARCADIS Design & Consultancy for natural and built assets

Project Number	30048392	**Well ID**	G6M-07-01X			**Date**	5/13/2020
Project Name/Location	Devens, Massachusetts					**Weather(°F)**	Cloudy, very windy 46*
Measuring Pt. Description	Top of Casing	**Screen Setting (ft-bmp)**	--	**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	52.22	**Total Depth (ft-bmp)**	98	**Water Column(ft)**	46	**Gallons in Well**	7.44
MP Elevation		**Pump Intake (ft-bmp)**	95	**Purge Method**	Low-Flow	**Sample Method**	Low-Flow
Sample Time	13:35	**Volumes Purged**	0.48	**Sample ID**	G6M-07-01X	**Sampled by**	Diane Champagne
Purge Start	12:35	**Gallons Purged**	3.6	**Replicate/ Code No.**			
Purge End	14:00						

Time	Minutes Elapsed	Rate (mL/min)	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox (mV)	Appearance	
											Color	Odor
12:40		160	52.46		6.18	1.017	29.1	2.59	13.85	130.4	Pale yellow	No
12:45	5	160	52.46		6.17	1.014	20.9	2.36	13.91	127.9	Pale yellow	No
12:50	5	160	52.46		6.13	1.015	17.2	2.09	13.59	113.5	Pale yellow	No
12:55	5	160	52.46		6.13	1.013	18.3	2.1	13.56	112.8	Pale yellow	No
13:00	5	160	52.46		6.16	1.012	10.6	2.06	13.68	107.1	Pale yellow	No
13:05	5	160	52.46		6.13	1.005	6.04	2.06	13.79	102.6	Pale yellow	No
13:10	5	160	52.46		6.15	1.003	5.5	2.07	13.83	100.9	Pale yellow	No
13:15	5	160	52.46		6.12	0.995	5.2	2.13	13.82	100.2	Pale yellow	No
13:20	5	160	52.46		6.12	0.987	4.24	2.23	13.79	100.1	Pale yellow	No
13:25	5	160	52.46		6.15	0.983	3.99	2.23	13.91	98.8	Pale yellow	No
13:30	5	160	52.46		6.12	0.972	3.81	2.3	13.82	100.5	Pale yellow	No

Constituent Sampled	Container	Number	Preservative
VOCs			
Dissolved Metals			
Nitrate/Nitrite			
Sulfate			
Sulfide			
Alkalinity			
Methane/Ethane/Ethene			
TOC			

Comments:

Well Casing Volume Conversion

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

mS/cm = milliiSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

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

Well Information

Well Location:	Inside fence area 2	Well Locked at Arrival:	no
Condition of Well:		Well Locked at Departure:	no
Well Completion:	Flush mount	Key Number To Well:	NA

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

mS/cm = milliiSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

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Synoptic Groundwater Gauging Log

Client:	USACE
Project Name/Location:	Devens, Massachusetts
Date(s):	10/21/2020
Sampler(s):	Nicholas Burch Eric Fowler Diane Champagne
Equipment:	water probe

Well	Date	Time	Depth to Water (ft)	Well Depth (ft)	Remarks
G6M-02-01X	10/21/2020	11:11:00	55.80	89.30	
G6M-02-03X	10/21/2020	09:16:00	59.97	105.40	
G6M-02-04X	10/21/2020	09:25:00	61.91	108.85	
G6M-02-06X	10/21/2020	11:39:00	8.16	67.49	
G6M-02-07X	10/21/2020	11:52:00	9.38	40.49	
G6M-02-08X	10/21/2020	09:03:00	14.73	72.02	
G6M-02-11X	10/21/2020	10:31:00	61.76	138.90	
G6M-02-12X	10/21/2020	10:44:00	60.36	137.69	
G6M-02-13X	10/21/2020	09:35:00	103.50	121.69	
G6M-03-07X	10/21/2020	12:35:00	58.43	89.61	
G6M-03-08X	10/21/2020	10:55:00	57.63	142.22	
G6M-03-09X	10/21/2020	11:03:00	56.90	143.68	
G6M-03-10X	10/21/2020	11:13:00	63.75	139.26	
G6M-04-01X	10/21/2020	11:14:00	53.90	90.40	
G6M-04-02X	10/21/2020	12:23:00	61.56	93.65	
G6M-04-03X	10/21/2020	11:29:00	58.33	94.00	
G6M-04-04X	10/21/2020	11:56:00	59.45	104.00	
G6M-04-05X	10/21/2020	10:28:00	56.20	112.20	
G6M-04-06X	10/21/2020	10:33:00	62.50	105.85	
G6M-04-07X	10/21/2020	10:38:00	62.30	131.55	
G6M-04-08X	10/21/2020	16:06:00	7.90	93.10	
G6M-04-09X	10/21/2020	08:28:00	33.52	67.25	
G6M-04-10A	10/21/2020	09:15:00	14.42	42.00	
G6M-04-10X	10/21/2020	09:18:00	15.03	63.31	
G6M-04-11X	10/21/2020	08:46:00	21.01	47.02	
G6M-04-13X	10/21/2020	09:19:00	11.25	41.80	
G6M-04-14X	10/21/2020	08:15:00	9.06	92.60	
G6M-04-15X	10/21/2020	08:34:00	44.11	81.83	
G6M-04-22X	10/21/2020	08:41:00	47.65	86.24	
G6M-04-31X	10/21/2020	15:29:00	47.40	81.14	
G6M-06-01X	10/21/2020	09:49:00	62.50	127.30	
G6M-07-01X	10/21/2020	11:22:00	55.25	94.95	
G6M-07-02X	10/21/2020	11:56:00	15.40	29.65	
G6M-13-01X	10/21/2020	09:53:00	64.80	138.20	
G6M-13-02X	10/21/2020	12:07:00	61.13	127.66	

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Synoptic Groundwater Gauging Log

Client:	USACE
Project Name/Location:	Devens, Massachusetts
Date(s):	10/21/2020
Sampler(s):	Nicholas Burch Eric Fowler Diane Champagne
Equipment:	water probe

Well	Date	Time	Depth to Water (ft)	Well Depth (ft)	Remarks
G6M-13-03X	10/21/2020	15:06:00	59.48	91.94	
G6M-13-04X	10/21/2020	10:00:00	64.10	137.20	
G6M-13-05X	10/21/2020	08:52:00	15.90	56.50	
G6M-13-06X	10/21/2020	08:57:00	15.48	62.00	
G6M-18-01	10/21/2020	09:25:00	62.00	125.70	
G6M-18-02	10/21/2020	09:34:00	66.75	137.27	
G6M-95-19X	10/21/2020	09:38:00	14.18	58.45	
G6M-95-20X	10/21/2020	09:24:00	14.75	24.80	
G6M-96-22A	10/21/2020	10:59:00	6.67	62.70	
G6M-96-22B	10/21/2020	10:54:00	7.07	71.70	
G6M-97-05B	10/21/2020	15:14:00	66.70	137.20	
G6M-97-28X	10/21/2020	10:09:00	60.10	105.45	
G6P-97-05X	10/21/2020	14:51:00	28.88	29.90	
MW-3	10/21/2020	10:10:00	64.55	137.10	
MW-7	10/21/2020	10:15:00	62.65	134.50	
XSA-12-95X	10/21/2020	11:00:00	63.85	131.60	
XSA-12-96X	10/21/2020	10:51:00	68.80	132.00	
XSA-12-97X	11/20/2020	11:00:00	69.62	133.35	
XSA-12-98X	11/5/2020	8:24:00	8.05	73.20	

O2F0329AB, 02F0329AB, Devens, 30048392

Created	2020-05-11 20:25:00 UTC by Diane Champagne
Updated	2020-05-11 20:30:01 UTC by Diane Champagne
Location	42.5726823974797, -71.6097850911986
Meter ID	O2F0329AB
Equipment Serial Number	02F0329AB
Client	USACE
Project	Devens
Project Number	30048392
Name of Sampler	Champagne

Notes: (1) Always wait for meter to stabilize before recording any readings. (2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth). (3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification known?	No

DO DEP SOP FT 1500

Name	Champagne
Barometer (mmHg)	748.2
Meter DO (mg/L)	10.09
Percent DO	99.3
Probe Charge	N/A
Probe Gain	N/A
Pass/Fail	Pass

DO Acceptance criteria from Table ± 0.3 mg/L. Rapid-Pulse Sensors: DO Gain Range 0.7 to 1.4; DO Charge Range 25-75. Optical: DO gain range 0.85 to 1.15 (Pro DSS 0.75 to 1.50); DO charge N/A. Steady-state & Galvanic Sensors: DO Gain & Charge N/A.

Specific Conductivity FT 1200

2020-05-11, 08:37

Make sure to bracket your readings (i.e. Calibration (1000 uS/cm), ICV (10,000 uS/cm), ICV (100 uS/cm)

Name	Champagne
Date	2020-05-11
Time	08:37
Time Zone	Eastern
Units	µS/cm
Standard Value	1.413
Meter Reading	1.414
Pass/Fail	Pass
Percent difference	0.07
Conductivity Acceptance	Within 5%

Conductivity Acceptance criteria ± 5%

pH DEP SOP FT 1100

Name	Champagne
Date	2020-05-11
Time	08:27
Time Zone	Eastern
pH Buffer SU	7
Meter Reading (SU)	7.01
pH Difference	0.01
pH Acceptance	Within 0.2 standard units
pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50; mV pH 4 Range +180 ± 50; mV pH 10 Range -180 ± 50	

Depth Sensor (Daily Calibration & ICV)

Does meter have a depth sensor that will be used to measure total depth & sample depth?	No

Depth Calibration

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria ± 5 % or ± 0.05m, whichever is greater.	
Do you need to calibrate other standards?	Yes

Other Calibrations

Units	Ntu
Name	Champagne
Date	2020-05-11
Time	08:29
Time Zone	Eastern
Solution Concentration	10
Meter Reading	10

Devens

Created	2020-05-13 16:13:24 UTC by Desmond Bedard
Updated	2020-05-13 16:15:30 UTC by Brian Webb
Location	42.5429015793302, -71.5849948581975

NOTE: For general use only. State specific or regulatory requirements for calibration are not included in this form. Please refer to Site project team for specific requirements.

This app is best used to calibrate equipment with auto-cal solutions or turbidity only solutions. Use of this app for three point calibrations is not advised.

Project Details

Project Name	Devens
Project Number	30048392
Client	USACE Civil Works
Model	Geotech portable turbidity meter
Model	Geotech portable turbidity meter
Serial Number(s)	19011937
Sampler	Desmond Bedard
Date	2020-05-12
Calibration Type?	Turbidity Calibration
Calibration Type?	Turbidity Calibration

Turbidity Calibration

Lot Number	231D
Expiration Date	2020-09-30

10:54, 1.22, 0.08, yes

Pre Calibration	1.22
Post Calibration	0.08
Calibration Within Range	Yes
Time	10:54

Signed



Signed 2020-05-13 16:15:11 UTC

Date	2020-05-12
Checked By	Desmond Bedard
Date	2020-05-12

Devens

Created	2020-05-12 20:40:49 UTC by Diane Champagne
Updated	2020-05-12 20:55:42 UTC by Brian Webb
Location	42.5762250088552, -71.603731345452

NOTE: For general use only. State specific or regulatory requirements for calibration are not included in this form. Please refer to Site project team for specific requirements.

This app is best used to calibrate equipment with auto-cal solutions or turbidity only solutions. Use of this app for three point calibrations is not advised.

Project Details

Project Name	Devens
Project Number	30048392
Client	USACE Civil Works
Model	Ysi
Model	Ysi
Sampler	Diane champagne
Date	2020-05-12
Calibration Type?	Auto and Turbidity Calibration
Calibration Type?	Both

Turbidity Calibration

08:40, 14.4, 10, yes

Pre Calibration	14.4
Post Calibration	10
Calibration Within Range	Yes
Time	08:40

Devens

Created	2020-05-13 13:00:15 UTC by Diane Champagne
Updated	2020-05-13 13:01:02 UTC by Brian Webb
Location	42.5745744025731, -71.6061765142452

NOTE: For general use only. State specific or regulatory requirements for calibration are not included in this form. Please refer to Site project team for specific requirements.

This app is best used to calibrate equipment with auto-cal solutions or turbidity only solutions. Use of this app for three point calibrations is not advised.

Project Details

Project Name	Devens
Project Number	30048392
Model	Ysi
Model	Ysi
Sampler	Diane champagne
Date	2020-05-13
Calibration Type?	Turbidity Calibration
Calibration Type?	Turbidity Calibration

Turbidity Calibration

09:00, 10.1, 10.1, yes

Pre Calibration	10.1
Post Calibration	10.1
Calibration Within Range	Yes
Time	09:00

10/14

Created	2020-10-15 14:36:32 UTC by Nicholas Burch
Updated	2020-10-15 14:41:28 UTC by Nicholas Burch
Location	42.5722348096945, -71.6098242584544

NOTE: For general use only. State specific or regulatory requirements for calibration are not included in this form. Please refer to Site project team for specific requirements.

This app is best used to calibrate equipment with auto-cal solutions or turbidity only solutions. Use of this app for three point calibrations is not advised.

Project Details

Project Name	10/14
Client	US Army Corps Of Engineers - General
Model	YSI ProDSS
Serial Number(s)	160100431
Sampler	Nick Burch
Date	2020-10-14
Calibration Type?	Single Point Calibration

Single Point Calibration

Expiration Date	2020-10-15
Calibrated Parameters	pH, Conductivity, ORP, DO, Turbidity

08:30

Calibration Range for pH - +/- 0.2 S.U	
Time	08:30
pH Pre Calibration	4.12
pH Post Calibration	4.12
pH Calibration Within Range	Yes

08:35

Calibration Range for pH - +/- 0.2 S.U	
Time	08:35
pH Pre Calibration	7.21
pH Post Calibration	7.21
pH Calibration Within Range	Yes

08:40

Calibration Range for pH - +/- 0.2 S.U	
Time	08:40
pH Pre Calibration	10.13
pH Post Calibration	10.12
pH Calibration Within Range	Yes

1244

Calibration Range for Conductivity - +/- 1% of the calibration standard	
Time	08:45
Conductivity Pre Calibration	1244

Conductivity Post Calibration	1244
Conductivity Calibration Within Range	Yes

246.3

Calibration Range for ORP- +/- 25mV	
Time	08:50
ORP Pre Calibration	246.3
ORP Post Calibration	247.1
ORP Calibration Within Range	Yes

99.1

Calibration Range for DO- Atmospheric	
Time	08:55
DO Pre Calibration	99.1
DO Post Calibration	99.3
DO Calibration Within Range	Yes

-0.99

Calibration Range for Turbidity - +/- 5% of the calibration standard	
Time	09:00
Turbidity Pre Calibration	-0.99
Turbidity Post Calibration	0
Turbidity Calibration Within Range	No

Signed



Signed 2020-10-15 14:41:08 UTC

Date	2020-10-14

YSI dss pro, 19j103220, Devens , 30048392

Created	2020-10-15 14:19:26 UTC by Diane Champagne
Updated	2020-10-15 14:23:34 UTC by Diane Champagne
Location	42.5727127399692, -71.6090524290424
Meter ID	YSI dss pro
Equipment Serial Number	19j103220
Project	Devens
Project Number	30048392
Name of Sampler	Diane Champagne

Notes: (1) Always wait for meter to stabilize before recording any readings. (2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth). (3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification known?	N/A

DO DEP SOP FT 1500

Name	Diane Champagne
Temperature (degrees C)	14.4
Barometer (mmHg)	754.9
Meter DO (mg/L)	99
Percent DO	99.3
Probe Charge	N/A
Probe Gain	N/A
Pass/Fail	Pass
Lab/Field	Field

DO Acceptance criteria from Table ± 0.3 mg/L. Rapid-Pulse Sensors: DO Gain Range 0.7 to 1.4; DO Charge Range 25-75. Optical: DO gain range 0.85 to 1.15 (Pro DSS 0.75 to 1.50); DO charge N/A. Steady-state & Galvanic Sensors: DO Gain & Charge N/A.

Specific Conductivity FT 1200

Calibration, 2020-10-14, 08:21

Make sure to bracket your readings (i.e. Calibration (1000 uS/cm), ICV (10,000 uS/cm), ICV (100 uS/cm)

Type	Calibration
Name	Diane Champagne
Date	2020-10-14
Time	08:21
Time Zone	Eastern
Units	µS/cm
Meter Reading	1.413
Pass/Fail	Pass
Lab/Field	Field
Conductivity Acceptance	Please enter values above in standard value and meter reading

Conductivity Acceptance criteria ± 5%

pH DEP SOP FT 1100

Name	Diane Champagne
Time Zone	Eastern
pH Buffer SU	7
Meter Reading (SU)	7
pH Difference	0
pH Acceptance	Within 0.2 standard units
Pass/Fail	Pass
Lab/Field	Field
pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50; mV pH 4 Range +180 ± 50; mV pH 10 Range -180 ± 50	

Name	Diane Champagne
Time Zone	Eastern
pH Buffer SU	4
Meter Reading (SU)	3.97
pH Difference	0.03
pH Acceptance	Within 0.2 standard units
Pass/Fail	Pass
Lab/Field	Field
pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50; mV pH 4 Range +180 ± 50; mV pH 10 Range -180 ± 50	

Depth Sensor (Daily Calibration & ICV)

Does meter have a depth sensor that will be used to measure total depth & sample depth?	No

Depth Calibration

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria ± 5 % or ± 0.05m, whichever is greater.	
Do you need to calibrate other standards?	No

General Comments Section

Comments	Dada from 10.14.20

10/15

Created	2020-10-15 13:52:19 UTC by Nicholas Burch
Updated	2020-10-15 14:41:45 UTC by Nicholas Burch
Location	42.5722557910684, -71.6099350509655

NOTE: For general use only. State specific or regulatory requirements for calibration are not included in this form. Please refer to Site project team for specific requirements.

This app is best used to calibrate equipment with auto-cal solutions or turbidity only solutions. Use of this app for three point calibrations is not advised.

Project Details

Project Name	10/15
Client	US Army Corps Of Engineers - General
Model	YSI ProDSS
Serial Number(s)	160100431
Sampler	Nick Burch
Date	2020-10-15
Calibration Type?	Single Point Calibration

Single Point Calibration

Expiration Date	2020-10-16
Calibrated Parameters	pH, Conductivity, ORP, Turbidity, DO

10:00

Calibration Range for pH - +/- 0.2 S.U	
Time	10:00
pH Pre Calibration	4.12
pH Post Calibration	4.13
pH Calibration Within Range	Yes

10:12

Calibration Range for pH - +/- 0.2 S.U	
Time	10:12
pH Pre Calibration	7.21
pH Post Calibration	7.21
pH Calibration Within Range	Yes

10:14

Calibration Range for pH - +/- 0.2 S.U	
Time	10:14
pH Pre Calibration	10.12
pH Post Calibration	10.12
pH Calibration Within Range	Yes

1244

Calibration Range for Conductivity - +/- 1% of the calibration standard	
Time	10:28
Conductivity Pre Calibration	1244

Conductivity Post Calibration	1244
Conductivity Calibration Within Range	Yes

248.3

Calibration Range for ORP- +/- 25mV	
Time	10:24
ORP Pre Calibration	248.3
ORP Post Calibration	246.1
ORP Calibration Within Range	Yes

98.4

Calibration Range for DO- Atmospheric	
Time	10:07
DO Pre Calibration	98.4
DO Post Calibration	99.3
DO Calibration Within Range	Yes

-0.99

Calibration Range for Turbidity - +/- 5% of the calibration standard	
Time	10:18
Turbidity Pre Calibration	-0.99
Turbidity Post Calibration	0
Turbidity Calibration Within Range	No

Signed



Signed 2020-10-15 13:54:11 UTC

Date	2020-10-15

19j103220, Devens , 30048392

Created	2020-10-16 12:20:19 UTC by Diane Champagne
Updated	2020-10-16 12:23:41 UTC by Diane Champagne
Location	42.5763376616338, -71.6032244079482
Meter ID	19j103220
Project	Devens
Project Number	30048392
Name of Sampler	Diane Champagne

Notes: (1) Always wait for meter to stabilize before recording any readings. (2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth). (3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification known?	No

DO DEP SOP FT 1500

2020-10-16, 08:20

Name	Diane Champagne
Date	2020-10-16
Time	08:20
Time Zone	Eastern
Barometer (mmHg)	755.6
Meter DO (mg/L)	9.82
Percent DO	98.7
Probe Charge	N/A
Probe Gain	N/A
Pass/Fail	Pass
Lab/Field	Field

DO Acceptance criteria from Table ± 0.3 mg/L. Rapid-Pulse Sensors: DO Gain Range 0.7 to 1.4; DO Charge Range 25-75. Optical: DO gain range 0.85 to 1.15 (Pro DSS 0.75 to 1.50); DO charge N/A. Steady-state & Galvanic Sensors: DO Gain & Charge N/A.

Specific Conductivity FT 1200

2020-10-16, 08:10

Make sure to bracket your readings (i.e. Calibration (1000 uS/cm), ICV (10,000 uS/cm), ICV (100 uS/cm)

Name	Diane Champagne
Date	2020-10-16
Time	08:10
Time Zone	Eastern
Units	µS/cm
Standard Value	1.413
Meter Reading	1.422
Pass/Fail	Pass
Lab/Field	Field
Percent difference	0.63
Conductivity Acceptance	Within 5%

Conductivity Acceptance criteria ± 5%

pH DEP SOP FT 1100

Name	Diane Champagne
Date	2020-10-16
Time	08:03
Time Zone	Eastern
pH Buffer SU	4
Meter Reading (SU)	4.01
pH Difference	0.01
pH Acceptance	Within 0.2 standard units
Pass/Fail	Pass
Lab/Field	Field

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50; mV pH 4 Range +180 ± 50; mV pH 10 Range -180 ± 50

Name	Diane Champagne
Date	2020-10-16
Time	08:06
Time Zone	Eastern
pH Buffer SU	7
Meter Reading (SU)	6.99
pH Difference	0.01
pH Acceptance	Within 0.2 standard units
Pass/Fail	Pass
Lab/Field	Field

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50; mV pH 4 Range +180 ± 50; mV pH 10 Range -180 ± 50

Depth Sensor (Daily Calibration & ICV)

Does meter have a depth sensor that will be used to measure total depth & sample depth?	No

Depth Calibration

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria ± 5 % or ± 0.05m, whichever is greater.

10/16

Created	2020-10-16 13:27:34 UTC by Nicholas Burch
Updated	2020-10-16 13:50:09 UTC by Nicholas Burch
Location	42.5725323814585, -71.6117769976543

NOTE: For general use only. State specific or regulatory requirements for calibration are not included in this form. Please refer to Site project team for specific requirements.

This app is best used to calibrate equipment with auto-cal solutions or turbidity only solutions. Use of this app for three point calibrations is not advised.

Project Details

Project Name	10/16
Client	US Army Corps Of Engineers - General
Model	YSI ProDSS
Serial Number(s)	160100431 17E101586
Sampler	Nick Burch
Date	2020-10-16
Calibration Type?	Single Point Calibration

Single Point Calibration

Expiration Date	2020-10-17
Calibrated Parameters	pH, Conductivity, ORP, DO, Turbidity

09:10

Calibration Range for pH - +/- 0.2 S.U	
Time	09:10
pH Pre Calibration	3.9
pH Post Calibration	4
pH Calibration Within Range	Yes

09:15

Calibration Range for pH - +/- 0.2 S.U	
Time	09:15
pH Pre Calibration	7.12
pH Post Calibration	7.03
pH Calibration Within Range	Yes

09:20

Calibration Range for pH - +/- 0.2 S.U	
Time	09:20
pH Pre Calibration	10.04
pH Post Calibration	10.07
pH Calibration Within Range	Yes

1.111

Calibration Range for Conductivity - +/- 1% of the calibration standard	
Time	09:30
Conductivity Pre Calibration	1.111

Conductivity Post Calibration	0.04
Conductivity Calibration Within Range	Yes

221.3

Calibration Range for ORP- +/- 25mV	
Time	09:25
ORP Pre Calibration	221.3
ORP Post Calibration	238.7
ORP Calibration Within Range	Yes

102.3

Calibration Range for DO- Atmospheric	
Time	09:00
DO Pre Calibration	102.3
DO Post Calibration	99.3
DO Calibration Within Range	Yes

2.3

Calibration Range for Turbidity - +/- 5% of the calibration standard	
Time	09:05
Turbidity Pre Calibration	2.3
Turbidity Post Calibration	0
Turbidity Calibration Within Range	Yes

Signed



Signed 2020-10-16 13:28:55 UTC

Date	2020-10-16

10/19

Created	2020-10-19 12:59:32 UTC by Nicholas Burch
Updated	2020-10-19 13:20:07 UTC by Nicholas Burch
Location	42.573632720483, -71.608869259052

NOTE: For general use only. State specific or regulatory requirements for calibration are not included in this form. Please refer to Site project team for specific requirements.

This app is best used to calibrate equipment with auto-cal solutions or turbidity only solutions. Use of this app for three point calibrations is not advised.

Project Details

Project Name	10/19
Client	US Army Corps Of Engineers - General
Model	YSI ProDSS
Serial Number(s)	160100431 17E101586
Sampler	Nick Burch
Date	2020-10-19
Calibration Type?	Single Point Calibration

Single Point Calibration

Expiration Date	2020-10-20
Calibrated Parameters	pH, Conductivity, DO, Turbidity, ORP

09:05

Calibration Range for pH - +/- 0.2 S.U	
Time	09:05
pH Pre Calibration	7.15
pH Post Calibration	7.05
pH Calibration Within Range	Yes

09:08

Calibration Range for pH - +/- 0.2 S.U	
Time	09:08
pH Pre Calibration	3.96
pH Post Calibration	4
pH Calibration Within Range	Yes

09:10

Calibration Range for pH - +/- 0.2 S.U	
Time	09:10
pH Pre Calibration	10
pH Post Calibration	10.13
pH Calibration Within Range	Yes

0.99

Calibration Range for Conductivity - +/- 1% of the calibration standard	
Time	09:15
Conductivity Pre Calibration	0.99

Conductivity Post Calibration	0.987
Conductivity Calibration Within Range	Yes

256.9

Calibration Range for ORP- +/- 25mV	
Time	09:13
ORP Pre Calibration	256.9
ORP Post Calibration	245.4
ORP Calibration Within Range	Yes

100.6

Calibration Range for DO- Atmospheric	
Time	09:00
DO Pre Calibration	100.6
DO Post Calibration	103
DO Calibration Within Range	Yes

-1.46

Calibration Range for Turbidity - +/- 5% of the calibration standard	
Time	09:01
Turbidity Pre Calibration	-1.46
Turbidity Post Calibration	0
Turbidity Calibration Within Range	Yes

Signed



Signed 2020-10-19 13:20:03 UTC

Date	2020-10-19

Created	2020-10-19 14:47:22 UTC by Chip Pipala
Updated	2020-10-19 15:43:24 UTC by Chip Pipala
Location	42.5690597, -71.6140084

NOTE: For general use only. State specific or regulatory requirements for calibration are not included in this form. Please refer to Site project team for specific requirements.

This app is best used to calibrate equipment with auto-cal solutions or turbidity only solutions. Use of this app for three point calibrations is not advised.

Project Details

Serial Number(s)	15E102911, 17E101954
Sampler	Chip pipala
Date	2020-10-19
Calibration Type?	Single Point Calibration

Single Point Calibration

Calibrated Parameters	pH, Conductivity, ORP, DO, Turbidity

10:52

Calibration Range for pH - +/- 0.2 S.U	
Time	10:52
pH Pre Calibration	4.05
pH Post Calibration	4

10:55

Calibration Range for pH - +/- 0.2 S.U	
Time	10:55
pH Pre Calibration	9.89
pH Post Calibration	10.09
pH Calibration Within Range	Yes

11:13

Calibration Range for pH - +/- 0.2 S.U	
Time	11:13
pH Pre Calibration	7.15
pH Post Calibration	7.04
pH Calibration Within Range	Yes

1.121

Calibration Range for Conductivity - +/- 1% of the calibration standard	
Time	11:21
Conductivity Pre Calibration	1.121
Conductivity Post Calibration	1.122
Conductivity Calibration Within Range	Yes

235.2

Calibration Range for ORP- +/- 25mV	
Time	11:25

ORP Pre Calibration	235.2
ORP Post Calibration	243
ORP Calibration Within Range	Yes

103.1

Calibration Range for DO- Atmospheric	
Time	11:28
DO Pre Calibration	103.1
DO Post Calibration	100.5
DO Calibration Within Range	Yes

0.1

Calibration Range for Turbidity - +/- 5% of the calibration standard	
Time	11:29
Turbidity Pre Calibration	0.1
Turbidity Post Calibration	0
Turbidity Calibration Within Range	Yes
Date	2020-10-19

10/19

Created	2020-10-19 12:59:32 UTC by Nicholas Burch
Updated	2020-10-19 13:20:07 UTC by Nicholas Burch
Location	42.573632720483, -71.608869259052

NOTE: For general use only. State specific or regulatory requirements for calibration are not included in this form. Please refer to Site project team for specific requirements.

This app is best used to calibrate equipment with auto-cal solutions or turbidity only solutions. Use of this app for three point calibrations is not advised.

Project Details

Project Name	10/19
Client	US Army Corps Of Engineers - General
Model	YSI ProDSS
Serial Number(s)	160100431 17E101586
Sampler	Nick Burch
Date	2020-10-19
Calibration Type?	Single Point Calibration

Single Point Calibration

Expiration Date	2020-10-20
Calibrated Parameters	pH, Conductivity, DO, Turbidity, ORP

09:05

Calibration Range for pH - +/- 0.2 S.U	
Time	09:05
pH Pre Calibration	7.15
pH Post Calibration	7.05
pH Calibration Within Range	Yes

09:08

Calibration Range for pH - +/- 0.2 S.U	
Time	09:08
pH Pre Calibration	3.96
pH Post Calibration	4
pH Calibration Within Range	Yes

09:10

Calibration Range for pH - +/- 0.2 S.U	
Time	09:10
pH Pre Calibration	10
pH Post Calibration	10.13
pH Calibration Within Range	Yes

0.99

Calibration Range for Conductivity - +/- 1% of the calibration standard	
Time	09:15
Conductivity Pre Calibration	0.99

Conductivity Post Calibration	0.987
Conductivity Calibration Within Range	Yes

256.9

Calibration Range for ORP- +/- 25mV	
Time	09:13
ORP Pre Calibration	256.9
ORP Post Calibration	245.4
ORP Calibration Within Range	Yes

100.6

Calibration Range for DO- Atmospheric	
Time	09:00
DO Pre Calibration	100.6
DO Post Calibration	103
DO Calibration Within Range	Yes

-1.46

Calibration Range for Turbidity - +/- 5% of the calibration standard	
Time	09:01
Turbidity Pre Calibration	-1.46
Turbidity Post Calibration	0
Turbidity Calibration Within Range	Yes

Signed



Signed 2020-10-19 13:20:03 UTC

Date	2020-10-19

10/22

Created	2020-10-22 12:30:02 UTC by Nicholas Burch
Updated	2020-10-22 12:54:30 UTC by Nicholas Burch
Location	42.5724277931533, -71.6101860640947

NOTE: For general use only. State specific or regulatory requirements for calibration are not included in this form. Please refer to Site project team for specific requirements.

This app is best used to calibrate equipment with auto-cal solutions or turbidity only solutions. Use of this app for three point calibrations is not advised.

Project Details

Project Name	10/22
Client	US Army Corps Of Engineers - General
Model	YSI ProDSS
Serial Number(s)	160100431 17E101586
Sampler	Nick Burch
Date	2020-10-22
Calibration Type?	Single Point Calibration

Single Point Calibration

Expiration Date	2020-10-23
Calibrated Parameters	pH, Conductivity, ORP, DO, Turbidity

08:41

Calibration Range for pH - +/- 0.2 S.U	
Time	08:41
pH Pre Calibration	4.01
pH Post Calibration	4
pH Calibration Within Range	Yes

08:43

Calibration Range for pH - +/- 0.2 S.U	
Time	08:43
pH Pre Calibration	10.04
pH Post Calibration	10
pH Calibration Within Range	Yes

08:44

Calibration Range for pH - +/- 0.2 S.U	
Time	08:44
pH Pre Calibration	7.2
pH Post Calibration	7
pH Calibration Within Range	Yes

0.86

Calibration Range for Conductivity - +/- 1% of the calibration standard	
Time	08:51
Conductivity Pre Calibration	0.86

Conductivity Post Calibration	0.85
Conductivity Calibration Within Range	Yes

237

Calibration Range for ORP- +/- 25mV	
Time	08:49
ORP Pre Calibration	237
ORP Post Calibration	240
ORP Calibration Within Range	Yes

98.8

Calibration Range for DO- Atmospheric	
Time	08:30
DO Pre Calibration	98.8
DO Post Calibration	100.1
DO Calibration Within Range	Yes

Signed



Signed 2020-10-22 12:30:31 UTC

Date	2020-10-22

Devens

Created	2020-11-05 14:50:22 UTC by Chip Pipala
Updated	2020-11-05 15:27:57 UTC by Chip Pipala
Location	42.5572598, -71.5959943

NOTE: For general use only. State specific or regulatory requirements for calibration are not included in this form. Please refer to Site project team for specific requirements.

This app is best used to calibrate equipment with auto-cal solutions or turbidity only solutions. Use of this app for three point calibrations is not advised.

Project Details

Project Name	Devens
Serial Number(s)	15E102911, 17E101954
Sampler	Connor Rosenbaum
Date	2020-11-05
Calibration Type?	Single Point Calibration

Single Point Calibration

Calibrated Parameters	pH, Conductivity, ORP, DO, Turbidity

09:52

Calibration Range for pH - +/- 0.2 S.U	
Time	09:52
pH Pre Calibration	4
pH Post Calibration	4
pH Calibration Within Range	Yes

09:57

Calibration Range for pH - +/- 0.2 S.U	
Time	09:57
pH Pre Calibration	7.08
pH Post Calibration	7
pH Calibration Within Range	Yes

10:08

Calibration Range for pH - +/- 0.2 S.U	
Time	10:08
pH Pre Calibration	10.15
pH Post Calibration	10.15
pH Calibration Within Range	Yes

0.001

Calibration Range for Conductivity - +/- 1% of the calibration standard	
Time	10:18
Conductivity Pre Calibration	0.001
Conductivity Post Calibration	0.001
Conductivity Calibration Within Range	Yes

245.6

Calibration Range for ORP- +/- 25mV	
Time	10:23
ORP Pre Calibration	245.6
ORP Post Calibration	245.9
ORP Calibration Within Range	Yes

11.02

Calibration Range for DO- Atmospheric	
Time	10:25
DO Pre Calibration	11.02
DO Post Calibration	10.99
DO Calibration Within Range	Yes

0

Calibration Range for Turbidity - +/- 5% of the calibration standard	
Time	10:27
Turbidity Pre Calibration	0
Turbidity Post Calibration	0
Turbidity Calibration Within Range	Yes

Signed



Signed 2020-11-05 15:27:48 UTC

Date	2020-11-05

Devens

Created	2020-11-22 13:32:42 UTC by Desmond Bedard
Updated	2020-11-22 17:39:37 UTC by Desmond Bedard
Location	42.5483462540829, -71.6024650075208

NOTE: For general use only. State specific or regulatory requirements for calibration are not included in this form. Please refer to Site project team for specific requirements.

This app is best used to calibrate equipment with auto-cal solutions or turbidity only solutions. Use of this app for three point calibrations is not advised.

Project Details

Project Name	Devens
Project Number	30048392
Client	USACE Civil Works
Model	YSI Pro Plus
Serial Number(s)	19F101436
Sampler	Desmond Bedard
Date	2020-11-22
Calibration Type?	Single Point Calibration

Single Point Calibration

Calibrated Parameters	pH, Conductivity, ORP, DO, Turbidity

07:51

Calibration Range for pH - +/- 0.2 S.U	
Time	07:51
pH Pre Calibration	7.07
pH Post Calibration	7.01
pH Calibration Within Range	Yes

1.421

Calibration Range for Conductivity - +/- 1% of the calibration standard	
Time	07:59
Conductivity Pre Calibration	1.421
Conductivity Post Calibration	1.414
Conductivity Calibration Within Range	Yes

235.9

Calibration Range for ORP- +/- 25mV	
Time	08:07
ORP Pre Calibration	235.9
ORP Post Calibration	233.8
ORP Calibration Within Range	Yes

0.04

Calibration Range for DO- Atmospheric	
Time	08:25
DO Pre Calibration	0.04

DO Post Calibration	0.01
DO Calibration Within Range	Yes

2.43

Calibration Range for Turbidity - +/- 5% of the calibration standard	
Time	08:35
Turbidity Pre Calibration	2.43
Turbidity Post Calibration	0.17
Turbidity Calibration Within Range	Yes
Notes	Turbidity model is separate - used geotech portable turbidity meter (sn: 18011592)

Signed



Signed 2020-11-22 13:35:45 UTC

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Synoptic Groundwater Gauging Log

Client:	USACE
Project Name/Location:	Devens, Massachusetts
Date(s):	5/13/2020
Sampler(s):	Gabriel O'Connor Desmond Bedard Diane Champagne
Equipment:	water probe

Well	Date	Time	Depth to Water (ft)	Well Depth (ft)	Remarks
MW-3	5/13/2020	08:48:00	60.37	132.90	Cut off old lock (wouldn't open); replaced with new lock (master lock no. 2 [key 2006])
G6M-13-06X	5/11/2020	09:03:00	12.31	62.47	
G6M-03-08X	5/13/2020	09:08:00	53.79	141.70	Cut off old lock (did not have key); replaced with master lock m1 (key 2006)
G6M-04-05X	5/13/2020	09:16:00	54.09	114.50	Cut off old lock (did not have key); replaced with master lock m1 (key 2006)
G6M-02-08X	5/11/2020	09:34:00	11.53	71.99	
G6M-95-19X	5/11/2020	09:39:00	10.81	58.72	
G6M-95-20X	5/11/2020	09:46:00	11.20	25.01	
G6M-04-13X	5/11/2020	09:49:00	12.87	42.02	
G6M-07-02X	5/11/2020	09:53:00	11.97	29.90	
G6M-04-10A	5/11/2020	09:56:00	11.06	42.11	
G6M-04-10X	5/11/2020	09:59:00	11.83	63.46	
G6M-13-05X	5/11/2020	10:05:00	12.70	56.66	
G6M-04-09X	5/11/2020	10:10:00	30.25	66.45	
G6M-04-31X	5/11/2020	10:19:00	44.39	80.95	
G6M-04-22X	5/11/2020	10:22:00	44.57	86.13	
G6M-04-11X	5/11/2020	10:27:00	17.88	47.01	
G6M-04-14X	5/13/2020	10:33:00	6.79	92.50	
G6M-96-22B	5/11/2020	10:34:00	3.91	72.49	
G6M-96-22A	5/11/2020	10:36:00	3.40	52.49	
G6M-04-08X	5/13/2020	10:43:00	5.80	93.55	
G6M-04-15X	5/11/2020	11:18:00	40.86	82.25	
G6M-02-01X	5/11/2020	11:38:00	52.78	90.80	
G6M-07-01X	5/11/2020	11:45:00	52.27	96.32	
G6M-04-01X	5/11/2020	11:52:00	50.94	91.89	
G6M-04-03X	5/11/2020	12:09:00	55.32	94.35	
G6M-04-02X	5/11/2020	12:16:00	61.38	93.09	
G6M-13-01X	5/11/2020	12:18:00	61.50	137.10	
G6M-13-03X	5/11/2020	12:34:00	56.34	91.57	
G6M-03-07X	5/11/2020	12:42:00	55.01	89.49	
G6M-04-04X	5/11/2020	12:49:00	56.17	100.00	Depth >100
G6M-02-03X	5/11/2020	12:56:00	56.51	104.74	
G6M-97-28X	5/11/2020	13:11:00	59.30	107.95	

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Synoptic Groundwater Gauging Log

Client:	USACE
Project Name/Location:	Devens, Massachusetts
Date(s):	5/13/2020
Sampler(s):	Gabriel O'Connor Desmond Bedard Diane Champagne
Equipment:	water probe

Well	Date	Time	Depth to Water (ft)	Well Depth (ft)	Remarks
G6M-02-04X	5/11/2020	13:15:00	58.44	107.61	
G6M-02-13X	5/11/2020	13:24:00	57.49	120.99	
G6M-13-02X	5/11/2020	13:31:00	58.00	126.04	
G6M-18-01	5/11/2020	13:42:00	58.59	126.85	
G6M-18-02	5/11/2020	13:53:00	63.88	137.09	
G6M-97-05B	5/11/2020	14:10:00	63.21	98.04	
G6M-13-04X	5/11/2020	14:27:00	60.90	135.00	
MW-7	5/11/2020	14:48:00	59.23	135.88	
G6M-02-11X	5/11/2020	15:09:00	58.55	128.45	
G6M-02-12X	5/11/2020	15:15:00	57.20	135.40	
G6M-03-09X	5/11/2020	15:20:00	53.78	124.14	
G6M-03-10X	5/11/2020	15:33:00	60.64	137.35	
G6M-04-07X	5/11/2020	15:49:00	59.51	132.88	
G6M-04-06X	5/11/2020	15:54:00	59.90	69.98	
XSA-12-95X	5/11/2020	16:05:00	60.15	161.55	Water level read inconsistently
G6M-02-06X	5/11/2020	16:21:00	5.84	67.25	
XSA-12-96X	5/11/2020	16:34:00	65.06	131.69	
XSA-12-97X	5/11/2020	16:42:00	54.25	145.61	
G6M-02-07X	5/11/2020	16:54:00	6.99	40.25	
XSA-12-98X	5/11/2020	16:58:00	4.18	72.90	
G6P-97-05X	5/11/2020	17:34:00	24.94	44.60	

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Synoptic Groundwater Gauging Log

Client:	USACE
Project Name/Location:	Devens, Massachusetts
Date(s):	10/21/2020
Sampler(s):	Nicholas Burch Eric Fowler Diane Champagne
Equipment:	water probe

Well	Date	Time	Depth to Water (ft)	Well Depth (ft)	Remarks
G6M-02-01X	10/21/2020	11:11:00	55.80	89.30	
G6M-02-03X	10/21/2020	09:16:00	59.97	105.40	
G6M-02-04X	10/21/2020	09:25:00	61.91	108.85	
G6M-02-06X	10/21/2020	11:39:00	8.16	67.49	
G6M-02-07X	10/21/2020	11:52:00	9.38	40.49	
G6M-02-08X	10/21/2020	09:03:00	14.73	72.02	
G6M-02-11X	10/21/2020	10:31:00	61.76	138.90	
G6M-02-12X	10/21/2020	10:44:00	60.36	137.69	
G6M-02-13X	10/21/2020	09:35:00	103.50	121.69	
G6M-03-07X	10/21/2020	12:35:00	58.43	89.61	
G6M-03-08X	10/21/2020	10:55:00	57.63	142.22	
G6M-03-09X	10/21/2020	11:03:00	56.90	143.68	
G6M-03-10X	10/21/2020	11:13:00	63.75	139.26	
G6M-04-01X	10/21/2020	11:14:00	53.90	90.40	
G6M-04-02X	10/21/2020	12:23:00	61.56	93.65	
G6M-04-03X	10/21/2020	11:29:00	58.33	94.00	
G6M-04-04X	10/21/2020	11:56:00	59.45	104.00	
G6M-04-05X	10/21/2020	10:28:00	56.20	112.20	
G6M-04-06X	10/21/2020	10:33:00	62.50	105.85	
G6M-04-07X	10/21/2020	10:38:00	62.30	131.55	
G6M-04-08X	10/21/2020	16:06:00	7.90	93.10	
G6M-04-09X	10/21/2020	08:28:00	33.52	67.25	
G6M-04-10A	10/21/2020	09:15:00	14.42	42.00	
G6M-04-10X	10/21/2020	09:18:00	15.03	63.31	
G6M-04-11X	10/21/2020	08:46:00	21.01	47.02	
G6M-04-13X	10/21/2020	09:19:00	11.25	41.80	
G6M-04-14X	10/21/2020	08:15:00	9.06	92.60	
G6M-04-15X	10/21/2020	08:34:00	44.11	81.83	
G6M-04-22X	10/21/2020	08:41:00	47.65	86.24	
G6M-04-31X	10/21/2020	15:29:00	47.40	81.14	
G6M-06-01X	10/21/2020	09:49:00	62.50	127.30	
G6M-07-01X	10/21/2020	11:22:00	55.25	94.95	
G6M-07-02X	10/21/2020	11:56:00	15.40	29.65	
G6M-13-01X	10/21/2020	09:53:00	64.80	138.20	
G6M-13-02X	10/21/2020	12:07:00	61.13	127.66	

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Synoptic Groundwater Gauging Log

Client:	USACE
Project Name/Location:	Devens, Massachusetts
Date(s):	10/21/2020
Sampler(s):	Nicholas Burch Eric Fowler Diane Champagne
Equipment:	water probe

Well	Date	Time	Depth to Water (ft)	Well Depth (ft)	Remarks
G6M-13-03X	10/21/2020	15:06:00	59.48	91.94	
G6M-13-04X	10/21/2020	10:00:00	64.10	137.20	
G6M-13-05X	10/21/2020	08:52:00	15.90	56.50	
G6M-13-06X	10/21/2020	08:57:00	15.48	62.00	
G6M-18-01	10/21/2020	09:25:00	62.00	125.70	
G6M-18-02	10/21/2020	09:34:00	66.75	137.27	
G6M-95-19X	10/21/2020	09:38:00	14.18	58.45	
G6M-95-20X	10/21/2020	09:24:00	14.75	24.80	
G6M-96-22A	10/21/2020	10:59:00	6.67	62.70	
G6M-96-22B	10/21/2020	10:54:00	7.07	71.70	
G6M-97-05B	10/21/2020	15:14:00	66.70	137.20	
G6M-97-28X	10/21/2020	10:09:00	60.10	105.45	
G6P-97-05X	10/21/2020	14:51:00	28.88	29.90	
MW-3	10/21/2020	10:10:00	64.55	137.10	
MW-7	10/21/2020	10:15:00	62.65	134.50	
XSA-12-95X	10/21/2020	11:00:00	63.85	131.60	
XSA-12-96X	10/21/2020	10:51:00	68.80	132.00	
XSA-12-97X	11/20/2020	11:00:00	69.62	133.35	
XSA-12-98X	11/5/2020	8:24:00	8.05	73.20	

Appendix B

Laboratory Analytical Reports

eurofins | Environment Testing America



ANALYTICAL REPORT

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

Laboratory Job ID: 680-183803-1
Client Project/Site: JV, LTM - AOC50 Spring 2020
Revision: 2

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

Attn: Nathan R Mullens

Kathryn Smith

Authorized for release by:
6/24/2020 7:08:19 PM

Kathryn Smith, Client Service Manager
(912)250-0275
kathy.smith@testamericainc.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
B	Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank.
H	Sample was prepped or analyzed beyond the specified holding time
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J	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
M	Manual integrated compound.
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 quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
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
J	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: Seres Engineering & Services LLC
Project/Site: JV, LTM - AOC50 Spring 2020

Job ID: 680-183803-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
680-183803-1	AOC50-DUP01-SPR20	Water	05/12/20 11:00	05/14/20 09:30	
680-183803-2	G6M-04-02X-SPR20	Water	05/12/20 11:45	05/14/20 09:30	
680-183803-3	G6M-04-03X-SPR20	Water	05/12/20 14:00	05/14/20 09:30	
680-183803-4	G6M-04-07X-SPR20	Water	05/12/20 11:55	05/14/20 09:30	
680-183803-5	G6M-04-10A-SPR20	Water	05/12/20 15:35	05/14/20 09:30	
680-183803-6	G6M-07-02X-SPR20	Water	05/12/20 13:25	05/14/20 09:30	
680-183803-7	G6M-13-01X-SPR20	Water	05/11/20 13:20	05/14/20 09:30	
680-183803-8	G6M-13-02X-SPR20	Water	05/12/20 09:45	05/14/20 09:30	
680-183803-9	G6M-13-04X-SPR20	Water	05/11/20 15:35	05/14/20 09:30	
680-183803-10	G6M-13-05X-SPR20	Water	05/12/20 15:50	05/14/20 09:30	
680-183803-11	G6M-97-05B-SPR20	Water	05/11/20 11:20	05/14/20 09:30	
680-183803-12	XSA-12-96X-SPR20	Water	05/12/20 16:40	05/14/20 09:30	
680-183803-13	Trip Blank1-051220	Water	05/12/20 00:00	05/14/20 09:30	

Job ID: 680-183803-1

Laboratory: Eurofins TestAmerica, Savannah

Narrative

CASE NARRATIVE
Client: Seres Engineering & Services LLC
Project: JV, LTM - AOC50 Spring 2020

Report Number: 680-183803-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

RECEIPT

The samples were received on 05/14/2020; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 0.8º C, 2.2º C, 3.2º C and 4.0º C.

VOLATILE ORGANIC COMPOUNDS (GC/MS)

Samples AOC50-DUP01-SPR20 (680-183803-1), G6M-04-02X-SPR20 (680-183803-2), G6M-04-03X-SPR20 (680-183803-3), G6M-04-07X-SPR20 (680-183803-4), G6M-04-10A-SPR20 (680-183803-5), G6M-07-02X-SPR20 (680-183803-6), G6M-13-01X-SPR20 (680-183803-7), G6M-13-02X-SPR20 (680-183803-8), G6M-13-04X-SPR20 (680-183803-9), G6M-13-05X-SPR20 (680-183803-10), G6M-97-05B-SPR20 (680-183803-11), XSA-12-96X-SPR20 (680-183803-12) and Trip Blank1-051220 (680-183803-13) were analyzed for Volatile Organic Compounds (GC/MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 05/22/2020, 05/24/2020, 05/26/2020 and 05/27/2020.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 680-619664.

The continuing calibration verification (CCV) associated with batch 680-619664 was outside the method criteria for the following analytes: Bromomethane and Chloroethane. These analytes have been identified as a poor performing analyte when using this method. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analytes is considered estimated.

The closing continuing calibration verification (CCVC) associated with batch 680-619664 recovered above the upper control limit for Bromomethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

The continuing calibration verification (CCV) associated with batch 680-619818 recovered above the upper control limit for Chloromethane, Bromomethane, Vinyl Acetate. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

The continuing calibration verification (CCV) associated with batch 680-619653 recovered above the upper control limit for Bromomethane, Chloromethane and Vinyl acetate. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

The continuing calibration verification (CCV) associated with batch 680-619876 recovered above the upper control limit for Bromomethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

The continuing calibration verification/the continuing calibration verification closing (CCVC) analyzed in batch 680-620023 was outside the method criteria for the following analyte: Bromomethane. Bromomethane 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 is considered estimated.

Job ID: 680-183803-1 (Continued)

Laboratory: Eurofins TestAmerica, Savannah (Continued)

Reanalysis of the following samples was performed outside of the analytical holding time due to a Trichloroethene hit in the Method Blank during the initial analysis: G6M-13-05X-SPR20 (680-183803-10), XSA-12-96X-SPR20 (680-183803-12) and Trip Blank1-051220 (680-183803-13).

n-Butylbenzene was detected in method blank MB 680-619664/10 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Bromomethane recovered high for LCSD 680-619653/5.

Bromomethane recovered high for LCS 680-619664/4 and LCSD 680-619664/5.

Bromomethane and Chloromethane recovered high for LCS 680-619818/6. 2,2-Dichloropropane, Bromomethane and Vinyl acetate exceeded the RPD limit for LCSD 680-619818/31.

Bromomethane recovered high for LCS 680-620023/3 and LCSD 680-620023/4.

Note that Bromomethane and Chloromethane were biased high in the LCS/LCSD's listed previously and were not detected in the associated samples; therefore, the data have been reported. Refer to the QC report for details.

Sample G6M-04-02X-SPR20 (680-183803-2)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

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

DISSOLVED GASES

Samples AOC50-DUP01-SPR20 (680-183803-1), G6M-04-02X-SPR20 (680-183803-2), G6M-04-03X-SPR20 (680-183803-3), G6M-04-07X-SPR20 (680-183803-4), G6M-04-10A-SPR20 (680-183803-5), G6M-07-02X-SPR20 (680-183803-6), G6M-13-01X-SPR20 (680-183803-7), G6M-13-02X-SPR20 (680-183803-8), G6M-13-04X-SPR20 (680-183803-9), G6M-13-05X-SPR20 (680-183803-10), G6M-97-05B-SPR20 (680-183803-11) and XSA-12-96X-SPR20 (680-183803-12) were analyzed for dissolved gases in accordance with RSK-175. The samples were analyzed on 05/19/2020 and 05/22/2020.

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

METALS (ICP) - DISSOLVED

Samples AOC50-DUP01-SPR20 (680-183803-1), G6M-04-02X-SPR20 (680-183803-2), G6M-04-03X-SPR20 (680-183803-3), G6M-04-07X-SPR20 (680-183803-4), G6M-04-10A-SPR20 (680-183803-5), G6M-07-02X-SPR20 (680-183803-6), G6M-13-01X-SPR20 (680-183803-7), G6M-13-02X-SPR20 (680-183803-8), G6M-13-04X-SPR20 (680-183803-9), G6M-13-05X-SPR20 (680-183803-10), G6M-97-05B-SPR20 (680-183803-11) and XSA-12-96X-SPR20 (680-183803-12) were analyzed for Metals (ICP) - Dissolved in accordance with EPA SW-846 Method 6010C. The samples were prepared on 05/17/2020 and 05/18/2020 and analyzed on 05/19/2020 and 05/22/2020.

Manganese was detected in method blank MB 680-619056/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Manganese recovered low for the MSD of sample G6M-13-01X-SPR20MSD (680-183803-7) in batch 680-619792. Refer to the QC report for details.

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

METALS (ICPMS) - DISSOLVED

Samples AOC50-DUP01-SPR20 (680-183803-1), G6M-04-02X-SPR20 (680-183803-2), G6M-04-03X-SPR20 (680-183803-3), G6M-04-07X-SPR20 (680-183803-4), G6M-04-10A-SPR20 (680-183803-5), G6M-07-02X-SPR20 (680-183803-6), G6M-13-01X-SPR20 (680-183803-7), G6M-13-02X-SPR20 (680-183803-8), G6M-13-04X-SPR20 (680-183803-9), G6M-13-05X-SPR20 (680-183803-10), G6M-97-05B-SPR20 (680-183803-11) and XSA-12-96X-SPR20 (680-183803-12) were analyzed for Metals (ICPMS) - Dissolved in

Job ID: 680-183803-1 (Continued)

Laboratory: Eurofins TestAmerica, Savannah (Continued)

accordance with EPA SW-846 Method 6020A. The samples were prepared on 05/17/2020 and 05/18/2020 and analyzed on 05/18/2020 and 05/19/2020.

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

ALKALINITY

Samples AOC50-DUP01-SPR20 (680-183803-1), G6M-04-02X-SPR20 (680-183803-2), G6M-04-03X-SPR20 (680-183803-3), G6M-04-07X-SPR20 (680-183803-4), G6M-04-10A-SPR20 (680-183803-5), G6M-07-02X-SPR20 (680-183803-6), G6M-13-01X-SPR20 (680-183803-7), G6M-13-02X-SPR20 (680-183803-8), G6M-13-04X-SPR20 (680-183803-9), G6M-13-05X-SPR20 (680-183803-10), G6M-97-05B-SPR20 (680-183803-11) and XSA-12-96X-SPR20 (680-183803-12) were analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 05/18/2020.

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

NITRATE-NITRITE AS NITROGEN

Samples AOC50-DUP01-SPR20 (680-183803-1), G6M-04-02X-SPR20 (680-183803-2), G6M-04-03X-SPR20 (680-183803-3), G6M-04-07X-SPR20 (680-183803-4), G6M-04-10A-SPR20 (680-183803-5), G6M-07-02X-SPR20 (680-183803-6), G6M-13-01X-SPR20 (680-183803-7), G6M-13-02X-SPR20 (680-183803-8), G6M-13-04X-SPR20 (680-183803-9), G6M-13-05X-SPR20 (680-183803-10), G6M-97-05B-SPR20 (680-183803-11) and XSA-12-96X-SPR20 (680-183803-12) were analyzed for nitrate-nitrite as nitrogen in accordance with EPA Method 353.2. The samples were analyzed on 05/19/2020.

Nitrate/Nitrite-N was detected in method blank MB 280-495500/22 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Nitrate/Nitrite-N was detected in method blank MB 280-495500/60 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Nitrate/Nitrite-N recovered low for the MS of sample G6M-13-05X-SPR20MS (680-183803-10) and MSD of sample G6M-13-05X-SPR20MSD (680-183803-10) in batch 280-495500. Refer to the QC report for details.

Nitrate/Nitrite-N recovered low for the MS of sample G6M-04-02X-SPR20MS (680-183803-2) and MSD of sample G6M-04-02X-SPR20MSD (680-183803-2) in batch 280-495500. Refer to the QC report for details.

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

SULFIDE

Samples AOC50-DUP01-SPR20 (680-183803-1), G6M-04-02X-SPR20 (680-183803-2), G6M-04-03X-SPR20 (680-183803-3), G6M-04-07X-SPR20 (680-183803-4), G6M-04-10A-SPR20 (680-183803-5), G6M-07-02X-SPR20 (680-183803-6), G6M-13-01X-SPR20 (680-183803-7), G6M-13-02X-SPR20 (680-183803-8), G6M-13-04X-SPR20 (680-183803-9), G6M-13-05X-SPR20 (680-183803-10), G6M-97-05B-SPR20 (680-183803-11) and XSA-12-96X-SPR20 (680-183803-12) were analyzed for sulfide in accordance with EPA SW846 Method 9034. The samples were analyzed on 05/18/2020.

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

ANIONS BY ION CHROMATOGRAPHY (28 DAY)

Samples AOC50-DUP01-SPR20 (680-183803-1), G6M-04-02X-SPR20 (680-183803-2), G6M-04-03X-SPR20 (680-183803-3), G6M-04-07X-SPR20 (680-183803-4), G6M-04-10A-SPR20 (680-183803-5), G6M-07-02X-SPR20 (680-183803-6), G6M-13-01X-SPR20 (680-183803-7), G6M-13-02X-SPR20 (680-183803-8), G6M-13-04X-SPR20 (680-183803-9), G6M-13-05X-SPR20 (680-183803-10), G6M-97-05B-SPR20 (680-183803-11) and XSA-12-96X-SPR20 (680-183803-12) were analyzed for Anions by Ion Chromatography (28 Day) in accordance with SW 846 9056A. The samples were analyzed on 05/21/2020 and 05/22/2020.

Samples AOC50-DUP01-SPR20 (680-183803-1)[5X], G6M-04-02X-SPR20 (680-183803-2)[5X], G6M-04-10A-SPR20 (680-183803-5)[5X], G6M-07-02X-SPR20 (680-183803-6)[5X], G6M-13-04X-SPR20 (680-183803-9)[5X] and G6M-13-05X-SPR20 (680-183803-10)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Job ID: 680-183803-1 (Continued)

Laboratory: Eurofins TestAmerica, Savannah (Continued)

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

TOTAL ORGANIC CARBON

Samples AOC50-DUP01-SPR20 (680-183803-1), G6M-04-02X-SPR20 (680-183803-2), G6M-04-03X-SPR20 (680-183803-3), G6M-04-07X-SPR20 (680-183803-4), G6M-04-10A-SPR20 (680-183803-5), G6M-07-02X-SPR20 (680-183803-6), G6M-13-01X-SPR20 (680-183803-7), G6M-13-02X-SPR20 (680-183803-8), G6M-13-04X-SPR20 (680-183803-9), G6M-13-05X-SPR20 (680-183803-10), G6M-97-05B-SPR20 (680-183803-11) and XSA-12-96X-SPR20 (680-183803-12) were analyzed for total organic carbon in accordance with EPA SW-846 Method 9060A. The samples were analyzed on 05/26/2020 and 05/27/2020.

The CCV analyzed prior to the associated sample was outside of acceptance limits, recovering at 112%. The upper acceptance limit is 110%. Reanalysis was performed and results are confirmed. Original analysis is reported. AOC50-DUP01-SPR20 (680-183803-1)

Samples AOC50-DUP01-SPR20 (680-183803-1)[6X], G6M-04-02X-SPR20 (680-183803-2)[5X], G6M-07-02X-SPR20 (680-183803-6)[6X] and G6M-97-05B-SPR20 (680-183803-11)[6X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

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

Client Sample ID: AOC50-DUP01-SPR20

Date Collected: 05/12/20 11:00
Date Received: 05/14/20 09:30

Lab Sample ID: 680-183803-1

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			05/22/20 16:56	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			05/22/20 16:56	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			05/22/20 16:56	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			05/22/20 16:56	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			05/22/20 16:56	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/22/20 16:56	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			05/22/20 16:56	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/22/20 16:56	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			05/22/20 16:56	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/22/20 16:56	1
1,2,4-Trimethylbenzene	**1.2**		1.0	0.47	ug/L			05/22/20 16:56	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			05/22/20 16:56	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			05/22/20 16:56	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			05/22/20 16:56	1
1,2-Dichloroethene, Total	**110**		2.0	0.74	ug/L			05/22/20 16:56	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			05/22/20 16:56	1
1,3,5-Trimethylbenzene	**0.32**	**J**	1.0	0.31	ug/L			05/22/20 16:56	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			05/22/20 16:56	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			05/22/20 16:56	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			05/22/20 16:56	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			05/22/20 16:56	1
2-Butanone (MEK)	**62**		10	3.4	ug/L			05/22/20 16:56	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/22/20 16:56	1
2-Hexanone	**4.8**	**J**	10	2.0	ug/L			05/22/20 16:56	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			05/22/20 16:56	1
4-Isopropyltoluene	0.48	U M	1.0	0.48	ug/L			05/22/20 16:56	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			05/22/20 16:56	1
Acetone	**9.7**	**J**	10	7.0	ug/L			05/22/20 16:56	1
Benzene	0.43	U	1.0	0.43	ug/L			05/22/20 16:56	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			05/22/20 16:56	1
Bromoform	0.43	U	1.0	0.43	ug/L			05/22/20 16:56	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			05/22/20 16:56	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			05/22/20 16:56	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			05/22/20 16:56	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			05/22/20 16:56	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			05/22/20 16:56	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			05/22/20 16:56	1
Chloroethane	**2.6**	**J Q**	5.0	2.5	ug/L			05/22/20 16:56	1
Chloroform	0.50	U	1.0	0.50	ug/L			05/22/20 16:56	1
Chloromethane	0.40	U	1.0	0.40	ug/L			05/22/20 16:56	1
cis-1,2-Dichloroethene	**110**		1.0	0.41	ug/L			05/22/20 16:56	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			05/22/20 16:56	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			05/22/20 16:56	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			05/22/20 16:56	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			05/22/20 16:56	1
Ethylbenzene	**0.35**	**J**	1.0	0.33	ug/L			05/22/20 16:56	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			05/22/20 16:56	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			05/22/20 16:56	1
Isopropylbenzene	0.35	U M	1.0	0.35	ug/L			05/22/20 16:56	1

Client Sample ID: AOC50-DUP01-SPR20
Date Collected: 05/12/20 11:00
Date Received: 05/14/20 09:30

Lab Sample ID: 680-183803-1
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			05/22/20 16:56	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			05/22/20 16:56	1
m-Xylene & p-Xylene	**0.92**	**J**	1.0	0.35	ug/L			05/22/20 16:56	1
Naphthalene	**2.9**	**J**	5.0	2.5	ug/L			05/22/20 16:56	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			05/22/20 16:56	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			05/22/20 16:56	1
o-Xylene	**0.53**	**J**	1.0	0.23	ug/L			05/22/20 16:56	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			05/22/20 16:56	1
Styrene	0.27	U	1.0	0.27	ug/L			05/22/20 16:56	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			05/22/20 16:56	1
Tetrachloroethene	**2.9**		1.0	0.74	ug/L			05/22/20 16:56	1
Toluene	**0.67**	**J**	1.0	0.48	ug/L			05/22/20 16:56	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/22/20 16:56	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			05/22/20 16:56	1
Trichloroethene	**0.73**	**J**	1.0	0.48	ug/L			05/22/20 16:56	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			05/22/20 16:56	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			05/22/20 16:56	1
Vinyl chloride	**3.6**		1.0	0.50	ug/L			05/22/20 16:56	1
Xylenes, Total	**1.5**	**J**	2.0	0.23	ug/L			05/22/20 16:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*05/22/20 16:56*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 119*		*05/22/20 16:56*	*1*
Toluene-d8 (Surr)	*98*		*89 - 112*		*05/22/20 16:56*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*81 - 118*		*05/22/20 16:56*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**3.4**		1.1	0.55	ug/L			05/19/20 12:29	1
Ethylene	**4.6**		1.0	0.50	ug/L			05/19/20 12:29	1
Methane (TCD)	**14000**		390	39	ug/L			05/19/20 12:29	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	2.0	U	5.0	2.0	mg/L			05/22/20 02:19	5

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**250000**		50	17	ug/L		05/17/20 11:04	05/19/20 01:36	1
Manganese	**4600**		10	1.0	ug/L		05/17/20 11:04	05/19/20 01:36	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**56**		3.0	1.5	ug/L		05/17/20 11:04	05/18/20 21:24	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.14**		0.10	0.019	mg/L			05/19/20 18:12	1
Sulfide	**1.9**		0.79	0.79	mg/L			05/18/20 12:41	1
Total Organic Carbon - Duplicates	**290**	**Q**	6.0	2.1	mg/L			05/26/20 07:51	6
Alkalinity	**250**		10	3.1	mg/L			05/18/20 10:42	1

Client: Seres Engineering & Services LLC
Project/Site: JV, LTM - AOC50 Spring 2020

Job ID: 680-183803-1

Client Sample ID: G6M-04-02X-SPR20
Date Collected: 05/12/20 11:45
Date Received: 05/14/20 09:30

Lab Sample ID: 680-183803-2
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			05/22/20 17:20	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			05/22/20 17:20	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			05/22/20 17:20	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			05/22/20 17:20	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			05/22/20 17:20	1
1,1-Dichloroethene	**0.88**	**J**	1.0	0.36	ug/L			05/22/20 17:20	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			05/22/20 17:20	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/22/20 17:20	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			05/22/20 17:20	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/22/20 17:20	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			05/22/20 17:20	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			05/22/20 17:20	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			05/22/20 17:20	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			05/22/20 17:20	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			05/22/20 17:20	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			05/22/20 17:20	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			05/22/20 17:20	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			05/22/20 17:20	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			05/22/20 17:20	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			05/22/20 17:20	1
2-Butanone (MEK)	3.4	U M	10	3.4	ug/L			05/22/20 17:20	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/22/20 17:20	1
2-Hexanone	2.0	U M	10	2.0	ug/L			05/22/20 17:20	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			05/22/20 17:20	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			05/22/20 17:20	1
4-Methyl-2-pentanone (MIBK)	**2.4**	**J**	10	2.1	ug/L			05/22/20 17:20	1
Acetone	7.0	U M	10	7.0	ug/L			05/22/20 17:20	1
Benzene	0.43	U M	1.0	0.43	ug/L			05/22/20 17:20	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			05/22/20 17:20	1
Bromoform	0.43	U	1.0	0.43	ug/L			05/22/20 17:20	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			05/22/20 17:20	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			05/22/20 17:20	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			05/22/20 17:20	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			05/22/20 17:20	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			05/22/20 17:20	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			05/22/20 17:20	1
Chloroethane	2.5	U Q	5.0	2.5	ug/L			05/22/20 17:20	1
Chloroform	0.50	U	1.0	0.50	ug/L			05/22/20 17:20	1
Chloromethane	0.40	U	1.0	0.40	ug/L			05/22/20 17:20	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			05/22/20 17:20	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			05/22/20 17:20	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			05/22/20 17:20	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			05/22/20 17:20	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			05/22/20 17:20	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			05/22/20 17:20	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			05/22/20 17:20	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			05/22/20 17:20	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			05/22/20 17:20	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			05/22/20 17:20	1

Client Sample ID: G6M-04-02X-SPR20

Date Collected: 05/12/20 11:45
Date Received: 05/14/20 09:30

Lab Sample ID: 680-183803-2

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			05/22/20 17:20	1
Naphthalene	2.5	U	5.0	2.5	ug/L			05/22/20 17:20	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			05/22/20 17:20	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			05/22/20 17:20	1
o-Xylene	0.23	U	1.0	0.23	ug/L			05/22/20 17:20	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			05/22/20 17:20	1
Styrene	0.27	U	1.0	0.27	ug/L			05/22/20 17:20	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			05/22/20 17:20	1
Tetrachloroethene	**1.7**		1.0	0.74	ug/L			05/22/20 17:20	1
Toluene	0.48	U	1.0	0.48	ug/L			05/22/20 17:20	1
trans-1,2-Dichloroethene	**0.92**	**J**	1.0	0.37	ug/L			05/22/20 17:20	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			05/22/20 17:20	1
Trichloroethene	**2.3**		1.0	0.48	ug/L			05/22/20 17:20	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			05/22/20 17:20	1
Vinyl acetate	0.81	U M	2.0	0.81	ug/L			05/22/20 17:20	1
Vinyl chloride	**28**		1.0	0.50	ug/L			05/22/20 17:20	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			05/22/20 17:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*05/22/20 17:20*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 119*		*05/22/20 17:20*	*1*
Toluene-d8 (Surr)	*99*		*89 - 112*		*05/22/20 17:20*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*81 - 118*		*05/22/20 17:20*	*1*

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethene, Total	**290**		10	3.7	ug/L			05/26/20 20:26	5
cis-1,2-Dichloroethene	**290**		5.0	2.1	ug/L			05/26/20 20:26	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*85 - 114*		*05/26/20 20:26*	*5*
Dibromofluoromethane (Surr)	*117*		*80 - 119*		*05/26/20 20:26*	*5*
Toluene-d8 (Surr)	*117*	*J*	*89 - 112*		*05/26/20 20:26*	*5*
1,2-Dichloroethane-d4 (Surr)	*100*		*81 - 118*		*05/26/20 20:26*	*5*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**1.3**		1.1	0.55	ug/L			05/19/20 12:42	1
Ethylene	**31**		1.0	0.50	ug/L			05/19/20 12:42	1
Methane (TCD)	**18000**		390	39	ug/L			05/19/20 12:42	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**2.0**	**J M**	5.0	2.0	mg/L			05/22/20 02:32	5

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**52000**		50	17	ug/L		05/17/20 11:04	05/19/20 01:41	1
Manganese	**6900**		10	1.0	ug/L		05/17/20 11:04	05/19/20 01:41	1

Client Sample ID: G6M-04-02X-SPR20

Lab Sample ID: 680-183803-2

Date Collected: 05/12/20 11:45

Matrix: Water

Date Received: 05/14/20 09:30

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**93**		3.0	1.5	ug/L		05/17/20 11:04	05/18/20 21:33	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.032**	**J**	0.10	0.019	mg/L			05/19/20 18:04	1
Sulfide	0.88	U	0.88	0.88	mg/L			05/18/20 12:41	1
Total Organic Carbon - Duplicates	**100**		5.0	1.7	mg/L			05/26/20 21:49	5
Alkalinity	**130**		10	3.1	mg/L			05/18/20 10:47	1

Client Sample ID: G6M-04-03X-SPR20

Lab Sample ID: 680-183803-3

Date Collected: 05/12/20 14:00

Matrix: Water

Date Received: 05/14/20 09:30

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			05/26/20 19:16	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			05/26/20 19:16	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			05/26/20 19:16	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			05/26/20 19:16	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			05/26/20 19:16	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/26/20 19:16	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			05/26/20 19:16	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/26/20 19:16	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			05/26/20 19:16	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/26/20 19:16	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			05/26/20 19:16	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			05/26/20 19:16	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			05/26/20 19:16	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			05/26/20 19:16	1
1,2-Dichloroethene, Total	**10**		2.0	0.74	ug/L			05/26/20 19:16	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			05/26/20 19:16	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			05/26/20 19:16	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			05/26/20 19:16	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			05/26/20 19:16	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			05/26/20 19:16	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			05/26/20 19:16	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			05/26/20 19:16	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/26/20 19:16	1
2-Hexanone	2.0	U	10	2.0	ug/L			05/26/20 19:16	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			05/26/20 19:16	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			05/26/20 19:16	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			05/26/20 19:16	1
Acetone	7.0	U	10	7.0	ug/L			05/26/20 19:16	1
Benzene	0.43	U	1.0	0.43	ug/L			05/26/20 19:16	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			05/26/20 19:16	1
Bromoform	0.43	U	1.0	0.43	ug/L			05/26/20 19:16	1
Bromomethane	2.5	U	5.0	2.5	ug/L			05/26/20 19:16	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			05/26/20 19:16	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			05/26/20 19:16	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			05/26/20 19:16	1

Client Sample ID: G6M-04-03X-SPR20

Date Collected: 05/12/20 14:00
Date Received: 05/14/20 09:30

Lab Sample ID: 680-183803-3

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			05/26/20 19:16	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			05/26/20 19:16	1
Chloroethane	2.5	U	5.0	2.5	ug/L			05/26/20 19:16	1
Chloroform	0.50	U	1.0	0.50	ug/L			05/26/20 19:16	1
Chloromethane	0.40	U	1.0	0.40	ug/L			05/26/20 19:16	1
cis-1,2-Dichloroethene	**10**		1.0	0.41	ug/L			05/26/20 19:16	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			05/26/20 19:16	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			05/26/20 19:16	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			05/26/20 19:16	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			05/26/20 19:16	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			05/26/20 19:16	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			05/26/20 19:16	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			05/26/20 19:16	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			05/26/20 19:16	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			05/26/20 19:16	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			05/26/20 19:16	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			05/26/20 19:16	1
Naphthalene	2.5	U	5.0	2.5	ug/L			05/26/20 19:16	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			05/26/20 19:16	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			05/26/20 19:16	1
o-Xylene	0.23	U	1.0	0.23	ug/L			05/26/20 19:16	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			05/26/20 19:16	1
Styrene	0.27	U	1.0	0.27	ug/L			05/26/20 19:16	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			05/26/20 19:16	1
Tetrachloroethene	**6.9**		1.0	0.74	ug/L			05/26/20 19:16	1
Toluene	0.48	U	1.0	0.48	ug/L			05/26/20 19:16	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/26/20 19:16	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			05/26/20 19:16	1
Trichloroethene	**4.5**		1.0	0.48	ug/L			05/26/20 19:16	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			05/26/20 19:16	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			05/26/20 19:16	1
Vinyl chloride	**3.5**		1.0	0.50	ug/L			05/26/20 19:16	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			05/26/20 19:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*85 - 114*		*05/26/20 19:16*	*1*
Dibromofluoromethane (Surr)	*119*		*80 - 119*		*05/26/20 19:16*	*1*
Toluene-d8 (Surr)	*111*		*89 - 112*		*05/26/20 19:16*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*81 - 118*		*05/26/20 19:16*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	0.55	U	1.1	0.55	ug/L			05/19/20 12:55	1
Ethylene	**2.1**		1.0	0.50	ug/L			05/19/20 12:55	1
Methane (TCD)	**11000**		390	39	ug/L			05/19/20 12:55	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**13**		1.0	0.40	mg/L			05/21/20 23:44	1

Client Sample ID: G6M-04-03X-SPR20

Lab Sample ID: 680-183803-3

Date Collected: 05/12/20 14:00

Matrix: Water

Date Received: 05/14/20 09:30

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**47000**		50	17	ug/L		05/17/20 11:04	05/19/20 01:46	1
Manganese	**5600**		10	1.0	ug/L		05/17/20 11:04	05/19/20 01:46	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**73**		3.0	1.5	ug/L		05/17/20 11:04	05/18/20 21:36	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.036**	**J**	0.10	0.019	mg/L			05/19/20 18:14	1
Sulfide	0.81	U	0.81	0.81	mg/L			05/18/20 12:41	1
Total Organic Carbon - Duplicates	**4.0**		1.0	0.35	mg/L			05/26/20 22:06	1
Alkalinity	**140**		10	3.1	mg/L			05/18/20 11:02	1

Client Sample ID: G6M-04-07X-SPR20

Lab Sample ID: 680-183803-4

Date Collected: 05/12/20 11:55

Matrix: Water

Date Received: 05/14/20 09:30

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			05/22/20 18:57	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			05/22/20 18:57	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			05/22/20 18:57	1
1,1,2-Trichloroethane	0.33	U M	1.0	0.33	ug/L			05/22/20 18:57	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			05/22/20 18:57	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/22/20 18:57	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			05/22/20 18:57	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/22/20 18:57	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			05/22/20 18:57	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/22/20 18:57	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			05/22/20 18:57	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			05/22/20 18:57	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			05/22/20 18:57	1
1,2-Dichloroethane	0.50	U	1.0	0.50	ug/L			05/22/20 18:57	1
1,2-Dichloroethene, Total	**110**		2.0	0.74	ug/L			05/22/20 18:57	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			05/22/20 18:57	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			05/22/20 18:57	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			05/22/20 18:57	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			05/22/20 18:57	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			05/22/20 18:57	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			05/22/20 18:57	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			05/22/20 18:57	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/22/20 18:57	1
2-Hexanone	2.0	U	10	2.0	ug/L			05/22/20 18:57	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			05/22/20 18:57	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			05/22/20 18:57	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			05/22/20 18:57	1
Acetone	7.0	U	10	7.0	ug/L			05/22/20 18:57	1
Benzene	0.43	U	1.0	0.43	ug/L			05/22/20 18:57	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			05/22/20 18:57	1

Client: Seres Engineering & Services LLC
Project/Site: JV, LTM - AOC50 Spring 2020

Job ID: 680-183803-1

Client Sample ID: G6M-04-07X-SPR20
Date Collected: 05/12/20 11:55
Date Received: 05/14/20 09:30

Lab Sample ID: 680-183803-4
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Bromoform	0.43	U	1.0	0.43	ug/L			05/22/20 18:57	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			05/22/20 18:57	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			05/22/20 18:57	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			05/22/20 18:57	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			05/22/20 18:57	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			05/22/20 18:57	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			05/22/20 18:57	1
Chloroethane	2.5	U	5.0	2.5	ug/L			05/22/20 18:57	1
Chloroform	0.50	U	1.0	0.50	ug/L			05/22/20 18:57	1
Chloromethane	0.40	U Q	1.0	0.40	ug/L			05/22/20 18:57	1
cis-1,2-Dichloroethene	**110**		1.0	0.41	ug/L			05/22/20 18:57	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			05/22/20 18:57	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			05/22/20 18:57	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			05/22/20 18:57	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			05/22/20 18:57	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			05/22/20 18:57	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			05/22/20 18:57	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			05/22/20 18:57	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			05/22/20 18:57	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			05/22/20 18:57	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			05/22/20 18:57	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			05/22/20 18:57	1
Naphthalene	2.5	U	5.0	2.5	ug/L			05/22/20 18:57	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			05/22/20 18:57	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			05/22/20 18:57	1
o-Xylene	0.23	U	1.0	0.23	ug/L			05/22/20 18:57	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			05/22/20 18:57	1
Styrene	0.27	U	1.0	0.27	ug/L			05/22/20 18:57	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			05/22/20 18:57	1
Tetrachloroethene	**18**		1.0	0.74	ug/L			05/22/20 18:57	1
Toluene	0.48	U	1.0	0.48	ug/L			05/22/20 18:57	1
trans-1,2-Dichloroethene	**0.59**	**J**	1.0	0.37	ug/L			05/22/20 18:57	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			05/22/20 18:57	1
Trichloroethene	**38**		1.0	0.48	ug/L			05/22/20 18:57	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			05/22/20 18:57	1
Vinyl acetate	0.81	U Q	2.0	0.81	ug/L			05/22/20 18:57	1
Vinyl chloride	**10**		1.0	0.50	ug/L			05/22/20 18:57	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			05/22/20 18:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*85 - 114*		*05/22/20 18:57*	*1*
Dibromofluoromethane (Surr)	*112*		*80 - 119*		*05/22/20 18:57*	*1*
Toluene-d8 (Surr)	*108*		*89 - 112*		*05/22/20 18:57*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*81 - 118*		*05/22/20 18:57*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	0.55	U	1.1	0.55	ug/L			05/19/20 13:07	1
Ethylene	0.50	U	1.0	0.50	ug/L			05/19/20 13:07	1
Methane	**360**		0.58	0.29	ug/L			05/19/20 13:07	1

Client Sample ID: G6M-04-07X-SPR20

Lab Sample ID: 680-183803-4

Date Collected: 05/12/20 11:55

Matrix: Water

Date Received: 05/14/20 09:30

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**9.4**		1.0	0.40	mg/L			05/21/20 23:57	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**950**		50	17	ug/L		05/17/20 11:04	05/19/20 01:50	1
Manganese	**3800**		10	1.0	ug/L		05/17/20 11:04	05/19/20 01:50	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**8.3**		3.0	1.5	ug/L		05/17/20 11:04	05/18/20 21:39	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.032**	**J**	0.10	0.019	mg/L			05/19/20 18:16	1
Sulfide	0.83	U	0.83	0.83	mg/L			05/18/20 12:41	1
Total Organic Carbon - Duplicates	**1.1**		1.0	0.35	mg/L			05/26/20 22:23	1
Alkalinity	**220**		10	3.1	mg/L			05/18/20 11:07	1

Client Sample ID: G6M-04-10A-SPR20

Lab Sample ID: 680-183803-5

Date Collected: 05/12/20 15:35

Matrix: Water

Date Received: 05/14/20 09:30

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			05/22/20 15:49	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			05/22/20 15:49	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			05/22/20 15:49	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			05/22/20 15:49	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			05/22/20 15:49	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/22/20 15:49	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			05/22/20 15:49	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/22/20 15:49	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			05/22/20 15:49	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/22/20 15:49	1
1,2,4-Trimethylbenzene	**1.2**		1.0	0.47	ug/L			05/22/20 15:49	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			05/22/20 15:49	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			05/22/20 15:49	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			05/22/20 15:49	1
1,2-Dichloroethene, Total	**12**		2.0	0.74	ug/L			05/22/20 15:49	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			05/22/20 15:49	1
1,3,5-Trimethylbenzene	**0.58**	**J**	1.0	0.31	ug/L			05/22/20 15:49	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			05/22/20 15:49	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			05/22/20 15:49	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			05/22/20 15:49	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			05/22/20 15:49	1
2-Butanone (MEK)	**12**		10	3.4	ug/L			05/22/20 15:49	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/22/20 15:49	1
2-Hexanone	**2.4**	**J**	10	2.0	ug/L			05/22/20 15:49	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			05/22/20 15:49	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			05/22/20 15:49	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			05/22/20 15:49	1

Client: Seres Engineering & Services LLC
Project/Site: JV, LTM - AOC50 Spring 2020

Job ID: 680-183803-1

Client Sample ID: G6M-04-10A-SPR20
Date Collected: 05/12/20 15:35
Date Received: 05/14/20 09:30

Lab Sample ID: 680-183803-5
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**11**		10	7.0	ug/L			05/22/20 15:49	1
Benzene	0.43	U	1.0	0.43	ug/L			05/22/20 15:49	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			05/22/20 15:49	1
Bromoform	0.43	U	1.0	0.43	ug/L			05/22/20 15:49	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			05/22/20 15:49	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			05/22/20 15:49	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			05/22/20 15:49	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			05/22/20 15:49	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			05/22/20 15:49	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			05/22/20 15:49	1
Chloroethane	2.5	U	5.0	2.5	ug/L			05/22/20 15:49	1
Chloroform	0.50	U	1.0	0.50	ug/L			05/22/20 15:49	1
Chloromethane	0.40	U Q	1.0	0.40	ug/L			05/22/20 15:49	1
cis-1,2-Dichloroethene	**11**		1.0	0.41	ug/L			05/22/20 15:49	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			05/22/20 15:49	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			05/22/20 15:49	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			05/22/20 15:49	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			05/22/20 15:49	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			05/22/20 15:49	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			05/22/20 15:49	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			05/22/20 15:49	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			05/22/20 15:49	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			05/22/20 15:49	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			05/22/20 15:49	1
m-Xylene & p-Xylene	**0.58**	**J**	1.0	0.35	ug/L			05/22/20 15:49	1
Naphthalene	2.5	U	5.0	2.5	ug/L			05/22/20 15:49	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			05/22/20 15:49	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			05/22/20 15:49	1
o-Xylene	**0.26**	**J**	1.0	0.23	ug/L			05/22/20 15:49	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			05/22/20 15:49	1
Styrene	0.27	U	1.0	0.27	ug/L			05/22/20 15:49	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			05/22/20 15:49	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			05/22/20 15:49	1
Toluene	0.48	U	1.0	0.48	ug/L			05/22/20 15:49	1
trans-1,2-Dichloroethene	**0.93**	**J**	1.0	0.37	ug/L			05/22/20 15:49	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			05/22/20 15:49	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			05/22/20 15:49	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			05/22/20 15:49	1
Vinyl acetate	0.81	U Q	2.0	0.81	ug/L			05/22/20 15:49	1
Vinyl chloride	**2.9**		1.0	0.50	ug/L			05/22/20 15:49	1
Xylenes, Total	**0.84**	**J**	2.0	0.23	ug/L			05/22/20 15:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*85 - 114*		*05/22/20 15:49*	*1*
Dibromofluoromethane (Surr)	*112*		*80 - 119*		*05/22/20 15:49*	*1*
Toluene-d8 (Surr)	*105*		*89 - 112*		*05/22/20 15:49*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*81 - 118*		*05/22/20 15:49*	*1*

Client Sample ID: G6M-04-10A-SPR20

Lab Sample ID: 680-183803-5

Date Collected: 05/12/20 15:35

Matrix: Water

Date Received: 05/14/20 09:30

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	0.90	J	1.1	0.55	ug/L			05/19/20 13:20	1
Ethylene	18		1.0	0.50	ug/L			05/19/20 13:20	1
Methane (TCD)	14000		390	39	ug/L			05/19/20 13:20	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	3.8	J	5.0	2.0	mg/L			05/22/20 02:45	5

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	130000		50	17	ug/L		05/17/20 11:04	05/19/20 01:55	1
Manganese	3700		10	1.0	ug/L		05/17/20 11:04	05/19/20 01:55	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	270		3.0	1.5	ug/L		05/17/20 11:04	05/18/20 21:43	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.049	J	0.10	0.019	mg/L			05/19/20 18:18	1
Sulfide	0.83	U	0.83	0.83	mg/L			05/18/20 12:41	1
Total Organic Carbon - Duplicates	44		1.0	0.35	mg/L			05/26/20 23:28	1
Alkalinity	300		10	3.1	mg/L			05/18/20 11:14	1

Client Sample ID: G6M-07-02X-SPR20

Lab Sample ID: 680-183803-6

Date Collected: 05/12/20 13:25

Matrix: Water

Date Received: 05/14/20 09:30

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			05/22/20 16:13	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			05/22/20 16:13	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			05/22/20 16:13	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			05/22/20 16:13	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			05/22/20 16:13	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/22/20 16:13	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			05/22/20 16:13	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/22/20 16:13	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			05/22/20 16:13	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/22/20 16:13	1
1,2,4-Trimethylbenzene	1.2		1.0	0.47	ug/L			05/22/20 16:13	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			05/22/20 16:13	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			05/22/20 16:13	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			05/22/20 16:13	1
1,2-Dichloroethene, Total	110		2.0	0.74	ug/L			05/22/20 16:13	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			05/22/20 16:13	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			05/22/20 16:13	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			05/22/20 16:13	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			05/22/20 16:13	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			05/22/20 16:13	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			05/22/20 16:13	1

Client Sample ID: G6M-07-02X-SPR20

Date Collected: 05/12/20 13:25
Date Received: 05/14/20 09:30

Lab Sample ID: 680-183803-6

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	**60**		10	3.4	ug/L			05/22/20 16:13	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/22/20 16:13	1
2-Hexanone	**4.1**	**J**	10	2.0	ug/L			05/22/20 16:13	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			05/22/20 16:13	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			05/22/20 16:13	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			05/22/20 16:13	1
Acetone	**14**		10	7.0	ug/L			05/22/20 16:13	1
Benzene	0.43	U	1.0	0.43	ug/L			05/22/20 16:13	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			05/22/20 16:13	1
Bromoform	0.43	U	1.0	0.43	ug/L			05/22/20 16:13	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			05/22/20 16:13	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			05/22/20 16:13	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			05/22/20 16:13	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			05/22/20 16:13	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			05/22/20 16:13	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			05/22/20 16:13	1
Chloroethane	2.5	U	5.0	2.5	ug/L			05/22/20 16:13	1
Chloroform	0.50	U	1.0	0.50	ug/L			05/22/20 16:13	1
Chloromethane	0.40	U M Q	1.0	0.40	ug/L			05/22/20 16:13	1
cis-1,2-Dichloroethene	**110**		1.0	0.41	ug/L			05/22/20 16:13	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			05/22/20 16:13	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			05/22/20 16:13	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			05/22/20 16:13	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			05/22/20 16:13	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			05/22/20 16:13	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			05/22/20 16:13	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			05/22/20 16:13	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			05/22/20 16:13	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			05/22/20 16:13	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			05/22/20 16:13	1
m-Xylene & p-Xylene	**0.82**	**J**	1.0	0.35	ug/L			05/22/20 16:13	1
Naphthalene	**6.6**		5.0	2.5	ug/L			05/22/20 16:13	1
n-Butylbenzene	0.47	U M	1.0	0.47	ug/L			05/22/20 16:13	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			05/22/20 16:13	1
o-Xylene	**0.49**	**J**	1.0	0.23	ug/L			05/22/20 16:13	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			05/22/20 16:13	1
Styrene	0.27	U	1.0	0.27	ug/L			05/22/20 16:13	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			05/22/20 16:13	1
Tetrachloroethene	**2.4**		1.0	0.74	ug/L			05/22/20 16:13	1
Toluene	**0.64**	**J**	1.0	0.48	ug/L			05/22/20 16:13	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/22/20 16:13	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			05/22/20 16:13	1
Trichloroethene	**0.72**	**J**	1.0	0.48	ug/L			05/22/20 16:13	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			05/22/20 16:13	1
Vinyl acetate	0.81	U Q	2.0	0.81	ug/L			05/22/20 16:13	1
Vinyl chloride	**3.6**		1.0	0.50	ug/L			05/22/20 16:13	1
Xylenes, Total	**1.3**	**J**	2.0	0.23	ug/L			05/22/20 16:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*85 - 114*		*05/22/20 16:13*	*1*

Client Sample ID: G6M-07-02X-SPR20

Lab Sample ID: 680-183803-6

Date Collected: 05/12/20 13:25

Matrix: Water

Date Received: 05/14/20 09:30

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*110*		*80 - 119*		*05/22/20 16:13*	*1*
Toluene-d8 (Surr)	*107*		*89 - 112*		*05/22/20 16:13*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*81 - 118*		*05/22/20 16:13*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**3.6**		1.1	0.55	ug/L			05/19/20 13:33	1
Ethylene	**4.4**		1.0	0.50	ug/L			05/19/20 13:33	1
Methane (TCD)	**14000**		390	39	ug/L			05/19/20 13:33	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	2.0	U	5.0	2.0	mg/L			05/22/20 02:58	5

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**250000**	**J**	50	17	ug/L		05/18/20 10:40	05/22/20 18:42	1
Manganese	**4900**	**J**	10	1.0	ug/L		05/18/20 10:40	05/22/20 18:42	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**43**		3.0	1.5	ug/L		05/18/20 10:40	05/19/20 00:08	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.13**		0.10	0.019	mg/L			05/19/20 18:32	1
Sulfide	**1.9**		0.81	0.81	mg/L			05/18/20 12:41	1
Total Organic Carbon - Duplicates	**290**		6.0	2.1	mg/L			05/27/20 00:58	6
Alkalinity	**250**		10	3.1	mg/L			05/18/20 11:20	1

Client Sample ID: G6M-13-01X-SPR20

Lab Sample ID: 680-183803-7

Date Collected: 05/11/20 13:20

Matrix: Water

Date Received: 05/14/20 09:30

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			05/22/20 16:36	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			05/22/20 16:36	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			05/22/20 16:36	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			05/22/20 16:36	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			05/22/20 16:36	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/22/20 16:36	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			05/22/20 16:36	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/22/20 16:36	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			05/22/20 16:36	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/22/20 16:36	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			05/22/20 16:36	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			05/22/20 16:36	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			05/22/20 16:36	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			05/22/20 16:36	1
1,2-Dichloroethene, Total	**4.4**		2.0	0.74	ug/L			05/22/20 16:36	1

Client: Seres Engineering & Services LLC
Project/Site: JV, LTM - AOC50 Spring 2020

Job ID: 680-183803-1

Client Sample ID: G6M-13-01X-SPR20
Date Collected: 05/11/20 13:20
Date Received: 05/14/20 09:30

Lab Sample ID: 680-183803-7
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			05/22/20 16:36	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			05/22/20 16:36	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			05/22/20 16:36	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			05/22/20 16:36	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			05/22/20 16:36	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			05/22/20 16:36	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			05/22/20 16:36	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/22/20 16:36	1
2-Hexanone	2.0	U	10	2.0	ug/L			05/22/20 16:36	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			05/22/20 16:36	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			05/22/20 16:36	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			05/22/20 16:36	1
Acetone	**7.0**	**J**	10	7.0	ug/L			05/22/20 16:36	1
Benzene	0.43	U	1.0	0.43	ug/L			05/22/20 16:36	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			05/22/20 16:36	1
Bromoform	0.43	U	1.0	0.43	ug/L			05/22/20 16:36	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			05/22/20 16:36	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			05/22/20 16:36	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			05/22/20 16:36	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			05/22/20 16:36	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			05/22/20 16:36	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			05/22/20 16:36	1
Chloroethane	2.5	U	5.0	2.5	ug/L			05/22/20 16:36	1
Chloroform	0.50	U	1.0	0.50	ug/L			05/22/20 16:36	1
Chloromethane	0.40	U M Q	1.0	0.40	ug/L			05/22/20 16:36	1
cis-1,2-Dichloroethene	**4.4**		1.0	0.41	ug/L			05/22/20 16:36	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			05/22/20 16:36	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			05/22/20 16:36	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			05/22/20 16:36	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			05/22/20 16:36	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			05/22/20 16:36	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			05/22/20 16:36	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			05/22/20 16:36	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			05/22/20 16:36	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			05/22/20 16:36	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			05/22/20 16:36	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			05/22/20 16:36	1
Naphthalene	2.5	U	5.0	2.5	ug/L			05/22/20 16:36	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			05/22/20 16:36	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			05/22/20 16:36	1
o-Xylene	0.23	U	1.0	0.23	ug/L			05/22/20 16:36	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			05/22/20 16:36	1
Styrene	0.27	U	1.0	0.27	ug/L			05/22/20 16:36	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			05/22/20 16:36	1
Tetrachloroethene	**0.85**	**J**	1.0	0.74	ug/L			05/22/20 16:36	1
Toluene	0.48	U	1.0	0.48	ug/L			05/22/20 16:36	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/22/20 16:36	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			05/22/20 16:36	1
Trichloroethene	**0.69**	**J**	1.0	0.48	ug/L			05/22/20 16:36	1

Client Sample ID: G6M-13-01X-SPR20

Lab Sample ID: 680-183803-7
Matrix: Water
Date Collected: 05/11/20 13:20
Date Received: 05/14/20 09:30

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			05/22/20 16:36	1
Vinyl acetate	0.81	U Q	2.0	0.81	ug/L			05/22/20 16:36	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			05/22/20 16:36	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			05/22/20 16:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*85 - 114*		*05/22/20 16:36*	*1*
Dibromofluoromethane (Surr)	*113*		*80 - 119*		*05/22/20 16:36*	*1*
Toluene-d8 (Surr)	*106*		*89 - 112*		*05/22/20 16:36*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*81 - 118*		*05/22/20 16:36*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	0.55	U	1.1	0.55	ug/L			05/19/20 13:46	1
Ethylene	**0.78**	**J**	1.0	0.50	ug/L			05/19/20 13:46	1
Methane (TCD)	**8000**		390	39	ug/L			05/19/20 13:46	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**10**		1.0	0.40	mg/L			05/21/20 22:27	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**620**		50	17	ug/L		05/18/20 10:40	05/22/20 18:28	1
Manganese	**5100**	**J**	10	1.0	ug/L		05/18/20 10:40	05/22/20 18:28	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**6.2**		3.0	1.5	ug/L		05/18/20 10:40	05/18/20 23:52	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.037**	**J**	0.10	0.019	mg/L			05/19/20 18:34	1
Sulfide	0.81	U	0.81	0.81	mg/L			05/18/20 12:41	1
Total Organic Carbon - Duplicates	**11**		1.0	0.35	mg/L			05/27/20 01:13	1
Alkalinity	**66**		10	3.1	mg/L			05/18/20 11:24	1

Client Sample ID: G6M-13-02X-SPR20

Lab Sample ID: 680-183803-8
Matrix: Water
Date Collected: 05/12/20 09:45
Date Received: 05/14/20 09:30

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			05/22/20 17:00	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			05/22/20 17:00	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			05/22/20 17:00	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			05/22/20 17:00	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			05/22/20 17:00	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/22/20 17:00	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			05/22/20 17:00	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/22/20 17:00	1

Client: Seres Engineering & Services LLC
Project/Site: JV, LTM - AOC50 Spring 2020

Job ID: 680-183803-1

Client Sample ID: G6M-13-02X-SPR20
Date Collected: 05/12/20 09:45
Date Received: 05/14/20 09:30

Lab Sample ID: 680-183803-8
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			05/22/20 17:00	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/22/20 17:00	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			05/22/20 17:00	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			05/22/20 17:00	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			05/22/20 17:00	1
1,2-Dichloroethane	0.50	U	1.0	0.50	ug/L			05/22/20 17:00	1
1,2-Dichloroethene, Total	**33**		2.0	0.74	ug/L			05/22/20 17:00	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			05/22/20 17:00	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			05/22/20 17:00	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			05/22/20 17:00	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			05/22/20 17:00	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			05/22/20 17:00	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			05/22/20 17:00	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			05/22/20 17:00	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/22/20 17:00	1
2-Hexanone	2.0	U	10	2.0	ug/L			05/22/20 17:00	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			05/22/20 17:00	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			05/22/20 17:00	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			05/22/20 17:00	1
Acetone	**51**		10	7.0	ug/L			05/22/20 17:00	1
Benzene	0.43	U	1.0	0.43	ug/L			05/22/20 17:00	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			05/22/20 17:00	1
Bromoform	0.43	U	1.0	0.43	ug/L			05/22/20 17:00	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			05/22/20 17:00	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			05/22/20 17:00	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			05/22/20 17:00	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			05/22/20 17:00	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			05/22/20 17:00	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			05/22/20 17:00	1
Chloroethane	2.5	U	5.0	2.5	ug/L			05/22/20 17:00	1
Chloroform	0.50	U	1.0	0.50	ug/L			05/22/20 17:00	1
Chloromethane	0.40	U Q	1.0	0.40	ug/L			05/22/20 17:00	1
cis-1,2-Dichloroethene	**32**		1.0	0.41	ug/L			05/22/20 17:00	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			05/22/20 17:00	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			05/22/20 17:00	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			05/22/20 17:00	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			05/22/20 17:00	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			05/22/20 17:00	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			05/22/20 17:00	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			05/22/20 17:00	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			05/22/20 17:00	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			05/22/20 17:00	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			05/22/20 17:00	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			05/22/20 17:00	1
Naphthalene	2.5	U	5.0	2.5	ug/L			05/22/20 17:00	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			05/22/20 17:00	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			05/22/20 17:00	1
o-Xylene	0.23	U	1.0	0.23	ug/L			05/22/20 17:00	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			05/22/20 17:00	1

Client Sample ID: G6M-13-02X-SPR20

Lab Sample ID: 680-183803-8

Date Collected: 05/12/20 09:45

Matrix: Water

Date Received: 05/14/20 09:30

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	0.27	U	1.0	0.27	ug/L			05/22/20 17:00	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			05/22/20 17:00	1
Tetrachloroethene	**5.6**		1.0	0.74	ug/L			05/22/20 17:00	1
Toluene	0.48	U	1.0	0.48	ug/L			05/22/20 17:00	1
trans-1,2-Dichloroethene	**1.1**		1.0	0.37	ug/L			05/22/20 17:00	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			05/22/20 17:00	1
Trichloroethene	**12**		1.0	0.48	ug/L			05/22/20 17:00	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			05/22/20 17:00	1
Vinyl acetate	0.81	U Q	2.0	0.81	ug/L			05/22/20 17:00	1
Vinyl chloride	**17**		1.0	0.50	ug/L			05/22/20 17:00	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			05/22/20 17:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*85 - 114*		*05/22/20 17:00*	*1*
Dibromofluoromethane (Surr)	*114*		*80 - 119*		*05/22/20 17:00*	*1*
Toluene-d8 (Surr)	*110*		*89 - 112*		*05/22/20 17:00*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*81 - 118*		*05/22/20 17:00*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**1.3**		1.1	0.55	ug/L			05/19/20 13:59	1
Ethylene	**2.1**		1.0	0.50	ug/L			05/19/20 13:59	1
Methane (TCD)	**16000**		390	39	ug/L			05/19/20 13:59	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**4.1**		1.0	0.40	mg/L			05/22/20 00:10	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**150**		50	17	ug/L		05/18/20 10:40	05/22/20 18:55	1
Manganese	**16**		10	1.0	ug/L		05/18/20 10:40	05/22/20 18:55	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5	U	3.0	1.5	ug/L		05/18/20 10:40	05/19/20 00:11	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.048**	**J**	0.10	0.019	mg/L			05/19/20 18:36	1
Sulfide	**1.4**		0.81	0.81	mg/L			05/18/20 12:41	1
Total Organic Carbon - Duplicates	**5.2**		1.0	0.35	mg/L			05/27/20 01:32	1
Alkalinity	**66**		10	3.1	mg/L			05/18/20 11:29	1

Client Sample ID: G6M-13-04X-SPR20

Lab Sample ID: 680-183803-9

Date Collected: 05/11/20 15:35

Matrix: Water

Date Received: 05/14/20 09:30

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			05/24/20 20:19	1

Client: Seres Engineering & Services LLC
Project/Site: JV, LTM - AOC50 Spring 2020

Job ID: 680-183803-1

Client Sample ID: G6M-13-04X-SPR20
Date Collected: 05/11/20 15:35
Date Received: 05/14/20 09:30

Lab Sample ID: 680-183803-9
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			05/24/20 20:19	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			05/24/20 20:19	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			05/24/20 20:19	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			05/24/20 20:19	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/24/20 20:19	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			05/24/20 20:19	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/24/20 20:19	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			05/24/20 20:19	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/24/20 20:19	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			05/24/20 20:19	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			05/24/20 20:19	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			05/24/20 20:19	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			05/24/20 20:19	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			05/24/20 20:19	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			05/24/20 20:19	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			05/24/20 20:19	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			05/24/20 20:19	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			05/24/20 20:19	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			05/24/20 20:19	1
2,2-Dichloropropane	0.37	U Q	1.0	0.37	ug/L			05/24/20 20:19	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			05/24/20 20:19	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/24/20 20:19	1
2-Hexanone	2.0	U	10	2.0	ug/L			05/24/20 20:19	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			05/24/20 20:19	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			05/24/20 20:19	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			05/24/20 20:19	1
Acetone	7.0	U	10	7.0	ug/L			05/24/20 20:19	1
Benzene	0.43	U	1.0	0.43	ug/L			05/24/20 20:19	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			05/24/20 20:19	1
Bromoform	0.43	U	1.0	0.43	ug/L			05/24/20 20:19	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			05/24/20 20:19	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			05/24/20 20:19	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			05/24/20 20:19	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			05/24/20 20:19	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			05/24/20 20:19	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			05/24/20 20:19	1
Chloroethane	2.5	U	5.0	2.5	ug/L			05/24/20 20:19	1
Chloroform	0.50	U	1.0	0.50	ug/L			05/24/20 20:19	1
Chloromethane	0.40	U Q	1.0	0.40	ug/L			05/24/20 20:19	1
cis-1,2-Dichloroethene	**0.68**	**J**	1.0	0.41	ug/L			05/24/20 20:19	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			05/24/20 20:19	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			05/24/20 20:19	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			05/24/20 20:19	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			05/24/20 20:19	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			05/24/20 20:19	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			05/24/20 20:19	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			05/24/20 20:19	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			05/24/20 20:19	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			05/24/20 20:19	1

Client Sample ID: G6M-13-04X-SPR20

Date Collected: 05/11/20 15:35
Date Received: 05/14/20 09:30

Lab Sample ID: 680-183803-9

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	2.5	U	5.0	2.5	ug/L			05/24/20 20:19	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			05/24/20 20:19	1
Naphthalene	2.5	U	5.0	2.5	ug/L			05/24/20 20:19	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			05/24/20 20:19	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			05/24/20 20:19	1
o-Xylene	0.23	U	1.0	0.23	ug/L			05/24/20 20:19	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			05/24/20 20:19	1
Styrene	0.27	U	1.0	0.27	ug/L			05/24/20 20:19	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			05/24/20 20:19	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			05/24/20 20:19	1
Toluene	0.48	U	1.0	0.48	ug/L			05/24/20 20:19	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/24/20 20:19	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			05/24/20 20:19	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			05/24/20 20:19	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			05/24/20 20:19	1
Vinyl acetate	0.81	U Q	2.0	0.81	ug/L			05/24/20 20:19	1
Vinyl chloride	**0.52**	**J**	1.0	0.50	ug/L			05/24/20 20:19	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			05/24/20 20:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*85 - 114*		*05/24/20 20:19*	*1*
Dibromofluoromethane (Surr)	*117*		*80 - 119*		*05/24/20 20:19*	*1*
Toluene-d8 (Surr)	*110*		*89 - 112*		*05/24/20 20:19*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*81 - 118*		*05/24/20 20:19*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**1.5**		1.1	0.55	ug/L			05/22/20 11:30	1
Ethylene	**2.5**		1.0	0.50	ug/L			05/22/20 11:30	1
Methane (TCD)	**21000**		390	39	ug/L			05/22/20 11:30	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**5.5**		5.0	2.0	mg/L			05/22/20 03:11	5

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**44000**		50	17	ug/L		05/18/20 10:40	05/22/20 19:00	1
Manganese	**9000**		10	1.0	ug/L		05/18/20 10:40	05/22/20 19:00	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**430**		3.0	1.5	ug/L		05/18/20 10:40	05/19/20 00:14	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.032**	**J**	0.10	0.019	mg/L			05/19/20 18:38	1
Sulfide	0.81	U	0.81	0.81	mg/L			05/18/20 12:41	1
Total Organic Carbon - Duplicates	**6.3**		1.0	0.35	mg/L			05/27/20 01:47	1
Alkalinity	**240**		10	3.1	mg/L			05/18/20 11:34	1

Client: Seres Engineering & Services LLC
Project/Site: JV, LTM - AOC50 Spring 2020

Job ID: 680-183803-1

Client Sample ID: G6M-13-05X-SPR20
Date Collected: 05/12/20 15:50
Date Received: 05/14/20 09:30

Lab Sample ID: 680-183803-10
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			05/26/20 20:22	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			05/26/20 20:22	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			05/26/20 20:22	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			05/26/20 20:22	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			05/26/20 20:22	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/26/20 20:22	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			05/26/20 20:22	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/26/20 20:22	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			05/26/20 20:22	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/26/20 20:22	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			05/26/20 20:22	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			05/26/20 20:22	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			05/26/20 20:22	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			05/26/20 20:22	1
1,2-Dichloroethene, Total	**9.3**		2.0	0.74	ug/L			05/26/20 20:22	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			05/26/20 20:22	1
1,3,5-Trimethylbenzene	0.31	U M	1.0	0.31	ug/L			05/26/20 20:22	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			05/26/20 20:22	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			05/26/20 20:22	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			05/26/20 20:22	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			05/26/20 20:22	1
2-Butanone (MEK)	**56**		10	3.4	ug/L			05/26/20 20:22	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/26/20 20:22	1
2-Hexanone	2.0	U	10	2.0	ug/L			05/26/20 20:22	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			05/26/20 20:22	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			05/26/20 20:22	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			05/26/20 20:22	1
Acetone	**28**		10	7.0	ug/L			05/26/20 20:22	1
Benzene	0.43	U M	1.0	0.43	ug/L			05/26/20 20:22	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			05/26/20 20:22	1
Bromoform	0.43	U	1.0	0.43	ug/L			05/26/20 20:22	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			05/26/20 20:22	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			05/26/20 20:22	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			05/26/20 20:22	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			05/26/20 20:22	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			05/26/20 20:22	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			05/26/20 20:22	1
Chloroethane	2.5	U	5.0	2.5	ug/L			05/26/20 20:22	1
Chloroform	0.50	U	1.0	0.50	ug/L			05/26/20 20:22	1
Chloromethane	0.40	U	1.0	0.40	ug/L			05/26/20 20:22	1
cis-1,2-Dichloroethene	**8.4**		1.0	0.41	ug/L			05/26/20 20:22	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			05/26/20 20:22	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			05/26/20 20:22	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			05/26/20 20:22	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			05/26/20 20:22	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			05/26/20 20:22	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			05/26/20 20:22	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			05/26/20 20:22	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			05/26/20 20:22	1

Client Sample ID: G6M-13-05X-SPR20
Date Collected: 05/12/20 15:50
Date Received: 05/14/20 09:30

Lab Sample ID: 680-183803-10
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			05/26/20 20:22	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			05/26/20 20:22	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			05/26/20 20:22	1
Naphthalene	2.5	U	5.0	2.5	ug/L			05/26/20 20:22	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			05/26/20 20:22	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			05/26/20 20:22	1
o-Xylene	0.23	U	1.0	0.23	ug/L			05/26/20 20:22	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			05/26/20 20:22	1
Styrene	0.27	U M	1.0	0.27	ug/L			05/26/20 20:22	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			05/26/20 20:22	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			05/26/20 20:22	1
Toluene	**0.48**	**J**	1.0	0.48	ug/L			05/26/20 20:22	1
trans-1,2-Dichloroethene	**0.88**	**J**	1.0	0.37	ug/L			05/26/20 20:22	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			05/26/20 20:22	1
Trichloroethene	**2.3**	**B**	1.0	0.48	ug/L			05/26/20 20:22	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			05/26/20 20:22	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			05/26/20 20:22	1
Vinyl chloride	**10**		1.0	0.50	ug/L			05/26/20 20:22	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			05/26/20 20:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*05/26/20 20:22*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 119*		*05/26/20 20:22*	*1*
Toluene-d8 (Surr)	*99*		*89 - 112*		*05/26/20 20:22*	*1*
1,2-Dichloroethane-d4 (Surr)	*108*		*81 - 118*		*05/26/20 20:22*	*1*

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U H	1.0	0.37	ug/L			05/27/20 14:27	1
1,1,1-Trichloroethane	0.37	U H	1.0	0.37	ug/L			05/27/20 14:27	1
1,1,2,2-Tetrachloroethane	0.62	U H	1.0	0.62	ug/L			05/27/20 14:27	1
1,1,2-Trichloroethane	0.33	U H	1.0	0.33	ug/L			05/27/20 14:27	1
1,1-Dichloroethane	0.38	U H	1.0	0.38	ug/L			05/27/20 14:27	1
1,1-Dichloroethene	0.36	U H	1.0	0.36	ug/L			05/27/20 14:27	1
1,1-Dichloropropene	0.34	U H	1.0	0.34	ug/L			05/27/20 14:27	1
1,2,3-Trichlorobenzene	2.5	U H	5.0	2.5	ug/L			05/27/20 14:27	1
1,2,3-Trichloropropane	0.39	U H	1.0	0.39	ug/L			05/27/20 14:27	1
1,2,4-Trichlorobenzene	2.5	U H	5.0	2.5	ug/L			05/27/20 14:27	1
1,2,4-Trimethylbenzene	0.47	U H	1.0	0.47	ug/L			05/27/20 14:27	1
1,2-Dibromo-3-Chloropropane	1.1	U H	5.0	1.1	ug/L			05/27/20 14:27	1
1,2-Dichlorobenzene	0.37	U H	1.0	0.37	ug/L			05/27/20 14:27	1
1,2-Dichloroethane	0.50	U H M	1.0	0.50	ug/L			05/27/20 14:27	1
1,2-Dichloroethene, Total	**6.8**	**H**	2.0	0.74	ug/L			05/27/20 14:27	1
1,2-Dichloropropane	0.67	U H	1.0	0.67	ug/L			05/27/20 14:27	1
1,3,5-Trimethylbenzene	0.31	U H	1.0	0.31	ug/L			05/27/20 14:27	1
1,3-Dichlorobenzene	0.43	U H	1.0	0.43	ug/L			05/27/20 14:27	1
1,3-Dichloropropane	0.34	U H	1.0	0.34	ug/L			05/27/20 14:27	1
1,4-Dichlorobenzene	0.46	U H	1.0	0.46	ug/L			05/27/20 14:27	1
2,2-Dichloropropane	0.37	U H	1.0	0.37	ug/L			05/27/20 14:27	1
2-Butanone (MEK)	**47**	**H**	10	3.4	ug/L			05/27/20 14:27	1

Client Sample ID: G6M-13-05X-SPR20

Date Collected: 05/12/20 15:50
Date Received: 05/14/20 09:30

Lab Sample ID: 680-183803-10

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorotoluene	0.27	U H	1.0	0.27	ug/L			05/27/20 14:27	1
2-Hexanone	2.0	U H	10	2.0	ug/L			05/27/20 14:27	1
4-Chlorotoluene	0.45	U H	1.0	0.45	ug/L			05/27/20 14:27	1
4-Isopropyltoluene	0.48	U H	1.0	0.48	ug/L			05/27/20 14:27	1
4-Methyl-2-pentanone (MIBK)	2.1	U H	10	2.1	ug/L			05/27/20 14:27	1
Acetone	**24**	**H**	10	7.0	ug/L			05/27/20 14:27	1
Benzene	0.43	U H	1.0	0.43	ug/L			05/27/20 14:27	1
Bromobenzene	0.50	U H	1.0	0.50	ug/L			05/27/20 14:27	1
Bromoform	0.43	U H	1.0	0.43	ug/L			05/27/20 14:27	1
Bromomethane	2.5	U H Q	5.0	2.5	ug/L			05/27/20 14:27	1
Carbon disulfide	0.43	U H	2.0	0.43	ug/L			05/27/20 14:27	1
Carbon tetrachloride	0.33	U H	1.0	0.33	ug/L			05/27/20 14:27	1
Chlorobenzene	0.26	U H	1.0	0.26	ug/L			05/27/20 14:27	1
Chlorobromomethane	0.45	U H	1.0	0.45	ug/L			05/27/20 14:27	1
Chlorodibromomethane	0.32	U H	1.0	0.32	ug/L			05/27/20 14:27	1
Chloroethane	2.5	U H	5.0	2.5	ug/L			05/27/20 14:27	1
Chloroform	0.50	U H	1.0	0.50	ug/L			05/27/20 14:27	1
Chloromethane	0.40	U H	1.0	0.40	ug/L			05/27/20 14:27	1
cis-1,2-Dichloroethene	**6.2**	**H**	1.0	0.41	ug/L			05/27/20 14:27	1
cis-1,3-Dichloropropene	0.40	U H	1.0	0.40	ug/L			05/27/20 14:27	1
Dibromomethane	0.35	U H	1.0	0.35	ug/L			05/27/20 14:27	1
Dichlorobromomethane	0.44	U H	1.0	0.44	ug/L			05/27/20 14:27	1
Dichlorodifluoromethane	0.60	U H	1.0	0.60	ug/L			05/27/20 14:27	1
Ethylbenzene	0.33	U H	1.0	0.33	ug/L			05/27/20 14:27	1
Ethylene Dibromide	0.44	U H	1.0	0.44	ug/L			05/27/20 14:27	1
Hexachlorobutadiene	2.5	U H	5.0	2.5	ug/L			05/27/20 14:27	1
Isopropylbenzene	0.35	U H	1.0	0.35	ug/L			05/27/20 14:27	1
Methyl tert-butyl ether	0.30	U H	10	0.30	ug/L			05/27/20 14:27	1
Methylene Chloride	2.5	U H	5.0	2.5	ug/L			05/27/20 14:27	1
m-Xylene & p-Xylene	0.35	U H	1.0	0.35	ug/L			05/27/20 14:27	1
Naphthalene	2.5	U H	5.0	2.5	ug/L			05/27/20 14:27	1
n-Butylbenzene	0.47	U H	1.0	0.47	ug/L			05/27/20 14:27	1
N-Propylbenzene	0.38	U H	1.0	0.38	ug/L			05/27/20 14:27	1
o-Xylene	0.23	U H	1.0	0.23	ug/L			05/27/20 14:27	1
sec-Butylbenzene	0.42	U H	1.0	0.42	ug/L			05/27/20 14:27	1
Styrene	0.27	U H	1.0	0.27	ug/L			05/27/20 14:27	1
tert-Butylbenzene	0.45	U H	1.0	0.45	ug/L			05/27/20 14:27	1
Tetrachloroethene	0.74	U H	1.0	0.74	ug/L			05/27/20 14:27	1
Toluene	0.48	U H	1.0	0.48	ug/L			05/27/20 14:27	1
trans-1,2-Dichloroethene	**0.52**	**J H**	1.0	0.37	ug/L			05/27/20 14:27	1
trans-1,3-Dichloropropene	0.42	U H	1.0	0.42	ug/L			05/27/20 14:27	1
Trichloroethene	**1.3**	**H**	1.0	0.48	ug/L			05/27/20 14:27	1
Trichlorofluoromethane	0.42	U H	1.0	0.42	ug/L			05/27/20 14:27	1
Vinyl acetate	0.81	U H	2.0	0.81	ug/L			05/27/20 14:27	1
Vinyl chloride	**11**	**H**	1.0	0.50	ug/L			05/27/20 14:27	1
Xylenes, Total	0.23	U H	2.0	0.23	ug/L			05/27/20 14:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*		*05/27/20 14:27*	*1*
Dibromofluoromethane (Surr)	*112*		*80 - 119*		*05/27/20 14:27*	*1*

Client Sample ID: G6M-13-05X-SPR20

Lab Sample ID: 680-183803-10

Date Collected: 05/12/20 15:50

Matrix: Water

Date Received: 05/14/20 09:30

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*109*		*89 - 112*		*05/27/20 14:27*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*81 - 118*		*05/27/20 14:27*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**27**		1.1	0.55	ug/L			05/22/20 11:43	1
Ethylene	**57**		1.0	0.50	ug/L			05/22/20 11:43	1
Methane (TCD)	**19000**		390	39	ug/L			05/22/20 11:43	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	2.0	U	5.0	2.0	mg/L			05/22/20 03:24	5

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**100000**		50	17	ug/L		05/18/20 10:40	05/22/20 19:09	1
Manganese	**16000**		10	1.0	ug/L		05/18/20 10:40	05/22/20 19:09	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**120**		3.0	1.5	ug/L		05/18/20 10:40	05/19/20 00:26	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.063**	**J**	0.10	0.019	mg/L			05/19/20 18:44	1
Sulfide	0.81	U	0.81	0.81	mg/L			05/18/20 12:41	1
Total Organic Carbon - Duplicates	**27**		1.0	0.35	mg/L			05/27/20 02:03	1
Alkalinity	**160**		10	3.1	mg/L			05/18/20 11:40	1

Client Sample ID: G6M-97-05B-SPR20

Lab Sample ID: 680-183803-11

Date Collected: 05/11/20 11:20

Matrix: Water

Date Received: 05/14/20 09:30

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			05/24/20 20:42	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			05/24/20 20:42	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			05/24/20 20:42	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			05/24/20 20:42	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			05/24/20 20:42	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/24/20 20:42	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			05/24/20 20:42	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/24/20 20:42	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			05/24/20 20:42	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/24/20 20:42	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			05/24/20 20:42	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			05/24/20 20:42	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			05/24/20 20:42	1
1,2-Dichloroethane	0.50	U	1.0	0.50	ug/L			05/24/20 20:42	1
1,2-Dichloroethene, Total	**77**		2.0	0.74	ug/L			05/24/20 20:42	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			05/24/20 20:42	1

Client: Seres Engineering & Services LLC
Project/Site: JV, LTM - AOC50 Spring 2020

Job ID: 680-183803-1

Client Sample ID: G6M-97-05B-SPR20
Date Collected: 05/11/20 11:20
Date Received: 05/14/20 09:30

Lab Sample ID: 680-183803-11
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			05/24/20 20:42	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			05/24/20 20:42	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			05/24/20 20:42	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			05/24/20 20:42	1
2,2-Dichloropropane	0.37	U Q	1.0	0.37	ug/L			05/24/20 20:42	1
2-Butanone (MEK)	**95**		10	3.4	ug/L			05/24/20 20:42	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/24/20 20:42	1
2-Hexanone	2.0	U	10	2.0	ug/L			05/24/20 20:42	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			05/24/20 20:42	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			05/24/20 20:42	1
4-Methyl-2-pentanone (MIBK)	**16**		10	2.1	ug/L			05/24/20 20:42	1
Acetone	**31**		10	7.0	ug/L			05/24/20 20:42	1
Benzene	0.43	U	1.0	0.43	ug/L			05/24/20 20:42	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			05/24/20 20:42	1
Bromoform	0.43	U	1.0	0.43	ug/L			05/24/20 20:42	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			05/24/20 20:42	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			05/24/20 20:42	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			05/24/20 20:42	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			05/24/20 20:42	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			05/24/20 20:42	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			05/24/20 20:42	1
Chloroethane	2.5	U	5.0	2.5	ug/L			05/24/20 20:42	1
Chloroform	0.50	U	1.0	0.50	ug/L			05/24/20 20:42	1
Chloromethane	0.40	U Q	1.0	0.40	ug/L			05/24/20 20:42	1
cis-1,2-Dichloroethene	**77**		1.0	0.41	ug/L			05/24/20 20:42	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			05/24/20 20:42	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			05/24/20 20:42	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			05/24/20 20:42	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			05/24/20 20:42	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			05/24/20 20:42	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			05/24/20 20:42	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			05/24/20 20:42	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			05/24/20 20:42	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			05/24/20 20:42	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			05/24/20 20:42	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			05/24/20 20:42	1
Naphthalene	2.5	U	5.0	2.5	ug/L			05/24/20 20:42	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			05/24/20 20:42	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			05/24/20 20:42	1
o-Xylene	0.23	U	1.0	0.23	ug/L			05/24/20 20:42	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			05/24/20 20:42	1
Styrene	0.27	U	1.0	0.27	ug/L			05/24/20 20:42	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			05/24/20 20:42	1
Tetrachloroethene	**6.4**		1.0	0.74	ug/L			05/24/20 20:42	1
Toluene	0.48	U	1.0	0.48	ug/L			05/24/20 20:42	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/24/20 20:42	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			05/24/20 20:42	1
Trichloroethene	**0.97**	**J**	1.0	0.48	ug/L			05/24/20 20:42	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			05/24/20 20:42	1

Client Sample ID: G6M-97-05B-SPR20

Lab Sample ID: 680-183803-11

Date Collected: 05/11/20 11:20

Matrix: Water

Date Received: 05/14/20 09:30

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl acetate	0.81	U Q	2.0	0.81	ug/L			05/24/20 20:42	1
Vinyl chloride	**0.56**	**J**	1.0	0.50	ug/L			05/24/20 20:42	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			05/24/20 20:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*85 - 114*		*05/24/20 20:42*	*1*
Dibromofluoromethane (Surr)	*116*		*80 - 119*		*05/24/20 20:42*	*1*
Toluene-d8 (Surr)	*112*		*89 - 112*		*05/24/20 20:42*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*81 - 118*		*05/24/20 20:42*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**6.5**		1.1	0.55	ug/L			05/22/20 11:56	1
Ethylene	**1.6**		1.0	0.50	ug/L			05/22/20 11:56	1
Methane (TCD)	**13000**		390	39	ug/L			05/22/20 11:56	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**0.48**	**J M**	1.0	0.40	mg/L			05/22/20 00:23	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**100000**		50	17	ug/L		05/18/20 10:40	05/22/20 19:05	1
Manganese	**16000**		10	1.0	ug/L		05/18/20 10:40	05/22/20 19:05	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**220**		3.0	1.5	ug/L		05/18/20 10:40	05/19/20 00:23	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.032**	**J**	0.10	0.019	mg/L			05/19/20 18:50	1
Sulfide	0.81	U	0.81	0.81	mg/L			05/18/20 12:41	1
Total Organic Carbon - Duplicates	**260**		6.0	2.1	mg/L			05/27/20 02:26	6
Alkalinity	**250**		10	3.1	mg/L			05/18/20 11:46	1

Client Sample ID: XSA-12-96X-SPR20

Lab Sample ID: 680-183803-12

Date Collected: 05/12/20 16:40

Matrix: Water

Date Received: 05/14/20 09:30

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			05/26/20 20:46	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			05/26/20 20:46	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			05/26/20 20:46	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			05/26/20 20:46	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			05/26/20 20:46	1
1,1-Dichloroethene	**0.88**	**J**	1.0	0.36	ug/L			05/26/20 20:46	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			05/26/20 20:46	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/26/20 20:46	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			05/26/20 20:46	1

Client: Seres Engineering & Services LLC
Project/Site: JV, LTM - AOC50 Spring 2020

Job ID: 680-183803-1

Client Sample ID: XSA-12-96X-SPR20
Date Collected: 05/12/20 16:40
Date Received: 05/14/20 09:30

Lab Sample ID: 680-183803-12
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/26/20 20:46	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			05/26/20 20:46	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			05/26/20 20:46	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			05/26/20 20:46	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			05/26/20 20:46	1
1,2-Dichloroethene, Total	**32**		2.0	0.74	ug/L			05/26/20 20:46	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			05/26/20 20:46	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			05/26/20 20:46	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			05/26/20 20:46	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			05/26/20 20:46	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			05/26/20 20:46	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			05/26/20 20:46	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			05/26/20 20:46	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/26/20 20:46	1
2-Hexanone	2.0	U	10	2.0	ug/L			05/26/20 20:46	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			05/26/20 20:46	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			05/26/20 20:46	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			05/26/20 20:46	1
Acetone	7.0	U	10	7.0	ug/L			05/26/20 20:46	1
Benzene	0.43	U	1.0	0.43	ug/L			05/26/20 20:46	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			05/26/20 20:46	1
Bromoform	0.43	U	1.0	0.43	ug/L			05/26/20 20:46	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			05/26/20 20:46	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			05/26/20 20:46	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			05/26/20 20:46	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			05/26/20 20:46	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			05/26/20 20:46	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			05/26/20 20:46	1
Chloroethane	**5.7**		5.0	2.5	ug/L			05/26/20 20:46	1
Chloroform	0.50	U	1.0	0.50	ug/L			05/26/20 20:46	1
Chloromethane	0.40	U	1.0	0.40	ug/L			05/26/20 20:46	1
cis-1,2-Dichloroethene	**25**		1.0	0.41	ug/L			05/26/20 20:46	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			05/26/20 20:46	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			05/26/20 20:46	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			05/26/20 20:46	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			05/26/20 20:46	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			05/26/20 20:46	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			05/26/20 20:46	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			05/26/20 20:46	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			05/26/20 20:46	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			05/26/20 20:46	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			05/26/20 20:46	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			05/26/20 20:46	1
Naphthalene	2.5	U	5.0	2.5	ug/L			05/26/20 20:46	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			05/26/20 20:46	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			05/26/20 20:46	1
o-Xylene	0.23	U	1.0	0.23	ug/L			05/26/20 20:46	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			05/26/20 20:46	1
Styrene	0.27	U	1.0	0.27	ug/L			05/26/20 20:46	1

Client Sample ID: XSA-12-96X-SPR20
Date Collected: 05/12/20 16:40
Date Received: 05/14/20 09:30

Lab Sample ID: 680-183803-12
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			05/26/20 20:46	1
Tetrachloroethene	**4.2**		1.0	0.74	ug/L			05/26/20 20:46	1
Toluene	0.48	U	1.0	0.48	ug/L			05/26/20 20:46	1
trans-1,2-Dichloroethene	**7.0**		1.0	0.37	ug/L			05/26/20 20:46	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			05/26/20 20:46	1
Trichloroethene	**20**	**B**	1.0	0.48	ug/L			05/26/20 20:46	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			05/26/20 20:46	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			05/26/20 20:46	1
Vinyl chloride	**21**		1.0	0.50	ug/L			05/26/20 20:46	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			05/26/20 20:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*05/26/20 20:46*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*05/26/20 20:46*	*1*
Toluene-d8 (Surr)	*99*		*89 - 112*		*05/26/20 20:46*	*1*
1,2-Dichloroethane-d4 (Surr)	*108*		*81 - 118*		*05/26/20 20:46*	*1*

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U H	1.0	0.37	ug/L			05/27/20 14:04	1
1,1,1-Trichloroethane	0.37	U H	1.0	0.37	ug/L			05/27/20 14:04	1
1,1,2,2-Tetrachloroethane	0.62	U H	1.0	0.62	ug/L			05/27/20 14:04	1
1,1,2-Trichloroethane	0.33	U H	1.0	0.33	ug/L			05/27/20 14:04	1
1,1-Dichloroethane	0.38	U H	1.0	0.38	ug/L			05/27/20 14:04	1
1,1-Dichloroethene	**0.73**	**J H**	1.0	0.36	ug/L			05/27/20 14:04	1
1,1-Dichloropropene	0.34	U H	1.0	0.34	ug/L			05/27/20 14:04	1
1,2,3-Trichlorobenzene	2.5	U H	5.0	2.5	ug/L			05/27/20 14:04	1
1,2,3-Trichloropropane	0.39	U H	1.0	0.39	ug/L			05/27/20 14:04	1
1,2,4-Trichlorobenzene	2.5	U H	5.0	2.5	ug/L			05/27/20 14:04	1
1,2,4-Trimethylbenzene	0.47	U H	1.0	0.47	ug/L			05/27/20 14:04	1
1,2-Dibromo-3-Chloropropane	1.1	U H	5.0	1.1	ug/L			05/27/20 14:04	1
1,2-Dichlorobenzene	0.37	U H	1.0	0.37	ug/L			05/27/20 14:04	1
1,2-Dichloroethane	0.50	U H M	1.0	0.50	ug/L			05/27/20 14:04	1
1,2-Dichloroethene, Total	**24**	**H**	2.0	0.74	ug/L			05/27/20 14:04	1
1,2-Dichloropropane	0.67	U H	1.0	0.67	ug/L			05/27/20 14:04	1
1,3,5-Trimethylbenzene	0.31	U H	1.0	0.31	ug/L			05/27/20 14:04	1
1,3-Dichlorobenzene	0.43	U H	1.0	0.43	ug/L			05/27/20 14:04	1
1,3-Dichloropropane	0.34	U H	1.0	0.34	ug/L			05/27/20 14:04	1
1,4-Dichlorobenzene	0.46	U H	1.0	0.46	ug/L			05/27/20 14:04	1
2,2-Dichloropropane	0.37	U H	1.0	0.37	ug/L			05/27/20 14:04	1
2-Butanone (MEK)	3.4	U H	10	3.4	ug/L			05/27/20 14:04	1
2-Chlorotoluene	0.27	U H	1.0	0.27	ug/L			05/27/20 14:04	1
2-Hexanone	2.0	U H	10	2.0	ug/L			05/27/20 14:04	1
4-Chlorotoluene	0.45	U H	1.0	0.45	ug/L			05/27/20 14:04	1
4-Isopropyltoluene	0.48	U H	1.0	0.48	ug/L			05/27/20 14:04	1
4-Methyl-2-pentanone (MIBK)	2.1	U H	10	2.1	ug/L			05/27/20 14:04	1
Acetone	7.0	U H	10	7.0	ug/L			05/27/20 14:04	1
Benzene	0.43	U H	1.0	0.43	ug/L			05/27/20 14:04	1
Bromobenzene	0.50	U H	1.0	0.50	ug/L			05/27/20 14:04	1
Bromoform	0.43	U H	1.0	0.43	ug/L			05/27/20 14:04	1

Client: Seres Engineering & Services LLC
Project/Site: JV, LTM - AOC50 Spring 2020

Job ID: 680-183803-1

Client Sample ID: XSA-12-96X-SPR20
Date Collected: 05/12/20 16:40
Date Received: 05/14/20 09:30

Lab Sample ID: 680-183803-12
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Bromomethane	2.5	U H Q	5.0	2.5	ug/L			05/27/20 14:04	1
Carbon disulfide	0.43	U H	2.0	0.43	ug/L			05/27/20 14:04	1
Carbon tetrachloride	0.33	U H	1.0	0.33	ug/L			05/27/20 14:04	1
Chlorobenzene	0.26	U H	1.0	0.26	ug/L			05/27/20 14:04	1
Chlorobromomethane	0.45	U H	1.0	0.45	ug/L			05/27/20 14:04	1
Chlorodibromomethane	0.32	U H	1.0	0.32	ug/L			05/27/20 14:04	1
Chloroethane	**4.1**	**J H**	5.0	2.5	ug/L			05/27/20 14:04	1
Chloroform	0.50	U H	1.0	0.50	ug/L			05/27/20 14:04	1
Chloromethane	0.40	U H	1.0	0.40	ug/L			05/27/20 14:04	1
cis-1,2-Dichloroethene	**18**	**H**	1.0	0.41	ug/L			05/27/20 14:04	1
cis-1,3-Dichloropropene	0.40	U H	1.0	0.40	ug/L			05/27/20 14:04	1
Dibromomethane	0.35	U H	1.0	0.35	ug/L			05/27/20 14:04	1
Dichlorobromomethane	0.44	U H	1.0	0.44	ug/L			05/27/20 14:04	1
Dichlorodifluoromethane	0.60	U H	1.0	0.60	ug/L			05/27/20 14:04	1
Ethylbenzene	0.33	U H	1.0	0.33	ug/L			05/27/20 14:04	1
Ethylene Dibromide	0.44	U H	1.0	0.44	ug/L			05/27/20 14:04	1
Hexachlorobutadiene	2.5	U H	5.0	2.5	ug/L			05/27/20 14:04	1
Isopropylbenzene	0.35	U H	1.0	0.35	ug/L			05/27/20 14:04	1
Methyl tert-butyl ether	0.30	U H	10	0.30	ug/L			05/27/20 14:04	1
Methylene Chloride	2.5	U H	5.0	2.5	ug/L			05/27/20 14:04	1
m-Xylene & p-Xylene	0.35	U H	1.0	0.35	ug/L			05/27/20 14:04	1
Naphthalene	2.5	U H	5.0	2.5	ug/L			05/27/20 14:04	1
n-Butylbenzene	0.47	U H	1.0	0.47	ug/L			05/27/20 14:04	1
N-Propylbenzene	0.38	U H	1.0	0.38	ug/L			05/27/20 14:04	1
o-Xylene	0.23	U H	1.0	0.23	ug/L			05/27/20 14:04	1
sec-Butylbenzene	0.42	U H	1.0	0.42	ug/L			05/27/20 14:04	1
Styrene	0.27	U H	1.0	0.27	ug/L			05/27/20 14:04	1
tert-Butylbenzene	0.45	U H	1.0	0.45	ug/L			05/27/20 14:04	1
Tetrachloroethene	**4.4**	**H**	1.0	0.74	ug/L			05/27/20 14:04	1
Toluene	0.48	U H	1.0	0.48	ug/L			05/27/20 14:04	1
trans-1,2-Dichloroethene	**5.7**	**H**	1.0	0.37	ug/L			05/27/20 14:04	1
trans-1,3-Dichloropropene	0.42	U H	1.0	0.42	ug/L			05/27/20 14:04	1
Trichloroethene	**17**	**H**	1.0	0.48	ug/L			05/27/20 14:04	1
Trichlorofluoromethane	0.42	U H	1.0	0.42	ug/L			05/27/20 14:04	1
Vinyl acetate	0.81	U H	2.0	0.81	ug/L			05/27/20 14:04	1
Vinyl chloride	**21**	**H**	1.0	0.50	ug/L			05/27/20 14:04	1
Xylenes, Total	0.23	U H	2.0	0.23	ug/L			05/27/20 14:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*05/27/20 14:04*	*1*
Dibromofluoromethane (Surr)	*110*		*80 - 119*		*05/27/20 14:04*	*1*
Toluene-d8 (Surr)	*108*		*89 - 112*		*05/27/20 14:04*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*81 - 118*		*05/27/20 14:04*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**11**		1.1	0.55	ug/L			05/22/20 12:09	1
Ethylene	**1.1**		1.0	0.50	ug/L			05/22/20 12:09	1
Methane (TCD)	**780**		390	39	ug/L			05/22/20 12:09	1

Client Sample ID: XSA-12-96X-SPR20

Lab Sample ID: 680-183803-12

Date Collected: 05/12/20 16:40

Matrix: Water

Date Received: 05/14/20 09:30

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**6.2**		1.0	0.40	mg/L			05/22/20 22:42	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**4200**		50	17	ug/L		05/18/20 10:40	05/22/20 19:23	1
Manganese	**5800**		10	1.0	ug/L		05/18/20 10:40	05/22/20 19:23	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5	U	3.0	1.5	ug/L		05/18/20 10:40	05/19/20 00:30	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.032**	**J**	0.10	0.019	mg/L			05/19/20 19:04	1
Sulfide	1.0	U	1.0	1.0	mg/L			05/18/20 12:41	1
Total Organic Carbon - Duplicates	**1.5**		1.0	0.35	mg/L			05/27/20 02:43	1
Alkalinity	**240**		10	3.1	mg/L			05/18/20 11:51	1

Client Sample ID: Trip Blank1-051220

Lab Sample ID: 680-183803-13

Date Collected: 05/12/20 00:00

Matrix: Water

Date Received: 05/14/20 09:30

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			05/26/20 16:52	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			05/26/20 16:52	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			05/26/20 16:52	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			05/26/20 16:52	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			05/26/20 16:52	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/26/20 16:52	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			05/26/20 16:52	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/26/20 16:52	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			05/26/20 16:52	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/26/20 16:52	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			05/26/20 16:52	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			05/26/20 16:52	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			05/26/20 16:52	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			05/26/20 16:52	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			05/26/20 16:52	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			05/26/20 16:52	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			05/26/20 16:52	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			05/26/20 16:52	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			05/26/20 16:52	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			05/26/20 16:52	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			05/26/20 16:52	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			05/26/20 16:52	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/26/20 16:52	1
2-Hexanone	2.0	U	10	2.0	ug/L			05/26/20 16:52	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			05/26/20 16:52	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			05/26/20 16:52	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			05/26/20 16:52	1

Client: Seres Engineering & Services LLC
Project/Site: JV, LTM - AOC50 Spring 2020

Job ID: 680-183803-1

Client Sample ID: Trip Blank1-051220
Date Collected: 05/12/20 00:00
Date Received: 05/14/20 09:30

Lab Sample ID: 680-183803-13
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	7.0	U	10	7.0	ug/L			05/26/20 16:52	1
Benzene	0.43	U M	1.0	0.43	ug/L			05/26/20 16:52	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			05/26/20 16:52	1
Bromoform	0.43	U	1.0	0.43	ug/L			05/26/20 16:52	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			05/26/20 16:52	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			05/26/20 16:52	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			05/26/20 16:52	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			05/26/20 16:52	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			05/26/20 16:52	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			05/26/20 16:52	1
Chloroethane	2.5	U	5.0	2.5	ug/L			05/26/20 16:52	1
Chloroform	0.50	U	1.0	0.50	ug/L			05/26/20 16:52	1
Chloromethane	0.40	U	1.0	0.40	ug/L			05/26/20 16:52	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			05/26/20 16:52	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			05/26/20 16:52	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			05/26/20 16:52	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			05/26/20 16:52	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			05/26/20 16:52	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			05/26/20 16:52	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			05/26/20 16:52	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			05/26/20 16:52	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			05/26/20 16:52	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			05/26/20 16:52	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			05/26/20 16:52	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			05/26/20 16:52	1
Naphthalene	2.5	U	5.0	2.5	ug/L			05/26/20 16:52	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			05/26/20 16:52	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			05/26/20 16:52	1
o-Xylene	0.23	U	1.0	0.23	ug/L			05/26/20 16:52	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			05/26/20 16:52	1
Styrene	0.27	U	1.0	0.27	ug/L			05/26/20 16:52	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			05/26/20 16:52	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			05/26/20 16:52	1
Toluene	0.48	U	1.0	0.48	ug/L			05/26/20 16:52	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/26/20 16:52	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			05/26/20 16:52	1
Trichloroethene	**1.1**	**B**	1.0	0.48	ug/L			05/26/20 16:52	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			05/26/20 16:52	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			05/26/20 16:52	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			05/26/20 16:52	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			05/26/20 16:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*05/26/20 16:52*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*05/26/20 16:52*	*1*
Toluene-d8 (Surr)	*99*		*89 - 112*		*05/26/20 16:52*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*81 - 118*		*05/26/20 16:52*	*1*

Client: Seres Engineering & Services LLC
Project/Site: JV, LTM - AOC50 Spring 2020

Job ID: 680-183803-1

Client Sample ID: Trip Blank1-051220
Date Collected: 05/12/20 00:00
Date Received: 05/14/20 09:30

Lab Sample ID: 680-183803-13
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U H	1.0	0.37	ug/L			05/27/20 13:40	1
1,1,1-Trichloroethane	0.37	U H	1.0	0.37	ug/L			05/27/20 13:40	1
1,1,2,2-Tetrachloroethane	0.62	U H	1.0	0.62	ug/L			05/27/20 13:40	1
1,1,2-Trichloroethane	0.33	U H	1.0	0.33	ug/L			05/27/20 13:40	1
1,1-Dichloroethane	0.38	U H	1.0	0.38	ug/L			05/27/20 13:40	1
1,1-Dichloroethene	0.36	U H	1.0	0.36	ug/L			05/27/20 13:40	1
1,1-Dichloropropene	0.34	U H	1.0	0.34	ug/L			05/27/20 13:40	1
1,2,3-Trichlorobenzene	2.5	U H	5.0	2.5	ug/L			05/27/20 13:40	1
1,2,3-Trichloropropane	0.39	U H	1.0	0.39	ug/L			05/27/20 13:40	1
1,2,4-Trichlorobenzene	2.5	U H	5.0	2.5	ug/L			05/27/20 13:40	1
1,2,4-Trimethylbenzene	0.47	U H	1.0	0.47	ug/L			05/27/20 13:40	1
1,2-Dibromo-3-Chloropropane	1.1	U H	5.0	1.1	ug/L			05/27/20 13:40	1
1,2-Dichlorobenzene	0.37	U H	1.0	0.37	ug/L			05/27/20 13:40	1
1,2-Dichloroethane	0.50	U H M	1.0	0.50	ug/L			05/27/20 13:40	1
1,2-Dichloroethene, Total	0.74	U H	2.0	0.74	ug/L			05/27/20 13:40	1
1,2-Dichloropropane	0.67	U H	1.0	0.67	ug/L			05/27/20 13:40	1
1,3,5-Trimethylbenzene	0.31	U H	1.0	0.31	ug/L			05/27/20 13:40	1
1,3-Dichlorobenzene	0.43	U H	1.0	0.43	ug/L			05/27/20 13:40	1
1,3-Dichloropropane	0.34	U H	1.0	0.34	ug/L			05/27/20 13:40	1
1,4-Dichlorobenzene	0.46	U H	1.0	0.46	ug/L			05/27/20 13:40	1
2,2-Dichloropropane	0.37	U H	1.0	0.37	ug/L			05/27/20 13:40	1
2-Butanone (MEK)	3.4	U H	10	3.4	ug/L			05/27/20 13:40	1
2-Chlorotoluene	0.27	U H	1.0	0.27	ug/L			05/27/20 13:40	1
2-Hexanone	2.0	U H	10	2.0	ug/L			05/27/20 13:40	1
4-Chlorotoluene	0.45	U H	1.0	0.45	ug/L			05/27/20 13:40	1
4-Isopropyltoluene	0.48	U H	1.0	0.48	ug/L			05/27/20 13:40	1
4-Methyl-2-pentanone (MIBK)	2.1	U H	10	2.1	ug/L			05/27/20 13:40	1
Acetone	7.0	U H	10	7.0	ug/L			05/27/20 13:40	1
Benzene	0.43	U H	1.0	0.43	ug/L			05/27/20 13:40	1
Bromobenzene	0.50	U H	1.0	0.50	ug/L			05/27/20 13:40	1
Bromoform	0.43	U H	1.0	0.43	ug/L			05/27/20 13:40	1
Bromomethane	2.5	U H Q	5.0	2.5	ug/L			05/27/20 13:40	1
Carbon disulfide	0.43	U H	2.0	0.43	ug/L			05/27/20 13:40	1
Carbon tetrachloride	0.33	U H	1.0	0.33	ug/L			05/27/20 13:40	1
Chlorobenzene	0.26	U H	1.0	0.26	ug/L			05/27/20 13:40	1
Chlorobromomethane	0.45	U H	1.0	0.45	ug/L			05/27/20 13:40	1
Chlorodibromomethane	0.32	U H	1.0	0.32	ug/L			05/27/20 13:40	1
Chloroethane	2.5	U H	5.0	2.5	ug/L			05/27/20 13:40	1
Chloroform	0.50	U H	1.0	0.50	ug/L			05/27/20 13:40	1
Chloromethane	0.40	U H	1.0	0.40	ug/L			05/27/20 13:40	1
cis-1,2-Dichloroethene	0.41	U H	1.0	0.41	ug/L			05/27/20 13:40	1
cis-1,3-Dichloropropene	0.40	U H	1.0	0.40	ug/L			05/27/20 13:40	1
Dibromomethane	0.35	U H	1.0	0.35	ug/L			05/27/20 13:40	1
Dichlorobromomethane	0.44	U H	1.0	0.44	ug/L			05/27/20 13:40	1
Dichlorodifluoromethane	0.60	U H	1.0	0.60	ug/L			05/27/20 13:40	1
Ethylbenzene	0.33	U H	1.0	0.33	ug/L			05/27/20 13:40	1
Ethylene Dibromide	0.44	U H	1.0	0.44	ug/L			05/27/20 13:40	1
Hexachlorobutadiene	2.5	U H	5.0	2.5	ug/L			05/27/20 13:40	1
Isopropylbenzene	0.35	U H	1.0	0.35	ug/L			05/27/20 13:40	1

Client: Seres Engineering & Services LLC
Project/Site: JV, LTM - AOC50 Spring 2020

Job ID: 680-183803-1

Client Sample ID: Trip Blank1-051220
Date Collected: 05/12/20 00:00
Date Received: 05/14/20 09:30

Lab Sample ID: 680-183803-13
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.30	U H	10	0.30	ug/L			05/27/20 13:40	1
Methylene Chloride	2.5	U H	5.0	2.5	ug/L			05/27/20 13:40	1
m-Xylene & p-Xylene	0.35	U H	1.0	0.35	ug/L			05/27/20 13:40	1
Naphthalene	2.5	U H	5.0	2.5	ug/L			05/27/20 13:40	1
n-Butylbenzene	0.47	U H	1.0	0.47	ug/L			05/27/20 13:40	1
N-Propylbenzene	0.38	U H	1.0	0.38	ug/L			05/27/20 13:40	1
o-Xylene	0.23	U H	1.0	0.23	ug/L			05/27/20 13:40	1
sec-Butylbenzene	0.42	U H	1.0	0.42	ug/L			05/27/20 13:40	1
Styrene	0.27	U H	1.0	0.27	ug/L			05/27/20 13:40	1
tert-Butylbenzene	0.45	U H	1.0	0.45	ug/L			05/27/20 13:40	1
Tetrachloroethene	0.74	U H	1.0	0.74	ug/L			05/27/20 13:40	1
Toluene	0.48	U H	1.0	0.48	ug/L			05/27/20 13:40	1
trans-1,2-Dichloroethene	0.37	U H	1.0	0.37	ug/L			05/27/20 13:40	1
trans-1,3-Dichloropropene	0.42	U H	1.0	0.42	ug/L			05/27/20 13:40	1
Trichloroethene	0.48	U H	1.0	0.48	ug/L			05/27/20 13:40	1
Trichlorofluoromethane	0.42	U H	1.0	0.42	ug/L			05/27/20 13:40	1
Vinyl acetate	0.81	U H	2.0	0.81	ug/L			05/27/20 13:40	1
Vinyl chloride	0.50	U H	1.0	0.50	ug/L			05/27/20 13:40	1
Xylenes, Total	0.23	U H	2.0	0.23	ug/L			05/27/20 13:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*85 - 114*		*05/27/20 13:40*	*1*
Dibromofluoromethane (Surr)	*113*		*80 - 119*		*05/27/20 13:40*	*1*
Toluene-d8 (Surr)	*107*		*89 - 112*		*05/27/20 13:40*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*81 - 118*		*05/27/20 13:40*	*1*

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

Lab Sample ID: MB 680-619653/10
Matrix: Water
Analysis Batch: 619653

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			05/22/20 14:39	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			05/22/20 14:39	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			05/22/20 14:39	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			05/22/20 14:39	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			05/22/20 14:39	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/22/20 14:39	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			05/22/20 14:39	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/22/20 14:39	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			05/22/20 14:39	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/22/20 14:39	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			05/22/20 14:39	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			05/22/20 14:39	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			05/22/20 14:39	1
1,2-Dichloroethane	0.50	U	1.0	0.50	ug/L			05/22/20 14:39	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			05/22/20 14:39	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			05/22/20 14:39	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			05/22/20 14:39	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			05/22/20 14:39	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			05/22/20 14:39	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			05/22/20 14:39	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			05/22/20 14:39	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			05/22/20 14:39	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/22/20 14:39	1
2-Hexanone	2.0	U	10	2.0	ug/L			05/22/20 14:39	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			05/22/20 14:39	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			05/22/20 14:39	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			05/22/20 14:39	1
Acetone	7.0	U	10	7.0	ug/L			05/22/20 14:39	1
Benzene	0.43	U	1.0	0.43	ug/L			05/22/20 14:39	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			05/22/20 14:39	1
Bromoform	0.43	U	1.0	0.43	ug/L			05/22/20 14:39	1
Bromomethane	2.5	U	5.0	2.5	ug/L			05/22/20 14:39	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			05/22/20 14:39	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			05/22/20 14:39	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			05/22/20 14:39	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			05/22/20 14:39	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			05/22/20 14:39	1
Chloroethane	2.5	U	5.0	2.5	ug/L			05/22/20 14:39	1
Chloroform	0.50	U	1.0	0.50	ug/L			05/22/20 14:39	1
Chloromethane	0.40	U	1.0	0.40	ug/L			05/22/20 14:39	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			05/22/20 14:39	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			05/22/20 14:39	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			05/22/20 14:39	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			05/22/20 14:39	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			05/22/20 14:39	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			05/22/20 14:39	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			05/22/20 14:39	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			05/22/20 14:39	1

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

Lab Sample ID: MB 680-619653/10
Matrix: Water
Analysis Batch: 619653

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			05/22/20 14:39	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			05/22/20 14:39	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			05/22/20 14:39	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			05/22/20 14:39	1
Naphthalene	2.5	U	5.0	2.5	ug/L			05/22/20 14:39	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			05/22/20 14:39	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			05/22/20 14:39	1
o-Xylene	0.23	U	1.0	0.23	ug/L			05/22/20 14:39	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			05/22/20 14:39	1
Styrene	0.27	U	1.0	0.27	ug/L			05/22/20 14:39	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			05/22/20 14:39	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			05/22/20 14:39	1
Toluene	0.48	U	1.0	0.48	ug/L			05/22/20 14:39	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/22/20 14:39	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			05/22/20 14:39	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			05/22/20 14:39	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			05/22/20 14:39	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			05/22/20 14:39	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			05/22/20 14:39	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			05/22/20 14:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*85 - 114*		*05/22/20 14:39*	*1*
Dibromofluoromethane (Surr)	*118*		*80 - 119*		*05/22/20 14:39*	*1*
Toluene-d8 (Surr)	*110*		*89 - 112*		*05/22/20 14:39*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*81 - 118*		*05/22/20 14:39*	*1*

Lab Sample ID: LCS 680-619653/4
Matrix: Water
Analysis Batch: 619653

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	51.1		ug/L		102	78 - 124
1,1,1-Trichloroethane	50.0	48.5		ug/L		97	74 - 131
1,1,2,2-Tetrachloroethane	50.0	51.1		ug/L		102	71 - 121
1,1,2-Trichloroethane	50.0	51.8		ug/L		104	80 - 119
1,1-Dichloroethane	50.0	49.7		ug/L		99	77 - 125
1,1-Dichloroethene	50.0	49.7		ug/L		99	71 - 131
1,1-Dichloropropene	50.0	54.3		ug/L		109	79 - 125
1,2,3-Trichlorobenzene	50.0	61.1		ug/L		122	69 - 129
1,2,3-Trichloropropane	50.0	48.2		ug/L		96	73 - 122
1,2,4-Trichlorobenzene	50.0	54.2		ug/L		108	69 - 130
1,2,4-Trimethylbenzene	50.0	47.5		ug/L		95	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	47.7		ug/L		95	62 - 128
1,2-Dichlorobenzene	50.0	53.5		ug/L		107	80 - 119
1,2-Dichloroethane	50.0	46.9		ug/L		94	73 - 128
1,2-Dichloroethene, Total	100	97.6		ug/L		98	79 - 121
1,2-Dichloropropane	50.0	57.1		ug/L		114	78 - 122

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

Lab Sample ID: LCS 680-619653/4
Matrix: Water
Analysis Batch: 619653

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	46.7		ug/L		93	75 - 124
1,3-Dichlorobenzene	50.0	49.7		ug/L		99	80 - 119
1,3-Dichloropropane	50.0	52.7		ug/L		105	80 - 119
1,4-Dichlorobenzene	50.0	49.0		ug/L		98	79 - 118
2,2-Dichloropropane	50.0	49.5		ug/L		99	60 - 139
2-Butanone (MEK)	250	282		ug/L		113	56 - 143
2-Chlorotoluene	50.0	45.5		ug/L		91	79 - 122
2-Hexanone	250	281		ug/L		113	57 - 139
4-Chlorotoluene	50.0	46.0		ug/L		92	78 - 122
4-Isopropyltoluene	50.0	53.5		ug/L		107	77 - 127
4-Methyl-2-pentanone (MIBK)	250	278		ug/L		111	67 - 130
Acetone	250	275		ug/L		110	39 - 160
Benzene	50.0	52.2		ug/L		104	79 - 120
Bromobenzene	50.0	46.4		ug/L		93	80 - 120
Bromoform	50.0	49.1		ug/L		98	66 - 130
Bromomethane	50.0	67.1		ug/L		134	53 - 141
Carbon disulfide	50.0	49.7		ug/L		99	64 - 133
Carbon tetrachloride	50.0	47.5		ug/L		95	72 - 136
Chlorobenzene	50.0	48.0		ug/L		96	82 - 118
Chlorobromomethane	50.0	51.4		ug/L		103	78 - 123
Chlorodibromomethane	50.0	49.8		ug/L		100	74 - 126
Chloroethane	50.0	56.4		ug/L		113	60 - 138
Chloroform	50.0	47.0		ug/L		94	79 - 124
Chloromethane	50.0	67.9		ug/L		136	50 - 139
cis-1,2-Dichloroethene	50.0	48.9		ug/L		98	78 - 123
cis-1,3-Dichloropropene	50.0	57.0		ug/L		114	75 - 124
Dibromomethane	50.0	48.5		ug/L		97	79 - 123
Dichlorobromomethane	50.0	48.8		ug/L		98	79 - 125
Dichlorodifluoromethane	50.0	44.5		ug/L		89	32 - 152
Ethylbenzene	50.0	49.3		ug/L		99	79 - 121
Ethylene Dibromide	50.0	51.9		ug/L		104	75 - 127
Hexachlorobutadiene	50.0	56.6		ug/L		113	66 - 134
Isopropylbenzene	50.0	48.3		ug/L		97	72 - 131
Methyl tert-butyl ether	50.0	53.7		ug/L		107	71 - 124
Methylene Chloride	50.0	52.9		ug/L		106	74 - 124
m-Xylene & p-Xylene	50.0	48.4		ug/L		97	80 - 121
Naphthalene	50.0	58.4		ug/L		117	61 - 128
n-Butylbenzene	50.0	53.1		ug/L		106	75 - 128
N-Propylbenzene	50.0	46.7		ug/L		93	76 - 126
o-Xylene	50.0	47.7		ug/L		95	78 - 122
sec-Butylbenzene	50.0	45.7		ug/L		91	77 - 126
Styrene	50.0	52.7		ug/L		105	78 - 123
tert-Butylbenzene	50.0	45.3		ug/L		91	78 - 124
Tetrachloroethene	50.0	48.3		ug/L		97	74 - 129
Toluene	50.0	51.0		ug/L		102	80 - 121
trans-1,2-Dichloroethene	50.0	48.7		ug/L		97	75 - 124
trans-1,3-Dichloropropene	50.0	54.8		ug/L		110	73 - 127
Trichloroethene	50.0	51.1		ug/L		102	79 - 123
Trichlorofluoromethane	50.0	49.3		ug/L		99	65 - 141

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

Lab Sample ID: LCS 680-619653/4
Matrix: Water
Analysis Batch: 619653

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	143		ug/L		143	54 - 146
Vinyl chloride	50.0	56.9		ug/L		114	58 - 137
Xylenes, Total	100	96.1		ug/L		96	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*85 - 114*
Dibromofluoromethane (Surr)	*99*		*80 - 119*
Toluene-d8 (Surr)	*104*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*

Lab Sample ID: LCSD 680-619653/5
Matrix: Water
Analysis Batch: 619653

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	50.3		ug/L		101	78 - 124	2	20
1,1,1-Trichloroethane	50.0	48.7		ug/L		97	74 - 131	0	20
1,1,2,2-Tetrachloroethane	50.0	48.7		ug/L		97	71 - 121	5	20
1,1,2-Trichloroethane	50.0	51.6		ug/L		103	80 - 119	1	20
1,1-Dichloroethane	50.0	50.2		ug/L		100	77 - 125	1	20
1,1-Dichloroethene	50.0	51.4		ug/L		103	71 - 131	3	20
1,1-Dichloropropene	50.0	54.2		ug/L		108	79 - 125	0	20
1,2,3-Trichlorobenzene	50.0	59.2		ug/L		118	69 - 129	3	20
1,2,3-Trichloropropane	50.0	46.9		ug/L		94	73 - 122	3	20
1,2,4-Trichlorobenzene	50.0	52.2		ug/L		104	69 - 130	4	20
1,2,4-Trimethylbenzene	50.0	48.2		ug/L		96	76 - 124	1	20
1,2-Dibromo-3-Chloropropane	50.0	45.8		ug/L		92	62 - 128	4	20
1,2-Dichlorobenzene	50.0	53.1		ug/L		106	80 - 119	1	20
1,2-Dichloroethane	50.0	46.3		ug/L		93	73 - 128	1	20
1,2-Dichloroethene, Total	100	100		ug/L		100	79 - 121	3	20
1,2-Dichloropropane	50.0	57.0		ug/L		114	78 - 122	0	20
1,3,5-Trimethylbenzene	50.0	47.6		ug/L		95	75 - 124	2	20
1,3-Dichlorobenzene	50.0	49.6		ug/L		99	80 - 119	0	20
1,3-Dichloropropane	50.0	52.4		ug/L		105	80 - 119	1	20
1,4-Dichlorobenzene	50.0	48.5		ug/L		97	79 - 118	1	20
2,2-Dichloropropane	50.0	49.9		ug/L		100	60 - 139	1	20
2-Butanone (MEK)	250	259		ug/L		104	56 - 143	8	20
2-Chlorotoluene	50.0	45.7		ug/L		91	79 - 122	1	20
2-Hexanone	250	270		ug/L		108	57 - 139	4	20
4-Chlorotoluene	50.0	46.6		ug/L		93	78 - 122	1	20
4-Isopropyltoluene	50.0	53.4		ug/L		107	77 - 127	0	20
4-Methyl-2-pentanone (MIBK)	250	267		ug/L		107	67 - 130	4	20
Acetone	250	260		ug/L		104	39 - 160	6	20
Benzene	50.0	52.7		ug/L		105	79 - 120	1	20
Bromobenzene	50.0	46.8		ug/L		94	80 - 120	1	20
Bromoform	50.0	48.5		ug/L		97	66 - 130	1	20
Bromomethane	50.0	75.2	Q	ug/L		150	53 - 141	11	20
Carbon disulfide	50.0	51.0		ug/L		102	64 - 133	3	20

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

Lab Sample ID: LCSD 680-619653/5
Matrix: Water
Analysis Batch: 619653

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	47.5		ug/L		95	72 - 136	0	20
Chlorobenzene			50.0	48.1		ug/L		96	82 - 118	0	20
Chlorobromomethane			50.0	52.5		ug/L		105	78 - 123	2	20
Chlorodibromomethane			50.0	49.7		ug/L		99	74 - 126	0	20
Chloroethane			50.0	58.2		ug/L		116	60 - 138	3	20
Chloroform			50.0	47.5		ug/L		95	79 - 124	1	20
Chloromethane			50.0	69.3		ug/L		139	50 - 139	2	20
cis-1,2-Dichloroethene			50.0	50.4		ug/L		101	78 - 123	3	20
cis-1,3-Dichloropropene			50.0	56.5		ug/L		113	75 - 124	1	20
Dibromomethane			50.0	49.0		ug/L		98	79 - 123	1	20
Dichlorobromomethane			50.0	50.7		ug/L		101	79 - 125	4	20
Dichlorodifluoromethane			50.0	45.2		ug/L		90	32 - 152	1	20
Ethylbenzene			50.0	50.0		ug/L		100	79 - 121	1	20
Ethylene Dibromide			50.0	52.0		ug/L		104	75 - 127	0	20
Hexachlorobutadiene			50.0	55.7		ug/L		111	66 - 134	1	20
Isopropylbenzene			50.0	48.8		ug/L		98	72 - 131	1	20
Methyl tert-butyl ether			50.0	52.2		ug/L		104	71 - 124	3	20
Methylene Chloride			50.0	56.4		ug/L		113	74 - 124	6	20
m-Xylene & p-Xylene			50.0	49.3		ug/L		99	80 - 121	2	20
Naphthalene			50.0	53.6		ug/L		107	61 - 128	8	20
n-Butylbenzene			50.0	52.7		ug/L		105	75 - 128	1	20
N-Propylbenzene			50.0	47.3		ug/L		95	76 - 126	1	20
o-Xylene			50.0	48.3		ug/L		97	78 - 122	1	20
sec-Butylbenzene			50.0	46.6		ug/L		93	77 - 126	2	20
Styrene			50.0	53.7		ug/L		107	78 - 123	2	20
tert-Butylbenzene			50.0	46.0		ug/L		92	78 - 124	2	20
Tetrachloroethene			50.0	49.1		ug/L		98	74 - 129	2	20
Toluene			50.0	51.9		ug/L		104	80 - 121	2	20
trans-1,2-Dichloroethene			50.0	49.9		ug/L		100	75 - 124	2	20
trans-1,3-Dichloropropene			50.0	53.7		ug/L		107	73 - 127	2	20
Trichloroethene			50.0	51.4		ug/L		103	79 - 123	1	20
Trichlorofluoromethane			50.0	50.5		ug/L		101	65 - 141	2	20
Vinyl acetate			100	136		ug/L		136	54 - 146	4	20
Vinyl chloride			50.0	58.1		ug/L		116	58 - 137	2	20
Xylenes, Total			100	97.6		ug/L		98	79 - 121	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*85 - 114*
Dibromofluoromethane (Surr)	*100*		*80 - 119*
Toluene-d8 (Surr)	*105*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*99*		*81 - 118*

Lab Sample ID: MB 680-619664/10
Matrix: Water
Analysis Batch: 619664

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			05/22/20 14:36	1

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

Lab Sample ID: MB 680-619664/10
Matrix: Water
Analysis Batch: 619664

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			05/22/20 14:36	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			05/22/20 14:36	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			05/22/20 14:36	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			05/22/20 14:36	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/22/20 14:36	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			05/22/20 14:36	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/22/20 14:36	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			05/22/20 14:36	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/22/20 14:36	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			05/22/20 14:36	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			05/22/20 14:36	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			05/22/20 14:36	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			05/22/20 14:36	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			05/22/20 14:36	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			05/22/20 14:36	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			05/22/20 14:36	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			05/22/20 14:36	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			05/22/20 14:36	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			05/22/20 14:36	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			05/22/20 14:36	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			05/22/20 14:36	1
2-Chlorotoluene	0.27	U M	1.0	0.27	ug/L			05/22/20 14:36	1
2-Hexanone	2.0	U	10	2.0	ug/L			05/22/20 14:36	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			05/22/20 14:36	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			05/22/20 14:36	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			05/22/20 14:36	1
Acetone	7.0	U	10	7.0	ug/L			05/22/20 14:36	1
Benzene	0.43	U M	1.0	0.43	ug/L			05/22/20 14:36	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			05/22/20 14:36	1
Bromoform	0.43	U	1.0	0.43	ug/L			05/22/20 14:36	1
Bromomethane	2.5	U	5.0	2.5	ug/L			05/22/20 14:36	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			05/22/20 14:36	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			05/22/20 14:36	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			05/22/20 14:36	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			05/22/20 14:36	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			05/22/20 14:36	1
Chloroethane	2.5	U	5.0	2.5	ug/L			05/22/20 14:36	1
Chloroform	0.50	U	1.0	0.50	ug/L			05/22/20 14:36	1
Chloromethane	0.40	U	1.0	0.40	ug/L			05/22/20 14:36	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			05/22/20 14:36	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			05/22/20 14:36	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			05/22/20 14:36	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			05/22/20 14:36	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			05/22/20 14:36	1
Ethylbenzene	0.33	U M	1.0	0.33	ug/L			05/22/20 14:36	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			05/22/20 14:36	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			05/22/20 14:36	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			05/22/20 14:36	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			05/22/20 14:36	1

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

Lab Sample ID: MB 680-619664/10
Matrix: Water
Analysis Batch: 619664

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	2.5	U	5.0	2.5	ug/L			05/22/20 14:36	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			05/22/20 14:36	1
Naphthalene	2.5	U M	5.0	2.5	ug/L			05/22/20 14:36	1
n-Butylbenzene	0.631	J	1.0	0.47	ug/L			05/22/20 14:36	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			05/22/20 14:36	1
o-Xylene	0.23	U	1.0	0.23	ug/L			05/22/20 14:36	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			05/22/20 14:36	1
Styrene	0.27	U	1.0	0.27	ug/L			05/22/20 14:36	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			05/22/20 14:36	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			05/22/20 14:36	1
Toluene	0.48	U	1.0	0.48	ug/L			05/22/20 14:36	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/22/20 14:36	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			05/22/20 14:36	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			05/22/20 14:36	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			05/22/20 14:36	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			05/22/20 14:36	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			05/22/20 14:36	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			05/22/20 14:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*85 - 114*		*05/22/20 14:36*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 119*		*05/22/20 14:36*	*1*
Toluene-d8 (Surr)	*98*		*89 - 112*		*05/22/20 14:36*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*81 - 118*		*05/22/20 14:36*	*1*

Lab Sample ID: LCS 680-619664/4
Matrix: Water
Analysis Batch: 619664

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	51.5		ug/L		103	78 - 124
1,1,1-Trichloroethane	50.0	50.3		ug/L		101	74 - 131
1,1,2,2-Tetrachloroethane	50.0	48.2		ug/L		96	71 - 121
1,1,2-Trichloroethane	50.0	50.0		ug/L		100	80 - 119
1,1-Dichloroethane	50.0	51.8		ug/L		104	77 - 125
1,1-Dichloroethene	50.0	49.7		ug/L		99	71 - 131
1,1-Dichloropropene	50.0	51.3		ug/L		103	79 - 125
1,2,3-Trichlorobenzene	50.0	53.5		ug/L		107	69 - 129
1,2,3-Trichloropropane	50.0	48.0		ug/L		96	73 - 122
1,2,4-Trichlorobenzene	50.0	53.3		ug/L		107	69 - 130
1,2,4-Trimethylbenzene	50.0	52.0		ug/L		104	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	47.3		ug/L		95	62 - 128
1,2-Dichlorobenzene	50.0	50.1		ug/L		100	80 - 119
1,2-Dichloroethane	50.0	51.9		ug/L		104	73 - 128
1,2-Dichloroethene, Total	100	104		ug/L		104	79 - 121
1,2-Dichloropropane	50.0	52.3		ug/L		105	78 - 122
1,3,5-Trimethylbenzene	50.0	51.1		ug/L		102	75 - 124
1,3-Dichlorobenzene	50.0	49.6		ug/L		99	80 - 119

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

Lab Sample ID: LCS 680-619664/4
Matrix: Water
Analysis Batch: 619664

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	49.9		ug/L		100	80 - 119
1,4-Dichlorobenzene	50.0	49.0		ug/L		98	79 - 118
2,2-Dichloropropane	50.0	54.7		ug/L		109	60 - 139
2-Butanone (MEK)	250	235		ug/L		94	56 - 143
2-Chlorotoluene	50.0	50.5		ug/L		101	79 - 122
2-Hexanone	250	239		ug/L		96	57 - 139
4-Chlorotoluene	50.0	50.7		ug/L		101	78 - 122
4-Isopropyltoluene	50.0	51.8		ug/L		104	77 - 127
4-Methyl-2-pentanone (MIBK)	250	243		ug/L		97	67 - 130
Acetone	250	235		ug/L		94	39 - 160
Benzene	50.0	51.2		ug/L		102	79 - 120
Bromobenzene	50.0	50.6		ug/L		101	80 - 120
Bromoform	50.0	49.0		ug/L		98	66 - 130
Bromomethane	50.0	178	J Q	ug/L		356	53 - 141
Carbon disulfide	50.0	50.5		ug/L		101	64 - 133
Carbon tetrachloride	50.0	50.5		ug/L		101	72 - 136
Chlorobenzene	50.0	49.8		ug/L		100	82 - 118
Chlorobromomethane	50.0	49.9		ug/L		100	78 - 123
Chlorodibromomethane	50.0	50.3		ug/L		101	74 - 126
Chloroethane	50.0	65.9		ug/L		132	60 - 138
Chloroform	50.0	50.5		ug/L		101	79 - 124
Chloromethane	50.0	52.6		ug/L		105	50 - 139
cis-1,2-Dichloroethene	50.0	52.6		ug/L		105	78 - 123
cis-1,3-Dichloropropene	50.0	52.9		ug/L		106	75 - 124
Dibromomethane	50.0	50.5		ug/L		101	79 - 123
Dichlorobromomethane	50.0	51.3		ug/L		103	79 - 125
Dichlorodifluoromethane	50.0	44.2		ug/L		88	32 - 152
Ethylbenzene	50.0	51.0		ug/L		102	79 - 121
Ethylene Dibromide	50.0	49.5		ug/L		99	75 - 127
Hexachlorobutadiene	50.0	54.1		ug/L		108	66 - 134
Isopropylbenzene	50.0	50.8		ug/L		102	72 - 131
Methyl tert-butyl ether	50.0	49.8		ug/L		100	71 - 124
Methylene Chloride	50.0	50.1		ug/L		100	74 - 124
m-Xylene & p-Xylene	50.0	51.0		ug/L		102	80 - 121
Naphthalene	50.0	51.7		ug/L		103	61 - 128
n-Butylbenzene	50.0	51.9		ug/L		104	75 - 128
N-Propylbenzene	50.0	51.2		ug/L		102	76 - 126
o-Xylene	50.0	51.5		ug/L		103	78 - 122
sec-Butylbenzene	50.0	51.4		ug/L		103	77 - 126
Styrene	50.0	51.6		ug/L		103	78 - 123
tert-Butylbenzene	50.0	51.0		ug/L		102	78 - 124
Tetrachloroethene	50.0	48.1		ug/L		96	74 - 129
Toluene	50.0	49.9		ug/L		100	80 - 121
trans-1,2-Dichloroethene	50.0	51.0		ug/L		102	75 - 124
trans-1,3-Dichloropropene	50.0	52.5		ug/L		105	73 - 127
Trichloroethene	50.0	48.9		ug/L		98	79 - 123
Trichlorofluoromethane	50.0	48.6		ug/L		97	65 - 141
Vinyl acetate	100	116		ug/L		116	54 - 146
Vinyl chloride	50.0	48.7		ug/L		97	58 - 137

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

Lab Sample ID: LCS 680-619664/4
Matrix: Water
Analysis Batch: 619664

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Xylenes, Total			100	103		ug/L		103	79 - 121		

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

Lab Sample ID: LCSD 680-619664/5
Matrix: Water
Analysis Batch: 619664

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	51.1		ug/L		102	78 - 124	1	20
1,1,1-Trichloroethane			50.0	49.9		ug/L		100	74 - 131	1	20
1,1,2,2-Tetrachloroethane			50.0	47.5		ug/L		95	71 - 121	1	20
1,1,2-Trichloroethane			50.0	49.2		ug/L		98	80 - 119	2	20
1,1-Dichloroethane			50.0	51.3		ug/L		103	77 - 125	1	20
1,1-Dichloroethene			50.0	48.9		ug/L		98	71 - 131	2	20
1,1-Dichloropropene			50.0	50.8	M	ug/L		102	79 - 125	1	20
1,2,3-Trichlorobenzene			50.0	54.7		ug/L		109	69 - 129	2	20
1,2,3-Trichloropropane			50.0	47.9		ug/L		96	73 - 122	0	20
1,2,4-Trichlorobenzene			50.0	54.0		ug/L		108	69 - 130	1	20
1,2,4-Trimethylbenzene			50.0	51.8		ug/L		104	76 - 124	0	20
1,2-Dibromo-3-Chloropropane			50.0	47.0		ug/L		94	62 - 128	1	20
1,2-Dichlorobenzene			50.0	49.7		ug/L		99	80 - 119	1	20
1,2-Dichloroethane			50.0	51.0		ug/L		102	73 - 128	2	20
1,2-Dichloroethene, Total			100	102		ug/L		102	79 - 121	2	20
1,2-Dichloropropane			50.0	51.5		ug/L		103	78 - 122	2	20
1,3,5-Trimethylbenzene			50.0	51.1		ug/L		102	75 - 124	0	20
1,3-Dichlorobenzene			50.0	49.5		ug/L		99	80 - 119	0	20
1,3-Dichloropropane			50.0	49.3		ug/L		99	80 - 119	1	20
1,4-Dichlorobenzene			50.0	48.5		ug/L		97	79 - 118	1	20
2,2-Dichloropropane			50.0	53.7		ug/L		107	60 - 139	2	20
2-Butanone (MEK)			250	230		ug/L		92	56 - 143	2	20
2-Chlorotoluene			50.0	50.4		ug/L		101	79 - 122	0	20
2-Hexanone			250	234		ug/L		94	57 - 139	2	20
4-Chlorotoluene			50.0	50.3		ug/L		101	78 - 122	1	20
4-Isopropyltoluene			50.0	51.4		ug/L		103	77 - 127	1	20
4-Methyl-2-pentanone (MIBK)			250	238		ug/L		95	67 - 130	2	20
Acetone			250	226		ug/L		90	39 - 160	4	20
Benzene			50.0	50.5		ug/L		101	79 - 120	1	20
Bromobenzene			50.0	50.1		ug/L		100	80 - 120	1	20
Bromoform			50.0	47.9		ug/L		96	66 - 130	2	20
Bromomethane			50.0	184	J Q	ug/L		369	53 - 141	3	20
Carbon disulfide			50.0	49.9		ug/L		100	64 - 133	1	20
Carbon tetrachloride			50.0	49.5		ug/L		99	72 - 136	2	20
Chlorobenzene			50.0	49.8		ug/L		100	82 - 118	0	20

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

Lab Sample ID: LCSD 680-619664/5
Matrix: Water
Analysis Batch: 619664

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	49.2		ug/L		98	78 - 123	1	20
Chlorodibromomethane			50.0	49.7		ug/L		99	74 - 126	1	20
Chloroethane			50.0	64.7		ug/L		129	60 - 138	2	20
Chloroform			50.0	49.9		ug/L		100	79 - 124	1	20
Chloromethane			50.0	51.6	M	ug/L		103	50 - 139	2	20
cis-1,2-Dichloroethene			50.0	51.4		ug/L		103	78 - 123	2	20
cis-1,3-Dichloropropene			50.0	52.5		ug/L		105	75 - 124	1	20
Dibromomethane			50.0	49.5		ug/L		99	79 - 123	2	20
Dichlorobromomethane			50.0	50.7		ug/L		101	79 - 125	1	20
Dichlorodifluoromethane			50.0	42.6		ug/L		85	32 - 152	4	20
Ethylbenzene			50.0	50.7		ug/L		101	79 - 121	1	20
Ethylene Dibromide			50.0	48.8		ug/L		98	75 - 127	1	20
Hexachlorobutadiene			50.0	55.6		ug/L		111	66 - 134	3	20
Isopropylbenzene			50.0	50.5		ug/L		101	72 - 131	1	20
Methyl tert-butyl ether			50.0	49.0		ug/L		98	71 - 124	2	20
Methylene Chloride			50.0	49.4		ug/L		99	74 - 124	2	20
m-Xylene & p-Xylene			50.0	50.7		ug/L		101	80 - 121	1	20
Naphthalene			50.0	52.9		ug/L		106	61 - 128	2	20
n-Butylbenzene			50.0	52.0		ug/L		104	75 - 128	0	20
N-Propylbenzene			50.0	50.7		ug/L		101	76 - 126	1	20
o-Xylene			50.0	50.9		ug/L		102	78 - 122	1	20
sec-Butylbenzene			50.0	51.0		ug/L		102	77 - 126	1	20
Styrene			50.0	51.1		ug/L		102	78 - 123	1	20
tert-Butylbenzene			50.0	50.6		ug/L		101	78 - 124	1	20
Tetrachloroethene			50.0	47.6		ug/L		95	74 - 129	1	20
Toluene			50.0	49.5		ug/L		99	80 - 121	1	20
trans-1,2-Dichloroethene			50.0	50.2		ug/L		100	75 - 124	2	20
trans-1,3-Dichloropropene			50.0	51.5		ug/L		103	73 - 127	2	20
Trichloroethene			50.0	48.6		ug/L		97	79 - 123	1	20
Trichlorofluoromethane			50.0	48.3		ug/L		97	65 - 141	1	20
Vinyl acetate			100	113		ug/L		113	54 - 146	3	20
Vinyl chloride			50.0	47.4		ug/L		95	58 - 137	3	20
Xylenes, Total			100	102		ug/L		102	79 - 121	1	20

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

Lab Sample ID: MB 680-619818/10
Matrix: Water
Analysis Batch: 619818

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			05/24/20 13:17	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			05/24/20 13:17	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			05/24/20 13:17	1

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

Lab Sample ID: MB 680-619818/10
Matrix: Water
Analysis Batch: 619818

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			05/24/20 13:17	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			05/24/20 13:17	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/24/20 13:17	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			05/24/20 13:17	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/24/20 13:17	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			05/24/20 13:17	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/24/20 13:17	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			05/24/20 13:17	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			05/24/20 13:17	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			05/24/20 13:17	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			05/24/20 13:17	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			05/24/20 13:17	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			05/24/20 13:17	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			05/24/20 13:17	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			05/24/20 13:17	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			05/24/20 13:17	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			05/24/20 13:17	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			05/24/20 13:17	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			05/24/20 13:17	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/24/20 13:17	1
2-Hexanone	2.0	U	10	2.0	ug/L			05/24/20 13:17	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			05/24/20 13:17	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			05/24/20 13:17	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			05/24/20 13:17	1
Acetone	7.0	U	10	7.0	ug/L			05/24/20 13:17	1
Benzene	0.43	U	1.0	0.43	ug/L			05/24/20 13:17	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			05/24/20 13:17	1
Bromoform	0.43	U	1.0	0.43	ug/L			05/24/20 13:17	1
Bromomethane	2.5	U	5.0	2.5	ug/L			05/24/20 13:17	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			05/24/20 13:17	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			05/24/20 13:17	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			05/24/20 13:17	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			05/24/20 13:17	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			05/24/20 13:17	1
Chloroethane	2.5	U	5.0	2.5	ug/L			05/24/20 13:17	1
Chloroform	0.50	U	1.0	0.50	ug/L			05/24/20 13:17	1
Chloromethane	0.40	U	1.0	0.40	ug/L			05/24/20 13:17	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			05/24/20 13:17	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			05/24/20 13:17	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			05/24/20 13:17	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			05/24/20 13:17	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			05/24/20 13:17	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			05/24/20 13:17	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			05/24/20 13:17	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			05/24/20 13:17	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			05/24/20 13:17	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			05/24/20 13:17	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			05/24/20 13:17	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			05/24/20 13:17	1

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

Lab Sample ID: MB 680-619818/10
Matrix: Water
Analysis Batch: 619818

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	2.5	U	5.0	2.5	ug/L			05/24/20 13:17	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			05/24/20 13:17	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			05/24/20 13:17	1
o-Xylene	0.23	U	1.0	0.23	ug/L			05/24/20 13:17	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			05/24/20 13:17	1
Styrene	0.27	U	1.0	0.27	ug/L			05/24/20 13:17	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			05/24/20 13:17	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			05/24/20 13:17	1
Toluene	0.48	U	1.0	0.48	ug/L			05/24/20 13:17	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/24/20 13:17	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			05/24/20 13:17	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			05/24/20 13:17	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			05/24/20 13:17	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			05/24/20 13:17	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			05/24/20 13:17	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			05/24/20 13:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*85 - 114*		*05/24/20 13:17*	*1*
Dibromofluoromethane (Surr)	*119*		*80 - 119*		*05/24/20 13:17*	*1*
Toluene-d8 (Surr)	*110*		*89 - 112*		*05/24/20 13:17*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*81 - 118*		*05/24/20 13:17*	*1*

Lab Sample ID: LCS 680-619818/6
Matrix: Water
Analysis Batch: 619818

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	51.0		ug/L		102	78 - 124
1,1,1-Trichloroethane	50.0	48.3		ug/L		97	74 - 131
1,1,2,2-Tetrachloroethane	50.0	50.2		ug/L		100	71 - 121
1,1,2-Trichloroethane	50.0	53.5		ug/L		107	80 - 119
1,1-Dichloroethane	50.0	53.7		ug/L		107	77 - 125
1,1-Dichloroethene	50.0	50.5		ug/L		101	71 - 131
1,1-Dichloropropene	50.0	54.1		ug/L		108	79 - 125
1,2,3-Trichlorobenzene	50.0	55.5		ug/L		111	69 - 129
1,2,3-Trichloropropane	50.0	47.7		ug/L		95	73 - 122
1,2,4-Trichlorobenzene	50.0	51.5		ug/L		103	69 - 130
1,2,4-Trimethylbenzene	50.0	49.8		ug/L		100	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	46.9		ug/L		94	62 - 128
1,2-Dichlorobenzene	50.0	54.4		ug/L		109	80 - 119
1,2-Dichloroethane	50.0	49.6		ug/L		99	73 - 128
1,2-Dichloroethene, Total	100	104		ug/L		104	79 - 121
1,2-Dichloropropane	50.0	59.7		ug/L		119	78 - 122
1,3,5-Trimethylbenzene	50.0	47.7		ug/L		95	75 - 124
1,3-Dichlorobenzene	50.0	51.1		ug/L		102	80 - 119
1,3-Dichloropropane	50.0	55.1		ug/L		110	80 - 119
1,4-Dichlorobenzene	50.0	48.3		ug/L		97	79 - 118

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

Lab Sample ID: LCS 680-619818/6
Matrix: Water
Analysis Batch: 619818

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	49.8	M	ug/L		100	60 - 139
2-Butanone (MEK)	250	267		ug/L		107	56 - 143
2-Chlorotoluene	50.0	46.9		ug/L		94	79 - 122
2-Hexanone	250	287		ug/L		115	57 - 139
4-Chlorotoluene	50.0	47.8		ug/L		96	78 - 122
4-Isopropyltoluene	50.0	53.1		ug/L		106	77 - 127
4-Methyl-2-pentanone (MIBK)	250	283		ug/L		113	67 - 130
Acetone	250	301		ug/L		120	39 - 160
Benzene	50.0	53.9		ug/L		108	79 - 120
Bromobenzene	50.0	48.9		ug/L		98	80 - 120
Bromoform	50.0	49.6		ug/L		99	66 - 130
Bromomethane	50.0	81.1	Q	ug/L		162	53 - 141
Carbon disulfide	50.0	51.2		ug/L		102	64 - 133
Carbon tetrachloride	50.0	46.3		ug/L		93	72 - 136
Chlorobenzene	50.0	48.9		ug/L		98	82 - 118
Chlorobromomethane	50.0	56.9		ug/L		114	78 - 123
Chlorodibromomethane	50.0	52.2		ug/L		104	74 - 126
Chloroethane	50.0	59.8		ug/L		120	60 - 138
Chloroform	50.0	50.3		ug/L		101	79 - 124
Chloromethane	50.0	72.7	Q	ug/L		145	50 - 139
cis-1,2-Dichloroethene	50.0	52.3		ug/L		105	78 - 123
cis-1,3-Dichloropropene	50.0	59.4		ug/L		119	75 - 124
Dibromomethane	50.0	51.9		ug/L		104	79 - 123
Dichlorobromomethane	50.0	52.4		ug/L		105	79 - 125
Dichlorodifluoromethane	50.0	43.9		ug/L		88	32 - 152
Ethylbenzene	50.0	50.5		ug/L		101	79 - 121
Ethylene Dibromide	50.0	54.3		ug/L		109	75 - 127
Hexachlorobutadiene	50.0	54.4		ug/L		109	66 - 134
Isopropylbenzene	50.0	48.9		ug/L		98	72 - 131
Methyl tert-butyl ether	50.0	55.9		ug/L		112	71 - 124
Methylene Chloride	50.0	58.9		ug/L		118	74 - 124
m-Xylene & p-Xylene	50.0	49.4		ug/L		99	80 - 121
Naphthalene	50.0	53.1		ug/L		106	61 - 128
n-Butylbenzene	50.0	52.0		ug/L		104	75 - 128
N-Propylbenzene	50.0	48.1		ug/L		96	76 - 126
o-Xylene	50.0	49.8		ug/L		100	78 - 122
sec-Butylbenzene	50.0	46.0		ug/L		92	77 - 126
Styrene	50.0	55.7		ug/L		111	78 - 123
tert-Butylbenzene	50.0	46.3		ug/L		93	78 - 124
Tetrachloroethene	50.0	48.3		ug/L		97	74 - 129
Toluene	50.0	53.0		ug/L		106	80 - 121
trans-1,2-Dichloroethene	50.0	51.3		ug/L		103	75 - 124
trans-1,3-Dichloropropene	50.0	56.8		ug/L		114	73 - 127
Trichloroethene	50.0	52.1		ug/L		104	79 - 123
Trichlorofluoromethane	50.0	49.4		ug/L		99	65 - 141
Vinyl acetate	100	141		ug/L		141	54 - 146
Vinyl chloride	50.0	57.7		ug/L		115	58 - 137
Xylenes, Total	100	99.2		ug/L		99	79 - 121

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

Lab Sample ID: LCS 680-619818/6
Matrix: Water
Analysis Batch: 619818

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

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*113*		*85 - 114*
Dibromofluoromethane (Surr)	*105*		*80 - 119*
Toluene-d8 (Surr)	*109*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*103*		*81 - 118*

Lab Sample ID: LCSD 680-619818/31
Matrix: Water
Analysis Batch: 619818

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	48.2		ug/L		96	78 - 124	6	20
1,1,1-Trichloroethane			50.0	45.6		ug/L		91	74 - 131	6	20
1,1,2,2-Tetrachloroethane			50.0	45.9		ug/L		92	71 - 121	9	20
1,1,2-Trichloroethane			50.0	47.7		ug/L		95	80 - 119	12	20
1,1-Dichloroethane			50.0	45.8		ug/L		92	77 - 125	16	20
1,1-Dichloroethene			50.0	47.5		ug/L		95	71 - 131	6	20
1,1-Dichloropropene			50.0	51.7		ug/L		103	79 - 125	5	20
1,2,3-Trichlorobenzene			50.0	49.8		ug/L		100	69 - 129	11	20
1,2,3-Trichloropropane			50.0	44.3		ug/L		89	73 - 122	7	20
1,2,4-Trichlorobenzene			50.0	45.1		ug/L		90	69 - 130	13	20
1,2,4-Trimethylbenzene			50.0	43.0		ug/L		86	76 - 124	15	20
1,2-Dibromo-3-Chloropropane			50.0	42.9		ug/L		86	62 - 128	9	20
1,2-Dichlorobenzene			50.0	48.1		ug/L		96	80 - 119	12	20
1,2-Dichloroethane			50.0	42.8		ug/L		86	73 - 128	15	20
1,2-Dichloroethene, Total			100	92.0		ug/L		92	79 - 121	12	20
1,2-Dichloropropane			50.0	52.8		ug/L		106	78 - 122	12	20
1,3,5-Trimethylbenzene			50.0	42.7		ug/L		85	75 - 124	11	20
1,3-Dichlorobenzene			50.0	44.8		ug/L		90	80 - 119	13	20
1,3-Dichloropropane			50.0	48.9		ug/L		98	80 - 119	12	20
1,4-Dichlorobenzene			50.0	43.5		ug/L		87	79 - 118	10	20
2,2-Dichloropropane			50.0	38.6	Q	ug/L		77	60 - 139	25	20
2-Butanone (MEK)			250	257		ug/L		103	56 - 143	4	20
2-Chlorotoluene			50.0	41.4		ug/L		83	79 - 122	12	20
2-Hexanone			250	264		ug/L		106	57 - 139	8	20
4-Chlorotoluene			50.0	41.4		ug/L		83	78 - 122	14	20
4-Isopropyltoluene			50.0	48.4		ug/L		97	77 - 127	9	20
4-Methyl-2-pentanone (MIBK)			250	258		ug/L		103	67 - 130	9	20
Acetone			250	264		ug/L		106	39 - 160	13	20
Benzene			50.0	49.0		ug/L		98	79 - 120	9	20
Bromobenzene			50.0	43.1		ug/L		86	80 - 120	13	20
Bromoform			50.0	45.6		ug/L		91	66 - 130	8	20
Bromomethane			50.0	39.4	Q	ug/L		79	53 - 141	69	20
Carbon disulfide			50.0	47.2		ug/L		94	64 - 133	8	20
Carbon tetrachloride			50.0	44.7		ug/L		89	72 - 136	3	20
Chlorobenzene			50.0	44.6		ug/L		89	82 - 118	9	20
Chlorobromomethane			50.0	47.0		ug/L		94	78 - 123	19	20
Chlorodibromomethane			50.0	45.7		ug/L		91	74 - 126	13	20
Chloroethane			50.0	54.7		ug/L		109	60 - 138	9	20

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

Lab Sample ID: LCSD 680-619818/31
Matrix: Water
Analysis Batch: 619818

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	43.4		ug/L		87	79 - 124	15	20
Chloromethane	50.0	66.2		ug/L		132	50 - 139	9	20
cis-1,2-Dichloroethene	50.0	46.0		ug/L		92	78 - 123	13	20
cis-1,3-Dichloropropene	50.0	50.4		ug/L		101	75 - 124	16	20
Dibromomethane	50.0	44.4		ug/L		89	79 - 123	16	20
Dichlorobromomethane	50.0	45.7		ug/L		91	79 - 125	14	20
Dichlorodifluoromethane	50.0	41.8		ug/L		84	32 - 152	5	20
Ethylbenzene	50.0	46.4		ug/L		93	79 - 121	8	20
Ethylene Dibromide	50.0	47.6		ug/L		95	75 - 127	13	20
Hexachlorobutadiene	50.0	46.5		ug/L		93	66 - 134	16	20
Isopropylbenzene	50.0	45.3		ug/L		91	72 - 131	8	20
Methyl tert-butyl ether	50.0	46.8		ug/L		94	71 - 124	18	20
Methylene Chloride	50.0	49.1		ug/L		98	74 - 124	18	20
m-Xylene & p-Xylene	50.0	44.4		ug/L		89	80 - 121	10	20
Naphthalene	50.0	50.1		ug/L		100	61 - 128	6	20
n-Butylbenzene	50.0	47.0		ug/L		94	75 - 128	10	20
N-Propylbenzene	50.0	43.0		ug/L		86	76 - 126	11	20
o-Xylene	50.0	44.7		ug/L		89	78 - 122	11	20
sec-Butylbenzene	50.0	41.7		ug/L		83	77 - 126	10	20
Styrene	50.0	49.5		ug/L		99	78 - 123	12	20
tert-Butylbenzene	50.0	41.8		ug/L		84	78 - 124	10	20
Tetrachloroethene	50.0	44.1		ug/L		88	74 - 129	9	20
Toluene	50.0	47.2		ug/L		94	80 - 121	12	20
trans-1,2-Dichloroethene	50.0	46.0		ug/L		92	75 - 124	11	20
trans-1,3-Dichloropropene	50.0	47.9		ug/L		96	73 - 127	17	20
Trichloroethene	50.0	48.1		ug/L		96	79 - 123	8	20
Trichlorofluoromethane	50.0	47.7		ug/L		95	65 - 141	4	20
Vinyl acetate	100	109	Q	ug/L		109	54 - 146	25	20
Vinyl chloride	50.0	55.9		ug/L		112	58 - 137	3	20
Xylenes, Total	100	89.1		ug/L		89	79 - 121	11	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*85 - 114*
Dibromofluoromethane (Surr)	*92*		*80 - 119*
Toluene-d8 (Surr)	*97*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*88*		*81 - 118*

Lab Sample ID: MB 680-619864/10
Matrix: Water
Analysis Batch: 619864

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			05/26/20 16:31	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			05/26/20 16:31	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			05/26/20 16:31	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			05/26/20 16:31	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			05/26/20 16:31	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/26/20 16:31	1

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

Lab Sample ID: MB 680-619864/10
Matrix: Water
Analysis Batch: 619864

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			05/26/20 16:31	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/26/20 16:31	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			05/26/20 16:31	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/26/20 16:31	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			05/26/20 16:31	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			05/26/20 16:31	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			05/26/20 16:31	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			05/26/20 16:31	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			05/26/20 16:31	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			05/26/20 16:31	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			05/26/20 16:31	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			05/26/20 16:31	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			05/26/20 16:31	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			05/26/20 16:31	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			05/26/20 16:31	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			05/26/20 16:31	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/26/20 16:31	1
2-Hexanone	2.0	U	10	2.0	ug/L			05/26/20 16:31	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			05/26/20 16:31	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			05/26/20 16:31	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			05/26/20 16:31	1
Acetone	7.0	U	10	7.0	ug/L			05/26/20 16:31	1
Benzene	0.43	U	1.0	0.43	ug/L			05/26/20 16:31	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			05/26/20 16:31	1
Bromoform	0.43	U	1.0	0.43	ug/L			05/26/20 16:31	1
Bromomethane	2.5	U	5.0	2.5	ug/L			05/26/20 16:31	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			05/26/20 16:31	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			05/26/20 16:31	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			05/26/20 16:31	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			05/26/20 16:31	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			05/26/20 16:31	1
Chloroethane	2.5	U	5.0	2.5	ug/L			05/26/20 16:31	1
Chloroform	0.50	U	1.0	0.50	ug/L			05/26/20 16:31	1
Chloromethane	0.40	U	1.0	0.40	ug/L			05/26/20 16:31	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			05/26/20 16:31	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			05/26/20 16:31	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			05/26/20 16:31	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			05/26/20 16:31	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			05/26/20 16:31	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			05/26/20 16:31	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			05/26/20 16:31	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			05/26/20 16:31	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			05/26/20 16:31	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			05/26/20 16:31	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			05/26/20 16:31	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			05/26/20 16:31	1
Naphthalene	2.5	U	5.0	2.5	ug/L			05/26/20 16:31	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			05/26/20 16:31	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			05/26/20 16:31	1

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

Lab Sample ID: MB 680-619864/10
Matrix: Water
Analysis Batch: 619864

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	0.23	U	1.0	0.23	ug/L			05/26/20 16:31	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			05/26/20 16:31	1
Styrene	0.27	U	1.0	0.27	ug/L			05/26/20 16:31	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			05/26/20 16:31	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			05/26/20 16:31	1
Toluene	0.48	U	1.0	0.48	ug/L			05/26/20 16:31	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/26/20 16:31	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			05/26/20 16:31	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			05/26/20 16:31	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			05/26/20 16:31	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			05/26/20 16:31	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			05/26/20 16:31	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			05/26/20 16:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*85 - 114*		*05/26/20 16:31*	*1*
Dibromofluoromethane (Surr)	*119*		*80 - 119*		*05/26/20 16:31*	*1*
Toluene-d8 (Surr)	*109*		*89 - 112*		*05/26/20 16:31*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*81 - 118*		*05/26/20 16:31*	*1*

Lab Sample ID: LCS 680-619864/4
Matrix: Water
Analysis Batch: 619864

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	48.9		ug/L		98	78 - 124
1,1,1-Trichloroethane	50.0	42.9		ug/L		86	74 - 131
1,1,2,2-Tetrachloroethane	50.0	49.1		ug/L		98	71 - 121
1,1,2-Trichloroethane	50.0	52.1		ug/L		104	80 - 119
1,1-Dichloroethane	50.0	47.5		ug/L		95	77 - 125
1,1-Dichloroethene	50.0	44.7		ug/L		89	71 - 131
1,1-Dichloropropene	50.0	47.1		ug/L		94	79 - 125
1,2,3-Trichlorobenzene	50.0	55.5		ug/L		111	69 - 129
1,2,3-Trichloropropane	50.0	47.8		ug/L		96	73 - 122
1,2,4-Trichlorobenzene	50.0	50.7		ug/L		101	69 - 130
1,2,4-Trimethylbenzene	50.0	46.3		ug/L		93	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	48.1		ug/L		96	62 - 128
1,2-Dichlorobenzene	50.0	50.3		ug/L		101	80 - 119
1,2-Dichloroethane	50.0	45.5		ug/L		91	73 - 128
1,2-Dichloroethene, Total	100	96.4		ug/L		96	79 - 121
1,2-Dichloropropane	50.0	57.0		ug/L		114	78 - 122
1,3,5-Trimethylbenzene	50.0	44.1		ug/L		88	75 - 124
1,3-Dichlorobenzene	50.0	47.3		ug/L		95	80 - 119
1,3-Dichloropropane	50.0	53.1		ug/L		106	80 - 119
1,4-Dichlorobenzene	50.0	47.1		ug/L		94	79 - 118
2,2-Dichloropropane	50.0	45.7	M	ug/L		91	60 - 139
2-Butanone (MEK)	250	293		ug/L		117	56 - 143
2-Chlorotoluene	50.0	43.5		ug/L		87	79 - 122

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

Lab Sample ID: LCS 680-619864/4
Matrix: Water
Analysis Batch: 619864

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	309		ug/L		124	57 - 139
4-Chlorotoluene	50.0	44.8		ug/L		90	78 - 122
4-Isopropyltoluene	50.0	48.5		ug/L		97	77 - 127
4-Methyl-2-pentanone (MIBK)	250	293		ug/L		117	67 - 130
Acetone	250	299		ug/L		120	39 - 160
Benzene	50.0	49.4		ug/L		99	79 - 120
Bromobenzene	50.0	45.5		ug/L		91	80 - 120
Bromoform	50.0	49.1		ug/L		98	66 - 130
Bromomethane	50.0	66.6		ug/L		133	53 - 141
Carbon disulfide	50.0	44.4		ug/L		89	64 - 133
Carbon tetrachloride	50.0	41.1		ug/L		82	72 - 136
Chlorobenzene	50.0	46.2		ug/L		92	82 - 118
Chlorobromomethane	50.0	51.3		ug/L		103	78 - 123
Chlorodibromomethane	50.0	51.0		ug/L		102	74 - 126
Chloroethane	50.0	53.3		ug/L		107	60 - 138
Chloroform	50.0	45.4		ug/L		91	79 - 124
Chloromethane	50.0	66.5		ug/L		133	50 - 139
cis-1,2-Dichloroethene	50.0	49.3		ug/L		99	78 - 123
cis-1,3-Dichloropropene	50.0	56.2		ug/L		112	75 - 124
Dibromomethane	50.0	49.5		ug/L		99	79 - 123
Dichlorobromomethane	50.0	50.9		ug/L		102	79 - 125
Dichlorodifluoromethane	50.0	42.9		ug/L		86	32 - 152
Ethylbenzene	50.0	45.8		ug/L		92	79 - 121
Ethylene Dibromide	50.0	52.8		ug/L		106	75 - 127
Hexachlorobutadiene	50.0	51.5		ug/L		103	66 - 134
Isopropylbenzene	50.0	44.7		ug/L		89	72 - 131
Methyl tert-butyl ether	50.0	54.1		ug/L		108	71 - 124
Methylene Chloride	50.0	53.2		ug/L		106	74 - 124
m-Xylene & p-Xylene	50.0	45.3		ug/L		91	80 - 121
Naphthalene	50.0	55.9		ug/L		112	61 - 128
n-Butylbenzene	50.0	47.6		ug/L		95	75 - 128
N-Propylbenzene	50.0	43.2		ug/L		86	76 - 126
o-Xylene	50.0	46.1		ug/L		92	78 - 122
sec-Butylbenzene	50.0	41.3		ug/L		83	77 - 126
Styrene	50.0	52.6		ug/L		105	78 - 123
tert-Butylbenzene	50.0	41.9		ug/L		84	78 - 124
Tetrachloroethene	50.0	44.0		ug/L		88	74 - 129
Toluene	50.0	49.1		ug/L		98	80 - 121
trans-1,2-Dichloroethene	50.0	47.1		ug/L		94	75 - 124
trans-1,3-Dichloropropene	50.0	51.7		ug/L		103	73 - 127
Trichloroethene	50.0	47.5		ug/L		95	79 - 123
Trichlorofluoromethane	50.0	42.5		ug/L		85	65 - 141
Vinyl acetate	100	112		ug/L		112	54 - 146
Vinyl chloride	50.0	52.5		ug/L		105	58 - 137
Xylenes, Total	100	91.4		ug/L		91	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*85 - 114*

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

Lab Sample ID: LCS 680-619864/4
Matrix: Water
Analysis Batch: 619864

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

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	*97*		*80 - 119*
Toluene-d8 (Surr)	*99*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*97*		*81 - 118*

Lab Sample ID: LCSD 680-619864/5
Matrix: Water
Analysis Batch: 619864

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	48.7		ug/L		97	78 - 124	1	20
1,1,1-Trichloroethane			50.0	43.1		ug/L		86	74 - 131	0	20
1,1,2,2-Tetrachloroethane			50.0	49.4		ug/L		99	71 - 121	1	20
1,1,2-Trichloroethane			50.0	51.7		ug/L		103	80 - 119	1	20
1,1-Dichloroethane			50.0	46.9		ug/L		94	77 - 125	1	20
1,1-Dichloroethene			50.0	41.4		ug/L		83	71 - 131	8	20
1,1-Dichloropropene			50.0	45.3		ug/L		91	79 - 125	4	20
1,2,3-Trichlorobenzene			50.0	56.5		ug/L		113	69 - 129	2	20
1,2,3-Trichloropropane			50.0	47.5		ug/L		95	73 - 122	1	20
1,2,4-Trichlorobenzene			50.0	51.8		ug/L		104	69 - 130	2	20
1,2,4-Trimethylbenzene			50.0	45.8		ug/L		92	76 - 124	1	20
1,2-Dibromo-3-Chloropropane			50.0	49.2		ug/L		98	62 - 128	2	20
1,2-Dichlorobenzene			50.0	50.1		ug/L		100	80 - 119	0	20
1,2-Dichloroethane			50.0	46.7		ug/L		93	73 - 128	2	20
1,2-Dichloroethene, Total			100	94.3		ug/L		94	79 - 121	2	20
1,2-Dichloropropane			50.0	57.0		ug/L		114	78 - 122	0	20
1,3,5-Trimethylbenzene			50.0	44.2		ug/L		88	75 - 124	0	20
1,3-Dichlorobenzene			50.0	48.1		ug/L		96	80 - 119	2	20
1,3-Dichloropropane			50.0	53.3		ug/L		107	80 - 119	0	20
1,4-Dichlorobenzene			50.0	47.6		ug/L		95	79 - 118	1	20
2,2-Dichloropropane			50.0	45.6	M	ug/L		91	60 - 139	0	20
2-Butanone (MEK)			250	288		ug/L		115	56 - 143	1	20
2-Chlorotoluene			50.0	42.8		ug/L		86	79 - 122	2	20
2-Hexanone			250	305		ug/L		122	57 - 139	1	20
4-Chlorotoluene			50.0	44.2		ug/L		88	78 - 122	1	20
4-Isopropyltoluene			50.0	49.5		ug/L		99	77 - 127	2	20
4-Methyl-2-pentanone (MIBK)			250	290		ug/L		116	67 - 130	1	20
Acetone			250	286		ug/L		114	39 - 160	5	20
Benzene			50.0	49.0		ug/L		98	79 - 120	1	20
Bromobenzene			50.0	46.0		ug/L		92	80 - 120	1	20
Bromoform			50.0	49.0		ug/L		98	66 - 130	0	20
Bromomethane			50.0	65.4		ug/L		131	53 - 141	2	20
Carbon disulfide			50.0	43.6		ug/L		87	64 - 133	2	20
Carbon tetrachloride			50.0	40.8		ug/L		82	72 - 136	1	20
Chlorobenzene			50.0	46.1		ug/L		92	82 - 118	0	20
Chlorobromomethane			50.0	48.8		ug/L		98	78 - 123	5	20
Chlorodibromomethane			50.0	49.7		ug/L		99	74 - 126	3	20
Chloroethane			50.0	50.5		ug/L		101	60 - 138	5	20
Chloroform			50.0	45.3		ug/L		91	79 - 124	0	20

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

Lab Sample ID: LCSD 680-619864/5
Matrix: Water
Analysis Batch: 619864

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	64.9	M	ug/L		130	50 - 139	2	20
cis-1,2-Dichloroethene			50.0	48.7		ug/L		97	78 - 123	1	20
cis-1,3-Dichloropropene			50.0	56.4		ug/L		113	75 - 124	0	20
Dibromomethane			50.0	48.7		ug/L		97	79 - 123	2	20
Dichlorobromomethane			50.0	49.6		ug/L		99	79 - 125	3	20
Dichlorodifluoromethane			50.0	40.8		ug/L		82	32 - 152	5	20
Ethylbenzene			50.0	45.8		ug/L		92	79 - 121	0	20
Ethylene Dibromide			50.0	51.2		ug/L		102	75 - 127	3	20
Hexachlorobutadiene			50.0	52.3		ug/L		105	66 - 134	2	20
Isopropylbenzene			50.0	44.6		ug/L		89	72 - 131	0	20
Methyl tert-butyl ether			50.0	53.9		ug/L		108	71 - 124	0	20
Methylene Chloride			50.0	52.6		ug/L		105	74 - 124	1	20
m-Xylene & p-Xylene			50.0	44.5		ug/L		89	80 - 121	2	20
Naphthalene			50.0	55.2		ug/L		110	61 - 128	1	20
n-Butylbenzene			50.0	47.8		ug/L		96	75 - 128	0	20
N-Propylbenzene			50.0	42.3		ug/L		85	76 - 126	2	20
o-Xylene			50.0	46.4		ug/L		93	78 - 122	0	20
sec-Butylbenzene			50.0	41.9		ug/L		84	77 - 126	1	20
Styrene			50.0	53.0		ug/L		106	78 - 123	1	20
tert-Butylbenzene			50.0	41.7		ug/L		83	78 - 124	1	20
Tetrachloroethene			50.0	43.2		ug/L		86	74 - 129	2	20
Toluene			50.0	48.1		ug/L		96	80 - 121	2	20
trans-1,2-Dichloroethene			50.0	45.6		ug/L		91	75 - 124	3	20
trans-1,3-Dichloropropene			50.0	51.2		ug/L		102	73 - 127	1	20
Trichloroethene			50.0	46.8		ug/L		94	79 - 123	1	20
Trichlorofluoromethane			50.0	41.2		ug/L		82	65 - 141	3	20
Vinyl acetate			100	112		ug/L		112	54 - 146	0	20
Vinyl chloride			50.0	50.9		ug/L		102	58 - 137	3	20
Xylenes, Total			100	90.9		ug/L		91	79 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*85 - 114*
Dibromofluoromethane (Surr)	*98*		*80 - 119*
Toluene-d8 (Surr)	*99*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*97*		*81 - 118*

Lab Sample ID: MB 680-619876/9
Matrix: Water
Analysis Batch: 619876

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			05/26/20 16:05	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			05/26/20 16:05	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			05/26/20 16:05	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			05/26/20 16:05	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			05/26/20 16:05	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/26/20 16:05	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			05/26/20 16:05	1

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

Lab Sample ID: MB 680-619876/9
Matrix: Water
Analysis Batch: 619876

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/26/20 16:05	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			05/26/20 16:05	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/26/20 16:05	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			05/26/20 16:05	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			05/26/20 16:05	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			05/26/20 16:05	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			05/26/20 16:05	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			05/26/20 16:05	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			05/26/20 16:05	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			05/26/20 16:05	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			05/26/20 16:05	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			05/26/20 16:05	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			05/26/20 16:05	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			05/26/20 16:05	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			05/26/20 16:05	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/26/20 16:05	1
2-Hexanone	2.0	U	10	2.0	ug/L			05/26/20 16:05	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			05/26/20 16:05	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			05/26/20 16:05	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			05/26/20 16:05	1
Acetone	7.0	U	10	7.0	ug/L			05/26/20 16:05	1
Benzene	0.43	U M	1.0	0.43	ug/L			05/26/20 16:05	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			05/26/20 16:05	1
Bromoform	0.43	U	1.0	0.43	ug/L			05/26/20 16:05	1
Bromomethane	2.5	U	5.0	2.5	ug/L			05/26/20 16:05	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			05/26/20 16:05	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			05/26/20 16:05	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			05/26/20 16:05	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			05/26/20 16:05	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			05/26/20 16:05	1
Chloroethane	2.5	U	5.0	2.5	ug/L			05/26/20 16:05	1
Chloroform	0.50	U	1.0	0.50	ug/L			05/26/20 16:05	1
Chloromethane	0.40	U	1.0	0.40	ug/L			05/26/20 16:05	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			05/26/20 16:05	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			05/26/20 16:05	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			05/26/20 16:05	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			05/26/20 16:05	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			05/26/20 16:05	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			05/26/20 16:05	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			05/26/20 16:05	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			05/26/20 16:05	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			05/26/20 16:05	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			05/26/20 16:05	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			05/26/20 16:05	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			05/26/20 16:05	1
Naphthalene	2.5	U	5.0	2.5	ug/L			05/26/20 16:05	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			05/26/20 16:05	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			05/26/20 16:05	1
o-Xylene	0.23	U M	1.0	0.23	ug/L			05/26/20 16:05	1

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

Lab Sample ID: MB 680-619876/9
Matrix: Water
Analysis Batch: 619876

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			05/26/20 16:05	1
Styrene	0.27	U	1.0	0.27	ug/L			05/26/20 16:05	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			05/26/20 16:05	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			05/26/20 16:05	1
Toluene	0.48	U	1.0	0.48	ug/L			05/26/20 16:05	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/26/20 16:05	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			05/26/20 16:05	1
Trichloroethene	0.847	J	1.0	0.48	ug/L			05/26/20 16:05	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			05/26/20 16:05	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			05/26/20 16:05	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			05/26/20 16:05	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			05/26/20 16:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*05/26/20 16:05*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*05/26/20 16:05*	*1*
Toluene-d8 (Surr)	*99*		*89 - 112*		*05/26/20 16:05*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*81 - 118*		*05/26/20 16:05*	*1*

Lab Sample ID: LCS 680-619876/4
Matrix: Water
Analysis Batch: 619876

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	50.9		ug/L		102	78 - 124
1,1,1-Trichloroethane	50.0	44.8		ug/L		90	74 - 131
1,1,2,2-Tetrachloroethane	50.0	48.8		ug/L		98	71 - 121
1,1,2-Trichloroethane	50.0	49.8		ug/L		100	80 - 119
1,1-Dichloroethane	50.0	47.8		ug/L		96	77 - 125
1,1-Dichloroethene	50.0	44.3		ug/L		89	71 - 131
1,1-Dichloropropene	50.0	43.1	M	ug/L		86	79 - 125
1,2,3-Trichlorobenzene	50.0	55.0		ug/L		110	69 - 129
1,2,3-Trichloropropane	50.0	48.8		ug/L		98	73 - 122
1,2,4-Trichlorobenzene	50.0	55.1		ug/L		110	69 - 130
1,2,4-Trimethylbenzene	50.0	50.1		ug/L		100	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	49.8		ug/L		100	62 - 128
1,2-Dichlorobenzene	50.0	48.2		ug/L		96	80 - 119
1,2-Dichloroethane	50.0	50.1		ug/L		100	73 - 128
1,2-Dichloroethene, Total	100	97.3		ug/L		97	79 - 121
1,2-Dichloropropane	50.0	50.8		ug/L		102	78 - 122
1,3,5-Trimethylbenzene	50.0	48.5		ug/L		97	75 - 124
1,3-Dichlorobenzene	50.0	47.9		ug/L		96	80 - 119
1,3-Dichloropropane	50.0	49.4		ug/L		99	80 - 119
1,4-Dichlorobenzene	50.0	48.2		ug/L		96	79 - 118
2,2-Dichloropropane	50.0	49.3		ug/L		99	60 - 139
2-Butanone (MEK)	250	235		ug/L		94	56 - 143
2-Chlorotoluene	50.0	48.0		ug/L		96	79 - 122
2-Hexanone	250	237		ug/L		95	57 - 139

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

Lab Sample ID: LCS 680-619876/4
Matrix: Water
Analysis Batch: 619876

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	48.4		ug/L		97	78 - 122
4-Isopropyltoluene	50.0	47.5		ug/L		95	77 - 127
4-Methyl-2-pentanone (MIBK)	250	234		ug/L		94	67 - 130
Acetone	250	226		ug/L		90	39 - 160
Benzene	50.0	47.5		ug/L		95	79 - 120
Bromobenzene	50.0	50.2		ug/L		100	80 - 120
Bromoform	50.0	49.9		ug/L		100	66 - 130
Bromomethane	50.0	161	J Q	ug/L		322	53 - 141
Carbon disulfide	50.0	44.3		ug/L		89	64 - 133
Carbon tetrachloride	50.0	43.1		ug/L		86	72 - 136
Chlorobenzene	50.0	48.7		ug/L		97	82 - 118
Chlorobromomethane	50.0	48.4		ug/L		97	78 - 123
Chlorodibromomethane	50.0	50.7		ug/L		101	74 - 126
Chloroethane	50.0	59.5		ug/L		119	60 - 138
Chloroform	50.0	47.8		ug/L		96	79 - 124
Chloromethane	50.0	47.9	M	ug/L		96	50 - 139
cis-1,2-Dichloroethene	50.0	50.0		ug/L		100	78 - 123
cis-1,3-Dichloropropene	50.0	52.3		ug/L		105	75 - 124
Dibromomethane	50.0	50.9		ug/L		102	79 - 123
Dichlorobromomethane	50.0	50.8		ug/L		102	79 - 125
Dichlorodifluoromethane	50.0	39.8		ug/L		80	32 - 152
Ethylbenzene	50.0	47.4		ug/L		95	79 - 121
Ethylene Dibromide	50.0	50.0		ug/L		100	75 - 127
Hexachlorobutadiene	50.0	51.6		ug/L		103	66 - 134
Isopropylbenzene	50.0	47.3		ug/L		95	72 - 131
Methyl tert-butyl ether	50.0	49.6		ug/L		99	71 - 124
Methylene Chloride	50.0	47.8		ug/L		96	74 - 124
m-Xylene & p-Xylene	50.0	47.7		ug/L		95	80 - 121
Naphthalene	50.0	52.6		ug/L		105	61 - 128
n-Butylbenzene	50.0	47.1		ug/L		94	75 - 128
N-Propylbenzene	50.0	46.4		ug/L		93	76 - 126
o-Xylene	50.0	49.5		ug/L		99	78 - 122
sec-Butylbenzene	50.0	46.5		ug/L		93	77 - 126
Styrene	50.0	51.0		ug/L		102	78 - 123
tert-Butylbenzene	50.0	46.9		ug/L		94	78 - 124
Tetrachloroethene	50.0	42.9		ug/L		86	74 - 129
Toluene	50.0	46.5		ug/L		93	80 - 121
trans-1,2-Dichloroethene	50.0	47.3		ug/L		95	75 - 124
trans-1,3-Dichloropropene	50.0	49.3		ug/L		99	73 - 127
Trichloroethene	50.0	46.5		ug/L		93	79 - 123
Trichlorofluoromethane	50.0	40.9		ug/L		82	65 - 141
Vinyl acetate	100	90.3		ug/L		90	54 - 146
Vinyl chloride	50.0	42.3		ug/L		85	58 - 137
Xylenes, Total	100	97.2		ug/L		97	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*
Dibromofluoromethane (Surr)	*98*		*80 - 119*

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

Lab Sample ID: LCS 680-619876/4
Matrix: Water
Analysis Batch: 619876

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

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	*94*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*99*		*81 - 118*

Lab Sample ID: LCSD 680-619876/5
Matrix: Water
Analysis Batch: 619876

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	49.7		ug/L		99	78 - 124	2	20
1,1,1-Trichloroethane			50.0	42.6		ug/L		85	74 - 131	5	20
1,1,2,2-Tetrachloroethane			50.0	48.1		ug/L		96	71 - 121	1	20
1,1,2-Trichloroethane			50.0	49.1		ug/L		98	80 - 119	1	20
1,1-Dichloroethane			50.0	46.8		ug/L		94	77 - 125	2	20
1,1-Dichloroethene			50.0	40.9		ug/L		82	71 - 131	8	20
1,1-Dichloropropene			50.0	40.2	M	ug/L		80	79 - 125	7	20
1,2,3-Trichlorobenzene			50.0	56.1		ug/L		112	69 - 129	2	20
1,2,3-Trichloropropane			50.0	48.4		ug/L		97	73 - 122	1	20
1,2,4-Trichlorobenzene			50.0	55.4		ug/L		111	69 - 130	1	20
1,2,4-Trimethylbenzene			50.0	50.1		ug/L		100	76 - 124	0	20
1,2-Dibromo-3-Chloropropane			50.0	48.6		ug/L		97	62 - 128	2	20
1,2-Dichlorobenzene			50.0	47.5		ug/L		95	80 - 119	1	20
1,2-Dichloroethane			50.0	48.9		ug/L		98	73 - 128	2	20
1,2-Dichloroethene, Total			100	94.6		ug/L		95	79 - 121	3	20
1,2-Dichloropropane			50.0	49.9		ug/L		100	78 - 122	2	20
1,3,5-Trimethylbenzene			50.0	47.8		ug/L		96	75 - 124	1	20
1,3-Dichlorobenzene			50.0	47.8		ug/L		96	80 - 119	0	20
1,3-Dichloropropane			50.0	48.4		ug/L		97	80 - 119	2	20
1,4-Dichlorobenzene			50.0	47.1		ug/L		94	79 - 118	2	20
2,2-Dichloropropane			50.0	47.1		ug/L		94	60 - 139	5	20
2-Butanone (MEK)			250	231		ug/L		92	56 - 143	2	20
2-Chlorotoluene			50.0	47.9		ug/L		96	79 - 122	0	20
2-Hexanone			250	231		ug/L		92	57 - 139	3	20
4-Chlorotoluene			50.0	48.2		ug/L		96	78 - 122	0	20
4-Isopropyltoluene			50.0	46.1		ug/L		92	77 - 127	3	20
4-Methyl-2-pentanone (MIBK)			250	230		ug/L		92	67 - 130	2	20
Acetone			250	223		ug/L		89	39 - 160	1	20
Benzene			50.0	46.4		ug/L		93	79 - 120	2	20
Bromobenzene			50.0	50.0		ug/L		100	80 - 120	0	20
Bromoform			50.0	49.7		ug/L		99	66 - 130	0	20
Bromomethane			50.0	159	J Q	ug/L		319	53 - 141	1	20
Carbon disulfide			50.0	41.1		ug/L		82	64 - 133	7	20
Carbon tetrachloride			50.0	39.8		ug/L		80	72 - 136	8	20
Chlorobenzene			50.0	48.5		ug/L		97	82 - 118	0	20
Chlorobromomethane			50.0	47.4		ug/L		95	78 - 123	2	20
Chlorodibromomethane			50.0	50.3		ug/L		101	74 - 126	1	20
Chloroethane			50.0	57.6		ug/L		115	60 - 138	3	20
Chloroform			50.0	47.1		ug/L		94	79 - 124	1	20
Chloromethane			50.0	45.7	M	ug/L		91	50 - 139	5	20

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

Lab Sample ID: LCSD 680-619876/5
Matrix: Water
Analysis Batch: 619876

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
cis-1,2-Dichloroethene			50.0	48.9		ug/L		98	78 - 123	2	20
cis-1,3-Dichloropropene			50.0	51.6		ug/L		103	75 - 124	1	20
Dibromomethane			50.0	49.9		ug/L		100	79 - 123	2	20
Dichlorobromomethane			50.0	50.3		ug/L		101	79 - 125	1	20
Dichlorodifluoromethane			50.0	34.2		ug/L		68	32 - 152	15	20
Ethylbenzene			50.0	46.9		ug/L		94	79 - 121	1	20
Ethylene Dibromide			50.0	48.5		ug/L		97	75 - 127	3	20
Hexachlorobutadiene			50.0	50.1		ug/L		100	66 - 134	3	20
Isopropylbenzene			50.0	46.1		ug/L		92	72 - 131	2	20
Methyl tert-butyl ether			50.0	48.8		ug/L		98	71 - 124	2	20
Methylene Chloride			50.0	46.6		ug/L		93	74 - 124	3	20
m-Xylene & p-Xylene			50.0	47.0		ug/L		94	80 - 121	1	20
Naphthalene			50.0	53.5		ug/L		107	61 - 128	2	20
n-Butylbenzene			50.0	45.5		ug/L		91	75 - 128	3	20
N-Propylbenzene			50.0	45.4		ug/L		91	76 - 126	2	20
o-Xylene			50.0	48.9		ug/L		98	78 - 122	1	20
sec-Butylbenzene			50.0	45.0		ug/L		90	77 - 126	3	20
Styrene			50.0	50.4		ug/L		101	78 - 123	1	20
tert-Butylbenzene			50.0	45.8		ug/L		92	78 - 124	2	20
Tetrachloroethene			50.0	40.9		ug/L		82	74 - 129	5	20
Toluene			50.0	46.0		ug/L		92	80 - 121	1	20
trans-1,2-Dichloroethene			50.0	45.7		ug/L		91	75 - 124	3	20
trans-1,3-Dichloropropene			50.0	48.2		ug/L		96	73 - 127	2	20
Trichloroethene			50.0	44.6		ug/L		89	79 - 123	4	20
Trichlorofluoromethane			50.0	36.4		ug/L		73	65 - 141	12	20
Vinyl acetate			100	87.5		ug/L		88	54 - 146	3	20
Vinyl chloride			50.0	39.0		ug/L		78	58 - 137	8	20
Xylenes, Total			100	95.9		ug/L		96	79 - 121	1	20

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

Lab Sample ID: MB 680-620023/8
Matrix: Water
Analysis Batch: 620023

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			05/27/20 12:44	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			05/27/20 12:44	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			05/27/20 12:44	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			05/27/20 12:44	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			05/27/20 12:44	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/27/20 12:44	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			05/27/20 12:44	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/27/20 12:44	1

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

Lab Sample ID: MB 680-620023/8
Matrix: Water
Analysis Batch: 620023

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			05/27/20 12:44	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/27/20 12:44	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			05/27/20 12:44	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			05/27/20 12:44	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			05/27/20 12:44	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			05/27/20 12:44	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			05/27/20 12:44	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			05/27/20 12:44	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			05/27/20 12:44	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			05/27/20 12:44	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			05/27/20 12:44	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			05/27/20 12:44	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			05/27/20 12:44	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			05/27/20 12:44	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/27/20 12:44	1
2-Hexanone	2.0	U	10	2.0	ug/L			05/27/20 12:44	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			05/27/20 12:44	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			05/27/20 12:44	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			05/27/20 12:44	1
Acetone	7.0	U	10	7.0	ug/L			05/27/20 12:44	1
Benzene	0.43	U	1.0	0.43	ug/L			05/27/20 12:44	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			05/27/20 12:44	1
Bromoform	0.43	U	1.0	0.43	ug/L			05/27/20 12:44	1
Bromomethane	2.5	U M	5.0	2.5	ug/L			05/27/20 12:44	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			05/27/20 12:44	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			05/27/20 12:44	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			05/27/20 12:44	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			05/27/20 12:44	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			05/27/20 12:44	1
Chloroethane	2.5	U	5.0	2.5	ug/L			05/27/20 12:44	1
Chloroform	0.50	U	1.0	0.50	ug/L			05/27/20 12:44	1
Chloromethane	0.40	U	1.0	0.40	ug/L			05/27/20 12:44	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			05/27/20 12:44	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			05/27/20 12:44	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			05/27/20 12:44	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			05/27/20 12:44	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			05/27/20 12:44	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			05/27/20 12:44	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			05/27/20 12:44	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			05/27/20 12:44	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			05/27/20 12:44	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			05/27/20 12:44	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			05/27/20 12:44	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			05/27/20 12:44	1
Naphthalene	2.5	U	5.0	2.5	ug/L			05/27/20 12:44	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			05/27/20 12:44	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			05/27/20 12:44	1
o-Xylene	0.23	U	1.0	0.23	ug/L			05/27/20 12:44	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			05/27/20 12:44	1

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

Lab Sample ID: MB 680-620023/8
Matrix: Water
Analysis Batch: 620023

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	0.27	U	1.0	0.27	ug/L			05/27/20 12:44	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			05/27/20 12:44	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			05/27/20 12:44	1
Toluene	0.48	U	1.0	0.48	ug/L			05/27/20 12:44	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/27/20 12:44	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			05/27/20 12:44	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			05/27/20 12:44	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			05/27/20 12:44	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			05/27/20 12:44	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			05/27/20 12:44	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			05/27/20 12:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*05/27/20 12:44*	*1*
Dibromofluoromethane (Surr)	*111*		*80 - 119*		*05/27/20 12:44*	*1*
Toluene-d8 (Surr)	*107*		*89 - 112*		*05/27/20 12:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*81 - 118*		*05/27/20 12:44*	*1*

Lab Sample ID: LCS 680-620023/3
Matrix: Water
Analysis Batch: 620023

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	57.6		ug/L		115	78 - 124
1,1,1-Trichloroethane	50.0	50.9		ug/L		102	74 - 131
1,1,2,2-Tetrachloroethane	50.0	51.5		ug/L		103	71 - 121
1,1,2-Trichloroethane	50.0	52.7		ug/L		105	80 - 119
1,1-Dichloroethane	50.0	50.1		ug/L		100	77 - 125
1,1-Dichloroethene	50.0	51.9		ug/L		104	71 - 131
1,1-Dichloropropene	50.0	52.4		ug/L		105	79 - 125
1,2,3-Trichlorobenzene	50.0	50.9		ug/L		102	69 - 129
1,2,3-Trichloropropane	50.0	48.2		ug/L		96	73 - 122
1,2,4-Trichlorobenzene	50.0	52.3		ug/L		105	69 - 130
1,2,4-Trimethylbenzene	50.0	52.2		ug/L		104	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	47.3		ug/L		95	62 - 128
1,2-Dichlorobenzene	50.0	51.3		ug/L		103	80 - 119
1,2-Dichloroethane	50.0	50.0		ug/L		100	73 - 128
1,2-Dichloroethene, Total	100	100		ug/L		100	79 - 121
1,2-Dichloropropane	50.0	49.9		ug/L		100	78 - 122
1,3,5-Trimethylbenzene	50.0	53.2		ug/L		106	75 - 124
1,3-Dichlorobenzene	50.0	53.1		ug/L		106	80 - 119
1,3-Dichloropropane	50.0	43.0		ug/L		86	80 - 119
1,4-Dichlorobenzene	50.0	51.6		ug/L		103	79 - 118
2,2-Dichloropropane	50.0	53.6		ug/L		107	60 - 139
2-Butanone (MEK)	250	242		ug/L		97	56 - 143
2-Chlorotoluene	50.0	51.2		ug/L		102	79 - 122
2-Hexanone	250	205		ug/L		82	57 - 139
4-Chlorotoluene	50.0	51.9		ug/L		104	78 - 122

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

Lab Sample ID: LCS 680-620023/3
Matrix: Water
Analysis Batch: 620023

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Isopropyltoluene	50.0	51.7		ug/L		103	77 - 127
4-Methyl-2-pentanone (MIBK)	250	228		ug/L		91	67 - 130
Acetone	250	230		ug/L		92	39 - 160
Benzene	50.0	50.9		ug/L		102	79 - 120
Bromobenzene	50.0	53.8		ug/L		108	80 - 120
Bromoform	50.0	48.7		ug/L		97	66 - 130
Bromomethane	50.0	219	J M Q	ug/L		439	53 - 141
Carbon disulfide	50.0	51.4		ug/L		103	64 - 133
Carbon tetrachloride	50.0	54.2		ug/L		108	72 - 136
Chlorobenzene	50.0	53.7		ug/L		107	82 - 118
Chlorobromomethane	50.0	53.2		ug/L		106	78 - 123
Chlorodibromomethane	50.0	55.0		ug/L		110	74 - 126
Chloroethane	50.0	57.2		ug/L		114	60 - 138
Chloroform	50.0	50.4		ug/L		101	79 - 124
Chloromethane	50.0	50.4		ug/L		101	50 - 139
cis-1,2-Dichloroethene	50.0	49.2		ug/L		98	78 - 123
cis-1,3-Dichloropropene	50.0	52.3		ug/L		105	75 - 124
Dibromomethane	50.0	48.6		ug/L		97	79 - 123
Dichlorobromomethane	50.0	51.6		ug/L		103	79 - 125
Dichlorodifluoromethane	50.0	50.5		ug/L		101	32 - 152
Ethylbenzene	50.0	53.3		ug/L		107	79 - 121
Ethylene Dibromide	50.0	50.5		ug/L		101	75 - 127
Hexachlorobutadiene	50.0	54.5		ug/L		109	66 - 134
Isopropylbenzene	50.0	53.8		ug/L		108	72 - 131
Methyl tert-butyl ether	50.0	49.9		ug/L		100	71 - 124
Methylene Chloride	50.0	46.3		ug/L		93	74 - 124
m-Xylene & p-Xylene	50.0	51.9		ug/L		104	80 - 121
Naphthalene	50.0	49.9		ug/L		100	61 - 128
n-Butylbenzene	50.0	52.3		ug/L		105	75 - 128
N-Propylbenzene	50.0	53.2		ug/L		106	76 - 126
o-Xylene	50.0	52.4		ug/L		105	78 - 122
sec-Butylbenzene	50.0	52.4		ug/L		105	77 - 126
Styrene	50.0	52.7		ug/L		105	78 - 123
tert-Butylbenzene	50.0	53.8		ug/L		108	78 - 124
Tetrachloroethene	50.0	56.0		ug/L		112	74 - 129
Toluene	50.0	52.3		ug/L		105	80 - 121
trans-1,2-Dichloroethene	50.0	50.8		ug/L		102	75 - 124
trans-1,3-Dichloropropene	50.0	52.3		ug/L		105	73 - 127
Trichloroethene	50.0	50.2		ug/L		100	79 - 123
Trichlorofluoromethane	50.0	51.1		ug/L		102	65 - 141
Vinyl acetate	100	104		ug/L		104	54 - 146
Vinyl chloride	50.0	51.7		ug/L		103	58 - 137
Xylenes, Total	100	104		ug/L		104	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*
Dibromofluoromethane (Surr)	*106*		*80 - 119*
Toluene-d8 (Surr)	*108*		*89 - 112*

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

Lab Sample ID: LCS 680-620023/3
Matrix: Water
Analysis Batch: 620023

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

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*105*		*81 - 118*

Lab Sample ID: LCSD 680-620023/4
Matrix: Water
Analysis Batch: 620023

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	56.9		ug/L		114	78 - 124	1	20
1,1,1-Trichloroethane			50.0	50.9		ug/L		102	74 - 131	0	20
1,1,2,2-Tetrachloroethane			50.0	52.9		ug/L		106	71 - 121	3	20
1,1,2-Trichloroethane			50.0	55.1		ug/L		110	80 - 119	4	20
1,1-Dichloroethane			50.0	50.6		ug/L		101	77 - 125	1	20
1,1-Dichloroethene			50.0	51.5		ug/L		103	71 - 131	1	20
1,1-Dichloropropene			50.0	50.8		ug/L		102	79 - 125	3	20
1,2,3-Trichlorobenzene			50.0	51.7		ug/L		103	69 - 129	1	20
1,2,3-Trichloropropane			50.0	50.2		ug/L		100	73 - 122	4	20
1,2,4-Trichlorobenzene			50.0	52.3		ug/L		105	69 - 130	0	20
1,2,4-Trimethylbenzene			50.0	51.7		ug/L		103	76 - 124	1	20
1,2-Dibromo-3-Chloropropane			50.0	49.7		ug/L		99	62 - 128	5	20
1,2-Dichlorobenzene			50.0	52.0		ug/L		104	80 - 119	1	20
1,2-Dichloroethane			50.0	53.1		ug/L		106	73 - 128	6	20
1,2-Dichloroethene, Total			100	100		ug/L		100	79 - 121	0	20
1,2-Dichloropropane			50.0	51.3		ug/L		103	78 - 122	3	20
1,3,5-Trimethylbenzene			50.0	52.2		ug/L		104	75 - 124	2	20
1,3-Dichlorobenzene			50.0	52.3		ug/L		105	80 - 119	1	20
1,3-Dichloropropane			50.0	45.9		ug/L		92	80 - 119	7	20
1,4-Dichlorobenzene			50.0	51.9		ug/L		104	79 - 118	1	20
2,2-Dichloropropane			50.0	52.6		ug/L		105	60 - 139	2	20
2-Butanone (MEK)			250	253		ug/L		101	56 - 143	4	20
2-Chlorotoluene			50.0	51.1		ug/L		102	79 - 122	0	20
2-Hexanone			250	217		ug/L		87	57 - 139	6	20
4-Chlorotoluene			50.0	51.4		ug/L		103	78 - 122	1	20
4-Isopropyltoluene			50.0	50.0		ug/L		100	77 - 127	3	20
4-Methyl-2-pentanone (MIBK)			250	241		ug/L		96	67 - 130	5	20
Acetone			250	237		ug/L		95	39 - 160	3	20
Benzene			50.0	51.9		ug/L		104	79 - 120	2	20
Bromobenzene			50.0	54.2		ug/L		108	80 - 120	1	20
Bromoform			50.0	50.4		ug/L		101	66 - 130	3	20
Bromomethane			50.0	231	J M Q	ug/L		462	53 - 141	5	20
Carbon disulfide			50.0	50.8		ug/L		102	64 - 133	1	20
Carbon tetrachloride			50.0	52.8		ug/L		106	72 - 136	2	20
Chlorobenzene			50.0	53.6		ug/L		107	82 - 118	0	20
Chlorobromomethane			50.0	54.8		ug/L		110	78 - 123	3	20
Chlorodibromomethane			50.0	57.5		ug/L		115	74 - 126	4	20
Chloroethane			50.0	56.7		ug/L		113	60 - 138	1	20
Chloroform			50.0	51.7		ug/L		103	79 - 124	2	20
Chloromethane			50.0	50.2		ug/L		100	50 - 139	0	20
cis-1,2-Dichloroethene			50.0	49.5		ug/L		99	78 - 123	1	20

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

Lab Sample ID: LCSD 680-620023/4
Matrix: Water
Analysis Batch: 620023

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
cis-1,3-Dichloropropene	50.0	55.0		ug/L		110	75 - 124	5	20
Dibromomethane	50.0	51.1		ug/L		102	79 - 123	5	20
Dichlorobromomethane	50.0	53.5		ug/L		107	79 - 125	4	20
Dichlorodifluoromethane	50.0	49.1		ug/L		98	32 - 152	3	20
Ethylbenzene	50.0	52.0		ug/L		104	79 - 121	3	20
Ethylene Dibromide	50.0	52.6		ug/L		105	75 - 127	4	20
Hexachlorobutadiene	50.0	52.4		ug/L		105	66 - 134	4	20
Isopropylbenzene	50.0	52.7		ug/L		105	72 - 131	2	20
Methyl tert-butyl ether	50.0	51.8		ug/L		104	71 - 124	4	20
Methylene Chloride	50.0	47.1		ug/L		94	74 - 124	2	20
m-Xylene & p-Xylene	50.0	51.2		ug/L		102	80 - 121	2	20
Naphthalene	50.0	50.5		ug/L		101	61 - 128	1	20
n-Butylbenzene	50.0	50.2		ug/L		100	75 - 128	4	20
N-Propylbenzene	50.0	51.7		ug/L		103	76 - 126	3	20
o-Xylene	50.0	52.3		ug/L		105	78 - 122	0	20
sec-Butylbenzene	50.0	51.6		ug/L		103	77 - 126	1	20
Styrene	50.0	52.6		ug/L		105	78 - 123	0	20
tert-Butylbenzene	50.0	52.0		ug/L		104	78 - 124	3	20
Tetrachloroethene	50.0	56.0		ug/L		112	74 - 129	0	20
Toluene	50.0	53.4		ug/L		107	80 - 121	2	20
trans-1,2-Dichloroethene	50.0	50.7		ug/L		101	75 - 124	0	20
trans-1,3-Dichloropropene	50.0	55.1		ug/L		110	73 - 127	5	20
Trichloroethene	50.0	50.0		ug/L		100	79 - 123	0	20
Trichlorofluoromethane	50.0	49.7		ug/L		99	65 - 141	3	20
Vinyl acetate	100	107		ug/L		107	54 - 146	3	20
Vinyl chloride	50.0	50.9		ug/L		102	58 - 137	1	20
Xylenes, Total	100	104		ug/L		104	79 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*
Dibromofluoromethane (Surr)	*109*		*80 - 119*
Toluene-d8 (Surr)	*105*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*111*		*81 - 118*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-619161/8
Matrix: Water
Analysis Batch: 619161

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	0.55	U	1.1	0.55	ug/L			05/19/20 10:52	1
Ethylene	0.50	U	1.0	0.50	ug/L			05/19/20 10:52	1
Methane	0.29	U	0.58	0.29	ug/L			05/19/20 10:52	1
Methane (TCD)	39	U	390	39	ug/L			05/19/20 10:52	1

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

Lab Sample ID: LCS 680-619161/3
Matrix: Water
Analysis Batch: 619161

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	288	268		ug/L		93	74 - 131
Ethylene	269	250		ug/L		93	72 - 133
Methane	154	143		ug/L		93	73 - 125

Lab Sample ID: LCS 680-619161/6
Matrix: Water
Analysis Batch: 619161

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: LCSD 680-619161/4
Matrix: Water
Analysis Batch: 619161

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	288	249		ug/L		86	74 - 131	7	30
Ethylene	269	236		ug/L		88	72 - 133	6	30
Methane	154	134		ug/L		87	73 - 125	7	30

Lab Sample ID: LCSD 680-619161/7
Matrix: Water
Analysis Batch: 619161

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	1750		ug/L		91	73 - 125	1	30

Lab Sample ID: MB 680-619629/8
Matrix: Water
Analysis Batch: 619629

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	0.55	U	1.1	0.55	ug/L			05/22/20 10:44	1
Ethylene	0.50	U	1.0	0.50	ug/L			05/22/20 10:44	1
Methane	0.29	U	0.58	0.29	ug/L			05/22/20 10:44	1
Methane (TCD)	39	U	390	39	ug/L			05/22/20 10:44	1

Lab Sample ID: LCS 680-619629/3
Matrix: Water
Analysis Batch: 619629

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	288	284		ug/L		98	74 - 131
Ethylene	269	266		ug/L		99	72 - 133
Methane	154	150		ug/L		98	73 - 125

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

Lab Sample ID: LCS 680-619629/6
Matrix: Water
Analysis Batch: 619629

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Methane (TCD)			1920	1870		ug/L		97	73 - 125		

Lab Sample ID: LCSD 680-619629/4
Matrix: Water
Analysis Batch: 619629

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			288	280		ug/L		97	74 - 131	1	30
Ethylene			269	264		ug/L		98	72 - 133	1	30
Methane			154	149		ug/L		97	73 - 125	1	30

Lab Sample ID: LCSD 680-619629/7
Matrix: Water
Analysis Batch: 619629

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	1900		ug/L		99	73 - 125	1	30

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-619621/33
Matrix: Water
Analysis Batch: 619621

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.40	U	1.0	0.40	mg/L			05/21/20 21:48	1

Lab Sample ID: LCS 680-619621/34
Matrix: Water
Analysis Batch: 619621

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	9.93		mg/L		99	87 - 112		

Lab Sample ID: LCSD 680-619621/35
Matrix: Water
Analysis Batch: 619621

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	9.98		mg/L		100	87 - 112	0	15

Lab Sample ID: 680-183803-7 MS
Matrix: Water
Analysis Batch: 619621

Client Sample ID: G6M-13-01X-SPR20
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate	10		10.0	20.1		mg/L		101	87 - 112		

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

Lab Sample ID: 680-183803-7 MSD
Matrix: Water
Analysis Batch: 619621

Client Sample ID: G6M-13-01X-SPR20
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	10		10.0	20.1		mg/L		101	87 - 112	0	15

Lab Sample ID: MB 680-619719/40
Matrix: Water
Analysis Batch: 619719

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.40	U	1.0	0.40	mg/L			05/22/20 20:46	1

Lab Sample ID: LCS 680-619719/41
Matrix: Water
Analysis Batch: 619719

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	9.87		mg/L		99	87 - 112

Lab Sample ID: LCSD 680-619719/42
Matrix: Water
Analysis Batch: 619719

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	9.80		mg/L		98	87 - 112	1	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-618987/1-A
Matrix: Water
Analysis Batch: 619169

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 618987

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	17	U	50	17	ug/L		05/17/20 11:04	05/19/20 00:18	1
Manganese	1.0	U	10	1.0	ug/L		05/17/20 11:04	05/19/20 00:18	1

Lab Sample ID: LCS 680-618987/2-A
Matrix: Water
Analysis Batch: 619169

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 618987

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	5010	4860		ug/L		97	87 - 115
Manganese	400	400		ug/L		100	90 - 114

Lab Sample ID: MB 680-619056/1-A
Matrix: Water
Analysis Batch: 619792

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 619056

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	17	U	50	17	ug/L		05/18/20 10:40	05/22/20 18:09	1
Manganese	1.41	J	10	1.0	ug/L		05/18/20 10:40	05/22/20 18:09	1

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

Lab Sample ID: LCS 680-619056/2-A
Matrix: Water
Analysis Batch: 619792

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 619056

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Iron			5010	4920		ug/L		98	87 - 115		
Manganese			400	393		ug/L		98	90 - 114		

Lab Sample ID: 680-183803-7 MS
Matrix: Water
Analysis Batch: 619792

Client Sample ID: G6M-13-01X-SPR20
Prep Type: Dissolved
Prep Batch: 619056

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Iron	620		5010	5630		ug/L		100	87 - 115		
Manganese	5100	J	400	5510	4	ug/L		91	90 - 114		

Lab Sample ID: 680-183803-7 MSD
Matrix: Water
Analysis Batch: 619792

Client Sample ID: G6M-13-01X-SPR20
Prep Type: Dissolved
Prep Batch: 619056

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	620		5010	5600		ug/L		99	87 - 115	1	20
Manganese	5100	J	400	5470	4	ug/L		83	90 - 114	1	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-618986/1-A
Matrix: Water
Analysis Batch: 619187

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 618986

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5	U	3.0	1.5	ug/L		05/17/20 11:04	05/18/20 20:18	1

Lab Sample ID: LCS 680-618986/2-A
Matrix: Water
Analysis Batch: 619187

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 618986

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic			100	97.9		ug/L		98	84 - 116		

Lab Sample ID: MB 680-619055/1-A
Matrix: Water
Analysis Batch: 619187

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 619055

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5	U	3.0	1.5	ug/L		05/18/20 10:40	05/18/20 23:45	1

Lab Sample ID: LCS 680-619055/2-A
Matrix: Water
Analysis Batch: 619187

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 619055

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic			100	99.9		ug/L		100	84 - 116		

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

Lab Sample ID: 680-183803-7 MS
Matrix: Water
Analysis Batch: 619187

Client Sample ID: G6M-13-01X-SPR20
Prep Type: Dissolved
Prep Batch: 619055

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	6.2		100	113		ug/L		107	84 - 116

Lab Sample ID: 680-183803-7 MSD
Matrix: Water
Analysis Batch: 619187

Client Sample ID: G6M-13-01X-SPR20
Prep Type: Dissolved
Prep Batch: 619055

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	6.2		100	105		ug/L		99	84 - 116	7	20

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 280-495500/22
Matrix: Water
Analysis Batch: 495500

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.0243	J	0.10	0.019	mg/L			05/19/20 17:26	1

Lab Sample ID: MB 280-495500/60
Matrix: Water
Analysis Batch: 495500

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.0209	J	0.10	0.019	mg/L			05/19/20 18:42	1

Lab Sample ID: LCS 280-495500/21
Matrix: Water
Analysis Batch: 495500

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	4.91		mg/L		98	90 - 110

Lab Sample ID: LCS 280-495500/59
Matrix: Water
Analysis Batch: 495500

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	5.13		mg/L		103	90 - 110

Lab Sample ID: 680-183803-2 MS
Matrix: Water
Analysis Batch: 495500

Client Sample ID: G6M-04-02X-SPR20
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate/Nitrite-N	0.032	J	4.00	2.97	J	mg/L		74	90 - 110

Method: 353.2 - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: 680-183803-2 MSD — **Client Sample ID: G6M-04-02X-SPR20**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 495500

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate/Nitrite-N	0.032	J	4.00	2.97	J	mg/L		73	90 - 110	0	10

Lab Sample ID: 680-183803-10 MS — **Client Sample ID: G6M-13-05X-SPR20**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 495500

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate/Nitrite-N	0.063	J	4.00	2.97	J	mg/L		73	90 - 110

Lab Sample ID: 680-183803-10 MSD — **Client Sample ID: G6M-13-05X-SPR20**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 495500

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate/Nitrite-N	0.063	J	4.00	2.94	J	mg/L		72	90 - 110	1	10

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 680-619356/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 619356

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	1.0	U	1.0	1.0	mg/L			05/18/20 12:41	1

Lab Sample ID: LCS 680-619356/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 619356

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	10.0	8.36		mg/L		84	75 - 125

Lab Sample ID: LCSD 680-619356/3 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 619356

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfide	10.0	8.45		mg/L		85	75 - 125	1	30

Lab Sample ID: 680-183803-4 MS — **Client Sample ID: G6M-04-07X-SPR20**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 619356

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	0.83	U	7.69	6.94		mg/L		90	75 - 125

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric) (Continued)

Lab Sample ID: 680-183803-4 MSD — **Client Sample ID: G6M-04-07X-SPR20**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 619356

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfide	0.83	U	7.69	6.94		mg/L		90	75 - 125	0	30

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 280-496241/34 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 496241

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	0.35	U Q	1.0	0.35	mg/L			05/26/20 00:33	1

Lab Sample ID: LCS 280-496241/33 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 496241

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Duplicates	25.0	27.2	Q	mg/L		109	88 - 112

Lab Sample ID: MB 280-496295/35 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 496295

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	0.35	U	1.0	0.35	mg/L			05/26/20 22:56	1

Lab Sample ID: MB 280-496295/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 496295

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	0.35	U	1.0	0.35	mg/L			05/26/20 13:37	1

Lab Sample ID: LCS 280-496295/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 496295

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Duplicates	25.0	25.0		mg/L		100	88 - 112

Lab Sample ID: LCS 280-496295/34 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 496295

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Duplicates	25.0	26.0		mg/L		104	88 - 112

Method: 9060A - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: 680-183803-5 MS
Matrix: Water
Analysis Batch: 496295

Client Sample ID: G6M-04-10A-SPR20
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon - Duplicates	44		25.2	68.5		mg/L		97	88 - 112		

Lab Sample ID: 680-183803-5 MSD
Matrix: Water
Analysis Batch: 496295

Client Sample ID: G6M-04-10A-SPR20
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 - Duplicates	44		25.2	69.8		mg/L		102	88 - 112	2	15

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-495344/5
Matrix: Water
Analysis Batch: 495344

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	3.1	U	10	3.1	mg/L			05/18/20 09:41	1

Lab Sample ID: LCS 280-495344/4
Matrix: Water
Analysis Batch: 495344

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Alkalinity			200	210		mg/L		105	89 - 109		

GC/MS VOA

Analysis Batch: 619653

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183803-4	G6M-04-07X-SPR20	Total/NA	Water	8260B	
680-183803-5	G6M-04-10A-SPR20	Total/NA	Water	8260B	
680-183803-6	G6M-07-02X-SPR20	Total/NA	Water	8260B	
680-183803-7	G6M-13-01X-SPR20	Total/NA	Water	8260B	
680-183803-8	G6M-13-02X-SPR20	Total/NA	Water	8260B	
MB 680-619653/10	Method Blank	Total/NA	Water	8260B	
LCS 680-619653/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-619653/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 619664

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183803-1	AOC50-DUP01-SPR20	Total/NA	Water	8260B	
680-183803-2	G6M-04-02X-SPR20	Total/NA	Water	8260B	
MB 680-619664/10	Method Blank	Total/NA	Water	8260B	
LCS 680-619664/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-619664/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 619818

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183803-9	G6M-13-04X-SPR20	Total/NA	Water	8260B	
680-183803-11	G6M-97-05B-SPR20	Total/NA	Water	8260B	
MB 680-619818/10	Method Blank	Total/NA	Water	8260B	
LCS 680-619818/6	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-619818/31	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 619864

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183803-2 - DL	G6M-04-02X-SPR20	Total/NA	Water	8260B	
680-183803-3	G6M-04-03X-SPR20	Total/NA	Water	8260B	
MB 680-619864/10	Method Blank	Total/NA	Water	8260B	
LCS 680-619864/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-619864/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 619876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183803-10	G6M-13-05X-SPR20	Total/NA	Water	8260B	
680-183803-12	XSA-12-96X-SPR20	Total/NA	Water	8260B	
680-183803-13	Trip Blank1-051220	Total/NA	Water	8260B	
MB 680-619876/9	Method Blank	Total/NA	Water	8260B	
LCS 680-619876/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-619876/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 620023

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183803-10 - RA	G6M-13-05X-SPR20	Total/NA	Water	8260B	
680-183803-12 - RA	XSA-12-96X-SPR20	Total/NA	Water	8260B	
680-183803-13 - RA	Trip Blank1-051220	Total/NA	Water	8260B	
MB 680-620023/8	Method Blank	Total/NA	Water	8260B	
LCS 680-620023/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-620023/4	Lab Control Sample Dup	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 619161

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183803-1	AOC50-DUP01-SPR20	Total/NA	Water	RSK-175	
680-183803-2	G6M-04-02X-SPR20	Total/NA	Water	RSK-175	
680-183803-3	G6M-04-03X-SPR20	Total/NA	Water	RSK-175	
680-183803-4	G6M-04-07X-SPR20	Total/NA	Water	RSK-175	
680-183803-5	G6M-04-10A-SPR20	Total/NA	Water	RSK-175	
680-183803-6	G6M-07-02X-SPR20	Total/NA	Water	RSK-175	
680-183803-7	G6M-13-01X-SPR20	Total/NA	Water	RSK-175	
680-183803-8	G6M-13-02X-SPR20	Total/NA	Water	RSK-175	
MB 680-619161/8	Method Blank	Total/NA	Water	RSK-175	
LCS 680-619161/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-619161/6	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-619161/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-619161/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	

Analysis Batch: 619629

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183803-9	G6M-13-04X-SPR20	Total/NA	Water	RSK-175	
680-183803-10	G6M-13-05X-SPR20	Total/NA	Water	RSK-175	
680-183803-11	G6M-97-05B-SPR20	Total/NA	Water	RSK-175	
680-183803-12	XSA-12-96X-SPR20	Total/NA	Water	RSK-175	
MB 680-619629/8	Method Blank	Total/NA	Water	RSK-175	
LCS 680-619629/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-619629/6	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-619629/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-619629/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	

HPLC/IC

Analysis Batch: 619621

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183803-1	AOC50-DUP01-SPR20	Total/NA	Water	9056A	
680-183803-2	G6M-04-02X-SPR20	Total/NA	Water	9056A	
680-183803-3	G6M-04-03X-SPR20	Total/NA	Water	9056A	
680-183803-4	G6M-04-07X-SPR20	Total/NA	Water	9056A	
680-183803-5	G6M-04-10A-SPR20	Total/NA	Water	9056A	
680-183803-6	G6M-07-02X-SPR20	Total/NA	Water	9056A	
680-183803-7	G6M-13-01X-SPR20	Total/NA	Water	9056A	
680-183803-8	G6M-13-02X-SPR20	Total/NA	Water	9056A	
680-183803-9	G6M-13-04X-SPR20	Total/NA	Water	9056A	
680-183803-10	G6M-13-05X-SPR20	Total/NA	Water	9056A	
680-183803-11	G6M-97-05B-SPR20	Total/NA	Water	9056A	
MB 680-619621/33	Method Blank	Total/NA	Water	9056A	
LCS 680-619621/34	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-619621/35	Lab Control Sample Dup	Total/NA	Water	9056A	
680-183803-7 MS	G6M-13-01X-SPR20	Total/NA	Water	9056A	
680-183803-7 MSD	G6M-13-01X-SPR20	Total/NA	Water	9056A	

Analysis Batch: 619719

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183803-12	XSA-12-96X-SPR20	Total/NA	Water	9056A	
MB 680-619719/40	Method Blank	Total/NA	Water	9056A	

HPLC/IC (Continued)

Analysis Batch: 619719 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 680-619719/41	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-619719/42	Lab Control Sample Dup	Total/NA	Water	9056A	

Metals

Prep Batch: 618986

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183803-1	AOC50-DUP01-SPR20	Dissolved	Water	3005A	
680-183803-2	G6M-04-02X-SPR20	Dissolved	Water	3005A	
680-183803-3	G6M-04-03X-SPR20	Dissolved	Water	3005A	
680-183803-4	G6M-04-07X-SPR20	Dissolved	Water	3005A	
680-183803-5	G6M-04-10A-SPR20	Dissolved	Water	3005A	
MB 680-618986/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-618986/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 618987

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183803-1	AOC50-DUP01-SPR20	Dissolved	Water	3005A	
680-183803-2	G6M-04-02X-SPR20	Dissolved	Water	3005A	
680-183803-3	G6M-04-03X-SPR20	Dissolved	Water	3005A	
680-183803-4	G6M-04-07X-SPR20	Dissolved	Water	3005A	
680-183803-5	G6M-04-10A-SPR20	Dissolved	Water	3005A	
MB 680-618987/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-618987/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 619055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183803-6	G6M-07-02X-SPR20	Dissolved	Water	3005A	
680-183803-7	G6M-13-01X-SPR20	Dissolved	Water	3005A	
680-183803-8	G6M-13-02X-SPR20	Dissolved	Water	3005A	
680-183803-9	G6M-13-04X-SPR20	Dissolved	Water	3005A	
680-183803-10	G6M-13-05X-SPR20	Dissolved	Water	3005A	
680-183803-11	G6M-97-05B-SPR20	Dissolved	Water	3005A	
680-183803-12	XSA-12-96X-SPR20	Dissolved	Water	3005A	
MB 680-619055/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-619055/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-183803-7 MS	G6M-13-01X-SPR20	Dissolved	Water	3005A	
680-183803-7 MSD	G6M-13-01X-SPR20	Dissolved	Water	3005A	

Prep Batch: 619056

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183803-6	G6M-07-02X-SPR20	Dissolved	Water	3005A	
680-183803-7	G6M-13-01X-SPR20	Dissolved	Water	3005A	
680-183803-8	G6M-13-02X-SPR20	Dissolved	Water	3005A	
680-183803-9	G6M-13-04X-SPR20	Dissolved	Water	3005A	
680-183803-10	G6M-13-05X-SPR20	Dissolved	Water	3005A	
680-183803-11	G6M-97-05B-SPR20	Dissolved	Water	3005A	
680-183803-12	XSA-12-96X-SPR20	Dissolved	Water	3005A	
MB 680-619056/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-619056/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-183803-7 MS	G6M-13-01X-SPR20	Dissolved	Water	3005A	

Metals (Continued)

Prep Batch: 619056 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183803-7 MSD	G6M-13-01X-SPR20	Dissolved	Water	3005A	

Analysis Batch: 619169

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183803-1	AOC50-DUP01-SPR20	Dissolved	Water	6010C	618987
680-183803-2	G6M-04-02X-SPR20	Dissolved	Water	6010C	618987
680-183803-3	G6M-04-03X-SPR20	Dissolved	Water	6010C	618987
680-183803-4	G6M-04-07X-SPR20	Dissolved	Water	6010C	618987
680-183803-5	G6M-04-10A-SPR20	Dissolved	Water	6010C	618987
MB 680-618987/1-A	Method Blank	Total Recoverable	Water	6010C	618987
LCS 680-618987/2-A	Lab Control Sample	Total Recoverable	Water	6010C	618987

Analysis Batch: 619187

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183803-1	AOC50-DUP01-SPR20	Dissolved	Water	6020A	618986
680-183803-2	G6M-04-02X-SPR20	Dissolved	Water	6020A	618986
680-183803-3	G6M-04-03X-SPR20	Dissolved	Water	6020A	618986
680-183803-4	G6M-04-07X-SPR20	Dissolved	Water	6020A	618986
680-183803-5	G6M-04-10A-SPR20	Dissolved	Water	6020A	618986
680-183803-6	G6M-07-02X-SPR20	Dissolved	Water	6020A	619055
680-183803-7	G6M-13-01X-SPR20	Dissolved	Water	6020A	619055
680-183803-8	G6M-13-02X-SPR20	Dissolved	Water	6020A	619055
680-183803-9	G6M-13-04X-SPR20	Dissolved	Water	6020A	619055
680-183803-10	G6M-13-05X-SPR20	Dissolved	Water	6020A	619055
680-183803-11	G6M-97-05B-SPR20	Dissolved	Water	6020A	619055
680-183803-12	XSA-12-96X-SPR20	Dissolved	Water	6020A	619055
MB 680-618986/1-A	Method Blank	Total Recoverable	Water	6020A	618986
MB 680-619055/1-A	Method Blank	Total Recoverable	Water	6020A	619055
LCS 680-618986/2-A	Lab Control Sample	Total Recoverable	Water	6020A	618986
LCS 680-619055/2-A	Lab Control Sample	Total Recoverable	Water	6020A	619055
680-183803-7 MS	G6M-13-01X-SPR20	Dissolved	Water	6020A	619055
680-183803-7 MSD	G6M-13-01X-SPR20	Dissolved	Water	6020A	619055

Analysis Batch: 619792

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183803-6	G6M-07-02X-SPR20	Dissolved	Water	6010C	619056
680-183803-7	G6M-13-01X-SPR20	Dissolved	Water	6010C	619056
680-183803-8	G6M-13-02X-SPR20	Dissolved	Water	6010C	619056
680-183803-9	G6M-13-04X-SPR20	Dissolved	Water	6010C	619056
680-183803-10	G6M-13-05X-SPR20	Dissolved	Water	6010C	619056
680-183803-11	G6M-97-05B-SPR20	Dissolved	Water	6010C	619056
680-183803-12	XSA-12-96X-SPR20	Dissolved	Water	6010C	619056
MB 680-619056/1-A	Method Blank	Total Recoverable	Water	6010C	619056
LCS 680-619056/2-A	Lab Control Sample	Total Recoverable	Water	6010C	619056
680-183803-7 MS	G6M-13-01X-SPR20	Dissolved	Water	6010C	619056
680-183803-7 MSD	G6M-13-01X-SPR20	Dissolved	Water	6010C	619056

General Chemistry

Analysis Batch: 495344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183803-1	AOC50-DUP01-SPR20	Total/NA	Water	SM 2320B	
680-183803-2	G6M-04-02X-SPR20	Total/NA	Water	SM 2320B	
680-183803-3	G6M-04-03X-SPR20	Total/NA	Water	SM 2320B	
680-183803-4	G6M-04-07X-SPR20	Total/NA	Water	SM 2320B	
680-183803-5	G6M-04-10A-SPR20	Total/NA	Water	SM 2320B	
680-183803-6	G6M-07-02X-SPR20	Total/NA	Water	SM 2320B	
680-183803-7	G6M-13-01X-SPR20	Total/NA	Water	SM 2320B	
680-183803-8	G6M-13-02X-SPR20	Total/NA	Water	SM 2320B	
680-183803-9	G6M-13-04X-SPR20	Total/NA	Water	SM 2320B	
680-183803-10	G6M-13-05X-SPR20	Total/NA	Water	SM 2320B	
680-183803-11	G6M-97-05B-SPR20	Total/NA	Water	SM 2320B	
680-183803-12	XSA-12-96X-SPR20	Total/NA	Water	SM 2320B	
MB 280-495344/5	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-495344/4	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 495500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183803-1	AOC50-DUP01-SPR20	Total/NA	Water	353.2	
680-183803-2	G6M-04-02X-SPR20	Total/NA	Water	353.2	
680-183803-3	G6M-04-03X-SPR20	Total/NA	Water	353.2	
680-183803-4	G6M-04-07X-SPR20	Total/NA	Water	353.2	
680-183803-5	G6M-04-10A-SPR20	Total/NA	Water	353.2	
680-183803-6	G6M-07-02X-SPR20	Total/NA	Water	353.2	
680-183803-7	G6M-13-01X-SPR20	Total/NA	Water	353.2	
680-183803-8	G6M-13-02X-SPR20	Total/NA	Water	353.2	
680-183803-9	G6M-13-04X-SPR20	Total/NA	Water	353.2	
680-183803-10	G6M-13-05X-SPR20	Total/NA	Water	353.2	
680-183803-11	G6M-97-05B-SPR20	Total/NA	Water	353.2	
680-183803-12	XSA-12-96X-SPR20	Total/NA	Water	353.2	
MB 280-495500/22	Method Blank	Total/NA	Water	353.2	
MB 280-495500/60	Method Blank	Total/NA	Water	353.2	
LCS 280-495500/21	Lab Control Sample	Total/NA	Water	353.2	
LCS 280-495500/59	Lab Control Sample	Total/NA	Water	353.2	
680-183803-2 MS	G6M-04-02X-SPR20	Total/NA	Water	353.2	
680-183803-2 MSD	G6M-04-02X-SPR20	Total/NA	Water	353.2	
680-183803-10 MS	G6M-13-05X-SPR20	Total/NA	Water	353.2	
680-183803-10 MSD	G6M-13-05X-SPR20	Total/NA	Water	353.2	

Analysis Batch: 496241

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183803-1	AOC50-DUP01-SPR20	Total/NA	Water	9060A	
MB 280-496241/34	Method Blank	Total/NA	Water	9060A	
LCS 280-496241/33	Lab Control Sample	Total/NA	Water	9060A	

Analysis Batch: 496295

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183803-2	G6M-04-02X-SPR20	Total/NA	Water	9060A	
680-183803-3	G6M-04-03X-SPR20	Total/NA	Water	9060A	
680-183803-4	G6M-04-07X-SPR20	Total/NA	Water	9060A	
680-183803-5	G6M-04-10A-SPR20	Total/NA	Water	9060A	
680-183803-6	G6M-07-02X-SPR20	Total/NA	Water	9060A	

General Chemistry (Continued)

Analysis Batch: 496295 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183803-7	G6M-13-01X-SPR20	Total/NA	Water	9060A	
680-183803-8	G6M-13-02X-SPR20	Total/NA	Water	9060A	
680-183803-9	G6M-13-04X-SPR20	Total/NA	Water	9060A	
680-183803-10	G6M-13-05X-SPR20	Total/NA	Water	9060A	
680-183803-11	G6M-97-05B-SPR20	Total/NA	Water	9060A	
680-183803-12	XSA-12-96X-SPR20	Total/NA	Water	9060A	
MB 280-496295/35	Method Blank	Total/NA	Water	9060A	
MB 280-496295/4	Method Blank	Total/NA	Water	9060A	
LCS 280-496295/3	Lab Control Sample	Total/NA	Water	9060A	
LCS 280-496295/34	Lab Control Sample	Total/NA	Water	9060A	
680-183803-5 MS	G6M-04-10A-SPR20	Total/NA	Water	9060A	
680-183803-5 MSD	G6M-04-10A-SPR20	Total/NA	Water	9060A	

Analysis Batch: 619356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183803-1	AOC50-DUP01-SPR20	Total/NA	Water	9034	
680-183803-2	G6M-04-02X-SPR20	Total/NA	Water	9034	
680-183803-3	G6M-04-03X-SPR20	Total/NA	Water	9034	
680-183803-4	G6M-04-07X-SPR20	Total/NA	Water	9034	
680-183803-5	G6M-04-10A-SPR20	Total/NA	Water	9034	
680-183803-6	G6M-07-02X-SPR20	Total/NA	Water	9034	
680-183803-7	G6M-13-01X-SPR20	Total/NA	Water	9034	
680-183803-8	G6M-13-02X-SPR20	Total/NA	Water	9034	
680-183803-9	G6M-13-04X-SPR20	Total/NA	Water	9034	
680-183803-10	G6M-13-05X-SPR20	Total/NA	Water	9034	
680-183803-11	G6M-97-05B-SPR20	Total/NA	Water	9034	
680-183803-12	XSA-12-96X-SPR20	Total/NA	Water	9034	
MB 680-619356/1	Method Blank	Total/NA	Water	9034	
LCS 680-619356/2	Lab Control Sample	Total/NA	Water	9034	
LCSD 680-619356/3	Lab Control Sample Dup	Total/NA	Water	9034	
680-183803-4 MS	G6M-04-07X-SPR20	Total/NA	Water	9034	
680-183803-4 MSD	G6M-04-07X-SPR20	Total/NA	Water	9034	

Client Sample ID: AOC50-DUP01-SPR20

Lab Sample ID: 680-183803-1

Date Collected: 05/12/20 11:00

Matrix: Water

Date Received: 05/14/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	619664	05/22/20 16:56	Y1S	TAL SAV
	Instrument ID: CMSC									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	619161	05/19/20 12:29	MYD	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		5	5 mL	5 mL	619621	05/22/20 02:19	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	618987	05/17/20 11:04	AJR	TAL SAV
Dissolved	Analysis	6010C		1			619169	05/19/20 01:36	BWR	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	618986	05/17/20 11:04	AJR	TAL SAV
Dissolved	Analysis	6020A		1			619187	05/18/20 21:24	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	495500	05/19/20 18:12	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	315 mL	315 mL	619356	05/18/20 12:41	TB	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		6	20 mL	20 mL	496241	05/26/20 07:51	JMB	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			495344	05/18/20 10:42	SPG	TAL DEN
	Instrument ID: WC-AT3									

Client Sample ID: G6M-04-02X-SPR20

Lab Sample ID: 680-183803-2

Date Collected: 05/12/20 11:45

Matrix: Water

Date Received: 05/14/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B	DL	5	5 mL	5 mL	619864	05/26/20 20:26	Y1S	TAL SAV
	Instrument ID: CMSA2									
Total/NA	Analysis	8260B		1	5 mL	5 mL	619664	05/22/20 17:20	Y1S	TAL SAV
	Instrument ID: CMSC									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	619161	05/19/20 12:42	MYD	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		5	5 mL	5 mL	619621	05/22/20 02:32	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	618987	05/17/20 11:04	AJR	TAL SAV
Dissolved	Analysis	6010C		1			619169	05/19/20 01:41	BWR	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	618986	05/17/20 11:04	AJR	TAL SAV
Dissolved	Analysis	6020A		1			619187	05/18/20 21:33	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	495500	05/19/20 18:04	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	285 mL	285 mL	619356	05/18/20 12:41	TB	TAL SAV
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: JV, LTM - AOC50 Spring 2020

Job ID: 680-183803-1

Client Sample ID: G6M-04-02X-SPR20

Lab Sample ID: 680-183803-2

Date Collected: 05/12/20 11:45

Matrix: Water

Date Received: 05/14/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060A		5	20 mL	20 mL	496295	05/26/20 21:49	JMB	TAL DEN
Total/NA	Analysis	SM 2320B		1			495344	05/18/20 10:47	SPG	TAL DEN
	Instrument ID: WC-AT3									

Client Sample ID: G6M-04-03X-SPR20

Lab Sample ID: 680-183803-3

Date Collected: 05/12/20 14:00

Matrix: Water

Date Received: 05/14/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	619864	05/26/20 19:16	Y1S	TAL SAV
	Instrument ID: CMSA2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	619161	05/19/20 12:55	MYD	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	619621	05/21/20 23:44	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	618987	05/17/20 11:04	AJR	TAL SAV
Dissolved	Analysis	6010C		1			619169	05/19/20 01:46	BWR	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	618986	05/17/20 11:04	AJR	TAL SAV
Dissolved	Analysis	6020A		1			619187	05/18/20 21:36	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	495500	05/19/20 18:14	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	310 mL	310 mL	619356	05/18/20 12:41	TB	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1	20 mL	20 mL	496295	05/26/20 22:06	JMB	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			495344	05/18/20 11:02	SPG	TAL DEN
	Instrument ID: WC-AT3									

Client Sample ID: G6M-04-07X-SPR20

Lab Sample ID: 680-183803-4

Date Collected: 05/12/20 11:55

Matrix: Water

Date Received: 05/14/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	619653	05/22/20 18:57	P1C	TAL SAV
	Instrument ID: CMSA2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	619161	05/19/20 13:07	MYD	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	619621	05/21/20 23:57	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	618987	05/17/20 11:04	AJR	TAL SAV
Dissolved	Analysis	6010C		1			619169	05/19/20 01:50	BWR	TAL SAV
	Instrument ID: ICPE									

Client Sample ID: G6M-04-07X-SPR20

Lab Sample ID: 680-183803-4

Date Collected: 05/12/20 11:55

Matrix: Water

Date Received: 05/14/20 09:30

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	618986	05/17/20 11:04	AJR	TAL SAV
Dissolved	Analysis	6020A		1			619187	05/18/20 21:39	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	495500	05/19/20 18:16	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	300 mL	300 mL	619356	05/18/20 12:41	TB	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1	20 mL	20 mL	496295	05/26/20 22:23	JMB	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			495344	05/18/20 11:07	SPG	TAL DEN
	Instrument ID: WC-AT3									

Client Sample ID: G6M-04-10A-SPR20

Lab Sample ID: 680-183803-5

Date Collected: 05/12/20 15:35

Matrix: Water

Date Received: 05/14/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	619653	05/22/20 15:49	P1C	TAL SAV
	Instrument ID: CMSA2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	619161	05/19/20 13:20	MYD	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		5	5 mL	5 mL	619621	05/22/20 02:45	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	618987	05/17/20 11:04	AJR	TAL SAV
Dissolved	Analysis	6010C		1			619169	05/19/20 01:55	BWR	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	618986	05/17/20 11:04	AJR	TAL SAV
Dissolved	Analysis	6020A		1			619187	05/18/20 21:43	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	495500	05/19/20 18:18	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	300 mL	300 mL	619356	05/18/20 12:41	TB	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1	20 mL	20 mL	496295	05/26/20 23:28	JMB	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			495344	05/18/20 11:14	SPG	TAL DEN
	Instrument ID: WC-AT3									

Client Sample ID: G6M-07-02X-SPR20

Lab Sample ID: 680-183803-6

Date Collected: 05/12/20 13:25

Matrix: Water

Date Received: 05/14/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	619653	05/22/20 16:13	P1C	TAL SAV
	Instrument ID: CMSA2									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: JV, LTM - AOC50 Spring 2020

Job ID: 680-183803-1

Client Sample ID: G6M-07-02X-SPR20

Lab Sample ID: 680-183803-6

Date Collected: 05/12/20 13:25

Matrix: Water

Date Received: 05/14/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	619161	05/19/20 13:33	MYD	TAL SAV
Total/NA	Analysis	9056A		5	5 mL	5 mL	619621	05/22/20 02:58	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	619056	05/18/20 10:40	AJR	TAL SAV
Dissolved	Analysis	6010C		1			619792	05/22/20 18:42	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	619055	05/18/20 10:40	AJR	TAL SAV
Dissolved	Analysis	6020A		1			619187	05/19/20 00:08	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	495500	05/19/20 18:32	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	310 mL	310 mL	619356	05/18/20 12:41	TB	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		6	20 mL	20 mL	496295	05/27/20 00:58	JMB	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			495344	05/18/20 11:20	SPG	TAL DEN
	Instrument ID: WC-AT3									

Client Sample ID: G6M-13-01X-SPR20

Lab Sample ID: 680-183803-7

Date Collected: 05/11/20 13:20

Matrix: Water

Date Received: 05/14/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	619653	05/22/20 16:36	P1C	TAL SAV
	Instrument ID: CMSA2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	619161	05/19/20 13:46	MYD	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	619621	05/21/20 22:27	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	619056	05/18/20 10:40	AJR	TAL SAV
Dissolved	Analysis	6010C		1			619792	05/22/20 18:28	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	619055	05/18/20 10:40	AJR	TAL SAV
Dissolved	Analysis	6020A		1			619187	05/18/20 23:52	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	495500	05/19/20 18:34	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	310 mL	310 mL	619356	05/18/20 12:41	TB	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1	20 mL	20 mL	496295	05/27/20 01:13	JMB	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			495344	05/18/20 11:24	SPG	TAL DEN
	Instrument ID: WC-AT3									

Client Sample ID: G6M-13-02X-SPR20

Lab Sample ID: 680-183803-8

Date Collected: 05/12/20 09:45

Matrix: Water

Date Received: 05/14/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	619653	05/22/20 17:00	P1C	TAL SAV
	Instrument ID: CMSA2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	619161	05/19/20 13:59	MYD	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	619621	05/22/20 00:10	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	619056	05/18/20 10:40	AJR	TAL SAV
Dissolved	Analysis	6010C		1			619792	05/22/20 18:55	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	619055	05/18/20 10:40	AJR	TAL SAV
Dissolved	Analysis	6020A		1			619187	05/19/20 00:11	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	495500	05/19/20 18:36	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	310 mL	310 mL	619356	05/18/20 12:41	TB	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1	20 mL	20 mL	496295	05/27/20 01:32	JMB	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			495344	05/18/20 11:29	SPG	TAL DEN
	Instrument ID: WC-AT3									

Client Sample ID: G6M-13-04X-SPR20

Lab Sample ID: 680-183803-9

Date Collected: 05/11/20 15:35

Matrix: Water

Date Received: 05/14/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	619818	05/24/20 20:19	P1C	TAL SAV
	Instrument ID: CMSA2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	619629	05/22/20 11:30	MYD	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		5	5 mL	5 mL	619621	05/22/20 03:11	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	619056	05/18/20 10:40	AJR	TAL SAV
Dissolved	Analysis	6010C		1			619792	05/22/20 19:00	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	619055	05/18/20 10:40	AJR	TAL SAV
Dissolved	Analysis	6020A		1			619187	05/19/20 00:14	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	495500	05/19/20 18:38	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	310 mL	310 mL	619356	05/18/20 12:41	TB	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1	20 mL	20 mL	496295	05/27/20 01:47	JMB	TAL DEN
	Instrument ID: WC_SHI3									

Client Sample ID: G6M-13-04X-SPR20

Lab Sample ID: 680-183803-9

Date Collected: 05/11/20 15:35

Matrix: Water

Date Received: 05/14/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2320B		1			495344	05/18/20 11:34	SPG	TAL DEN

Client Sample ID: G6M-13-05X-SPR20

Lab Sample ID: 680-183803-10

Date Collected: 05/12/20 15:50

Matrix: Water

Date Received: 05/14/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	619876	05/26/20 20:22	Y1S	TAL SAV
	Instrument ID: CMSC									
Total/NA	Analysis	8260B	RA	1	5 mL	5 mL	620023	05/27/20 14:27	P1C	TAL SAV
	Instrument ID: CMSP2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	619629	05/22/20 11:43	MYD	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		5	5 mL	5 mL	619621	05/22/20 03:24	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	619056	05/18/20 10:40	AJR	TAL SAV
Dissolved	Analysis	6010C		1			619792	05/22/20 19:09	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	619055	05/18/20 10:40	AJR	TAL SAV
Dissolved	Analysis	6020A		1			619187	05/19/20 00:26	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	495500	05/19/20 18:44	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	310 mL	310 mL	619356	05/18/20 12:41	TB	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1	20 mL	20 mL	496295	05/27/20 02:03	JMB	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			495344	05/18/20 11:40	SPG	TAL DEN
	Instrument ID: WC-AT3									

Client Sample ID: G6M-97-05B-SPR20

Lab Sample ID: 680-183803-11

Date Collected: 05/11/20 11:20

Matrix: Water

Date Received: 05/14/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	619818	05/24/20 20:42	P1C	TAL SAV
	Instrument ID: CMSA2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	619629	05/22/20 11:56	MYD	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	619621	05/22/20 00:23	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	619056	05/18/20 10:40	AJR	TAL SAV
Dissolved	Analysis	6010C		1			619792	05/22/20 19:05	BCB	TAL SAV
	Instrument ID: ICPE									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: JV, LTM - AOC50 Spring 2020

Job ID: 680-183803-1

Client Sample ID: G6M-97-05B-SPR20

Lab Sample ID: 680-183803-11

Date Collected: 05/11/20 11:20

Matrix: Water

Date Received: 05/14/20 09:30

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	619055	05/18/20 10:40	AJR	TAL SAV
Dissolved	Analysis	6020A		1			619187	05/19/20 00:23	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	495500	05/19/20 18:50	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	310 mL	310 mL	619356	05/18/20 12:41	TB	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		6	20 mL	20 mL	496295	05/27/20 02:26	JMB	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			495344	05/18/20 11:46	SPG	TAL DEN
	Instrument ID: WC-AT3									

Client Sample ID: XSA-12-96X-SPR20

Lab Sample ID: 680-183803-12

Date Collected: 05/12/20 16:40

Matrix: Water

Date Received: 05/14/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	619876	05/26/20 20:46	Y1S	TAL SAV
	Instrument ID: CMSC									
Total/NA	Analysis	8260B	RA	1	5 mL	5 mL	620023	05/27/20 14:04	P1C	TAL SAV
	Instrument ID: CMSP2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	619629	05/22/20 12:09	MYD	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	619719	05/22/20 22:42	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	619056	05/18/20 10:40	AJR	TAL SAV
Dissolved	Analysis	6010C		1			619792	05/22/20 19:23	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	619055	05/18/20 10:40	AJR	TAL SAV
Dissolved	Analysis	6020A		1			619187	05/19/20 00:30	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	495500	05/19/20 19:04	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	250 mL	250 mL	619356	05/18/20 12:41	TB	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1	20 mL	20 mL	496295	05/27/20 02:43	JMB	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			495344	05/18/20 11:51	SPG	TAL DEN
	Instrument ID: WC-AT3									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: JV, LTM - AOC50 Spring 2020

Job ID: 680-183803-1

Client Sample ID: Trip Blank1-051220

Lab Sample ID: 680-183803-13

Date Collected: 05/12/20 00:00

Matrix: Water

Date Received: 05/14/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	619876	05/26/20 16:52	Y1S	TAL SAV
	Instrument ID: CMSC									
Total/NA	Analysis	8260B	RA	1	5 mL	5 mL	620023	05/27/20 13:40	P1C	TAL SAV
	Instrument ID: CMSP2									

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-183803-1
Project/Site: JV, LTM - AOC50 Spring 2020

Laboratory: Eurofins TestAmerica, Savannah

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

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-22-22

Laboratory: Eurofins TestAmerica, Denver

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21

Method Summary

Client: Seres Engineering & Services LLC
Project/Site: JV, LTM - AOC50 Spring 2020

Job ID: 680-183803-1

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
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	TAL DEN
9034	Sulfide, Acid Soluble and Insoluble (Titrimetric)	SW846	TAL SAV
9060A	Organic Carbon, Total (TOC)	SW846	TAL DEN
SM 2320B	Alkalinity	SM	TAL DEN
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 TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Corey Caulkins
Arcadis U.S., Inc. 410 North 44th Street, Suite 1000 Phoenix, AZ 85008 United States

COC # AOC50_5.11.2

ARCADIS

Project Name: Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: JV, Long Term Monitoring, AOC 50, Spring 2020
Project Number: DEVNS-LTM	POC: Jon Lawhon; 912-250-0283; jon.lawhon@testamericainc.com	
WBS Code:	Ship to: 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
E353.2 (A) = Nitrite Nitrate as N
RSK175 (A) = Dissolved Gases
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

680-183803 Chain of Custody

						Analytical Test Method	A2320B (A)	E353.2 (A)	RSK175 (A)	SW6010C - Fe Mn	SW6020A - As	SW8260B - VOCs	SW9034 (A)	SW9056A - SO4	SW9060A - TOC				Sample	Depth (ft bgs)			
	Event: JV, Long Term Monitoring, AOC 50, Spring 2020						46	47	8	9	9	29	7	5	10								
	Sample ID	Matrix	Date	Time	Samp Init.												Location ID	Sample Type	Top	Bottom	Cooler	Comments
1	AOC50-DUP01-SPR20	WG	5/12/2020	11:00	DC/DB/GO		X	X	X	X	X	X	X	X	X		G6M-07-02X	FD1	22.50	27.50		
2	~~AOC50-DUP02-SPR20~~	~~WG~~			~~DC/DB/GO~~		~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		~~G6M-13-02X~~	~~FD1~~	~~115.00~~	~~125.00~~		
3	~~G6M-03-07X-SPR20~~	~~WG~~			~~DC/DB/GO~~		~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		~~G6M-03-07X~~	~~N1~~	~~80.00~~	~~90.00~~		
4	G6M-04-02X-SPR20	WG	5/12/2020	11:45	DC/DB/GO		X	X	X	X	X	X	X	X	X		G6M-04-02X	N1	80.00	90.00		
5	G6M-04-03X-SPR20	WG	5/12/2020	14:00	DC/DB/GO		X	X	X	X	X	X	X	X	X		G6M-04-03X	N1	85.00	95.00		
6	G6M-04-07X-SPR20	WG	5/12/2020	11:55	DC/DB/GO		X	X	X	X	X	X	X	X	X		G6M-04-07X	N1	120.00	130.00		
7	G6M-04-10A-SPR20	WG	5/12/2020	15:35	DC/DB/GO		X	X	X	X	X	X	X	X	X		G6M-04-10A	N1	30.00	40.00		
8	~~G6M-07-01X-SPR20~~	~~WG~~			~~DC/DB/GO~~		~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		~~G6M-07-01X~~	~~N1~~	~~78.00~~	~~89.00~~		
9	G6M-07-02X-SPR20	WG	5/12/2020	13:25	DC/DB/GO		X	X	X	X	X	X	X	X	X		G6M-07-02X	N1	22.50	27.50		
11	G6M-13-01X-SPR20	WG	5/11/2020	13:20	DC/DB/GO		X	X	X	X	X	X	X	X	X		G6M-13-01X	N1	125.00	135.00		
13	G6M-13-02X-SPR20	WG	5/12/2020	9:45	DC/DB/GO		X	X	X	X	X	X	X	X	X		G6M-13-02X	N1	115.00	125.00		
14	G6M-13-04X-SPR20	WG	5/11/2020	15:35	DC/DB/GO		X	X	X	X	X	X	X	X	X		G6M-13-04X	N1	125.00	135.00		
15	G6M-13-05X-SPR20	WG	5/12/2020	15:50	DC/DB/GO		X	X	X	X	X	X	X	X	X		G6M-13-05X	N1	45.00	55.00		
16	G6M-97-05B-SPR20	WG	5/11/2020	11:20	DC/DB/GO		X	X	X	X	X	X	X	X	X		G6M-97-05B	N1	130.00	135.00		
17	XSA-12-96X-SPR20	WG	5/12/2020	16:40	DC/DB/GO		X	X	X	X	X	X	X	X	X		XSA-12-96X	N1	120.00	130.00		
18	Trip Blank-1-051220		05/12/20									2										

Turnaround Time: NA

Relinquished by: ***(Signature)***
Date
Time
Received by: *(Signature)*
Devens eCOCs Spring 2020

CS Bandla
Date 05-14-20
Time 0930
Shipping Date:
Received by Laboratory: ***(Signature, Date, Time)*** & conditio 3.6/1.8/0.4/2.8(CF)
4.0/22/0.8/3.2°

Boston #215

Chain of Custody Record

421701 eurofins Environment Testing TestAmerica

Address: AOC 50

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TAL-8210

Client Contact	Project Manager: Kayne Longo	Site Contact: Diane Champagne	Date:	COC No:
Company Name: Arcadis	Tel/Email:	Lab Contact:	Carrier:	1 of 2 COCs
Address: 1 Executive Dr #303	Analysis Turnaround Time			Sampler: DC / DB / GO
City/State/Zip: Chelmsford MA 01824	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 9789379999	TAT if different from Below			Walk-in Client:
Fax:	☐ 2 weeks 10 DAY			Lab Sampling:
Project Name: Devens	☐ 1 week			
Site: AOC 50	☐ 2 days			Job / SDG No.:
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Dissolved As, Fe, Mn	VOC's 8260B	Nitrate/Nitrite	Sulfate 9056A	Sulfide 9034	Alkalinity 2320B	MEE RSK-175	TOC	Sample Specific Notes:
Trip Blank	—	—	—	Lab water	2	N	N		2							
G6M-97-05B	5-11-20	1120	G	GW	13	Y	N	1	3	1	1	2	1	3	1	
G6M-13-01X	5-11-20	1320	G	GW	13	Y	N	1	3	1	1	2	1	3	1	
G6M-13-04X	5-11-20	1535	G	GW	13	Y	N	1	3	1	1	2	1	3	1	
G6M-13-02X	5-12-20	945	G	GW	13	Y	N	1	3	1	1	2	1	3	1	
G6M-04-02X	5-12-20	1145	G	GW	13	Y	N	1	3	1	1	2	1	3	1	
G6M-04-07X	5-12-20	1155	G	GW	13	Y	N	1	3	1	1	2	1	3	1	
G6M-04-03X	5-12-20	1400	G	GW	13	Y	N	1	3	1	1	2	1	3	1	
G6M-07-02X	5-12-20	1325	G	GW	13	Y	N	1	3	1	1	2	1	3	1	
DC ~~DB-0512~~ BD-051220	5-12-20	1100	G	GW	13	Y	N	1	3	1	1	2	1	3	1	
G6M-13-05X	5-12-20	1550	G	GW	13	Y	N	1	3	1	1	2	1	3	1	
G6M-04-10A	5-12-20	1535	G	GW	13	Y	N	1	3	1	1	2	1	3	1	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

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 & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Arcadis	5/12/20 1830	[signature]	TA	5-22-20 1827
[signature]	TA	5-13-20 1801			
			Received in Laboratory by:		

Boston #215

Chain of Custody Record

421702

eurofins | Environment Testing TestAmerica

Address: AOC 50

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TAL-8210

Client Contact	Project Manager: Kaytie Longo	Site Contact: D. Champagne	Date:	COC No:
Company Name: Arcadis	Tel/Email:	Lab Contact:	Carrier:	2 of 2 COCs
Address: 1 Executive Dr #303	Analysis Turnaround Time			Sampler:
City/State/Zip: Chelmsford MA 01824	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 9789379999	TAT if different from Below			Walk-in Client:
Fax:	☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day — 10day			Lab Sampling:
Project Name: Devens				Job / SDG No.:
Site: AOC 50				
PO #				

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	VOC 8260B	dissolved As, Fe, Mn	Nitrate Nitrite 353.2	Sulfate 9056A	Sulfide 9034	Alkalinity 2320B	MEE RSK-175	TOC 9060A	Sample Specific Notes:
XSA-12-96 X	5-12-20	1640	G	GW	13	Y	N	3	1	1	1	2	1	3	1	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

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 & Comments:

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temp. (°C): Obs'd: _____ Corr'd: _____	Therm ID No.: _____

Relinquished by:	Company: Arcadis	Date/Time: 5/12/20 1830	Received by:	Company: FP	Date/Time: 5-12-20 1827
Relinquished by:	Company: FP Ice	Date/Time: 5/13-20	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Eurofins TestAmerica, 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: Lawhon, Jon K	Carrier Tracking No(s):	COC No: 680-611167.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jon.lawhon@testamericainc.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 #: 680-183803-1
Address: 4955 Yarrow Street,	Due Date Requested: 5/26/2020			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: JV, LTM - AOC50 Spring 2020	Project #: 68023801			
Site:	SSOW#:			

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:

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)	2320B/ Alkalinity	353.2_Pres	9060A/ (MOD) Waters - TOC Duplicates	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
AOC50-DUP01-SPR20 (680-183803-1)	5/12/20	11:00 Eastern		Water			X	X	X	3	
G6M-04-02X-SPR20 (680-183803-2)	5/12/20	11:45 Eastern		Water			X	X	X	3	
G6M-04-03X-SPR20 (680-183803-3)	5/12/20	14:00 Eastern		Water			X	X	X	3	
G6M-04-07X-SPR20 (680-183803-4)	5/12/20	11:55 Eastern		Water			X	X	X	3	
G6M-04-10A-SPR20 (680-183803-5)	5/12/20	15:35 Eastern		Water			X	X	X	3	
G6M-07-02X-SPR20 (680-183803-6)	5/12/20	13:25 Eastern		Water			X	X	X	3	
G6M-13-01X-SPR20 (680-183803-7)	5/11/20	13:20 Eastern		Water			X	X	X	3	
G6M-13-02X-SPR20 (680-183803-8)	5/12/20	09:45 Eastern		Water			X	X	X	3	
G6M-13-04X-SPR20 (680-183803-9)	5/11/20	15:35 Eastern		Water			X	X	X	3	



Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica 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 TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	5-14-20 1600	TA	[signature]	5/15/20 0830	ETADEW
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No

Custody Seal No.: ~~NO Seal~~ 1163971
DS 5/15/20

Cooler Temperature(s) °C and Other Remarks: 0.5, IR8, +0.6, DS, 5/15/20

Ver: 01/16/2019

Eurofins TestAmerica, 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: Lawhon, Jon K	Carrier Tracking No(s):	COC No: 680-611167.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: jon.lawhon@testamericainc.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 #: 680-183803-1
Address: 4955 Yarrow Street, ,	Due Date Requested: 5/26/2020			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: JV, LTM - AOC50 Spring 2020	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)	2320B/ Alkalinity	353.2_Pres	9060A/ (MOD) Waters - TOC Duplicates	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
G6M-13-05X-SPR20 (680-183803-10)	5/12/20	15:50 Eastern		Water			X	X	X	3	
G6M-97-05B-SPR20 (680-183803-11)	5/11/20	11:20 Eastern		Water			X	X	X	3	
XSA-12-96X-SPR20 (680-183803-12)	5/12/20	16:40 Eastern		Water			X	X	X	3	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the labo

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	DJ	5-14-20 1600	TA	DJ	5/15/20 0850	ETADEW
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
	~~NO Seal~~ DJ 5/15/20	0.3, IR8, +0.6, DJ, 5/15/20

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-183803-1

Login Number: 183803
List Number: 1
Creator: Banda, Christy S

List Source: Eurofins TestAmerica, Savannah

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-183803-1

Login Number: 183803
List Number: 2
Creator: Schade, Daniel B

List Source: Eurofins TestAmerica, Denver
List Creation: 05/15/20 11:34 AM

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.	False	Not present
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
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.	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.	True	

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-183803-1

Login Number: 183803
List Number: 3
Creator: Schade, Daniel B

List Source: Eurofins TestAmerica, Denver
List Creation: 05/15/20 02:16 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.	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.	True	

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ANALYTICAL REPORT

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

Laboratory Job ID: 680-183899-2
Client Project/Site: JV, LTM, AOC 50 Spring 2020

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

Attn: Nathan R Mullens

Kathryn Smith

Authorized for release by:
5/28/2020 8:29:32 PM

Kathryn Smith, Client Service Manager
(912)250-0275
kathy.smith@testamericainc.com

LINKS

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The test results in this report meet all 2003 NELAC and 2009 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
J	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
U	Undetected at the Limit of Detection.

HPLC/IC

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

General Chemistry

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Sample Summary

Client: Seres Engineering & Services LLC
Project/Site: JV, LTM, AOC 50 Spring 2020

Job ID: 680-183899-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
680-183899-5	G6M-03-07X-SPR20	Water	05/13/20 00:00	05/15/20 09:20	
680-183899-6	G6M-07-01X-SPR20	Water	05/13/20 00:00	05/15/20 09:20	
680-183899-7	AOC50-TB02-SPR20	Water	05/13/20 00:00	05/15/20 09:20	

Job ID: 680-183899-2

Laboratory: Eurofins TestAmerica, Savannah

Narrative

CASE NARRATIVE
Client: Seres Engineering & Services LLC
Project: JV, LTM, AOC 50 Spring 2020

Report Number: 680-183899-2

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

RECEIPT

The samples were received on 05/15/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.8 C.

VOLATILE ORGANIC COMPOUNDS (GC/MS)

Samples G6M-03-07X-SPR20 (680-183899-5), G6M-07-01X-SPR20 (680-183899-6) and AOC50-TB02-SPR20 (680-183899-7) were analyzed for Volatile Organic Compounds (GC/MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 05/20/2020 and 05/21/2020.

n-Butylbenzene was detected in method blank MB 680-619316/10 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 680-619316 recovered outside control limits for the following analytes: Bromomethane. This analyte were biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

The closing continuing calibration verification (CCVC) analyzed in batch 619316 was outside the method criteria for the 12 hour window by 1 hour and 24 minutes. The data integrity was not impacted and the data has been reported and addressed. All other QC criteria have been met. G6M-07-01X-SPR20 (680-183899-6), AOC50-TB02-SPR20 (680-183899-7) and (CCVC 680-619316/31)

The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 680-619494 recovered outside control limits for the following analytes: Bromomethane. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Sample G6M-03-07X-SPR20 (680-183899-5)[50X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

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

DISSOLVED GASES

Samples G6M-03-07X-SPR20 (680-183899-5) and G6M-07-01X-SPR20 (680-183899-6) were analyzed for dissolved gases in accordance with RSK-175. The samples were analyzed on 05/19/2020 and 05/20/2020.

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

METALS (ICP) - DISSOLVED

Samples G6M-03-07X-SPR20 (680-183899-5) and G6M-07-01X-SPR20 (680-183899-6) were analyzed for Metals (ICP) - Dissolved in accordance with EPA SW-846 Method 6010C. The samples were prepared on 05/18/2020 and analyzed on 05/20/2020.

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

Job ID: 680-183899-2 (Continued)

Laboratory: Eurofins TestAmerica, Savannah (Continued)

METALS (ICPMS) - DISSOLVED

Samples G6M-03-07X-SPR20 (680-183899-5) and G6M-07-01X-SPR20 (680-183899-6) were analyzed for Metals (ICPMS) - Dissolved in accordance with EPA SW-846 Method 6020A. The samples were prepared on 05/18/2020 and analyzed on 05/19/2020.

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

ALKALINITY

Samples G6M-03-07X-SPR20 (680-183899-5) and G6M-07-01X-SPR20 (680-183899-6) were analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 05/21/2020.

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

NITRATE-NITRITE AS NITROGEN

Samples G6M-03-07X-SPR20 (680-183899-5) and G6M-07-01X-SPR20 (680-183899-6) were analyzed for nitrate-nitrite as nitrogen in accordance with EPA Method 353.2. The samples were analyzed on 05/21/2020.

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

SULFIDE

Samples G6M-03-07X-SPR20 (680-183899-5) and G6M-07-01X-SPR20 (680-183899-6) were analyzed for sulfide in accordance with EPA SW846 Method 9034. The samples were analyzed on 05/20/2020.

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

ANIONS BY ION CHROMATOGRAPHY (28 DAY)

Samples G6M-03-07X-SPR20 (680-183899-5) and G6M-07-01X-SPR20 (680-183899-6) were analyzed for Anions by Ion Chromatography (28 Day) in accordance with SW 846 9056A. The samples were analyzed on 05/22/2020.

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

TOTAL ORGANIC CARBON

Samples G6M-03-07X-SPR20 (680-183899-5) and G6M-07-01X-SPR20 (680-183899-6) were analyzed for total organic carbon in accordance with EPA SW-846 Method 9060A. The samples were analyzed on 05/26/2020.

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

Client: Seres Engineering & Services LLC
Project/Site: JV, LTM, AOC 50 Spring 2020

Job ID: 680-183899-2

Client Sample ID: G6M-03-07X-SPR20
Date Collected: 05/13/20 00:00
Date Received: 05/15/20 09:20

Lab Sample ID: 680-183899-5
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	19	U	50	19	ug/L			05/21/20 18:26	50
1,1,1-Trichloroethane	19	U	50	19	ug/L			05/21/20 18:26	50
1,1,2,2-Tetrachloroethane	31	U	50	31	ug/L			05/21/20 18:26	50
1,1,2-Trichloroethane	17	U	50	17	ug/L			05/21/20 18:26	50
1,1-Dichloroethane	19	U	50	19	ug/L			05/21/20 18:26	50
1,1-Dichloroethene	18	U	50	18	ug/L			05/21/20 18:26	50
1,1-Dichloropropene	17	U	50	17	ug/L			05/21/20 18:26	50
1,2,3-Trichlorobenzene	130	U	250	130	ug/L			05/21/20 18:26	50
1,2,3-Trichloropropane	20	U	50	20	ug/L			05/21/20 18:26	50
1,2,4-Trichlorobenzene	130	U	250	130	ug/L			05/21/20 18:26	50
1,2,4-Trimethylbenzene	24	U	50	24	ug/L			05/21/20 18:26	50
1,2-Dibromo-3-Chloropropane	55	U	250	55	ug/L			05/21/20 18:26	50
1,2-Dichlorobenzene	19	U	50	19	ug/L			05/21/20 18:26	50
1,2-Dichloroethane	25	U M	50	25	ug/L			05/21/20 18:26	50
1,2-Dichloroethene, Total	37	U	100	37	ug/L			05/21/20 18:26	50
1,2-Dichloropropane	34	U	50	34	ug/L			05/21/20 18:26	50
1,3,5-Trimethylbenzene	16	U M	50	16	ug/L			05/21/20 18:26	50
1,3-Dichlorobenzene	22	U	50	22	ug/L			05/21/20 18:26	50
1,3-Dichloropropane	17	U	50	17	ug/L			05/21/20 18:26	50
1,4-Dichlorobenzene	23	U	50	23	ug/L			05/21/20 18:26	50
2,2-Dichloropropane	19	U	50	19	ug/L			05/21/20 18:26	50
2-Butanone (MEK)	170	U	500	170	ug/L			05/21/20 18:26	50
2-Chlorotoluene	14	U	50	14	ug/L			05/21/20 18:26	50
2-Hexanone	100	U	500	100	ug/L			05/21/20 18:26	50
4-Chlorotoluene	23	U	50	23	ug/L			05/21/20 18:26	50
4-Isopropyltoluene	24	U	50	24	ug/L			05/21/20 18:26	50
4-Methyl-2-pentanone (MIBK)	**150**	**J**	500	110	ug/L			05/21/20 18:26	50
Acetone	**450**	**J**	500	350	ug/L			05/21/20 18:26	50
Benzene	22	U M	50	22	ug/L			05/21/20 18:26	50
Bromobenzene	25	U	50	25	ug/L			05/21/20 18:26	50
Bromoform	22	U	50	22	ug/L			05/21/20 18:26	50
Bromomethane	130	U Q	250	130	ug/L			05/21/20 18:26	50
Carbon disulfide	22	U	100	22	ug/L			05/21/20 18:26	50
Carbon tetrachloride	17	U	50	17	ug/L			05/21/20 18:26	50
Chlorobenzene	13	U	50	13	ug/L			05/21/20 18:26	50
Chlorobromomethane	23	U	50	23	ug/L			05/21/20 18:26	50
Chlorodibromomethane	16	U	50	16	ug/L			05/21/20 18:26	50
Chloroethane	130	U	250	130	ug/L			05/21/20 18:26	50
Chloroform	25	U	50	25	ug/L			05/21/20 18:26	50
Chloromethane	20	U	50	20	ug/L			05/21/20 18:26	50
cis-1,2-Dichloroethene	21	U	50	21	ug/L			05/21/20 18:26	50
cis-1,3-Dichloropropene	20	U	50	20	ug/L			05/21/20 18:26	50
Dibromomethane	18	U	50	18	ug/L			05/21/20 18:26	50
Dichlorobromomethane	22	U	50	22	ug/L			05/21/20 18:26	50
Dichlorodifluoromethane	30	U	50	30	ug/L			05/21/20 18:26	50
Ethylbenzene	17	U	50	17	ug/L			05/21/20 18:26	50
Ethylene Dibromide	22	U	50	22	ug/L			05/21/20 18:26	50
Hexachlorobutadiene	130	U	250	130	ug/L			05/21/20 18:26	50
Isopropylbenzene	18	U	50	18	ug/L			05/21/20 18:26	50

Client Sample ID: G6M-03-07X-SPR20

Date Collected: 05/13/20 00:00
Date Received: 05/15/20 09:20

Lab Sample ID: 680-183899-5

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	15	U	500	15	ug/L			05/21/20 18:26	50
Methylene Chloride	**260**		250	130	ug/L			05/21/20 18:26	50
m-Xylene & p-Xylene	**31**	**J**	50	18	ug/L			05/21/20 18:26	50
Naphthalene	130	U	250	130	ug/L			05/21/20 18:26	50
n-Butylbenzene	24	U	50	24	ug/L			05/21/20 18:26	50
N-Propylbenzene	19	U	50	19	ug/L			05/21/20 18:26	50
o-Xylene	12	U	50	12	ug/L			05/21/20 18:26	50
sec-Butylbenzene	21	U	50	21	ug/L			05/21/20 18:26	50
Styrene	14	U	50	14	ug/L			05/21/20 18:26	50
tert-Butylbenzene	23	U	50	23	ug/L			05/21/20 18:26	50
Tetrachloroethene	37	U	50	37	ug/L			05/21/20 18:26	50
Toluene	**96**		50	24	ug/L			05/21/20 18:26	50
trans-1,2-Dichloroethene	19	U	50	19	ug/L			05/21/20 18:26	50
trans-1,3-Dichloropropene	21	U	50	21	ug/L			05/21/20 18:26	50
Trichloroethene	**26**	**J**	50	24	ug/L			05/21/20 18:26	50
Trichlorofluoromethane	21	U	50	21	ug/L			05/21/20 18:26	50
Vinyl acetate	41	U	100	41	ug/L			05/21/20 18:26	50
Vinyl chloride	25	U	50	25	ug/L			05/21/20 18:26	50
Xylenes, Total	**31**	**J**	100	12	ug/L			05/21/20 18:26	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*05/21/20 18:26*	*50*
Dibromofluoromethane (Surr)	*106*		*80 - 119*		*05/21/20 18:26*	*50*
Toluene-d8 (Surr)	*99*		*89 - 112*		*05/21/20 18:26*	*50*
1,2-Dichloroethane-d4 (Surr)	*110*		*81 - 118*		*05/21/20 18:26*	*50*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**6.1**		1.1	0.55	ug/L			05/19/20 16:34	1
Ethylene	0.50	U	1.0	0.50	ug/L			05/19/20 16:34	1
Methane (TCD)	**11000**		390	39	ug/L			05/19/20 16:34	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.40	U	1.0	0.40	mg/L			05/22/20 23:08	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**95000**		50	17	ug/L		05/18/20 12:09	05/20/20 01:57	1
Manganese	**2100**		10	1.0	ug/L		05/18/20 12:09	05/20/20 01:57	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**340**		3.0	1.5	ug/L		05/18/20 12:09	05/19/20 16:51	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.032**	**J**	0.10	0.019	mg/L			05/21/20 19:57	1
Sulfide	0.96	U	0.96	0.96	mg/L			05/20/20 16:30	1
Total Organic Carbon - Duplicates	**19**		1.0	0.35	mg/L			05/26/20 16:32	1
Alkalinity	**160**		10	3.1	mg/L			05/21/20 11:23	1

Client: Seres Engineering & Services LLC
Project/Site: JV, LTM, AOC 50 Spring 2020

Job ID: 680-183899-2

Client Sample ID: G6M-07-01X-SPR20
Date Collected: 05/13/20 00:00
Date Received: 05/15/20 09:20

Lab Sample ID: 680-183899-6
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			05/20/20 19:09	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			05/20/20 19:09	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			05/20/20 19:09	1
1,1,2-Trichloroethane	0.33	U M	1.0	0.33	ug/L			05/20/20 19:09	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			05/20/20 19:09	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/20/20 19:09	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			05/20/20 19:09	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/20/20 19:09	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			05/20/20 19:09	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/20/20 19:09	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			05/20/20 19:09	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			05/20/20 19:09	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			05/20/20 19:09	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			05/20/20 19:09	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			05/20/20 19:09	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			05/20/20 19:09	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			05/20/20 19:09	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			05/20/20 19:09	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			05/20/20 19:09	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			05/20/20 19:09	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			05/20/20 19:09	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			05/20/20 19:09	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/20/20 19:09	1
2-Hexanone	2.0	U	10	2.0	ug/L			05/20/20 19:09	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			05/20/20 19:09	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			05/20/20 19:09	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			05/20/20 19:09	1
Acetone	7.0	U	10	7.0	ug/L			05/20/20 19:09	1
Benzene	0.43	U M	1.0	0.43	ug/L			05/20/20 19:09	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			05/20/20 19:09	1
Bromoform	0.43	U	1.0	0.43	ug/L			05/20/20 19:09	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			05/20/20 19:09	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			05/20/20 19:09	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			05/20/20 19:09	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			05/20/20 19:09	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			05/20/20 19:09	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			05/20/20 19:09	1
Chloroethane	2.5	U	5.0	2.5	ug/L			05/20/20 19:09	1
Chloroform	0.50	U	1.0	0.50	ug/L			05/20/20 19:09	1
Chloromethane	0.40	U	1.0	0.40	ug/L			05/20/20 19:09	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			05/20/20 19:09	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			05/20/20 19:09	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			05/20/20 19:09	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			05/20/20 19:09	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			05/20/20 19:09	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			05/20/20 19:09	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			05/20/20 19:09	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			05/20/20 19:09	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			05/20/20 19:09	1

Client Sample ID: G6M-07-01X-SPR20

Date Collected: 05/13/20 00:00
Date Received: 05/15/20 09:20

Lab Sample ID: 680-183899-6

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			05/20/20 19:09	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			05/20/20 19:09	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			05/20/20 19:09	1
Naphthalene	2.5	U	5.0	2.5	ug/L			05/20/20 19:09	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			05/20/20 19:09	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			05/20/20 19:09	1
o-Xylene	0.23	U	1.0	0.23	ug/L			05/20/20 19:09	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			05/20/20 19:09	1
Styrene	0.27	U	1.0	0.27	ug/L			05/20/20 19:09	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			05/20/20 19:09	1
Tetrachloroethene	**27**		1.0	0.74	ug/L			05/20/20 19:09	1
Toluene	0.48	U	1.0	0.48	ug/L			05/20/20 19:09	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/20/20 19:09	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			05/20/20 19:09	1
Trichloroethene	**0.97**	**J**	1.0	0.48	ug/L			05/20/20 19:09	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			05/20/20 19:09	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			05/20/20 19:09	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			05/20/20 19:09	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			05/20/20 19:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*05/20/20 19:09*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*05/20/20 19:09*	*1*
Toluene-d8 (Surr)	*98*		*89 - 112*		*05/20/20 19:09*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*81 - 118*		*05/20/20 19:09*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	0.55	U	1.1	0.55	ug/L			05/20/20 13:25	1
Ethylene	0.50	U	1.0	0.50	ug/L			05/20/20 13:25	1
Methane	**1.4**		0.58	0.29	ug/L			05/20/20 13:25	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**7.6**		1.0	0.40	mg/L			05/22/20 23:21	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**93**		50	17	ug/L		05/18/20 12:09	05/20/20 02:02	1
Manganese	**19**		10	1.0	ug/L		05/18/20 12:09	05/20/20 02:02	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5	U	3.0	1.5	ug/L		05/18/20 12:09	05/19/20 16:54	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	**1.2**		0.10	0.019	mg/L			05/21/20 19:59	1
Sulfide	0.83	U	0.83	0.83	mg/L			05/20/20 16:30	1
Total Organic Carbon - Duplicates	**0.47**	**J**	1.0	0.35	mg/L			05/26/20 17:25	1
Alkalinity	**35**		10	3.1	mg/L			05/21/20 11:28	1

Client: Seres Engineering & Services LLC
Project/Site: JV, LTM, AOC 50 Spring 2020

Job ID: 680-183899-2

Client Sample ID: AOC50-TB02-SPR20
Date Collected: 05/13/20 00:00
Date Received: 05/15/20 09:20

Lab Sample ID: 680-183899-7
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			05/20/20 15:16	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			05/20/20 15:16	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			05/20/20 15:16	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			05/20/20 15:16	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			05/20/20 15:16	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/20/20 15:16	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			05/20/20 15:16	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/20/20 15:16	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			05/20/20 15:16	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/20/20 15:16	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			05/20/20 15:16	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			05/20/20 15:16	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			05/20/20 15:16	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			05/20/20 15:16	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			05/20/20 15:16	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			05/20/20 15:16	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			05/20/20 15:16	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			05/20/20 15:16	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			05/20/20 15:16	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			05/20/20 15:16	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			05/20/20 15:16	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			05/20/20 15:16	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/20/20 15:16	1
2-Hexanone	2.0	U	10	2.0	ug/L			05/20/20 15:16	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			05/20/20 15:16	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			05/20/20 15:16	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			05/20/20 15:16	1
Acetone	7.0	U	10	7.0	ug/L			05/20/20 15:16	1
Benzene	0.43	U M	1.0	0.43	ug/L			05/20/20 15:16	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			05/20/20 15:16	1
Bromoform	0.43	U	1.0	0.43	ug/L			05/20/20 15:16	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			05/20/20 15:16	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			05/20/20 15:16	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			05/20/20 15:16	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			05/20/20 15:16	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			05/20/20 15:16	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			05/20/20 15:16	1
Chloroethane	2.5	U	5.0	2.5	ug/L			05/20/20 15:16	1
Chloroform	0.50	U	1.0	0.50	ug/L			05/20/20 15:16	1
Chloromethane	0.40	U	1.0	0.40	ug/L			05/20/20 15:16	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			05/20/20 15:16	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			05/20/20 15:16	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			05/20/20 15:16	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			05/20/20 15:16	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			05/20/20 15:16	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			05/20/20 15:16	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			05/20/20 15:16	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			05/20/20 15:16	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			05/20/20 15:16	1

Client: Seres Engineering & Services LLC
Project/Site: JV, LTM, AOC 50 Spring 2020

Job ID: 680-183899-2

Client Sample ID: AOC50-TB02-SPR20
Date Collected: 05/13/20 00:00
Date Received: 05/15/20 09:20

Lab Sample ID: 680-183899-7
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			05/20/20 15:16	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			05/20/20 15:16	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			05/20/20 15:16	1
Naphthalene	2.5	U	5.0	2.5	ug/L			05/20/20 15:16	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			05/20/20 15:16	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			05/20/20 15:16	1
o-Xylene	0.23	U	1.0	0.23	ug/L			05/20/20 15:16	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			05/20/20 15:16	1
Styrene	0.27	U	1.0	0.27	ug/L			05/20/20 15:16	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			05/20/20 15:16	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			05/20/20 15:16	1
Toluene	0.48	U	1.0	0.48	ug/L			05/20/20 15:16	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/20/20 15:16	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			05/20/20 15:16	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			05/20/20 15:16	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			05/20/20 15:16	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			05/20/20 15:16	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			05/20/20 15:16	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			05/20/20 15:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*05/20/20 15:16*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*05/20/20 15:16*	*1*
Toluene-d8 (Surr)	*99*		*89 - 112*		*05/20/20 15:16*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*81 - 118*		*05/20/20 15:16*	*1*

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

Lab Sample ID: MB 680-619316/10
Matrix: Water
Analysis Batch: 619316

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			05/20/20 14:06	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			05/20/20 14:06	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			05/20/20 14:06	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			05/20/20 14:06	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			05/20/20 14:06	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/20/20 14:06	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			05/20/20 14:06	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/20/20 14:06	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			05/20/20 14:06	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/20/20 14:06	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			05/20/20 14:06	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			05/20/20 14:06	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			05/20/20 14:06	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			05/20/20 14:06	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			05/20/20 14:06	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			05/20/20 14:06	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			05/20/20 14:06	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			05/20/20 14:06	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			05/20/20 14:06	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			05/20/20 14:06	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			05/20/20 14:06	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			05/20/20 14:06	1
2-Chlorotoluene	0.27	U M	1.0	0.27	ug/L			05/20/20 14:06	1
2-Hexanone	2.0	U	10	2.0	ug/L			05/20/20 14:06	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			05/20/20 14:06	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			05/20/20 14:06	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			05/20/20 14:06	1
Acetone	7.0	U	10	7.0	ug/L			05/20/20 14:06	1
Benzene	0.43	U M	1.0	0.43	ug/L			05/20/20 14:06	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			05/20/20 14:06	1
Bromoform	0.43	U	1.0	0.43	ug/L			05/20/20 14:06	1
Bromomethane	2.5	U	5.0	2.5	ug/L			05/20/20 14:06	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			05/20/20 14:06	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			05/20/20 14:06	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			05/20/20 14:06	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			05/20/20 14:06	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			05/20/20 14:06	1
Chloroethane	2.5	U	5.0	2.5	ug/L			05/20/20 14:06	1
Chloroform	0.50	U	1.0	0.50	ug/L			05/20/20 14:06	1
Chloromethane	0.40	U	1.0	0.40	ug/L			05/20/20 14:06	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			05/20/20 14:06	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			05/20/20 14:06	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			05/20/20 14:06	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			05/20/20 14:06	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			05/20/20 14:06	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			05/20/20 14:06	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			05/20/20 14:06	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			05/20/20 14:06	1

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

Lab Sample ID: MB 680-619316/10
Matrix: Water
Analysis Batch: 619316

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			05/20/20 14:06	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			05/20/20 14:06	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			05/20/20 14:06	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			05/20/20 14:06	1
Naphthalene	2.5	U	5.0	2.5	ug/L			05/20/20 14:06	1
n-Butylbenzene	0.505	J	1.0	0.47	ug/L			05/20/20 14:06	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			05/20/20 14:06	1
o-Xylene	0.23	U	1.0	0.23	ug/L			05/20/20 14:06	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			05/20/20 14:06	1
Styrene	0.27	U	1.0	0.27	ug/L			05/20/20 14:06	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			05/20/20 14:06	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			05/20/20 14:06	1
Toluene	0.48	U	1.0	0.48	ug/L			05/20/20 14:06	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/20/20 14:06	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			05/20/20 14:06	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			05/20/20 14:06	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			05/20/20 14:06	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			05/20/20 14:06	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			05/20/20 14:06	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			05/20/20 14:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*		*05/20/20 14:06*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 119*		*05/20/20 14:06*	*1*
Toluene-d8 (Surr)	*99*		*89 - 112*		*05/20/20 14:06*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*81 - 118*		*05/20/20 14:06*	*1*

Lab Sample ID: LCS 680-619316/4
Matrix: Water
Analysis Batch: 619316

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	51.7		ug/L		103	78 - 124
1,1,1-Trichloroethane	50.0	49.2		ug/L		98	74 - 131
1,1,2,2-Tetrachloroethane	50.0	47.8		ug/L		96	71 - 121
1,1,2-Trichloroethane	50.0	49.2		ug/L		98	80 - 119
1,1-Dichloroethane	50.0	49.9		ug/L		100	77 - 125
1,1-Dichloroethene	50.0	48.2		ug/L		96	71 - 131
1,1-Dichloropropene	50.0	49.6		ug/L		99	79 - 125
1,2,3-Trichlorobenzene	50.0	54.6		ug/L		109	69 - 129
1,2,3-Trichloropropane	50.0	47.3		ug/L		95	73 - 122
1,2,4-Trichlorobenzene	50.0	54.8		ug/L		110	69 - 130
1,2,4-Trimethylbenzene	50.0	52.1		ug/L		104	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	48.2		ug/L		96	62 - 128
1,2-Dichlorobenzene	50.0	49.9		ug/L		100	80 - 119
1,2-Dichloroethane	50.0	50.0		ug/L		100	73 - 128
1,2-Dichloroethene, Total	100	99.7		ug/L		100	79 - 121
1,2-Dichloropropane	50.0	50.5		ug/L		101	78 - 122

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

Lab Sample ID: LCS 680-619316/4
Matrix: Water
Analysis Batch: 619316

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	51.3		ug/L		103	75 - 124
1,3-Dichlorobenzene	50.0	50.0		ug/L		100	80 - 119
1,3-Dichloropropane	50.0	49.0		ug/L		98	80 - 119
1,4-Dichlorobenzene	50.0	49.2		ug/L		98	79 - 118
2,2-Dichloropropane	50.0	52.8		ug/L		106	60 - 139
2-Butanone (MEK)	250	230		ug/L		92	56 - 143
2-Chlorotoluene	50.0	50.4		ug/L		101	79 - 122
2-Hexanone	250	227		ug/L		91	57 - 139
4-Chlorotoluene	50.0	50.0		ug/L		100	78 - 122
4-Isopropyltoluene	50.0	52.1		ug/L		104	77 - 127
4-Methyl-2-pentanone (MIBK)	250	230		ug/L		92	67 - 130
Acetone	250	216		ug/L		87	39 - 160
Benzene	50.0	49.6		ug/L		99	79 - 120
Bromobenzene	50.0	50.4		ug/L		101	80 - 120
Bromoform	50.0	50.4		ug/L		101	66 - 130
Bromomethane	50.0	203	J Q	ug/L		405	53 - 141
Carbon disulfide	50.0	48.6		ug/L		97	64 - 133
Carbon tetrachloride	50.0	49.0		ug/L		98	72 - 136
Chlorobenzene	50.0	49.6		ug/L		99	82 - 118
Chlorobromomethane	50.0	49.9		ug/L		100	78 - 123
Chlorodibromomethane	50.0	49.8		ug/L		100	74 - 126
Chloroethane	50.0	62.0		ug/L		124	60 - 138
Chloroform	50.0	48.9		ug/L		98	79 - 124
Chloromethane	50.0	50.0		ug/L		100	50 - 139
cis-1,2-Dichloroethene	50.0	50.4		ug/L		101	78 - 123
cis-1,3-Dichloropropene	50.0	52.5		ug/L		105	75 - 124
Dibromomethane	50.0	49.6		ug/L		99	79 - 123
Dichlorobromomethane	50.0	50.3		ug/L		101	79 - 125
Dichlorodifluoromethane	50.0	41.0		ug/L		82	32 - 152
Ethylbenzene	50.0	50.4		ug/L		101	79 - 121
Ethylene Dibromide	50.0	49.0		ug/L		98	75 - 127
Hexachlorobutadiene	50.0	55.2		ug/L		110	66 - 134
Isopropylbenzene	50.0	50.8		ug/L		102	72 - 131
Methyl tert-butyl ether	50.0	49.0		ug/L		98	71 - 124
Methylene Chloride	50.0	52.3		ug/L		105	74 - 124
m-Xylene & p-Xylene	50.0	50.9		ug/L		102	80 - 121
Naphthalene	50.0	53.6		ug/L		107	61 - 128
n-Butylbenzene	50.0	52.3		ug/L		105	75 - 128
N-Propylbenzene	50.0	50.7		ug/L		101	76 - 126
o-Xylene	50.0	51.2		ug/L		102	78 - 122
sec-Butylbenzene	50.0	51.0		ug/L		102	77 - 126
Styrene	50.0	51.5		ug/L		103	78 - 123
tert-Butylbenzene	50.0	51.1		ug/L		102	78 - 124
Tetrachloroethene	50.0	48.1		ug/L		96	74 - 129
Toluene	50.0	48.9		ug/L		98	80 - 121
trans-1,2-Dichloroethene	50.0	49.3		ug/L		99	75 - 124
trans-1,3-Dichloropropene	50.0	51.6		ug/L		103	73 - 127
Trichloroethene	50.0	48.5		ug/L		97	79 - 123
Trichlorofluoromethane	50.0	47.4		ug/L		95	65 - 141

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

Lab Sample ID: LCS 680-619316/4
Matrix: Water
Analysis Batch: 619316

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	111		ug/L		111	54 - 146
Vinyl chloride	50.0	46.3		ug/L		93	58 - 137
Xylenes, Total	100	102		ug/L		102	79 - 121

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

Lab Sample ID: LCSD 680-619316/5
Matrix: Water
Analysis Batch: 619316

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	53.2		ug/L		106	78 - 124	3	20
1,1,1-Trichloroethane	50.0	48.7		ug/L		97	74 - 131	1	20
1,1,2,2-Tetrachloroethane	50.0	48.3		ug/L		97	71 - 121	1	20
1,1,2-Trichloroethane	50.0	49.1		ug/L		98	80 - 119	0	20
1,1-Dichloroethane	50.0	49.9		ug/L		100	77 - 125	0	20
1,1-Dichloroethene	50.0	47.7		ug/L		95	71 - 131	1	20
1,1-Dichloropropene	50.0	49.3		ug/L		99	79 - 125	1	20
1,2,3-Trichlorobenzene	50.0	56.2		ug/L		112	69 - 129	3	20
1,2,3-Trichloropropane	50.0	48.7		ug/L		97	73 - 122	3	20
1,2,4-Trichlorobenzene	50.0	56.2		ug/L		112	69 - 130	2	20
1,2,4-Trimethylbenzene	50.0	52.7		ug/L		105	76 - 124	1	20
1,2-Dibromo-3-Chloropropane	50.0	49.3		ug/L		99	62 - 128	2	20
1,2-Dichlorobenzene	50.0	49.8		ug/L		100	80 - 119	0	20
1,2-Dichloroethane	50.0	49.6		ug/L		99	73 - 128	1	20
1,2-Dichloroethene, Total	100	100		ug/L		100	79 - 121	0	20
1,2-Dichloropropane	50.0	50.7		ug/L		101	78 - 122	0	20
1,3,5-Trimethylbenzene	50.0	51.8		ug/L		104	75 - 124	1	20
1,3-Dichlorobenzene	50.0	49.9		ug/L		100	80 - 119	0	20
1,3-Dichloropropane	50.0	48.9		ug/L		98	80 - 119	0	20
1,4-Dichlorobenzene	50.0	49.0		ug/L		98	79 - 118	0	20
2,2-Dichloropropane	50.0	52.3		ug/L		105	60 - 139	1	20
2-Butanone (MEK)	250	225		ug/L		90	56 - 143	2	20
2-Chlorotoluene	50.0	51.0		ug/L		102	79 - 122	1	20
2-Hexanone	250	221		ug/L		88	57 - 139	2	20
4-Chlorotoluene	50.0	50.8		ug/L		102	78 - 122	2	20
4-Isopropyltoluene	50.0	52.0		ug/L		104	77 - 127	0	20
4-Methyl-2-pentanone (MIBK)	250	226		ug/L		91	67 - 130	2	20
Acetone	250	218		ug/L		87	39 - 160	1	20
Benzene	50.0	49.9		ug/L		100	79 - 120	1	20
Bromobenzene	50.0	51.9		ug/L		104	80 - 120	3	20
Bromoform	50.0	51.2		ug/L		102	66 - 130	2	20
Bromomethane	50.0	206	J Q	ug/L		413	53 - 141	2	20
Carbon disulfide	50.0	47.9		ug/L		96	64 - 133	1	20

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

Lab Sample ID: LCSD 680-619316/5
Matrix: Water
Analysis Batch: 619316

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	48.7		ug/L		97	72 - 136	1	20
Chlorobenzene			50.0	51.1		ug/L		102	82 - 118	3	20
Chlorobromomethane			50.0	50.3		ug/L		101	78 - 123	1	20
Chlorodibromomethane			50.0	49.9		ug/L		100	74 - 126	0	20
Chloroethane			50.0	62.2		ug/L		124	60 - 138	0	20
Chloroform			50.0	49.2		ug/L		98	79 - 124	1	20
Chloromethane			50.0	49.5		ug/L		99	50 - 139	1	20
cis-1,2-Dichloroethene			50.0	50.4		ug/L		101	78 - 123	0	20
cis-1,3-Dichloropropene			50.0	52.4		ug/L		105	75 - 124	0	20
Dibromomethane			50.0	49.0		ug/L		98	79 - 123	1	20
Dichlorobromomethane			50.0	50.4		ug/L		101	79 - 125	0	20
Dichlorodifluoromethane			50.0	38.5		ug/L		77	32 - 152	6	20
Ethylbenzene			50.0	51.6		ug/L		103	79 - 121	2	20
Ethylene Dibromide			50.0	49.0		ug/L		98	75 - 127	0	20
Hexachlorobutadiene			50.0	56.1		ug/L		112	66 - 134	2	20
Isopropylbenzene			50.0	51.4		ug/L		103	72 - 131	1	20
Methyl tert-butyl ether			50.0	48.6		ug/L		97	71 - 124	1	20
Methylene Chloride			50.0	51.4		ug/L		103	74 - 124	2	20
m-Xylene & p-Xylene			50.0	51.6		ug/L		103	80 - 121	1	20
Naphthalene			50.0	54.5		ug/L		109	61 - 128	2	20
n-Butylbenzene			50.0	52.1		ug/L		104	75 - 128	0	20
N-Propylbenzene			50.0	51.1		ug/L		102	76 - 126	1	20
o-Xylene			50.0	51.9		ug/L		104	78 - 122	1	20
sec-Butylbenzene			50.0	51.4		ug/L		103	77 - 126	1	20
Styrene			50.0	52.5		ug/L		105	78 - 123	2	20
tert-Butylbenzene			50.0	51.7		ug/L		103	78 - 124	1	20
Tetrachloroethene			50.0	47.7		ug/L		95	74 - 129	1	20
Toluene			50.0	49.2		ug/L		98	80 - 121	1	20
trans-1,2-Dichloroethene			50.0	49.7		ug/L		99	75 - 124	1	20
trans-1,3-Dichloropropene			50.0	51.6		ug/L		103	73 - 127	0	20
Trichloroethene			50.0	48.9		ug/L		98	79 - 123	1	20
Trichlorofluoromethane			50.0	45.6		ug/L		91	65 - 141	4	20
Vinyl acetate			100	109		ug/L		109	54 - 146	2	20
Vinyl chloride			50.0	45.5		ug/L		91	58 - 137	2	20
Xylenes, Total			100	104		ug/L		104	79 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*
Dibromofluoromethane (Surr)	*100*		*80 - 119*
Toluene-d8 (Surr)	*99*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*98*		*81 - 118*

Lab Sample ID: MB 680-619494/9
Matrix: Water
Analysis Batch: 619494

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			05/21/20 12:59	1

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

Lab Sample ID: MB 680-619494/9
Matrix: Water
Analysis Batch: 619494

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			05/21/20 12:59	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			05/21/20 12:59	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			05/21/20 12:59	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			05/21/20 12:59	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/21/20 12:59	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			05/21/20 12:59	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/21/20 12:59	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			05/21/20 12:59	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			05/21/20 12:59	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			05/21/20 12:59	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			05/21/20 12:59	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			05/21/20 12:59	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			05/21/20 12:59	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			05/21/20 12:59	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			05/21/20 12:59	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			05/21/20 12:59	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			05/21/20 12:59	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			05/21/20 12:59	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			05/21/20 12:59	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			05/21/20 12:59	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			05/21/20 12:59	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			05/21/20 12:59	1
2-Hexanone	2.0	U	10	2.0	ug/L			05/21/20 12:59	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			05/21/20 12:59	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			05/21/20 12:59	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			05/21/20 12:59	1
Acetone	7.0	U	10	7.0	ug/L			05/21/20 12:59	1
Benzene	0.43	U M	1.0	0.43	ug/L			05/21/20 12:59	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			05/21/20 12:59	1
Bromoform	0.43	U	1.0	0.43	ug/L			05/21/20 12:59	1
Bromomethane	2.5	U	5.0	2.5	ug/L			05/21/20 12:59	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			05/21/20 12:59	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			05/21/20 12:59	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			05/21/20 12:59	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			05/21/20 12:59	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			05/21/20 12:59	1
Chloroethane	2.5	U	5.0	2.5	ug/L			05/21/20 12:59	1
Chloroform	0.50	U	1.0	0.50	ug/L			05/21/20 12:59	1
Chloromethane	0.40	U	1.0	0.40	ug/L			05/21/20 12:59	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			05/21/20 12:59	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			05/21/20 12:59	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			05/21/20 12:59	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			05/21/20 12:59	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			05/21/20 12:59	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			05/21/20 12:59	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			05/21/20 12:59	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			05/21/20 12:59	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			05/21/20 12:59	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			05/21/20 12:59	1

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

Lab Sample ID: MB 680-619494/9
Matrix: Water
Analysis Batch: 619494

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	2.5	U	5.0	2.5	ug/L			05/21/20 12:59	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			05/21/20 12:59	1
Naphthalene	2.5	U	5.0	2.5	ug/L			05/21/20 12:59	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			05/21/20 12:59	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			05/21/20 12:59	1
o-Xylene	0.23	U	1.0	0.23	ug/L			05/21/20 12:59	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			05/21/20 12:59	1
Styrene	0.27	U	1.0	0.27	ug/L			05/21/20 12:59	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			05/21/20 12:59	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			05/21/20 12:59	1
Toluene	0.48	U	1.0	0.48	ug/L			05/21/20 12:59	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/21/20 12:59	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			05/21/20 12:59	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			05/21/20 12:59	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			05/21/20 12:59	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			05/21/20 12:59	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			05/21/20 12:59	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			05/21/20 12:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*05/21/20 12:59*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 119*		*05/21/20 12:59*	*1*
Toluene-d8 (Surr)	*99*		*89 - 112*		*05/21/20 12:59*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*81 - 118*		*05/21/20 12:59*	*1*

Lab Sample ID: LCS 680-619494/5
Matrix: Water
Analysis Batch: 619494

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	52.7		ug/L		105	78 - 124
1,1,1-Trichloroethane	50.0	50.9		ug/L		102	74 - 131
1,1,2,2-Tetrachloroethane	50.0	47.8		ug/L		96	71 - 121
1,1,2-Trichloroethane	50.0	49.2		ug/L		98	80 - 119
1,1-Dichloroethane	50.0	51.6		ug/L		103	77 - 125
1,1-Dichloroethene	50.0	49.6		ug/L		99	71 - 131
1,1-Dichloropropene	50.0	51.5		ug/L		103	79 - 125
1,2,3-Trichlorobenzene	50.0	55.0		ug/L		110	69 - 129
1,2,3-Trichloropropane	50.0	47.6		ug/L		95	73 - 122
1,2,4-Trichlorobenzene	50.0	55.0		ug/L		110	69 - 130
1,2,4-Trimethylbenzene	50.0	52.5		ug/L		105	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	49.5		ug/L		99	62 - 128
1,2-Dichlorobenzene	50.0	50.6		ug/L		101	80 - 119
1,2-Dichloroethane	50.0	50.6		ug/L		101	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	51.5		ug/L		103	75 - 124
1,3-Dichlorobenzene	50.0	50.1		ug/L		100	80 - 119

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

Lab Sample ID: LCS 680-619494/5
Matrix: Water
Analysis Batch: 619494

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	49.0		ug/L		98	80 - 119
1,4-Dichlorobenzene	50.0	48.8		ug/L		98	79 - 118
2,2-Dichloropropane	50.0	55.4		ug/L		111	60 - 139
2-Butanone (MEK)	250	225		ug/L		90	56 - 143
2-Chlorotoluene	50.0	51.2		ug/L		102	79 - 122
2-Hexanone	250	228		ug/L		91	57 - 139
4-Chlorotoluene	50.0	51.2		ug/L		102	78 - 122
4-Isopropyltoluene	50.0	53.0		ug/L		106	77 - 127
4-Methyl-2-pentanone (MIBK)	250	232		ug/L		93	67 - 130
Acetone	250	217		ug/L		87	39 - 160
Benzene	50.0	50.8		ug/L		102	79 - 120
Bromobenzene	50.0	50.7		ug/L		101	80 - 120
Bromoform	50.0	51.4		ug/L		103	66 - 130
Bromomethane	50.0	194	J Q	ug/L		389	53 - 141
Carbon disulfide	50.0	50.3		ug/L		101	64 - 133
Carbon tetrachloride	50.0	51.3		ug/L		103	72 - 136
Chlorobenzene	50.0	50.3		ug/L		101	82 - 118
Chlorobromomethane	50.0	49.6		ug/L		99	78 - 123
Chlorodibromomethane	50.0	51.4		ug/L		103	74 - 126
Chloroethane	50.0	64.6		ug/L		129	60 - 138
Chloroform	50.0	50.3		ug/L		101	79 - 124
Chloromethane	50.0	51.5		ug/L		103	50 - 139
cis-1,2-Dichloroethene	50.0	51.9		ug/L		104	78 - 123
cis-1,3-Dichloropropene	50.0	53.5		ug/L		107	75 - 124
Dibromomethane	50.0	49.6		ug/L		99	79 - 123
Dichlorobromomethane	50.0	51.8		ug/L		104	79 - 125
Dichlorodifluoromethane	50.0	39.7		ug/L		79	32 - 152
Ethylbenzene	50.0	51.9		ug/L		104	79 - 121
Ethylene Dibromide	50.0	48.9		ug/L		98	75 - 127
Hexachlorobutadiene	50.0	56.9		ug/L		114	66 - 134
Isopropylbenzene	50.0	51.5		ug/L		103	72 - 131
Methyl tert-butyl ether	50.0	49.0		ug/L		98	71 - 124
Methylene Chloride	50.0	50.8		ug/L		102	74 - 124
m-Xylene & p-Xylene	50.0	51.7		ug/L		103	80 - 121
Naphthalene	50.0	53.5		ug/L		107	61 - 128
n-Butylbenzene	50.0	53.9		ug/L		108	75 - 128
N-Propylbenzene	50.0	51.9		ug/L		104	76 - 126
o-Xylene	50.0	52.0		ug/L		104	78 - 122
sec-Butylbenzene	50.0	52.1		ug/L		104	77 - 126
Styrene	50.0	52.3		ug/L		105	78 - 123
tert-Butylbenzene	50.0	51.6		ug/L		103	78 - 124
Tetrachloroethene	50.0	48.1		ug/L		96	74 - 129
Toluene	50.0	49.7		ug/L		99	80 - 121
trans-1,2-Dichloroethene	50.0	50.5		ug/L		101	75 - 124
trans-1,3-Dichloropropene	50.0	52.8		ug/L		106	73 - 127
Trichloroethene	50.0	49.8		ug/L		100	79 - 123
Trichlorofluoromethane	50.0	48.3		ug/L		97	65 - 141
Vinyl acetate	100	115		ug/L		115	54 - 146
Vinyl chloride	50.0	47.9		ug/L		96	58 - 137

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

Lab Sample ID: LCS 680-619494/5
Matrix: Water
Analysis Batch: 619494

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	104		ug/L		104	79 - 121		

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

Lab Sample ID: LCSD 680-619494/6
Matrix: Water
Analysis Batch: 619494

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	53.2		ug/L		106	78 - 124	1	20
1,1,1-Trichloroethane			50.0	50.7		ug/L		101	74 - 131	1	20
1,1,2,2-Tetrachloroethane			50.0	49.5		ug/L		99	71 - 121	3	20
1,1,2-Trichloroethane			50.0	51.0		ug/L		102	80 - 119	4	20
1,1-Dichloroethane			50.0	51.6		ug/L		103	77 - 125	0	20
1,1-Dichloroethene			50.0	48.9		ug/L		98	71 - 131	1	20
1,1-Dichloropropene			50.0	50.6		ug/L		101	79 - 125	2	20
1,2,3-Trichlorobenzene			50.0	55.9		ug/L		112	69 - 129	2	20
1,2,3-Trichloropropane			50.0	48.8		ug/L		98	73 - 122	3	20
1,2,4-Trichlorobenzene			50.0	55.7		ug/L		111	69 - 130	1	20
1,2,4-Trimethylbenzene			50.0	52.2		ug/L		104	76 - 124	1	20
1,2-Dibromo-3-Chloropropane			50.0	51.6		ug/L		103	62 - 128	4	20
1,2-Dichlorobenzene			50.0	50.1		ug/L		100	80 - 119	1	20
1,2-Dichloroethane			50.0	52.6		ug/L		105	73 - 128	4	20
1,2-Dichloroethene, Total			100	102		ug/L		102	79 - 121	0	20
1,2-Dichloropropane			50.0	52.5		ug/L		105	78 - 122	1	20
1,3,5-Trimethylbenzene			50.0	51.3		ug/L		103	75 - 124	0	20
1,3-Dichlorobenzene			50.0	50.0		ug/L		100	80 - 119	0	20
1,3-Dichloropropane			50.0	51.0		ug/L		102	80 - 119	4	20
1,4-Dichlorobenzene			50.0	49.0		ug/L		98	79 - 118	0	20
2,2-Dichloropropane			50.0	54.6		ug/L		109	60 - 139	1	20
2-Butanone (MEK)			250	235		ug/L		94	56 - 143	4	20
2-Chlorotoluene			50.0	50.4		ug/L		101	79 - 122	1	20
2-Hexanone			250	241		ug/L		96	57 - 139	5	20
4-Chlorotoluene			50.0	50.7		ug/L		101	78 - 122	1	20
4-Isopropyltoluene			50.0	51.9		ug/L		104	77 - 127	2	20
4-Methyl-2-pentanone (MIBK)			250	243		ug/L		97	67 - 130	5	20
Acetone			250	231		ug/L		93	39 - 160	7	20
Benzene			50.0	51.0		ug/L		102	79 - 120	0	20
Bromobenzene			50.0	50.6		ug/L		101	80 - 120	0	20
Bromoform			50.0	54.3		ug/L		109	66 - 130	6	20
Bromomethane			50.0	195	J Q	ug/L		391	53 - 141	1	20
Carbon disulfide			50.0	49.8		ug/L		100	64 - 133	1	20
Carbon tetrachloride			50.0	51.3		ug/L		103	72 - 136	0	20
Chlorobenzene			50.0	49.9		ug/L		100	82 - 118	1	20

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

Lab Sample ID: LCSD 680-619494/6
Matrix: Water
Analysis Batch: 619494

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	50.3		ug/L		101	78 - 123	1	20
Chlorodibromomethane			50.0	53.6		ug/L		107	74 - 126	4	20
Chloroethane			50.0	63.0		ug/L		126	60 - 138	3	20
Chloroform			50.0	50.7		ug/L		101	79 - 124	1	20
Chloromethane			50.0	50.7		ug/L		101	50 - 139	2	20
cis-1,2-Dichloroethene			50.0	52.2		ug/L		104	78 - 123	1	20
cis-1,3-Dichloropropene			50.0	54.8		ug/L		110	75 - 124	2	20
Dibromomethane			50.0	51.9		ug/L		104	79 - 123	4	20
Dichlorobromomethane			50.0	53.8		ug/L		108	79 - 125	4	20
Dichlorodifluoromethane			50.0	38.6		ug/L		77	32 - 152	3	20
Ethylbenzene			50.0	51.0		ug/L		102	79 - 121	2	20
Ethylene Dibromide			50.0	50.5		ug/L		101	75 - 127	3	20
Hexachlorobutadiene			50.0	55.9		ug/L		112	66 - 134	2	20
Isopropylbenzene			50.0	50.6		ug/L		101	72 - 131	2	20
Methyl tert-butyl ether			50.0	50.8		ug/L		102	71 - 124	4	20
Methylene Chloride			50.0	52.6		ug/L		105	74 - 124	3	20
m-Xylene & p-Xylene			50.0	51.0		ug/L		102	80 - 121	1	20
Naphthalene			50.0	55.2		ug/L		110	61 - 128	3	20
n-Butylbenzene			50.0	53.2		ug/L		106	75 - 128	1	20
N-Propylbenzene			50.0	51.0		ug/L		102	76 - 126	2	20
o-Xylene			50.0	51.5		ug/L		103	78 - 122	1	20
sec-Butylbenzene			50.0	51.0		ug/L		102	77 - 126	2	20
Styrene			50.0	52.1		ug/L		104	78 - 123	0	20
tert-Butylbenzene			50.0	50.4		ug/L		101	78 - 124	2	20
Tetrachloroethene			50.0	47.8		ug/L		96	74 - 129	1	20
Toluene			50.0	49.8		ug/L		100	80 - 121	0	20
trans-1,2-Dichloroethene			50.0	50.0		ug/L		100	75 - 124	1	20
trans-1,3-Dichloropropene			50.0	54.6		ug/L		109	73 - 127	3	20
Trichloroethene			50.0	49.0		ug/L		98	79 - 123	2	20
Trichlorofluoromethane			50.0	47.5		ug/L		95	65 - 141	2	20
Vinyl acetate			100	118		ug/L		118	54 - 146	3	20
Vinyl chloride			50.0	46.8		ug/L		94	58 - 137	2	20
Xylenes, Total			100	103		ug/L		103	79 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*
Dibromofluoromethane (Surr)	*103*		*80 - 119*
Toluene-d8 (Surr)	*100*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*103*		*81 - 118*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-619161/8
Matrix: Water
Analysis Batch: 619161

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	0.55	U	1.1	0.55	ug/L			05/19/20 10:52	1
Ethylene	0.50	U	1.0	0.50	ug/L			05/19/20 10:52	1

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

Lab Sample ID: MB 680-619161/8
Matrix: Water
Analysis Batch: 619161

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	0.29	U	0.58	0.29	ug/L			05/19/20 10:52	1
Methane (TCD)	39	U	390	39	ug/L			05/19/20 10:52	1

Lab Sample ID: LCS 680-619161/3
Matrix: Water
Analysis Batch: 619161

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	288	268		ug/L		93	74 - 131
Ethylene	269	250		ug/L		93	72 - 133
Methane	154	143		ug/L		93	73 - 125

Lab Sample ID: LCS 680-619161/6
Matrix: Water
Analysis Batch: 619161

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: LCSD 680-619161/4
Matrix: Water
Analysis Batch: 619161

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	288	249		ug/L		86	74 - 131	7	30
Ethylene	269	236		ug/L		88	72 - 133	6	30
Methane	154	134		ug/L		87	73 - 125	7	30

Lab Sample ID: LCSD 680-619161/7
Matrix: Water
Analysis Batch: 619161

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	1750		ug/L		91	73 - 125	1	30

Lab Sample ID: MB 680-619351/8
Matrix: Water
Analysis Batch: 619351

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	0.55	U	1.1	0.55	ug/L			05/20/20 12:50	1
Ethylene	0.50	U	1.0	0.50	ug/L			05/20/20 12:50	1
Methane	0.29	U	0.58	0.29	ug/L			05/20/20 12:50	1
Methane (TCD)	39	U	390	39	ug/L			05/20/20 12:50	1

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

Lab Sample ID: LCS 680-619351/3
Matrix: Water
Analysis Batch: 619351

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	288	267		ug/L		93	74 - 131
Ethylene	269	247		ug/L		92	72 - 133
Methane	154	145		ug/L		94	73 - 125

Lab Sample ID: LCS 680-619351/6
Matrix: Water
Analysis Batch: 619351

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	1960		ug/L		102	73 - 125

Lab Sample ID: LCSD 680-619351/4
Matrix: Water
Analysis Batch: 619351

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	288	254		ug/L		88	74 - 131	5	30
Ethylene	269	237		ug/L		88	72 - 133	5	30
Methane	154	137		ug/L		89	73 - 125	6	30

Lab Sample ID: LCSD 680-619351/7
Matrix: Water
Analysis Batch: 619351

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	1990		ug/L		103	73 - 125	1	30

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-619719/40
Matrix: Water
Analysis Batch: 619719

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.40	U	1.0	0.40	mg/L			05/22/20 20:46	1

Lab Sample ID: LCS 680-619719/41
Matrix: Water
Analysis Batch: 619719

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	9.87		mg/L		99	87 - 112

Lab Sample ID: LCSD 680-619719/42
Matrix: Water
Analysis Batch: 619719

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	9.80		mg/L		98	87 - 112	1	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-619068/1-A
Matrix: Water
Analysis Batch: 619358

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 619068

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	17	U	50	17	ug/L		05/18/20 12:09	05/20/20 00:20	1
Manganese	1.0	U	10	1.0	ug/L		05/18/20 12:09	05/20/20 00:20	1

Lab Sample ID: LCS 680-619068/2-A
Matrix: Water
Analysis Batch: 619358

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 619068

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	5010	4770		ug/L		95	87 - 115
Manganese	400	395		ug/L		99	90 - 114

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-619067/1-A
Matrix: Water
Analysis Batch: 619332

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 619067

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5	U	3.0	1.5	ug/L		05/18/20 12:09	05/19/20 15:59	1

Lab Sample ID: LCS 680-619067/2-A
Matrix: Water
Analysis Batch: 619332

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 619067

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	100	109		ug/L		109	84 - 116

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 280-495813/60
Matrix: Water
Analysis Batch: 495813

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.019	U	0.10	0.019	mg/L			05/21/20 18:55	1

Lab Sample ID: LCS 280-495813/59
Matrix: Water
Analysis Batch: 495813

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	4.53		mg/L		91	90 - 110

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 680-619454/1
Matrix: Water
Analysis Batch: 619454

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	1.0	U	1.0	1.0	mg/L			05/20/20 16:30	1

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: LCS 680-619454/2
Matrix: Water
Analysis Batch: 619454

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	9.53		mg/L		95	75 - 125		

Lab Sample ID: LCSD 680-619454/3
Matrix: Water
Analysis Batch: 619454

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	9.53		mg/L		95	75 - 125	0	30

Lab Sample ID: 680-183899-5 DU
Matrix: Water
Analysis Batch: 619454

Client Sample ID: G6M-03-07X-SPR20
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Sulfide	0.96	U		0.88	U	mg/L				NC	30

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 280-496295/4
Matrix: Water
Analysis Batch: 496295

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	0.35	U	1.0	0.35	mg/L			05/26/20 13:37	1

Lab Sample ID: LCS 280-496295/3
Matrix: Water
Analysis Batch: 496295

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 - Duplicates			25.0	25.0		mg/L		100	88 - 112		

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-495774/5
Matrix: Water
Analysis Batch: 495774

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	3.1	U	10	3.1	mg/L			05/21/20 09:44	1

Lab Sample ID: LCS 280-495774/4
Matrix: Water
Analysis Batch: 495774

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Alkalinity			200	213		mg/L		107	89 - 109		

GC/MS VOA

Analysis Batch: 619316

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183899-6	G6M-07-01X-SPR20	Total/NA	Water	8260B	
680-183899-7	AOC50-TB02-SPR20	Total/NA	Water	8260B	
MB 680-619316/10	Method Blank	Total/NA	Water	8260B	
LCS 680-619316/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-619316/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 619494

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183899-5	G6M-03-07X-SPR20	Total/NA	Water	8260B	
MB 680-619494/9	Method Blank	Total/NA	Water	8260B	
LCS 680-619494/5	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-619494/6	Lab Control Sample Dup	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 619161

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183899-5	G6M-03-07X-SPR20	Total/NA	Water	RSK-175	
MB 680-619161/8	Method Blank	Total/NA	Water	RSK-175	
LCS 680-619161/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-619161/6	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-619161/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-619161/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	

Analysis Batch: 619351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183899-6	G6M-07-01X-SPR20	Total/NA	Water	RSK-175	
MB 680-619351/8	Method Blank	Total/NA	Water	RSK-175	
LCS 680-619351/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-619351/6	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-619351/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-619351/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	

HPLC/IC

Analysis Batch: 619719

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183899-5	G6M-03-07X-SPR20	Total/NA	Water	9056A	
680-183899-6	G6M-07-01X-SPR20	Total/NA	Water	9056A	
MB 680-619719/40	Method Blank	Total/NA	Water	9056A	
LCS 680-619719/41	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-619719/42	Lab Control Sample Dup	Total/NA	Water	9056A	

Metals

Prep Batch: 619067

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183899-5	G6M-03-07X-SPR20	Dissolved	Water	3005A	
680-183899-6	G6M-07-01X-SPR20	Dissolved	Water	3005A	
MB 680-619067/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-619067/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Metals

Prep Batch: 619068

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183899-5	G6M-03-07X-SPR20	Dissolved	Water	3005A	
680-183899-6	G6M-07-01X-SPR20	Dissolved	Water	3005A	
MB 680-619068/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-619068/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 619332

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183899-5	G6M-03-07X-SPR20	Dissolved	Water	6020A	619067
680-183899-6	G6M-07-01X-SPR20	Dissolved	Water	6020A	619067
MB 680-619067/1-A	Method Blank	Total Recoverable	Water	6020A	619067
LCS 680-619067/2-A	Lab Control Sample	Total Recoverable	Water	6020A	619067

Analysis Batch: 619358

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183899-5	G6M-03-07X-SPR20	Dissolved	Water	6010C	619068
680-183899-6	G6M-07-01X-SPR20	Dissolved	Water	6010C	619068
MB 680-619068/1-A	Method Blank	Total Recoverable	Water	6010C	619068
LCS 680-619068/2-A	Lab Control Sample	Total Recoverable	Water	6010C	619068

General Chemistry

Analysis Batch: 495774

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183899-5	G6M-03-07X-SPR20	Total/NA	Water	SM 2320B	
680-183899-6	G6M-07-01X-SPR20	Total/NA	Water	SM 2320B	
MB 280-495774/5	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-495774/4	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 495813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183899-5	G6M-03-07X-SPR20	Total/NA	Water	353.2	
680-183899-6	G6M-07-01X-SPR20	Total/NA	Water	353.2	
MB 280-495813/60	Method Blank	Total/NA	Water	353.2	
LCS 280-495813/59	Lab Control Sample	Total/NA	Water	353.2	

Analysis Batch: 496295

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183899-5	G6M-03-07X-SPR20	Total/NA	Water	9060A	
680-183899-6	G6M-07-01X-SPR20	Total/NA	Water	9060A	
MB 280-496295/4	Method Blank	Total/NA	Water	9060A	
LCS 280-496295/3	Lab Control Sample	Total/NA	Water	9060A	

Analysis Batch: 619454

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183899-5	G6M-03-07X-SPR20	Total/NA	Water	9034	
680-183899-6	G6M-07-01X-SPR20	Total/NA	Water	9034	
MB 680-619454/1	Method Blank	Total/NA	Water	9034	
LCS 680-619454/2	Lab Control Sample	Total/NA	Water	9034	
LCSD 680-619454/3	Lab Control Sample Dup	Total/NA	Water	9034	
680-183899-5 DU	G6M-03-07X-SPR20	Total/NA	Water	9034	

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: JV, LTM, AOC 50 Spring 2020

Job ID: 680-183899-2

Client Sample ID: G6M-03-07X-SPR20

Lab Sample ID: 680-183899-5

Date Collected: 05/13/20 00:00
Matrix: Water
Date Received: 05/15/20 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		50	5 mL	5 mL	619494	05/21/20 18:26	Y1S	TAL SAV
	Instrument ID: CMSC									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	619161	05/19/20 16:34	MYD	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	619719	05/22/20 23:08	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	619068	05/18/20 12:09	AJR	TAL SAV
Dissolved	Analysis	6010C		1			619358	05/20/20 01:57	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	619067	05/18/20 12:09	AJR	TAL SAV
Dissolved	Analysis	6020A		1			619332	05/19/20 16:51	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	495813	05/21/20 19:57	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	260 mL	260 mL	619454	05/20/20 16:30	TB	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1	20 mL	20 mL	496295	05/26/20 16:32	JMB	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			495774	05/21/20 11:23	SPG	TAL DEN
	Instrument ID: WC-AT3									

Client Sample ID: G6M-07-01X-SPR20

Lab Sample ID: 680-183899-6

Date Collected: 05/13/20 00:00
Matrix: Water
Date Received: 05/15/20 09:20

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	619316	05/20/20 19:09	EMA	TAL SAV
	Instrument ID: CMSC									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	619351	05/20/20 13:25	MYD	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	619719	05/22/20 23:21	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	619068	05/18/20 12:09	AJR	TAL SAV
Dissolved	Analysis	6010C		1			619358	05/20/20 02:02	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	619067	05/18/20 12:09	AJR	TAL SAV
Dissolved	Analysis	6020A		1			619332	05/19/20 16:54	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	495813	05/21/20 19:59	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	300 mL	300 mL	619454	05/20/20 16:30	TB	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1	20 mL	20 mL	496295	05/26/20 17:25	JMB	TAL DEN
	Instrument ID: WC_SHI3									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: JV, LTM, AOC 50 Spring 2020

Job ID: 680-183899-2

Client Sample ID: G6M-07-01X-SPR20

Lab Sample ID: 680-183899-6

Date Collected: 05/13/20 00:00
Matrix: Water
Date Received: 05/15/20 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2320B		1			495774	05/21/20 11:28	SPG	TAL DEN

Client Sample ID: AOC50-TB02-SPR20

Lab Sample ID: 680-183899-7

Date Collected: 05/13/20 00:00
Matrix: Water
Date Received: 05/15/20 09:20

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	619316	05/20/20 15:16	EMA	TAL SAV
	Instrument ID: CMSC									

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-183899-2
Project/Site: JV, LTM, AOC 50 Spring 2020

Laboratory: Eurofins TestAmerica, Savannah

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

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-22-22

Laboratory: Eurofins TestAmerica, Denver

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21

Method Summary

Client: Seres Engineering & Services LLC
Project/Site: JV, LTM, AOC 50 Spring 2020

Job ID: 680-183899-2

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
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	TAL DEN
9034	Sulfide, Acid Soluble and Insoluble (Titrimetric)	SW846	TAL SAV
9060A	Organic Carbon, Total (TOC)	SW846	TAL DEN
SM 2320B	Alkalinity	SM	TAL DEN
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 TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

CHAIN-OF-CUSTODY RECORD

Seres-Arcadis JV
Corey Caulkins
Arcadis U.S., Inc. 410 North 44th Street, Suite 1000 Phoenix, AZ 85008 United States

COC # AOC50_5.11.2

ARCADIS

Project Name: Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: JV, Long Term Monitoring, AOC 50, Spring 2020
Project Number: DEVNS-LTM	POC: Jon Lawhon; 912-250-0283; jon.lawhon@testamericainc.com	
WBS Code:	Ship to: 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:
A2320B (A) = Alkalinity
E353.2 (A) = Nitrite Nitrate as N
RSK175 (A) = Dissolved Gases
SW9034 (A) = Sulfide
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As

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: JV, Long Term Monitoring, AOC 50, Spring 2020							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
3	G6M-03-07X-SPR20	WG	5/13/2020		DC/DB/GO		X	X	X	X	X	X	X	X	X		G6M-03-07X	N1	80.00	90.00		
8	G6M-07-01X-SPR20	WG	5/13/2020		DC/DB/GO		X	X	X	X	X	X	X	X	X		G6M-07-01X	N1	78.00	89.00		
17	AOC50-TB02-051220		5/13/2020	--	DC/DB/GO							X										
18																						

Turnaround Time: NA



Relinquished by: ***(Signature)***
Date
Time
Received by: *(Signature)*
Devens eCOCs Spring 2020

Date
Time
Shipping Date:
Received by Laboratory: ***(Signature, Date, Time)*** & conditio

NM 5-15-20 1400 1.4/1.8

5/28/2020

Chain of Custody Record

421703 eurofins Environment Testing TestAmerica

Boston #215

Address: AOC 57

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TAL-8210

Client Contact	Project Manager: Kaytie Longo	Site Contact: D. Champagne	Date:	COC No:
Company Name: Arcadis	Tel/Email:	Lab Contact:	Carrier:	1 of 1 COCs
Address: 1 Executive Dr #303	Analysis Turnaround Time			Sampler: DC/DB/GO
City/State/Zip: Chelmsford MA 08 24	☑ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 9789379999	TAT if different from Below			Walk-in Client:
Fax:	☐ 2 weeks 10 day			Lab Sampling:
Project Name: Devens	☐ 1 week			
Site: AOC 57	☐ 2 days			Job / SDG No.:
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Total As, Fe, Mn	Dissolved As, Fe, Mn	Sample Specific Notes:
57M-95-03X	5-13-20	1345	G	GW	2	Y	N	1	1	
57M-96-11X	5-13-20	1440	G	GW	2	Y	N	1	1	
AOC-57-DUP01-SPR20	5-13-20	1200	G	GW	2	Y	N	1	1	
57-Area3-SW-1	5-13-20	1550	G	GW	2	Y	N	1	1	

END of AOC 57 Sampling

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

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 & Comments:

1.4/1.8

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Desmond Bedard DBedard	Arcadis	05/13/20 17:41	[signature]	FB	5-13-20 1745
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by: DW	Company: SAO	Date/Time: 5-15-2020/0920

Chain of Custody Record 421723

eurofins | Environment Testing TestAmerica

Boston #215

Address: AOC50

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TAL-8210

Client Contact	Project Manager: Kaytie Iongo	Site Contact: D. Champagne	Date:	COC No: 051320
Company Name: Arcadis	Tel/Email:	Lab Contact:	Carrier:	1 of 1 COCs
Address: 1 Executive Dr #303	Analysis Turnaround Time			Sampler:
City/State/Zip: Chelmsford MA 01824	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 9789379999	TAT if different from Below			Walk-in Client:
Fax:	☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day — 10day			Lab Sampling:
Project Name: Devens				Job / SDG No.:
Site: AOC50				
PO #				

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Dissolved As, Fe, Mn	VOCs 8260B	Nitrate/Nitrite	Sulfate 9056A	Sulfide 9034	Alkalinity 310.B	MEE RSK-175	TOC	Sample Specific Notes:
Trip Blank	—	—	—	Lab water	2	-	-		2							
G6M-03-07X	5-13-20	1025	G	GW	13	Y	N	1	3	1	1	2	1	3	1	
G6M-07-01X	5-13-20	1335	G	GW	13	Y	N	1	3	1	1	2	1	3	1	
END of AOC Sampling																

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

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 & Comments:

1.4/1.8

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ | Therm ID No.: _____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Desmond Bedard Pbedard	Arcadis	05/13/20 17:41		TT	5-13-20 1745
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company: SJV	Date/Time: 5-15-2020/0920

Eurofins TestAmerica, 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: Lawhon, Jon K	Carrier Tracking No(s):	COC No: 680-611407.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jon.lawhon@testamericainc.com	State of Origin: Massachusetts	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): Dept. of Defense ELAP - A2LA; DoD - ANAB		Job #: 680-183899-2
Address: 4955 Yarrow Street,	Due Date Requested: 5/27/2020			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: JV, LTM, AOC 50 Spring 2020	Project #: 68023801			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, 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)	2320B/ Alkalinity	353.2_Pres	9060A/ (MOD) Waters - TOC Duplicates	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
G6M-03-07X-SPR20 (680-183899-5)	5/13/20	Eastern		Water			X	X	X	3	
G6M-07-01X-SPR20 (680-183899-6)	5/13/20	Eastern		Water			X	X	X	3	

680-183899 Chain of Custody

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica 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 TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	5/18/2020 1147		[signature]	5/19/20 0900	ETADEW
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.: 1163787	Cooler Temperature(s) °C and Other Remarks: 2.0, IR8, +0.6, DS, 5/19/20

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-183899-2

Login Number: 183899
List Number: 1
Creator: Mooken, Darmal

List Source: Eurofins TestAmerica, 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").	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: 680-183899-2

Login Number: 183899
List Number: 2
Creator: Schade, Daniel B

List Source: Eurofins TestAmerica, Denver
List Creation: 05/19/20 11:08 AM

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.	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.	True	

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ANALYTICAL REPORT

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

Laboratory Job ID: 680-190204-1
Client Project/Site: Fort Devens

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

Attn: Nathan R Mullens

Kathryn Smith

Authorized for release by:
10/30/2020 6:14:34 PM

Kathryn Smith, Client Service Manager
(912)250-0275
Kathy.Smith@Eurofinset.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
J	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

GC VOA

Qualifier	Qualifier Description
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
J	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
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

Glossary (Continued)

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

Job ID: 680-190204-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
680-190204-1	G6M-13-03X-FAL20	Water	10/16/20 12:55	10/17/20 10:10	
680-190204-2	G6M-13-04X-FAL20	Water	10/16/20 14:35	10/17/20 10:10	
680-190204-3	G6M-95-19X-FAL20	Water	10/16/20 09:10	10/17/20 10:10	
680-190204-4	XSA-12-96X-FAL20	Water	10/15/20 16:40	10/17/20 10:10	
680-190204-5	XSA-12-98X-FAL20	Water	10/16/20 11:40	10/17/20 10:10	
680-190204-6	G6M-02-04X-FAL20	Water	10/15/20 16:35	10/17/20 10:10	
680-190204-7	G6M-02-06X-FAL20	Water	10/16/20 13:30	10/17/20 10:10	
680-190204-8	G6M-02-07X-FAL20	Water	10/16/20 12:05	10/17/20 10:10	
680-190204-9	G6M-02-13X-FAL20	Water	10/16/20 16:25	10/17/20 10:10	
680-190204-10	G6M-04-03X-FAL20	Water	10/16/20 15:20	10/17/20 10:10	
680-190204-11	G6M-04-11X-FAL20	Water	10/16/20 10:20	10/17/20 10:10	

Job ID: 680-190204-1

Laboratory: Eurofins TestAmerica, Savannah

Narrative

CASE NARRATIVE
Client: Seres Engineering & Services LLC
Project: Fort Devens

Report Number: 680-190204-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

RECEIPT
The samples were received on 10/17/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 3.7 C.

VOLATILE ORGANIC COMPOUNDS (GC/MS)
Samples G6M-13-03X-FAL20 (680-190204-1), G6M-13-04X-FAL20 (680-190204-2), G6M-95-19X-FAL20 (680-190204-3), XSA-12-96X-FAL20 (680-190204-4), XSA-12-98X-FAL20 (680-190204-5), G6M-02-04X-FAL20 (680-190204-6), G6M-02-06X-FAL20 (680-190204-7), G6M-02-07X-FAL20 (680-190204-8), G6M-02-13X-FAL20 (680-190204-9), G6M-04-03X-FAL20 (680-190204-10) and G6M-04-11X-FAL20 (680-190204-11) were analyzed for Volatile Organic Compounds (GC/MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 10/29/2020.

Toluene-d8 (Surr) recovered marginally low for G6M-02-07X-FAL20 (680-190204-8) and MB 680-641269/9. Refer to the QC report for details.

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

DISSOLVED GASES
Samples G6M-13-04X-FAL20 (680-190204-2), XSA-12-96X-FAL20 (680-190204-4) and G6M-04-03X-FAL20 (680-190204-10) were analyzed for dissolved gases in accordance with RSK-175. The samples were analyzed on 10/26/2020.

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

METALS (ICP) - DISSOLVED
Samples G6M-13-03X-FAL20 (680-190204-1), G6M-13-04X-FAL20 (680-190204-2), XSA-12-96X-FAL20 (680-190204-4), XSA-12-98X-FAL20 (680-190204-5), G6M-02-04X-FAL20 (680-190204-6), G6M-02-06X-FAL20 (680-190204-7), G6M-02-07X-FAL20 (680-190204-8), G6M-02-13X-FAL20 (680-190204-9), G6M-04-03X-FAL20 (680-190204-10) and G6M-04-11X-FAL20 (680-190204-11) were analyzed for Metals (ICP) - Dissolved in accordance with EPA SW-846 Method 6010C. The samples were prepared on 10/19/2020 and analyzed on 10/20/2020.

Iron and Manganese recovered low for the MS/MSD of sample G6M-02-13X-FAL20 (680-190204-9) in batch 680-640009.

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

METALS (ICPMS) - DISSOLVED
Samples G6M-13-03X-FAL20 (680-190204-1), G6M-13-04X-FAL20 (680-190204-2), XSA-12-96X-FAL20 (680-190204-4), XSA-12-98X-FAL20 (680-190204-5), G6M-02-04X-FAL20 (680-190204-6), G6M-02-06X-FAL20 (680-190204-7), G6M-02-07X-FAL20 (680-190204-8), G6M-02-13X-FAL20 (680-190204-9), G6M-04-03X-FAL20 (680-190204-10) and G6M-04-11X-FAL20 (680-190204-11) were analyzed for Metals (ICPMS) - Dissolved in accordance with EPA SW-846 Method 6020A. The samples were prepared on 10/19/2020 and analyzed on 10/20/2020.

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

Job ID: 680-190204-1 (Continued)

Laboratory: Eurofins TestAmerica, Savannah (Continued)

ALKALINITY
Samples G6M-13-04X-FAL20 (680-190204-2), XSA-12-96X-FAL20 (680-190204-4) and G6M-04-03X-FAL20 (680-190204-10) were analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 10/26/2020.

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

NITRATE-NITRITE AS NITROGEN
Samples G6M-13-04X-FAL20 (680-190204-2), XSA-12-96X-FAL20 (680-190204-4) and G6M-04-03X-FAL20 (680-190204-10) were analyzed for nitrate-nitrite as nitrogen in accordance with EPA Method 353.2. The samples were analyzed on 10/26/2020.

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

SULFIDE
Samples G6M-13-04X-FAL20 (680-190204-2), XSA-12-96X-FAL20 (680-190204-4) and G6M-04-03X-FAL20 (680-190204-10) were analyzed for sulfide in accordance with EPA SW846 Method 9034. The samples were analyzed on 10/21/2020.

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

ANIONS BY ION CHROMATOGRAPHY (28 DAY)
Samples G6M-13-04X-FAL20 (680-190204-2), XSA-12-96X-FAL20 (680-190204-4) and G6M-04-03X-FAL20 (680-190204-10) were analyzed for Anions by Ion Chromatography (28 Day) in accordance with SW 846 9056A. The samples were analyzed on 10/25/2020.

Samples G6M-13-04X-FAL20 (680-190204-2)[5X] and G6M-04-03X-FAL20 (680-190204-10)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

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

TOTAL ORGANIC CARBON
Samples G6M-13-04X-FAL20 (680-190204-2), XSA-12-96X-FAL20 (680-190204-4) and G6M-04-03X-FAL20 (680-190204-10) were analyzed for total organic carbon in accordance with EPA SW-846 Method 9060A. The samples were analyzed on 10/29/2020 and 10/30/2020.

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

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190204-1

Client Sample ID: G6M-13-03X-FAL20
Date Collected: 10/16/20 12:55
Date Received: 10/17/20 10:10

Lab Sample ID: 680-190204-1
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 02:22	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 02:22	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/29/20 02:22	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/29/20 02:22	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/29/20 02:22	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/29/20 02:22	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/29/20 02:22	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 02:22	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/29/20 02:22	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 02:22	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 02:22	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/29/20 02:22	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/29/20 02:22	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/29/20 02:22	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			10/29/20 02:22	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/29/20 02:22	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/29/20 02:22	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/29/20 02:22	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/29/20 02:22	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/29/20 02:22	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/29/20 02:22	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/29/20 02:22	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/29/20 02:22	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/29/20 02:22	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/29/20 02:22	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/29/20 02:22	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/29/20 02:22	1
Acetone	7.0	U	10	7.0	ug/L			10/29/20 02:22	1
Benzene	0.43	U M	1.0	0.43	ug/L			10/29/20 02:22	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/29/20 02:22	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/29/20 02:22	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/29/20 02:22	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/29/20 02:22	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/29/20 02:22	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/29/20 02:22	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/29/20 02:22	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/29/20 02:22	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/29/20 02:22	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/29/20 02:22	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/29/20 02:22	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			10/29/20 02:22	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/29/20 02:22	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/29/20 02:22	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/29/20 02:22	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/29/20 02:22	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/29/20 02:22	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/29/20 02:22	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/29/20 02:22	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/29/20 02:22	1

Client Sample ID: G6M-13-03X-FAL20

Lab Sample ID: 680-190204-1

Date Collected: 10/16/20 12:55

Matrix: Water

Date Received: 10/17/20 10:10

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	**0.85**	**J**	10	0.30	ug/L			10/29/20 02:22	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/29/20 02:22	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/29/20 02:22	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/29/20 02:22	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 02:22	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/29/20 02:22	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/29/20 02:22	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/29/20 02:22	1
Styrene	0.27	U	1.0	0.27	ug/L			10/29/20 02:22	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/29/20 02:22	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			10/29/20 02:22	1
Toluene	0.48	U	1.0	0.48	ug/L			10/29/20 02:22	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/29/20 02:22	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/29/20 02:22	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/29/20 02:22	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/29/20 02:22	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/29/20 02:22	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/29/20 02:22	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/29/20 02:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*		*10/29/20 02:22*	*1*
Dibromofluoromethane (Surr)	*89*		*80 - 119*		*10/29/20 02:22*	*1*
Toluene-d8 (Surr)	*89*		*89 - 112*		*10/29/20 02:22*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*		*10/29/20 02:22*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	17	U	50	17	ug/L		10/19/20 16:08	10/20/20 22:20	1
Manganese	**430**		10	1.0	ug/L		10/19/20 16:08	10/20/20 22:20	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5	U	3.0	1.5	ug/L		10/19/20 16:08	10/20/20 19:29	1

Client Sample ID: G6M-13-04X-FAL20

Lab Sample ID: 680-190204-2

Date Collected: 10/16/20 14:35

Matrix: Water

Date Received: 10/17/20 10:10

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 02:45	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 02:45	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/29/20 02:45	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/29/20 02:45	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/29/20 02:45	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/29/20 02:45	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/29/20 02:45	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 02:45	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/29/20 02:45	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 02:45	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190204-1

Client Sample ID: G6M-13-04X-FAL20
Date Collected: 10/16/20 14:35
Date Received: 10/17/20 10:10

Lab Sample ID: 680-190204-2
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 02:45	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/29/20 02:45	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/29/20 02:45	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/29/20 02:45	1
1,2-Dichloroethene, Total	**1.3**	**J**	2.0	0.74	ug/L			10/29/20 02:45	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/29/20 02:45	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/29/20 02:45	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/29/20 02:45	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/29/20 02:45	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/29/20 02:45	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/29/20 02:45	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/29/20 02:45	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/29/20 02:45	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/29/20 02:45	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/29/20 02:45	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/29/20 02:45	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/29/20 02:45	1
Acetone	7.0	U	10	7.0	ug/L			10/29/20 02:45	1
Benzene	0.43	U	1.0	0.43	ug/L			10/29/20 02:45	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/29/20 02:45	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/29/20 02:45	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/29/20 02:45	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/29/20 02:45	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/29/20 02:45	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/29/20 02:45	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/29/20 02:45	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/29/20 02:45	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/29/20 02:45	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/29/20 02:45	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/29/20 02:45	1
cis-1,2-Dichloroethene	**1.2**		1.0	0.41	ug/L			10/29/20 02:45	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/29/20 02:45	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/29/20 02:45	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/29/20 02:45	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/29/20 02:45	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/29/20 02:45	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/29/20 02:45	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/29/20 02:45	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/29/20 02:45	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/29/20 02:45	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/29/20 02:45	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/29/20 02:45	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/29/20 02:45	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 02:45	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/29/20 02:45	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/29/20 02:45	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/29/20 02:45	1
Styrene	0.27	U	1.0	0.27	ug/L			10/29/20 02:45	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/29/20 02:45	1

Client Sample ID: G6M-13-04X-FAL20

Lab Sample ID: 680-190204-2

Date Collected: 10/16/20 14:35

Matrix: Water

Date Received: 10/17/20 10:10

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			10/29/20 02:45	1
Toluene	0.48	U	1.0	0.48	ug/L			10/29/20 02:45	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/29/20 02:45	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/29/20 02:45	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/29/20 02:45	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/29/20 02:45	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/29/20 02:45	1
Vinyl chloride	**1.3**		1.0	0.50	ug/L			10/29/20 02:45	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/29/20 02:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*		*10/29/20 02:45*	*1*
Dibromofluoromethane (Surr)	*87*		*80 - 119*		*10/29/20 02:45*	*1*
Toluene-d8 (Surr)	*89*		*89 - 112*		*10/29/20 02:45*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*		*10/29/20 02:45*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**3.3**		1.1	0.55	ug/L			10/26/20 01:34	1
Ethylene	**3.6**		1.0	0.50	ug/L			10/26/20 01:34	1
Methane (TCD)	**25000**		390	39	ug/L			10/26/20 01:34	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**4.4**	**J**	5.0	2.0	mg/L			10/25/20 05:35	5

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**100000**		50	17	ug/L		10/19/20 16:08	10/20/20 22:28	1
Manganese	**10000**		10	1.0	ug/L		10/19/20 16:08	10/20/20 22:28	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**550**		3.0	1.5	ug/L		10/19/20 16:08	10/20/20 19:36	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.055**	**J**	0.10	0.019	mg/L			10/26/20 19:35	1
Sulfide	0.96	U	0.96	0.96	mg/L			10/21/20 13:10	1
Total Organic Carbon - Duplicates	**10**		1.0	0.35	mg/L			10/29/20 23:59	1
Alkalinity	**250**		10	3.1	mg/L			10/26/20 20:20	1

Client Sample ID: G6M-95-19X-FAL20

Lab Sample ID: 680-190204-3

Date Collected: 10/16/20 09:10

Matrix: Water

Date Received: 10/17/20 10:10

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 03:09	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 03:09	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/29/20 03:09	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190204-1

Client Sample ID: G6M-95-19X-FAL20
Date Collected: 10/16/20 09:10
Date Received: 10/17/20 10:10

Lab Sample ID: 680-190204-3
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/29/20 03:09	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/29/20 03:09	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/29/20 03:09	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/29/20 03:09	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 03:09	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/29/20 03:09	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 03:09	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 03:09	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/29/20 03:09	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/29/20 03:09	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/29/20 03:09	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			10/29/20 03:09	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/29/20 03:09	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/29/20 03:09	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/29/20 03:09	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/29/20 03:09	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/29/20 03:09	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/29/20 03:09	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/29/20 03:09	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/29/20 03:09	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/29/20 03:09	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/29/20 03:09	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/29/20 03:09	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/29/20 03:09	1
Acetone	7.0	U	10	7.0	ug/L			10/29/20 03:09	1
Benzene	0.43	U M	1.0	0.43	ug/L			10/29/20 03:09	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/29/20 03:09	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/29/20 03:09	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/29/20 03:09	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/29/20 03:09	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/29/20 03:09	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/29/20 03:09	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/29/20 03:09	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/29/20 03:09	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/29/20 03:09	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/29/20 03:09	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/29/20 03:09	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			10/29/20 03:09	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/29/20 03:09	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/29/20 03:09	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/29/20 03:09	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/29/20 03:09	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/29/20 03:09	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/29/20 03:09	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/29/20 03:09	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/29/20 03:09	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/29/20 03:09	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/29/20 03:09	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/29/20 03:09	1

Client Sample ID: G6M-95-19X-FAL20

Lab Sample ID: 680-190204-3

Date Collected: 10/16/20 09:10

Matrix: Water

Date Received: 10/17/20 10:10

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	2.5	U	5.0	2.5	ug/L			10/29/20 03:09	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 03:09	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/29/20 03:09	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/29/20 03:09	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/29/20 03:09	1
Styrene	0.27	U	1.0	0.27	ug/L			10/29/20 03:09	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/29/20 03:09	1
Tetrachloroethene	**1.4**		1.0	0.74	ug/L			10/29/20 03:09	1
Toluene	0.48	U	1.0	0.48	ug/L			10/29/20 03:09	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/29/20 03:09	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/29/20 03:09	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/29/20 03:09	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/29/20 03:09	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/29/20 03:09	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/29/20 03:09	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/29/20 03:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*		*10/29/20 03:09*	*1*
Dibromofluoromethane (Surr)	*89*		*80 - 119*		*10/29/20 03:09*	*1*
Toluene-d8 (Surr)	*89*		*89 - 112*		*10/29/20 03:09*	*1*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*		*10/29/20 03:09*	*1*

Client Sample ID: XSA-12-96X-FAL20

Lab Sample ID: 680-190204-4

Date Collected: 10/15/20 16:40

Matrix: Water

Date Received: 10/17/20 10:10

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 06:53	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 06:53	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/29/20 06:53	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/29/20 06:53	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/29/20 06:53	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/29/20 06:53	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/29/20 06:53	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 06:53	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/29/20 06:53	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 06:53	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 06:53	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/29/20 06:53	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/29/20 06:53	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/29/20 06:53	1
1,2-Dichloroethene, Total	**17**		2.0	0.74	ug/L			10/29/20 06:53	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/29/20 06:53	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/29/20 06:53	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/29/20 06:53	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/29/20 06:53	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/29/20 06:53	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/29/20 06:53	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190204-1

Client Sample ID: XSA-12-96X-FAL20
Date Collected: 10/15/20 16:40
Date Received: 10/17/20 10:10

Lab Sample ID: 680-190204-4
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/29/20 06:53	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/29/20 06:53	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/29/20 06:53	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/29/20 06:53	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/29/20 06:53	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/29/20 06:53	1
Acetone	7.0	U	10	7.0	ug/L			10/29/20 06:53	1
Benzene	0.43	U	1.0	0.43	ug/L			10/29/20 06:53	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/29/20 06:53	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/29/20 06:53	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/29/20 06:53	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/29/20 06:53	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/29/20 06:53	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/29/20 06:53	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/29/20 06:53	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/29/20 06:53	1
Chloroethane	**5.7**		5.0	2.5	ug/L			10/29/20 06:53	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/29/20 06:53	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/29/20 06:53	1
cis-1,2-Dichloroethene	**12**		1.0	0.41	ug/L			10/29/20 06:53	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/29/20 06:53	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/29/20 06:53	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/29/20 06:53	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/29/20 06:53	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/29/20 06:53	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/29/20 06:53	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/29/20 06:53	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/29/20 06:53	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/29/20 06:53	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/29/20 06:53	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/29/20 06:53	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/29/20 06:53	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 06:53	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/29/20 06:53	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/29/20 06:53	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/29/20 06:53	1
Styrene	0.27	U	1.0	0.27	ug/L			10/29/20 06:53	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/29/20 06:53	1
Tetrachloroethene	**7.4**		1.0	0.74	ug/L			10/29/20 06:53	1
Toluene	0.48	U	1.0	0.48	ug/L			10/29/20 06:53	1
trans-1,2-Dichloroethene	**5.4**		1.0	0.37	ug/L			10/29/20 06:53	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/29/20 06:53	1
Trichloroethene	**16**		1.0	0.48	ug/L			10/29/20 06:53	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/29/20 06:53	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/29/20 06:53	1
Vinyl chloride	**15**		1.0	0.50	ug/L			10/29/20 06:53	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/29/20 06:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*10/29/20 06:53*	*1*

Client Sample ID: XSA-12-96X-FAL20

Lab Sample ID: 680-190204-4

Date Collected: 10/15/20 16:40

Matrix: Water

Date Received: 10/17/20 10:10

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*100*		*80 - 119*		*10/29/20 06:53*	*1*
Toluene-d8 (Surr)	*101*		*89 - 112*		*10/29/20 06:53*	*1*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*		*10/29/20 06:53*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**18**		1.1	0.55	ug/L			10/26/20 01:47	1
Ethylene	**1.3**		1.0	0.50	ug/L			10/26/20 01:47	1
Methane (TCD)	**1800**		390	39	ug/L			10/26/20 01:47	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**9.2**		1.0	0.40	mg/L			10/25/20 13:58	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**3200**		50	17	ug/L		10/19/20 16:08	10/20/20 22:45	1
Manganese	**5900**		10	1.0	ug/L		10/19/20 16:08	10/20/20 22:45	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5	U	3.0	1.5	ug/L		10/19/20 16:08	10/20/20 19:50	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.019	U	0.10	0.019	mg/L			10/26/20 19:37	1
Sulfide	0.81	U	0.81	0.81	mg/L			10/21/20 13:10	1
Total Organic Carbon - Duplicates	**1.5**		1.0	0.35	mg/L			10/30/20 00:14	1
Alkalinity	**220**		10	3.1	mg/L			10/26/20 20:26	1

Client Sample ID: XSA-12-98X-FAL20

Lab Sample ID: 680-190204-5

Date Collected: 10/16/20 11:40

Matrix: Water

Date Received: 10/17/20 10:10

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 03:32	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 03:32	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/29/20 03:32	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/29/20 03:32	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/29/20 03:32	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/29/20 03:32	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/29/20 03:32	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 03:32	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/29/20 03:32	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 03:32	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 03:32	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/29/20 03:32	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/29/20 03:32	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/29/20 03:32	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			10/29/20 03:32	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190204-1

Client Sample ID: XSA-12-98X-FAL20
Date Collected: 10/16/20 11:40
Date Received: 10/17/20 10:10

Lab Sample ID: 680-190204-5
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/29/20 03:32	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/29/20 03:32	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/29/20 03:32	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/29/20 03:32	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/29/20 03:32	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/29/20 03:32	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/29/20 03:32	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/29/20 03:32	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/29/20 03:32	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/29/20 03:32	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/29/20 03:32	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/29/20 03:32	1
Acetone	7.0	U	10	7.0	ug/L			10/29/20 03:32	1
Benzene	0.43	U M	1.0	0.43	ug/L			10/29/20 03:32	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/29/20 03:32	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/29/20 03:32	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/29/20 03:32	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/29/20 03:32	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/29/20 03:32	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/29/20 03:32	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/29/20 03:32	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/29/20 03:32	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/29/20 03:32	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/29/20 03:32	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/29/20 03:32	1
cis-1,2-Dichloroethene	**0.61**	**J**	1.0	0.41	ug/L			10/29/20 03:32	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/29/20 03:32	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/29/20 03:32	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/29/20 03:32	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/29/20 03:32	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/29/20 03:32	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/29/20 03:32	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/29/20 03:32	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/29/20 03:32	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/29/20 03:32	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/29/20 03:32	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/29/20 03:32	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/29/20 03:32	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 03:32	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/29/20 03:32	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/29/20 03:32	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/29/20 03:32	1
Styrene	0.27	U	1.0	0.27	ug/L			10/29/20 03:32	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/29/20 03:32	1
Tetrachloroethene	**4.1**		1.0	0.74	ug/L			10/29/20 03:32	1
Toluene	0.48	U	1.0	0.48	ug/L			10/29/20 03:32	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/29/20 03:32	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/29/20 03:32	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/29/20 03:32	1

Client Sample ID: XSA-12-98X-FAL20

Lab Sample ID: 680-190204-5

Date Collected: 10/16/20 11:40

Matrix: Water

Date Received: 10/17/20 10:10

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/29/20 03:32	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/29/20 03:32	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/29/20 03:32	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/29/20 03:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*		*10/29/20 03:32*	*1*
Dibromofluoromethane (Surr)	*89*		*80 - 119*		*10/29/20 03:32*	*1*
Toluene-d8 (Surr)	*89*		*89 - 112*		*10/29/20 03:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*		*10/29/20 03:32*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**150**		50	17	ug/L		10/19/20 16:08	10/20/20 23:01	1
Manganese	**4.9**	**J**	10	1.0	ug/L		10/19/20 16:08	10/20/20 23:01	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5	U	3.0	1.5	ug/L		10/19/20 16:08	10/20/20 20:04	1

Client Sample ID: G6M-02-04X-FAL20

Lab Sample ID: 680-190204-6

Date Collected: 10/15/20 16:35

Matrix: Water

Date Received: 10/17/20 10:10

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 07:17	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 07:17	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/29/20 07:17	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/29/20 07:17	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/29/20 07:17	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/29/20 07:17	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/29/20 07:17	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 07:17	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/29/20 07:17	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 07:17	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 07:17	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/29/20 07:17	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/29/20 07:17	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/29/20 07:17	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			10/29/20 07:17	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/29/20 07:17	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/29/20 07:17	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/29/20 07:17	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/29/20 07:17	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/29/20 07:17	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/29/20 07:17	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/29/20 07:17	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/29/20 07:17	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/29/20 07:17	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/29/20 07:17	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190204-1

Client Sample ID: G6M-02-04X-FAL20
Date Collected: 10/15/20 16:35
Date Received: 10/17/20 10:10

Lab Sample ID: 680-190204-6
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/29/20 07:17	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/29/20 07:17	1
Acetone	7.0	U	10	7.0	ug/L			10/29/20 07:17	1
Benzene	0.43	U	1.0	0.43	ug/L			10/29/20 07:17	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/29/20 07:17	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/29/20 07:17	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/29/20 07:17	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/29/20 07:17	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/29/20 07:17	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/29/20 07:17	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/29/20 07:17	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/29/20 07:17	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/29/20 07:17	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/29/20 07:17	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/29/20 07:17	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			10/29/20 07:17	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/29/20 07:17	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/29/20 07:17	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/29/20 07:17	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/29/20 07:17	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/29/20 07:17	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/29/20 07:17	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/29/20 07:17	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/29/20 07:17	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/29/20 07:17	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/29/20 07:17	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/29/20 07:17	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/29/20 07:17	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 07:17	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/29/20 07:17	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/29/20 07:17	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/29/20 07:17	1
Styrene	0.27	U	1.0	0.27	ug/L			10/29/20 07:17	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/29/20 07:17	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			10/29/20 07:17	1
Toluene	0.48	U	1.0	0.48	ug/L			10/29/20 07:17	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/29/20 07:17	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/29/20 07:17	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/29/20 07:17	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/29/20 07:17	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/29/20 07:17	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/29/20 07:17	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/29/20 07:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*10/29/20 07:17*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*10/29/20 07:17*	*1*
Toluene-d8 (Surr)	*101*		*89 - 112*		*10/29/20 07:17*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*		*10/29/20 07:17*	*1*

Client Sample ID: G6M-02-04X-FAL20

Lab Sample ID: 680-190204-6

Date Collected: 10/15/20 16:35

Matrix: Water

Date Received: 10/17/20 10:10

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	63000		50	17	ug/L		10/19/20 16:08	10/20/20 22:57	1
Manganese	3400		10	1.0	ug/L		10/19/20 16:08	10/20/20 22:57	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	430		3.0	1.5	ug/L		10/19/20 16:08	10/20/20 20:00	1

Client Sample ID: G6M-02-06X-FAL20

Lab Sample ID: 680-190204-7

Date Collected: 10/16/20 13:30

Matrix: Water

Date Received: 10/17/20 10:10

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 03:55	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 03:55	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/29/20 03:55	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/29/20 03:55	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/29/20 03:55	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/29/20 03:55	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/29/20 03:55	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 03:55	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/29/20 03:55	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 03:55	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 03:55	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/29/20 03:55	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/29/20 03:55	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/29/20 03:55	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			10/29/20 03:55	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/29/20 03:55	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/29/20 03:55	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/29/20 03:55	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/29/20 03:55	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/29/20 03:55	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/29/20 03:55	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/29/20 03:55	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/29/20 03:55	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/29/20 03:55	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/29/20 03:55	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/29/20 03:55	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/29/20 03:55	1
Acetone	7.0	U	10	7.0	ug/L			10/29/20 03:55	1
Benzene	0.43	U M	1.0	0.43	ug/L			10/29/20 03:55	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/29/20 03:55	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/29/20 03:55	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/29/20 03:55	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/29/20 03:55	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/29/20 03:55	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/29/20 03:55	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/29/20 03:55	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/29/20 03:55	1

Client Sample ID: G6M-02-06X-FAL20
Date Collected: 10/16/20 13:30
Date Received: 10/17/20 10:10

Lab Sample ID: 680-190204-7
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	2.5	U	5.0	2.5	ug/L			10/29/20 03:55	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/29/20 03:55	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/29/20 03:55	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			10/29/20 03:55	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/29/20 03:55	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/29/20 03:55	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/29/20 03:55	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/29/20 03:55	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/29/20 03:55	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/29/20 03:55	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/29/20 03:55	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/29/20 03:55	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/29/20 03:55	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/29/20 03:55	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/29/20 03:55	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/29/20 03:55	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 03:55	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/29/20 03:55	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/29/20 03:55	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/29/20 03:55	1
Styrene	0.27	U	1.0	0.27	ug/L			10/29/20 03:55	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/29/20 03:55	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			10/29/20 03:55	1
Toluene	0.48	U	1.0	0.48	ug/L			10/29/20 03:55	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/29/20 03:55	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/29/20 03:55	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/29/20 03:55	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/29/20 03:55	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/29/20 03:55	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/29/20 03:55	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/29/20 03:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*		*10/29/20 03:55*	*1*
Dibromofluoromethane (Surr)	*88*		*80 - 119*		*10/29/20 03:55*	*1*
Toluene-d8 (Surr)	*89*		*89 - 112*		*10/29/20 03:55*	*1*
1,2-Dichloroethane-d4 (Surr)	*85*		*81 - 118*		*10/29/20 03:55*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	17	U	50	17	ug/L		10/19/20 16:08	10/20/20 22:24	1
Manganese	**1.3**	**J**	10	1.0	ug/L		10/19/20 16:08	10/20/20 22:24	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**1.5**	**J**	3.0	1.5	ug/L		10/19/20 16:08	10/20/20 19:32	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190204-1

Client Sample ID: G6M-02-07X-FAL20
Date Collected: 10/16/20 12:05
Date Received: 10/17/20 10:10

Lab Sample ID: 680-190204-8
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 04:18	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 04:18	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/29/20 04:18	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/29/20 04:18	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/29/20 04:18	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/29/20 04:18	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/29/20 04:18	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 04:18	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/29/20 04:18	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 04:18	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 04:18	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/29/20 04:18	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/29/20 04:18	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/29/20 04:18	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			10/29/20 04:18	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/29/20 04:18	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/29/20 04:18	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/29/20 04:18	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/29/20 04:18	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/29/20 04:18	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/29/20 04:18	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/29/20 04:18	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/29/20 04:18	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/29/20 04:18	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/29/20 04:18	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/29/20 04:18	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/29/20 04:18	1
Acetone	7.0	U	10	7.0	ug/L			10/29/20 04:18	1
Benzene	0.43	U M	1.0	0.43	ug/L			10/29/20 04:18	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/29/20 04:18	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/29/20 04:18	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/29/20 04:18	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/29/20 04:18	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/29/20 04:18	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/29/20 04:18	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/29/20 04:18	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/29/20 04:18	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/29/20 04:18	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/29/20 04:18	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/29/20 04:18	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			10/29/20 04:18	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/29/20 04:18	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/29/20 04:18	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/29/20 04:18	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/29/20 04:18	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/29/20 04:18	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/29/20 04:18	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/29/20 04:18	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/29/20 04:18	1

Client Sample ID: G6M-02-07X-FAL20

Lab Sample ID: 680-190204-8

Date Collected: 10/16/20 12:05

Matrix: Water

Date Received: 10/17/20 10:10

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/29/20 04:18	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/29/20 04:18	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/29/20 04:18	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/29/20 04:18	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 04:18	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/29/20 04:18	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/29/20 04:18	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/29/20 04:18	1
Styrene	0.27	U	1.0	0.27	ug/L			10/29/20 04:18	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/29/20 04:18	1
Tetrachloroethene	**3.8**		1.0	0.74	ug/L			10/29/20 04:18	1
Toluene	0.48	U	1.0	0.48	ug/L			10/29/20 04:18	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/29/20 04:18	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/29/20 04:18	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/29/20 04:18	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/29/20 04:18	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/29/20 04:18	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/29/20 04:18	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/29/20 04:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*		*10/29/20 04:18*	*1*
Dibromofluoromethane (Surr)	*88*		*80 - 119*		*10/29/20 04:18*	*1*
Toluene-d8 (Surr)	*88*	*J*	*89 - 112*		*10/29/20 04:18*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*		*10/29/20 04:18*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**17**	**J**	50	17	ug/L		10/19/20 16:08	10/20/20 22:53	1
Manganese	**6.1**	**J**	10	1.0	ug/L		10/19/20 16:08	10/20/20 22:53	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**1.5**	**J**	3.0	1.5	ug/L		10/19/20 16:08	10/20/20 19:57	1

Client Sample ID: G6M-02-13X-FAL20

Lab Sample ID: 680-190204-9

Date Collected: 10/16/20 16:25

Matrix: Water

Date Received: 10/17/20 10:10

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 04:41	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 04:41	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/29/20 04:41	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/29/20 04:41	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/29/20 04:41	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/29/20 04:41	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/29/20 04:41	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 04:41	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/29/20 04:41	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 04:41	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190204-1

Client Sample ID: G6M-02-13X-FAL20
Date Collected: 10/16/20 16:25
Date Received: 10/17/20 10:10

Lab Sample ID: 680-190204-9
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 04:41	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/29/20 04:41	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/29/20 04:41	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/29/20 04:41	1
1,2-Dichloroethene, Total	**1.1**	**J**	2.0	0.74	ug/L			10/29/20 04:41	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/29/20 04:41	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/29/20 04:41	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/29/20 04:41	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/29/20 04:41	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/29/20 04:41	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/29/20 04:41	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/29/20 04:41	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/29/20 04:41	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/29/20 04:41	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/29/20 04:41	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/29/20 04:41	1
4-Methyl-2-pentanone (MIBK)	**15**		10	2.1	ug/L			10/29/20 04:41	1
Acetone	7.0	U	10	7.0	ug/L			10/29/20 04:41	1
Benzene	0.43	U	1.0	0.43	ug/L			10/29/20 04:41	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/29/20 04:41	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/29/20 04:41	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/29/20 04:41	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/29/20 04:41	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/29/20 04:41	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/29/20 04:41	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/29/20 04:41	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/29/20 04:41	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/29/20 04:41	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/29/20 04:41	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/29/20 04:41	1
cis-1,2-Dichloroethene	**0.90**	**J**	1.0	0.41	ug/L			10/29/20 04:41	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/29/20 04:41	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/29/20 04:41	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/29/20 04:41	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/29/20 04:41	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/29/20 04:41	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/29/20 04:41	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/29/20 04:41	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/29/20 04:41	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/29/20 04:41	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/29/20 04:41	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/29/20 04:41	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/29/20 04:41	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 04:41	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/29/20 04:41	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/29/20 04:41	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/29/20 04:41	1
Styrene	0.27	U	1.0	0.27	ug/L			10/29/20 04:41	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/29/20 04:41	1

Client Sample ID: G6M-02-13X-FAL20

Lab Sample ID: 680-190204-9

Date Collected: 10/16/20 16:25

Matrix: Water

Date Received: 10/17/20 10:10

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			10/29/20 04:41	1
Toluene	0.48	U	1.0	0.48	ug/L			10/29/20 04:41	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/29/20 04:41	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/29/20 04:41	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/29/20 04:41	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/29/20 04:41	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/29/20 04:41	1
Vinyl chloride	**0.96**	**J**	1.0	0.50	ug/L			10/29/20 04:41	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/29/20 04:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*10/29/20 04:41*	*1*
Dibromofluoromethane (Surr)	*87*		*80 - 119*		*10/29/20 04:41*	*1*
Toluene-d8 (Surr)	*89*		*89 - 112*		*10/29/20 04:41*	*1*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*		*10/29/20 04:41*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**12000**	**J**	50	17	ug/L		10/19/20 16:08	10/20/20 22:00	1
Manganese	**26000**	**J**	10	1.0	ug/L		10/19/20 16:08	10/20/20 22:00	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**160**		3.0	1.5	ug/L		10/19/20 16:08	10/20/20 19:11	1

Client Sample ID: G6M-04-03X-FAL20

Lab Sample ID: 680-190204-10

Date Collected: 10/16/20 15:20

Matrix: Water

Date Received: 10/17/20 10:10

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 05:04	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 05:04	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/29/20 05:04	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/29/20 05:04	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/29/20 05:04	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/29/20 05:04	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/29/20 05:04	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 05:04	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/29/20 05:04	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 05:04	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 05:04	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/29/20 05:04	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/29/20 05:04	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/29/20 05:04	1
1,2-Dichloroethene, Total	**0.94**	**J**	2.0	0.74	ug/L			10/29/20 05:04	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/29/20 05:04	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/29/20 05:04	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/29/20 05:04	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/29/20 05:04	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/29/20 05:04	1

Client Sample ID: G6M-04-03X-FAL20
Date Collected: 10/16/20 15:20
Date Received: 10/17/20 10:10

Lab Sample ID: 680-190204-10
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/29/20 05:04	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/29/20 05:04	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/29/20 05:04	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/29/20 05:04	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/29/20 05:04	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/29/20 05:04	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/29/20 05:04	1
Acetone	7.0	U	10	7.0	ug/L			10/29/20 05:04	1
Benzene	0.43	U M	1.0	0.43	ug/L			10/29/20 05:04	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/29/20 05:04	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/29/20 05:04	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/29/20 05:04	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/29/20 05:04	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/29/20 05:04	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/29/20 05:04	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/29/20 05:04	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/29/20 05:04	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/29/20 05:04	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/29/20 05:04	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/29/20 05:04	1
cis-1,2-Dichloroethene	**0.70**	**J**	1.0	0.41	ug/L			10/29/20 05:04	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/29/20 05:04	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/29/20 05:04	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/29/20 05:04	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/29/20 05:04	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/29/20 05:04	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/29/20 05:04	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/29/20 05:04	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/29/20 05:04	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/29/20 05:04	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/29/20 05:04	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/29/20 05:04	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/29/20 05:04	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 05:04	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/29/20 05:04	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/29/20 05:04	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/29/20 05:04	1
Styrene	0.27	U	1.0	0.27	ug/L			10/29/20 05:04	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/29/20 05:04	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			10/29/20 05:04	1
Toluene	0.48	U	1.0	0.48	ug/L			10/29/20 05:04	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/29/20 05:04	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/29/20 05:04	1
Trichloroethene	**0.80**	**J**	1.0	0.48	ug/L			10/29/20 05:04	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/29/20 05:04	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/29/20 05:04	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/29/20 05:04	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/29/20 05:04	1

Client Sample ID: G6M-04-03X-FAL20

Lab Sample ID: 680-190204-10

Date Collected: 10/16/20 15:20

Matrix: Water

Date Received: 10/17/20 10:10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*		*10/29/20 05:04*	*1*
Dibromofluoromethane (Surr)	*87*		*80 - 119*		*10/29/20 05:04*	*1*
Toluene-d8 (Surr)	*89*		*89 - 112*		*10/29/20 05:04*	*1*
1,2-Dichloroethane-d4 (Surr)	*85*		*81 - 118*		*10/29/20 05:04*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	0.55	U	1.1	0.55	ug/L			10/26/20 02:00	1
Ethylene	**1.5**		1.0	0.50	ug/L			10/26/20 02:00	1
Methane (TCD)	**22000**		390	39	ug/L			10/26/20 02:00	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**6.4**		5.0	2.0	mg/L			10/25/20 07:44	5

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**27000**		50	17	ug/L		10/19/20 16:08	10/20/20 22:41	1
Manganese	**3100**		10	1.0	ug/L		10/19/20 16:08	10/20/20 22:41	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**180**		3.0	1.5	ug/L		10/19/20 16:08	10/20/20 19:46	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.082**	**J**	0.10	0.019	mg/L			10/26/20 19:39	1
Sulfide	0.81	U	0.81	0.81	mg/L			10/21/20 13:10	1
Total Organic Carbon - Duplicates	**6.0**		1.0	0.35	mg/L			10/30/20 00:29	1
Alkalinity	**190**		10	3.1	mg/L			10/26/20 20:30	1

Client Sample ID: G6M-04-11X-FAL20

Lab Sample ID: 680-190204-11

Date Collected: 10/16/20 10:20

Matrix: Water

Date Received: 10/17/20 10:10

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 05:28	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 05:28	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/29/20 05:28	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/29/20 05:28	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/29/20 05:28	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/29/20 05:28	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/29/20 05:28	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 05:28	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/29/20 05:28	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 05:28	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 05:28	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/29/20 05:28	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/29/20 05:28	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/29/20 05:28	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			10/29/20 05:28	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190204-1

Client Sample ID: G6M-04-11X-FAL20
Date Collected: 10/16/20 10:20
Date Received: 10/17/20 10:10

Lab Sample ID: 680-190204-11
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/29/20 05:28	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/29/20 05:28	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/29/20 05:28	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/29/20 05:28	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/29/20 05:28	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/29/20 05:28	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/29/20 05:28	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/29/20 05:28	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/29/20 05:28	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/29/20 05:28	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/29/20 05:28	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/29/20 05:28	1
Acetone	7.0	U	10	7.0	ug/L			10/29/20 05:28	1
Benzene	0.43	U	1.0	0.43	ug/L			10/29/20 05:28	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/29/20 05:28	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/29/20 05:28	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/29/20 05:28	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/29/20 05:28	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/29/20 05:28	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/29/20 05:28	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/29/20 05:28	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/29/20 05:28	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/29/20 05:28	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/29/20 05:28	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/29/20 05:28	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			10/29/20 05:28	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/29/20 05:28	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/29/20 05:28	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/29/20 05:28	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/29/20 05:28	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/29/20 05:28	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/29/20 05:28	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/29/20 05:28	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/29/20 05:28	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/29/20 05:28	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/29/20 05:28	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/29/20 05:28	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/29/20 05:28	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 05:28	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/29/20 05:28	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/29/20 05:28	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/29/20 05:28	1
Styrene	0.27	U	1.0	0.27	ug/L			10/29/20 05:28	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/29/20 05:28	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			10/29/20 05:28	1
Toluene	0.48	U	1.0	0.48	ug/L			10/29/20 05:28	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/29/20 05:28	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/29/20 05:28	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/29/20 05:28	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190204-1

Client Sample ID: G6M-04-11X-FAL20
Date Collected: 10/16/20 10:20
Date Received: 10/17/20 10:10

Lab Sample ID: 680-190204-11
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/29/20 05:28	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/29/20 05:28	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/29/20 05:28	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/29/20 05:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*		*10/29/20 05:28*	*1*
Dibromofluoromethane (Surr)	*88*		*80 - 119*		*10/29/20 05:28*	*1*
Toluene-d8 (Surr)	*89*		*89 - 112*		*10/29/20 05:28*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*		*10/29/20 05:28*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	17	U	50	17	ug/L		10/19/20 16:08	10/20/20 22:49	1
Manganese	**1.6**	**J**	10	1.0	ug/L		10/19/20 16:08	10/20/20 22:49	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5	U	3.0	1.5	ug/L		10/19/20 16:08	10/20/20 19:53	1

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

Lab Sample ID: MB 680-641269/9
Matrix: Water
Analysis Batch: 641269

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 00:26	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 00:26	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/29/20 00:26	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/29/20 00:26	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/29/20 00:26	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/29/20 00:26	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/29/20 00:26	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 00:26	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/29/20 00:26	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 00:26	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 00:26	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/29/20 00:26	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/29/20 00:26	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/29/20 00:26	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			10/29/20 00:26	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/29/20 00:26	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/29/20 00:26	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/29/20 00:26	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/29/20 00:26	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/29/20 00:26	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/29/20 00:26	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/29/20 00:26	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/29/20 00:26	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/29/20 00:26	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/29/20 00:26	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/29/20 00:26	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/29/20 00:26	1
Acetone	7.0	U	10	7.0	ug/L			10/29/20 00:26	1
Benzene	0.43	U M	1.0	0.43	ug/L			10/29/20 00:26	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/29/20 00:26	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/29/20 00:26	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/29/20 00:26	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/29/20 00:26	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/29/20 00:26	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/29/20 00:26	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/29/20 00:26	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/29/20 00:26	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/29/20 00:26	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/29/20 00:26	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/29/20 00:26	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			10/29/20 00:26	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/29/20 00:26	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/29/20 00:26	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/29/20 00:26	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/29/20 00:26	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/29/20 00:26	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/29/20 00:26	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/29/20 00:26	1

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

Lab Sample ID: MB 680-641269/9
Matrix: Water
Analysis Batch: 641269

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/29/20 00:26	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/29/20 00:26	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/29/20 00:26	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/29/20 00:26	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/29/20 00:26	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 00:26	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/29/20 00:26	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/29/20 00:26	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/29/20 00:26	1
Styrene	0.27	U	1.0	0.27	ug/L			10/29/20 00:26	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/29/20 00:26	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			10/29/20 00:26	1
Toluene	0.48	U	1.0	0.48	ug/L			10/29/20 00:26	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/29/20 00:26	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/29/20 00:26	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/29/20 00:26	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/29/20 00:26	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/29/20 00:26	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/29/20 00:26	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/29/20 00:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*10/29/20 00:26*	*1*
Dibromofluoromethane (Surr)	*87*		*80 - 119*		*10/29/20 00:26*	*1*
Toluene-d8 (Surr)	*88*	*J*	*89 - 112*		*10/29/20 00:26*	*1*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*		*10/29/20 00:26*	*1*

Lab Sample ID: LCS 680-641269/4
Matrix: Water
Analysis Batch: 641269

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	48.0		ug/L		96	78 - 124
1,1,1-Trichloroethane	50.0	49.1		ug/L		98	74 - 131
1,1,2,2-Tetrachloroethane	50.0	47.3		ug/L		95	71 - 121
1,1,2-Trichloroethane	50.0	48.7		ug/L		97	80 - 119
1,1-Dichloroethane	50.0	51.3		ug/L		103	77 - 125
1,1-Dichloroethene	50.0	43.7		ug/L		87	71 - 131
1,1-Dichloropropene	50.0	51.7	M	ug/L		103	79 - 125
1,2,3-Trichlorobenzene	50.0	47.2		ug/L		94	69 - 129
1,2,3-Trichloropropane	50.0	48.3		ug/L		97	73 - 122
1,2,4-Trichlorobenzene	50.0	46.5		ug/L		93	69 - 130
1,2,4-Trimethylbenzene	50.0	46.7		ug/L		93	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	48.4		ug/L		97	62 - 128
1,2-Dichlorobenzene	50.0	46.6		ug/L		93	80 - 119
1,2-Dichloroethane	50.0	51.3		ug/L		103	73 - 128
1,2-Dichloroethene, Total	100	94.6		ug/L		95	79 - 121
1,2-Dichloropropane	50.0	51.0		ug/L		102	78 - 122

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

Lab Sample ID: LCS 680-641269/4
Matrix: Water
Analysis Batch: 641269

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	46.8		ug/L		94	75 - 124
1,3-Dichlorobenzene	50.0	46.9		ug/L		94	80 - 119
1,3-Dichloropropane	50.0	50.9		ug/L		102	80 - 119
1,4-Dichlorobenzene	50.0	46.3		ug/L		93	79 - 118
2,2-Dichloropropane	50.0	43.0		ug/L		86	60 - 139
2-Butanone (MEK)	250	228		ug/L		91	56 - 143
2-Chlorotoluene	50.0	46.8		ug/L		94	79 - 122
2-Hexanone	250	253		ug/L		101	57 - 139
4-Chlorotoluene	50.0	45.4		ug/L		91	78 - 122
4-Isopropyltoluene	50.0	46.2		ug/L		92	77 - 127
4-Methyl-2-pentanone (MIBK)	250	259		ug/L		104	67 - 130
Acetone	250	263		ug/L		105	39 - 160
Benzene	50.0	48.1		ug/L		96	79 - 120
Bromobenzene	50.0	47.4		ug/L		95	80 - 120
Bromoform	50.0	45.6		ug/L		91	66 - 130
Bromomethane	50.0	49.2		ug/L		98	53 - 141
Carbon disulfide	50.0	47.5		ug/L		95	64 - 133
Carbon tetrachloride	50.0	49.0		ug/L		98	72 - 136
Chlorobenzene	50.0	47.7		ug/L		95	82 - 118
Chlorobromomethane	50.0	52.4		ug/L		105	78 - 123
Chlorodibromomethane	50.0	48.3		ug/L		97	74 - 126
Chloroethane	50.0	45.2		ug/L		90	60 - 138
Chloroform	50.0	49.4		ug/L		99	79 - 124
Chloromethane	50.0	43.6		ug/L		87	50 - 139
cis-1,2-Dichloroethene	50.0	48.2		ug/L		96	78 - 123
cis-1,3-Dichloropropene	50.0	49.7		ug/L		99	75 - 124
Dibromomethane	50.0	50.5		ug/L		101	79 - 123
Dichlorobromomethane	50.0	48.7		ug/L		97	79 - 125
Dichlorodifluoromethane	50.0	41.0		ug/L		82	32 - 152
Ethylbenzene	50.0	47.5		ug/L		95	79 - 121
Ethylene Dibromide	50.0	50.9		ug/L		102	75 - 127
Hexachlorobutadiene	50.0	45.7		ug/L		91	66 - 134
Isopropylbenzene	50.0	47.8		ug/L		96	72 - 131
Methyl tert-butyl ether	50.0	49.7		ug/L		99	71 - 124
Methylene Chloride	50.0	48.8		ug/L		98	74 - 124
m-Xylene & p-Xylene	50.0	47.3		ug/L		95	80 - 121
Naphthalene	50.0	49.3		ug/L		99	61 - 128
n-Butylbenzene	50.0	47.0		ug/L		94	75 - 128
N-Propylbenzene	50.0	46.8		ug/L		94	76 - 126
o-Xylene	50.0	46.9		ug/L		94	78 - 122
sec-Butylbenzene	50.0	47.0		ug/L		94	77 - 126
Styrene	50.0	49.5		ug/L		99	78 - 123
tert-Butylbenzene	50.0	46.7		ug/L		93	78 - 124
Tetrachloroethene	50.0	50.2		ug/L		100	74 - 129
Toluene	50.0	50.2		ug/L		100	80 - 121
trans-1,2-Dichloroethene	50.0	46.4		ug/L		93	75 - 124
trans-1,3-Dichloropropene	50.0	52.1		ug/L		104	73 - 127
Trichloroethene	50.0	51.5		ug/L		103	79 - 123
Trichlorofluoromethane	50.0	49.2		ug/L		98	65 - 141

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

Lab Sample ID: LCS 680-641269/4
Matrix: Water
Analysis Batch: 641269

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	103		ug/L		103	54 - 146
Vinyl chloride	50.0	45.7		ug/L		91	58 - 137
Xylenes, Total	100	94.2		ug/L		94	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*
Dibromofluoromethane (Surr)	*97*		*80 - 119*
Toluene-d8 (Surr)	*98*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*97*		*81 - 118*

Lab Sample ID: LCSD 680-641269/5
Matrix: Water
Analysis Batch: 641269

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	48.3		ug/L		97	78 - 124	1	20
1,1,1-Trichloroethane	50.0	49.1		ug/L		98	74 - 131	0	20
1,1,2,2-Tetrachloroethane	50.0	46.1		ug/L		92	71 - 121	2	20
1,1,2-Trichloroethane	50.0	47.5		ug/L		95	80 - 119	2	20
1,1-Dichloroethane	50.0	51.2		ug/L		102	77 - 125	0	20
1,1-Dichloroethene	50.0	44.0		ug/L		88	71 - 131	1	20
1,1-Dichloropropene	50.0	52.3	M	ug/L		105	79 - 125	1	20
1,2,3-Trichlorobenzene	50.0	47.4		ug/L		95	69 - 129	0	20
1,2,3-Trichloropropane	50.0	46.9		ug/L		94	73 - 122	3	20
1,2,4-Trichlorobenzene	50.0	47.6		ug/L		95	69 - 130	2	20
1,2,4-Trimethylbenzene	50.0	46.8		ug/L		94	76 - 124	0	20
1,2-Dibromo-3-Chloropropane	50.0	48.2		ug/L		96	62 - 128	0	20
1,2-Dichlorobenzene	50.0	46.6		ug/L		93	80 - 119	0	20
1,2-Dichloroethane	50.0	50.4		ug/L		101	73 - 128	2	20
1,2-Dichloroethene, Total	100	94.6		ug/L		95	79 - 121	0	20
1,2-Dichloropropane	50.0	50.5		ug/L		101	78 - 122	1	20
1,3,5-Trimethylbenzene	50.0	47.0		ug/L		94	75 - 124	1	20
1,3-Dichlorobenzene	50.0	46.9		ug/L		94	80 - 119	0	20
1,3-Dichloropropane	50.0	50.1		ug/L		100	80 - 119	2	20
1,4-Dichlorobenzene	50.0	46.4		ug/L		93	79 - 118	0	20
2,2-Dichloropropane	50.0	43.4		ug/L		87	60 - 139	1	20
2-Butanone (MEK)	250	221		ug/L		89	56 - 143	3	20
2-Chlorotoluene	50.0	47.3		ug/L		95	79 - 122	1	20
2-Hexanone	250	247		ug/L		99	57 - 139	2	20
4-Chlorotoluene	50.0	46.0		ug/L		92	78 - 122	1	20
4-Isopropyltoluene	50.0	46.4		ug/L		93	77 - 127	0	20
4-Methyl-2-pentanone (MIBK)	250	252		ug/L		101	67 - 130	3	20
Acetone	250	256		ug/L		103	39 - 160	2	20
Benzene	50.0	48.2		ug/L		96	79 - 120	0	20
Bromobenzene	50.0	47.5		ug/L		95	80 - 120	0	20
Bromoform	50.0	45.3		ug/L		91	66 - 130	1	20
Bromomethane	50.0	50.4		ug/L		101	53 - 141	2	20
Carbon disulfide	50.0	47.5		ug/L		95	64 - 133	0	20

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

Lab Sample ID: LCSD 680-641269/5
Matrix: Water
Analysis Batch: 641269

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	49.0		ug/L		98	72 - 136	0	20
Chlorobenzene	50.0	48.1		ug/L		96	82 - 118	1	20
Chlorobromomethane	50.0	51.3		ug/L		103	78 - 123	2	20
Chlorodibromomethane	50.0	47.8		ug/L		96	74 - 126	1	20
Chloroethane	50.0	45.2		ug/L		90	60 - 138	0	20
Chloroform	50.0	49.9		ug/L		100	79 - 124	1	20
Chloromethane	50.0	43.9		ug/L		88	50 - 139	1	20
cis-1,2-Dichloroethene	50.0	48.0		ug/L		96	78 - 123	0	20
cis-1,3-Dichloropropene	50.0	49.1		ug/L		98	75 - 124	1	20
Dibromomethane	50.0	49.4		ug/L		99	79 - 123	2	20
Dichlorobromomethane	50.0	47.7		ug/L		95	79 - 125	2	20
Dichlorodifluoromethane	50.0	39.2		ug/L		78	32 - 152	4	20
Ethylbenzene	50.0	48.0		ug/L		96	79 - 121	1	20
Ethylene Dibromide	50.0	48.8		ug/L		98	75 - 127	4	20
Hexachlorobutadiene	50.0	45.5		ug/L		91	66 - 134	0	20
Isopropylbenzene	50.0	48.1		ug/L		96	72 - 131	1	20
Methyl tert-butyl ether	50.0	48.9		ug/L		98	71 - 124	2	20
Methylene Chloride	50.0	48.1		ug/L		96	74 - 124	1	20
m-Xylene & p-Xylene	50.0	47.5		ug/L		95	80 - 121	1	20
Naphthalene	50.0	48.9		ug/L		98	61 - 128	1	20
n-Butylbenzene	50.0	46.4		ug/L		93	75 - 128	1	20
N-Propylbenzene	50.0	47.1		ug/L		94	76 - 126	1	20
o-Xylene	50.0	47.1		ug/L		94	78 - 122	0	20
sec-Butylbenzene	50.0	46.9		ug/L		94	77 - 126	0	20
Styrene	50.0	49.6		ug/L		99	78 - 123	0	20
tert-Butylbenzene	50.0	47.4		ug/L		95	78 - 124	2	20
Tetrachloroethene	50.0	49.7		ug/L		99	74 - 129	1	20
Toluene	50.0	50.6		ug/L		101	80 - 121	1	20
trans-1,2-Dichloroethene	50.0	46.5		ug/L		93	75 - 124	0	20
trans-1,3-Dichloropropene	50.0	50.6		ug/L		101	73 - 127	3	20
Trichloroethene	50.0	51.2		ug/L		102	79 - 123	1	20
Trichlorofluoromethane	50.0	49.1		ug/L		98	65 - 141	0	20
Vinyl acetate	100	98.3		ug/L		98	54 - 146	5	20
Vinyl chloride	50.0	45.5		ug/L		91	58 - 137	0	20
Xylenes, Total	100	94.6		ug/L		95	79 - 121	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*
Dibromofluoromethane (Surr)	*96*		*80 - 119*
Toluene-d8 (Surr)	*98*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*

Lab Sample ID: MB 680-641277/9
Matrix: Water
Analysis Batch: 641277

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 01:08	1

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

Lab Sample ID: MB 680-641277/9
Matrix: Water
Analysis Batch: 641277

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 01:08	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/29/20 01:08	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/29/20 01:08	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/29/20 01:08	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/29/20 01:08	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/29/20 01:08	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 01:08	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/29/20 01:08	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 01:08	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 01:08	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/29/20 01:08	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/29/20 01:08	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/29/20 01:08	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			10/29/20 01:08	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/29/20 01:08	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/29/20 01:08	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/29/20 01:08	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/29/20 01:08	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/29/20 01:08	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/29/20 01:08	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/29/20 01:08	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/29/20 01:08	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/29/20 01:08	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/29/20 01:08	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/29/20 01:08	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/29/20 01:08	1
Acetone	7.0	U	10	7.0	ug/L			10/29/20 01:08	1
Benzene	0.43	U	1.0	0.43	ug/L			10/29/20 01:08	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/29/20 01:08	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/29/20 01:08	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/29/20 01:08	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/29/20 01:08	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/29/20 01:08	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/29/20 01:08	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/29/20 01:08	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/29/20 01:08	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/29/20 01:08	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/29/20 01:08	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/29/20 01:08	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			10/29/20 01:08	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/29/20 01:08	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/29/20 01:08	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/29/20 01:08	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/29/20 01:08	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/29/20 01:08	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/29/20 01:08	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/29/20 01:08	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/29/20 01:08	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/29/20 01:08	1

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

Lab Sample ID: MB 680-641277/9
Matrix: Water
Analysis Batch: 641277

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/29/20 01:08	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/29/20 01:08	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/29/20 01:08	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 01:08	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/29/20 01:08	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/29/20 01:08	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/29/20 01:08	1
Styrene	0.27	U	1.0	0.27	ug/L			10/29/20 01:08	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/29/20 01:08	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			10/29/20 01:08	1
Toluene	0.48	U	1.0	0.48	ug/L			10/29/20 01:08	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/29/20 01:08	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/29/20 01:08	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/29/20 01:08	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/29/20 01:08	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/29/20 01:08	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/29/20 01:08	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/29/20 01:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*10/29/20 01:08*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*10/29/20 01:08*	*1*
Toluene-d8 (Surr)	*104*		*89 - 112*		*10/29/20 01:08*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*		*10/29/20 01:08*	*1*

Lab Sample ID: LCS 680-641277/4
Matrix: Water
Analysis Batch: 641277

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	57.1		ug/L		114	78 - 124
1,1,1-Trichloroethane	50.0	52.0		ug/L		104	74 - 131
1,1,2,2-Tetrachloroethane	50.0	53.2		ug/L		106	71 - 121
1,1,2-Trichloroethane	50.0	57.2		ug/L		114	80 - 119
1,1-Dichloroethane	50.0	49.6		ug/L		99	77 - 125
1,1-Dichloroethene	50.0	52.8		ug/L		106	71 - 131
1,1-Dichloropropene	50.0	52.4		ug/L		105	79 - 125
1,2,3-Trichlorobenzene	50.0	45.4		ug/L		91	69 - 129
1,2,3-Trichloropropane	50.0	59.2		ug/L		118	73 - 122
1,2,4-Trichlorobenzene	50.0	44.2		ug/L		88	69 - 130
1,2,4-Trimethylbenzene	50.0	50.1		ug/L		100	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	47.2		ug/L		94	62 - 128
1,2-Dichlorobenzene	50.0	48.1		ug/L		96	80 - 119
1,2-Dichloroethane	50.0	52.5		ug/L		105	73 - 128
1,2-Dichloroethene, Total	100	102		ug/L		102	79 - 121
1,2-Dichloropropane	50.0	51.5		ug/L		103	78 - 122
1,3,5-Trimethylbenzene	50.0	49.7		ug/L		99	75 - 124
1,3-Dichlorobenzene	50.0	48.5		ug/L		97	80 - 119

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

Lab Sample ID: LCS 680-641277/4
Matrix: Water
Analysis Batch: 641277

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	54.1		ug/L		108	80 - 119
1,4-Dichlorobenzene	50.0	47.9		ug/L		96	79 - 118
2,2-Dichloropropane	50.0	44.6		ug/L		89	60 - 139
2-Butanone (MEK)	250	278		ug/L		111	56 - 143
2-Chlorotoluene	50.0	50.0		ug/L		100	79 - 122
2-Hexanone	250	254		ug/L		102	57 - 139
4-Chlorotoluene	50.0	50.6		ug/L		101	78 - 122
4-Isopropyltoluene	50.0	44.1		ug/L		88	77 - 127
4-Methyl-2-pentanone (MIBK)	250	258		ug/L		103	67 - 130
Acetone	250	240		ug/L		96	39 - 160
Benzene	50.0	53.1		ug/L		106	79 - 120
Bromobenzene	50.0	55.2		ug/L		110	80 - 120
Bromoform	50.0	58.5		ug/L		117	66 - 130
Bromomethane	50.0	44.2		ug/L		88	53 - 141
Carbon disulfide	50.0	51.9		ug/L		104	64 - 133
Carbon tetrachloride	50.0	53.2		ug/L		106	72 - 136
Chlorobenzene	50.0	54.0		ug/L		108	82 - 118
Chlorobromomethane	50.0	54.3		ug/L		109	78 - 123
Chlorodibromomethane	50.0	57.1		ug/L		114	74 - 126
Chloroethane	50.0	44.7		ug/L		89	60 - 138
Chloroform	50.0	51.7		ug/L		103	79 - 124
Chloromethane	50.0	45.5		ug/L		91	50 - 139
cis-1,2-Dichloroethene	50.0	48.0		ug/L		96	78 - 123
cis-1,3-Dichloropropene	50.0	52.0		ug/L		104	75 - 124
Dibromomethane	50.0	53.9		ug/L		108	79 - 123
Dichlorobromomethane	50.0	52.9		ug/L		106	79 - 125
Dichlorodifluoromethane	50.0	49.4		ug/L		99	32 - 152
Ethylbenzene	50.0	51.5		ug/L		103	79 - 121
Ethylene Dibromide	50.0	57.6		ug/L		115	75 - 127
Hexachlorobutadiene	50.0	44.6		ug/L		89	66 - 134
Isopropylbenzene	50.0	51.0		ug/L		102	72 - 131
Methyl tert-butyl ether	50.0	51.7		ug/L		103	71 - 124
Methylene Chloride	50.0	52.6		ug/L		105	74 - 124
m-Xylene & p-Xylene	50.0	51.7		ug/L		103	80 - 121
Naphthalene	50.0	44.7		ug/L		89	61 - 128
n-Butylbenzene	50.0	42.0		ug/L		84	75 - 128
N-Propylbenzene	50.0	50.2		ug/L		100	76 - 126
o-Xylene	50.0	51.3		ug/L		103	78 - 122
sec-Butylbenzene	50.0	49.5		ug/L		99	77 - 126
Styrene	50.0	54.3		ug/L		109	78 - 123
tert-Butylbenzene	50.0	50.3		ug/L		101	78 - 124
Tetrachloroethene	50.0	59.4		ug/L		119	74 - 129
Toluene	50.0	55.8		ug/L		112	80 - 121
trans-1,2-Dichloroethene	50.0	53.7		ug/L		107	75 - 124
trans-1,3-Dichloropropene	50.0	50.9		ug/L		102	73 - 127
Trichloroethene	50.0	56.9		ug/L		114	79 - 123
Trichlorofluoromethane	50.0	52.1		ug/L		104	65 - 141
Vinyl acetate	100	93.7		ug/L		94	54 - 146
Vinyl chloride	50.0	49.4		ug/L		99	58 - 137

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

Lab Sample ID: LCS 680-641277/4
Matrix: Water
Analysis Batch: 641277

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Xylenes, Total			100	103		ug/L		103	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*88*		*85 - 114*
Dibromofluoromethane (Surr)	*107*		*80 - 119*
Toluene-d8 (Surr)	*107*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*105*		*81 - 118*

Lab Sample ID: LCSD 680-641277/5
Matrix: Water
Analysis Batch: 641277

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	56.6		ug/L		113	78 - 124	1	20
1,1,1-Trichloroethane			50.0	52.1		ug/L		104	74 - 131	0	20
1,1,2,2-Tetrachloroethane			50.0	53.2		ug/L		106	71 - 121	0	20
1,1,2-Trichloroethane			50.0	58.4		ug/L		117	80 - 119	2	20
1,1-Dichloroethane			50.0	49.6		ug/L		99	77 - 125	0	20
1,1-Dichloroethene			50.0	53.5		ug/L		107	71 - 131	1	20
1,1-Dichloropropene			50.0	52.7		ug/L		105	79 - 125	1	20
1,2,3-Trichlorobenzene			50.0	46.2		ug/L		92	69 - 129	2	20
1,2,3-Trichloropropane			50.0	57.6		ug/L		115	73 - 122	3	20
1,2,4-Trichlorobenzene			50.0	45.0		ug/L		90	69 - 130	2	20
1,2,4-Trimethylbenzene			50.0	49.5		ug/L		99	76 - 124	1	20
1,2-Dibromo-3-Chloropropane			50.0	47.0		ug/L		94	62 - 128	0	20
1,2-Dichlorobenzene			50.0	48.0		ug/L		96	80 - 119	0	20
1,2-Dichloroethane			50.0	53.4		ug/L		107	73 - 128	2	20
1,2-Dichloroethene, Total			100	103		ug/L		103	79 - 121	1	20
1,2-Dichloropropane			50.0	52.1		ug/L		104	78 - 122	1	20
1,3,5-Trimethylbenzene			50.0	48.5		ug/L		97	75 - 124	2	20
1,3-Dichlorobenzene			50.0	48.3		ug/L		97	80 - 119	0	20
1,3-Dichloropropane			50.0	54.8		ug/L		110	80 - 119	1	20
1,4-Dichlorobenzene			50.0	47.6		ug/L		95	79 - 118	1	20
2,2-Dichloropropane			50.0	44.3		ug/L		89	60 - 139	1	20
2-Butanone (MEK)			250	274		ug/L		110	56 - 143	2	20
2-Chlorotoluene			50.0	49.7		ug/L		99	79 - 122	0	20
2-Hexanone			250	256		ug/L		102	57 - 139	1	20
4-Chlorotoluene			50.0	50.4		ug/L		101	78 - 122	0	20
4-Isopropyltoluene			50.0	44.4		ug/L		89	77 - 127	1	20
4-Methyl-2-pentanone (MIBK)			250	255		ug/L		102	67 - 130	1	20
Acetone			250	244		ug/L		98	39 - 160	1	20
Benzene			50.0	54.0		ug/L		108	79 - 120	2	20
Bromobenzene			50.0	54.4		ug/L		109	80 - 120	1	20
Bromoform			50.0	57.2		ug/L		114	66 - 130	2	20
Bromomethane			50.0	49.1		ug/L		98	53 - 141	10	20
Carbon disulfide			50.0	52.5		ug/L		105	64 - 133	1	20
Carbon tetrachloride			50.0	54.4		ug/L		109	72 - 136	2	20
Chlorobenzene			50.0	52.5		ug/L		105	82 - 118	3	20

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

Lab Sample ID: LCSD 680-641277/5
Matrix: Water
Analysis Batch: 641277

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	55.8		ug/L		112	78 - 123	3	20
Chlorodibromomethane	50.0	57.9		ug/L		116	74 - 126	1	20
Chloroethane	50.0	44.9		ug/L		90	60 - 138	0	20
Chloroform	50.0	52.1		ug/L		104	79 - 124	1	20
Chloromethane	50.0	45.6		ug/L		91	50 - 139	0	20
cis-1,2-Dichloroethene	50.0	48.6		ug/L		97	78 - 123	1	20
cis-1,3-Dichloropropene	50.0	52.4		ug/L		105	75 - 124	1	20
Dibromomethane	50.0	54.6		ug/L		109	79 - 123	1	20
Dichlorobromomethane	50.0	53.6		ug/L		107	79 - 125	1	20
Dichlorodifluoromethane	50.0	50.2		ug/L		100	32 - 152	2	20
Ethylbenzene	50.0	50.6		ug/L		101	79 - 121	2	20
Ethylene Dibromide	50.0	58.1		ug/L		116	75 - 127	1	20
Hexachlorobutadiene	50.0	45.3		ug/L		91	66 - 134	2	20
Isopropylbenzene	50.0	50.0		ug/L		100	72 - 131	2	20
Methyl tert-butyl ether	50.0	52.5		ug/L		105	71 - 124	1	20
Methylene Chloride	50.0	53.6		ug/L		107	74 - 124	2	20
m-Xylene & p-Xylene	50.0	50.9		ug/L		102	80 - 121	2	20
Naphthalene	50.0	45.6		ug/L		91	61 - 128	2	20
n-Butylbenzene	50.0	42.0		ug/L		84	75 - 128	0	20
N-Propylbenzene	50.0	49.7		ug/L		99	76 - 126	1	20
o-Xylene	50.0	50.6		ug/L		101	78 - 122	1	20
sec-Butylbenzene	50.0	49.1		ug/L		98	77 - 126	1	20
Styrene	50.0	53.8		ug/L		108	78 - 123	1	20
tert-Butylbenzene	50.0	49.9		ug/L		100	78 - 124	1	20
Tetrachloroethene	50.0	58.8		ug/L		118	74 - 129	1	20
Toluene	50.0	55.6		ug/L		111	80 - 121	0	20
trans-1,2-Dichloroethene	50.0	54.5		ug/L		109	75 - 124	1	20
trans-1,3-Dichloropropene	50.0	51.7		ug/L		103	73 - 127	1	20
Trichloroethene	50.0	57.1		ug/L		114	79 - 123	0	20
Trichlorofluoromethane	50.0	52.6		ug/L		105	65 - 141	1	20
Vinyl acetate	100	94.0		ug/L		94	54 - 146	0	20
Vinyl chloride	50.0	48.8		ug/L		98	58 - 137	1	20
Xylenes, Total	100	102		ug/L		102	79 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*87*		*85 - 114*
Dibromofluoromethane (Surr)	*108*		*80 - 119*
Toluene-d8 (Surr)	*106*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*107*		*81 - 118*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-640667/38
Matrix: Water
Analysis Batch: 640667

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	0.55	U	1.1	0.55	ug/L			10/25/20 22:20	1
Ethylene	0.50	U	1.0	0.50	ug/L			10/25/20 22:20	1

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

Lab Sample ID: MB 680-640667/38
Matrix: Water
Analysis Batch: 640667

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	0.29	U	0.58	0.29	ug/L			10/25/20 22:20	1
Methane (TCD)	39	U	390	39	ug/L			10/25/20 22:20	1

Lab Sample ID: LCS 680-640667/34
Matrix: Water
Analysis Batch: 640667

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	1720		ug/L		90	73 - 125

Lab Sample ID: LCS 680-640667/36
Matrix: Water
Analysis Batch: 640667

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	288	250		ug/L		87	74 - 131
Ethylene	269	231		ug/L		86	72 - 133
Methane	154	137		ug/L		89	73 - 125

Lab Sample ID: LCSD 680-640667/35
Matrix: Water
Analysis Batch: 640667

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	1730		ug/L		90	73 - 125	0	30

Lab Sample ID: LCSD 680-640667/37
Matrix: Water
Analysis Batch: 640667

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	288	255		ug/L		88	74 - 131	2	30
Ethylene	269	232		ug/L		86	72 - 133	0	30
Methane	154	138		ug/L		90	73 - 125	1	30

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-640606/2
Matrix: Water
Analysis Batch: 640606

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.40	U	1.0	0.40	mg/L			10/24/20 16:51	1

Lab Sample ID: LCS 680-640606/3
Matrix: Water
Analysis Batch: 640606

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	10.8		mg/L		108	87 - 112

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

Lab Sample ID: LCSD 680-640606/4
Matrix: Water
Analysis Batch: 640606

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	10.8		mg/L		108	87 - 112	0	15

Lab Sample ID: MB 680-640614/33
Matrix: Water
Analysis Batch: 640614

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.40	U	1.0	0.40	mg/L			10/25/20 09:02	1

Lab Sample ID: LCS 680-640614/34
Matrix: Water
Analysis Batch: 640614

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	10.7		mg/L		107	87 - 112		

Lab Sample ID: LCSD 680-640614/35
Matrix: Water
Analysis Batch: 640614

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	10.7		mg/L		107	87 - 112	0	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-639715/1-A
Matrix: Water
Analysis Batch: 640009

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 639715

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	17	U	50	17	ug/L		10/19/20 16:08	10/20/20 21:51	1
Manganese	1.0	U	10	1.0	ug/L		10/19/20 16:08	10/20/20 21:51	1

Lab Sample ID: LCS 680-639715/2-A
Matrix: Water
Analysis Batch: 640009

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 639715

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Iron			5000	5040		ug/L		101	87 - 115		
Manganese			400	409		ug/L		102	90 - 114		

Lab Sample ID: 680-190204-9 MS
Matrix: Water
Analysis Batch: 640009

Client Sample ID: G6M-02-13X-FAL20
Prep Type: Dissolved
Prep Batch: 639715

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Iron	12000	J	5000	16100	J	ug/L		85	87 - 115		
Manganese	26000	J	400	24900	4	ug/L		-256	90 - 114		

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

Lab Sample ID: 680-190204-9 MSD
Matrix: Water
Analysis Batch: 640009

Client Sample ID: G6M-02-13X-FAL20
Prep Type: Dissolved
Prep Batch: 639715

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	12000	J	5000	15700	J	ug/L		77	87 - 115	2	20
Manganese	26000	J	400	24400	4	ug/L		-401	90 - 114	2	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-639714/1-A
Matrix: Water
Analysis Batch: 639949

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 639714

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5	U	3.0	1.5	ug/L		10/19/20 16:08	10/20/20 19:04	1

Lab Sample ID: LCS 680-639714/2-A
Matrix: Water
Analysis Batch: 639949

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 639714

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	100	102		ug/L		102	84 - 116

Lab Sample ID: 680-190204-9 MS
Matrix: Water
Analysis Batch: 639949

Client Sample ID: G6M-02-13X-FAL20
Prep Type: Dissolved
Prep Batch: 639714

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	160		100	250		ug/L		95	84 - 116

Lab Sample ID: 680-190204-9 MSD
Matrix: Water
Analysis Batch: 639949

Client Sample ID: G6M-02-13X-FAL20
Prep Type: Dissolved
Prep Batch: 639714

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	160		100	248		ug/L		93	84 - 116	1	20

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 280-514188/61
Matrix: Water
Analysis Batch: 514188

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.019	U	0.10	0.019	mg/L			10/26/20 18:27	1

Lab Sample ID: LCS 280-514188/60
Matrix: Water
Analysis Batch: 514188

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	5.06		mg/L		101	90 - 110

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 680-640062/1
Matrix: Water
Analysis Batch: 640062

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	1.0	U	1.0	1.0	mg/L			10/21/20 13:10	1

Lab Sample ID: LCS 680-640062/2
Matrix: Water
Analysis Batch: 640062

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	10.1		mg/L		101	75 - 125

Lab Sample ID: LCSD 680-640062/3
Matrix: Water
Analysis Batch: 640062

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	10.1		mg/L		101	75 - 125	0	30

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 280-514811/4
Matrix: Water
Analysis Batch: 514811

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	0.35	U	1.0	0.35	mg/L			10/29/20 16:32	1

Lab Sample ID: LCS 280-514811/3
Matrix: Water
Analysis Batch: 514811

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 - Duplicates	25.0	25.3		mg/L		101	88 - 112

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-514211/32
Matrix: Water
Analysis Batch: 514211

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	3.1	U	10	3.1	mg/L			10/26/20 18:41	1

Lab Sample ID: LCS 280-514211/31
Matrix: Water
Analysis Batch: 514211

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	200	208		mg/L		104	89 - 109

GC/MS VOA

Analysis Batch: 641269

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190204-1	G6M-13-03X-FAL20	Total/NA	Water	8260B	
680-190204-2	G6M-13-04X-FAL20	Total/NA	Water	8260B	
680-190204-3	G6M-95-19X-FAL20	Total/NA	Water	8260B	
680-190204-5	XSA-12-98X-FAL20	Total/NA	Water	8260B	
680-190204-7	G6M-02-06X-FAL20	Total/NA	Water	8260B	
680-190204-8	G6M-02-07X-FAL20	Total/NA	Water	8260B	
680-190204-9	G6M-02-13X-FAL20	Total/NA	Water	8260B	
680-190204-10	G6M-04-03X-FAL20	Total/NA	Water	8260B	
680-190204-11	G6M-04-11X-FAL20	Total/NA	Water	8260B	
MB 680-641269/9	Method Blank	Total/NA	Water	8260B	
LCS 680-641269/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-641269/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 641277

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190204-4	XSA-12-96X-FAL20	Total/NA	Water	8260B	
680-190204-6	G6M-02-04X-FAL20	Total/NA	Water	8260B	
MB 680-641277/9	Method Blank	Total/NA	Water	8260B	
LCS 680-641277/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-641277/5	Lab Control Sample Dup	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 640667

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190204-2	G6M-13-04X-FAL20	Total/NA	Water	RSK-175	
680-190204-4	XSA-12-96X-FAL20	Total/NA	Water	RSK-175	
680-190204-10	G6M-04-03X-FAL20	Total/NA	Water	RSK-175	
MB 680-640667/38	Method Blank	Total/NA	Water	RSK-175	
LCS 680-640667/34	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-640667/36	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-640667/35	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-640667/37	Lab Control Sample Dup	Total/NA	Water	RSK-175	

HPLC/IC

Analysis Batch: 640606

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190204-2	G6M-13-04X-FAL20	Total/NA	Water	9056A	
680-190204-10	G6M-04-03X-FAL20	Total/NA	Water	9056A	
MB 680-640606/2	Method Blank	Total/NA	Water	9056A	
LCS 680-640606/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-640606/4	Lab Control Sample Dup	Total/NA	Water	9056A	

Analysis Batch: 640614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190204-4	XSA-12-96X-FAL20	Total/NA	Water	9056A	
MB 680-640614/33	Method Blank	Total/NA	Water	9056A	
LCS 680-640614/34	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-640614/35	Lab Control Sample Dup	Total/NA	Water	9056A	

Metals

Prep Batch: 639714

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190204-1	G6M-13-03X-FAL20	Dissolved	Water	3005A	
680-190204-2	G6M-13-04X-FAL20	Dissolved	Water	3005A	
680-190204-4	XSA-12-96X-FAL20	Dissolved	Water	3005A	
680-190204-5	XSA-12-98X-FAL20	Dissolved	Water	3005A	
680-190204-6	G6M-02-04X-FAL20	Dissolved	Water	3005A	
680-190204-7	G6M-02-06X-FAL20	Dissolved	Water	3005A	
680-190204-8	G6M-02-07X-FAL20	Dissolved	Water	3005A	
680-190204-9	G6M-02-13X-FAL20	Dissolved	Water	3005A	
680-190204-10	G6M-04-03X-FAL20	Dissolved	Water	3005A	
680-190204-11	G6M-04-11X-FAL20	Dissolved	Water	3005A	
MB 680-639714/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-639714/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-190204-9 MS	G6M-02-13X-FAL20	Dissolved	Water	3005A	
680-190204-9 MSD	G6M-02-13X-FAL20	Dissolved	Water	3005A	

Prep Batch: 639715

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190204-1	G6M-13-03X-FAL20	Dissolved	Water	3005A	
680-190204-2	G6M-13-04X-FAL20	Dissolved	Water	3005A	
680-190204-4	XSA-12-96X-FAL20	Dissolved	Water	3005A	
680-190204-5	XSA-12-98X-FAL20	Dissolved	Water	3005A	
680-190204-6	G6M-02-04X-FAL20	Dissolved	Water	3005A	
680-190204-7	G6M-02-06X-FAL20	Dissolved	Water	3005A	
680-190204-8	G6M-02-07X-FAL20	Dissolved	Water	3005A	
680-190204-9	G6M-02-13X-FAL20	Dissolved	Water	3005A	
680-190204-10	G6M-04-03X-FAL20	Dissolved	Water	3005A	
680-190204-11	G6M-04-11X-FAL20	Dissolved	Water	3005A	
MB 680-639715/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-639715/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-190204-9 MS	G6M-02-13X-FAL20	Dissolved	Water	3005A	
680-190204-9 MSD	G6M-02-13X-FAL20	Dissolved	Water	3005A	

Analysis Batch: 639949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190204-1	G6M-13-03X-FAL20	Dissolved	Water	6020A	639714
680-190204-2	G6M-13-04X-FAL20	Dissolved	Water	6020A	639714
680-190204-4	XSA-12-96X-FAL20	Dissolved	Water	6020A	639714
680-190204-5	XSA-12-98X-FAL20	Dissolved	Water	6020A	639714
680-190204-6	G6M-02-04X-FAL20	Dissolved	Water	6020A	639714
680-190204-7	G6M-02-06X-FAL20	Dissolved	Water	6020A	639714
680-190204-8	G6M-02-07X-FAL20	Dissolved	Water	6020A	639714
680-190204-9	G6M-02-13X-FAL20	Dissolved	Water	6020A	639714
680-190204-10	G6M-04-03X-FAL20	Dissolved	Water	6020A	639714
680-190204-11	G6M-04-11X-FAL20	Dissolved	Water	6020A	639714
MB 680-639714/1-A	Method Blank	Total Recoverable	Water	6020A	639714
LCS 680-639714/2-A	Lab Control Sample	Total Recoverable	Water	6020A	639714
680-190204-9 MS	G6M-02-13X-FAL20	Dissolved	Water	6020A	639714
680-190204-9 MSD	G6M-02-13X-FAL20	Dissolved	Water	6020A	639714

Metals

Analysis Batch: 640009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190204-1	G6M-13-03X-FAL20	Dissolved	Water	6010C	639715
680-190204-2	G6M-13-04X-FAL20	Dissolved	Water	6010C	639715
680-190204-4	XSA-12-96X-FAL20	Dissolved	Water	6010C	639715
680-190204-5	XSA-12-98X-FAL20	Dissolved	Water	6010C	639715
680-190204-6	G6M-02-04X-FAL20	Dissolved	Water	6010C	639715
680-190204-7	G6M-02-06X-FAL20	Dissolved	Water	6010C	639715
680-190204-8	G6M-02-07X-FAL20	Dissolved	Water	6010C	639715
680-190204-9	G6M-02-13X-FAL20	Dissolved	Water	6010C	639715
680-190204-10	G6M-04-03X-FAL20	Dissolved	Water	6010C	639715
680-190204-11	G6M-04-11X-FAL20	Dissolved	Water	6010C	639715
MB 680-639715/1-A	Method Blank	Total Recoverable	Water	6010C	639715
LCS 680-639715/2-A	Lab Control Sample	Total Recoverable	Water	6010C	639715
680-190204-9 MS	G6M-02-13X-FAL20	Dissolved	Water	6010C	639715
680-190204-9 MSD	G6M-02-13X-FAL20	Dissolved	Water	6010C	639715

General Chemistry

Analysis Batch: 514188

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190204-2	G6M-13-04X-FAL20	Total/NA	Water	353.2	
680-190204-4	XSA-12-96X-FAL20	Total/NA	Water	353.2	
680-190204-10	G6M-04-03X-FAL20	Total/NA	Water	353.2	
MB 280-514188/61	Method Blank	Total/NA	Water	353.2	
LCS 280-514188/60	Lab Control Sample	Total/NA	Water	353.2	

Analysis Batch: 514211

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190204-2	G6M-13-04X-FAL20	Total/NA	Water	SM 2320B	
680-190204-4	XSA-12-96X-FAL20	Total/NA	Water	SM 2320B	
680-190204-10	G6M-04-03X-FAL20	Total/NA	Water	SM 2320B	
MB 280-514211/32	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-514211/31	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 514811

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190204-2	G6M-13-04X-FAL20	Total/NA	Water	9060A	
680-190204-4	XSA-12-96X-FAL20	Total/NA	Water	9060A	
680-190204-10	G6M-04-03X-FAL20	Total/NA	Water	9060A	
MB 280-514811/4	Method Blank	Total/NA	Water	9060A	
LCS 280-514811/3	Lab Control Sample	Total/NA	Water	9060A	

Analysis Batch: 640062

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190204-2	G6M-13-04X-FAL20	Total/NA	Water	9034	
680-190204-4	XSA-12-96X-FAL20	Total/NA	Water	9034	
680-190204-10	G6M-04-03X-FAL20	Total/NA	Water	9034	
MB 680-640062/1	Method Blank	Total/NA	Water	9034	
LCS 680-640062/2	Lab Control Sample	Total/NA	Water	9034	
LCSD 680-640062/3	Lab Control Sample Dup	Total/NA	Water	9034	

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190204-1

Client Sample ID: G6M-13-03X-FAL20

Lab Sample ID: 680-190204-1

Date Collected: 10/16/20 12:55

Matrix: Water

Date Received: 10/17/20 10:10

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	641269	10/29/20 02:22	EMA	TAL SAV
	Instrument ID: CMSC									
Dissolved	Prep	3005A			50 mL	50 mL	639715	10/19/20 16:08	AJR	TAL SAV
Dissolved	Analysis	6010C		1			640009	10/20/20 22:20	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	639714	10/19/20 16:08	AJR	TAL SAV
Dissolved	Analysis	6020A		1			639949	10/20/20 19:29	BWR	TAL SAV
	Instrument ID: ICPMSC									

Client Sample ID: G6M-13-04X-FAL20

Lab Sample ID: 680-190204-2

Date Collected: 10/16/20 14:35

Matrix: Water

Date Received: 10/17/20 10:10

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	641269	10/29/20 02:45	EMA	TAL SAV
	Instrument ID: CMSC									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	640667	10/26/20 01:34	DBM	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		5	5 mL	5 mL	640606	10/25/20 05:35	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	639715	10/19/20 16:08	AJR	TAL SAV
Dissolved	Analysis	6010C		1			640009	10/20/20 22:28	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	639714	10/19/20 16:08	AJR	TAL SAV
Dissolved	Analysis	6020A		1			639949	10/20/20 19:36	BWR	TAL SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	353.2		1	100 mL	100 mL	514188	10/26/20 19:35	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	260 mL	260 mL	640062	10/21/20 13:10	NVF	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1	20 mL	20 mL	514811	10/29/20 23:59	JMB	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			514211	10/26/20 20:20	RAF	TAL DEN
	Instrument ID: WC-AT3									

Client Sample ID: G6M-95-19X-FAL20

Lab Sample ID: 680-190204-3

Date Collected: 10/16/20 09:10

Matrix: Water

Date Received: 10/17/20 10:10

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	641269	10/29/20 03:09	EMA	TAL SAV
	Instrument ID: CMSC									

Client Sample ID: XSA-12-96X-FAL20

Lab Sample ID: 680-190204-4

Date Collected: 10/15/20 16:40

Matrix: Water

Date Received: 10/17/20 10:10

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	641277	10/29/20 06:53	EMA	TAL SAV
	Instrument ID: CMSP2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	640667	10/26/20 01:47	DBM	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	640614	10/25/20 13:58	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	639715	10/19/20 16:08	AJR	TAL SAV
Dissolved	Analysis	6010C		1			640009	10/20/20 22:45	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	639714	10/19/20 16:08	AJR	TAL SAV
Dissolved	Analysis	6020A		1			639949	10/20/20 19:50	BWR	TAL SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	353.2		1	100 mL	100 mL	514188	10/26/20 19:37	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	310 mL	310 mL	640062	10/21/20 13:10	NVF	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1	20 mL	20 mL	514811	10/30/20 00:14	JMB	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			514211	10/26/20 20:26	RAF	TAL DEN
	Instrument ID: WC-AT3									

Client Sample ID: XSA-12-98X-FAL20

Lab Sample ID: 680-190204-5

Date Collected: 10/16/20 11:40

Matrix: Water

Date Received: 10/17/20 10:10

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	641269	10/29/20 03:32	EMA	TAL SAV
	Instrument ID: CMSC									
Dissolved	Prep	3005A			50 mL	50 mL	639715	10/19/20 16:08	AJR	TAL SAV
Dissolved	Analysis	6010C		1			640009	10/20/20 23:01	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	639714	10/19/20 16:08	AJR	TAL SAV
Dissolved	Analysis	6020A		1			639949	10/20/20 20:04	BWR	TAL SAV
	Instrument ID: ICPMSC									

Client Sample ID: G6M-02-04X-FAL20

Lab Sample ID: 680-190204-6

Date Collected: 10/15/20 16:35

Matrix: Water

Date Received: 10/17/20 10:10

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	641277	10/29/20 07:17	EMA	TAL SAV
	Instrument ID: CMSP2									
Dissolved	Prep	3005A			50 mL	50 mL	639715	10/19/20 16:08	AJR	TAL SAV
Dissolved	Analysis	6010C		1			640009	10/20/20 22:57	BCB	TAL SAV
	Instrument ID: ICPE									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190204-1

Client Sample ID: G6M-02-04X-FAL20

Lab Sample ID: 680-190204-6

Date Collected: 10/15/20 16:35

Matrix: Water

Date Received: 10/17/20 10:10

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	639714	10/19/20 16:08	AJR	TAL SAV
Dissolved	Analysis	6020A		1			639949	10/20/20 20:00	BWR	TAL SAV
	Instrument ID: ICPMSC									

Client Sample ID: G6M-02-06X-FAL20

Lab Sample ID: 680-190204-7

Date Collected: 10/16/20 13:30

Matrix: Water

Date Received: 10/17/20 10:10

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	641269	10/29/20 03:55	EMA	TAL SAV
	Instrument ID: CMSC									
Dissolved	Prep	3005A			50 mL	50 mL	639715	10/19/20 16:08	AJR	TAL SAV
Dissolved	Analysis	6010C		1			640009	10/20/20 22:24	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	639714	10/19/20 16:08	AJR	TAL SAV
Dissolved	Analysis	6020A		1			639949	10/20/20 19:32	BWR	TAL SAV
	Instrument ID: ICPMSC									

Client Sample ID: G6M-02-07X-FAL20

Lab Sample ID: 680-190204-8

Date Collected: 10/16/20 12:05

Matrix: Water

Date Received: 10/17/20 10:10

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	641269	10/29/20 04:18	EMA	TAL SAV
	Instrument ID: CMSC									
Dissolved	Prep	3005A			50 mL	50 mL	639715	10/19/20 16:08	AJR	TAL SAV
Dissolved	Analysis	6010C		1			640009	10/20/20 22:53	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	639714	10/19/20 16:08	AJR	TAL SAV
Dissolved	Analysis	6020A		1			639949	10/20/20 19:57	BWR	TAL SAV
	Instrument ID: ICPMSC									

Client Sample ID: G6M-02-13X-FAL20

Lab Sample ID: 680-190204-9

Date Collected: 10/16/20 16:25

Matrix: Water

Date Received: 10/17/20 10:10

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	641269	10/29/20 04:41	EMA	TAL SAV
	Instrument ID: CMSC									
Dissolved	Prep	3005A			50 mL	50 mL	639715	10/19/20 16:08	AJR	TAL SAV
Dissolved	Analysis	6010C		1			640009	10/20/20 22:00	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	639714	10/19/20 16:08	AJR	TAL SAV
Dissolved	Analysis	6020A		1			639949	10/20/20 19:11	BWR	TAL SAV
	Instrument ID: ICPMSC									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190204-1

Client Sample ID: G6M-04-03X-FAL20

Lab Sample ID: 680-190204-10

Date Collected: 10/16/20 15:20

Matrix: Water

Date Received: 10/17/20 10:10

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	641269	10/29/20 05:04	EMA	TAL SAV
	Instrument ID: CMSC									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	640667	10/26/20 02:00	DBM	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		5	5 mL	5 mL	640606	10/25/20 07:44	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	639715	10/19/20 16:08	AJR	TAL SAV
Dissolved	Analysis	6010C		1			640009	10/20/20 22:41	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	639714	10/19/20 16:08	AJR	TAL SAV
Dissolved	Analysis	6020A		1			639949	10/20/20 19:46	BWR	TAL SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	353.2		1	100 mL	100 mL	514188	10/26/20 19:39	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	310 mL	310 mL	640062	10/21/20 13:10	NVF	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1	20 mL	20 mL	514811	10/30/20 00:29	JMB	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			514211	10/26/20 20:30	RAF	TAL DEN
	Instrument ID: WC-AT3									

Client Sample ID: G6M-04-11X-FAL20

Lab Sample ID: 680-190204-11

Date Collected: 10/16/20 10:20

Matrix: Water

Date Received: 10/17/20 10:10

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	641269	10/29/20 05:28	EMA	TAL SAV
	Instrument ID: CMSC									
Dissolved	Prep	3005A			50 mL	50 mL	639715	10/19/20 16:08	AJR	TAL SAV
Dissolved	Analysis	6010C		1			640009	10/20/20 22:49	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	639714	10/19/20 16:08	AJR	TAL SAV
Dissolved	Analysis	6020A		1			639949	10/20/20 19:53	BWR	TAL SAV
	Instrument ID: ICPMSC									

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-190204-1
Project/Site: Fort Devens

Laboratory: Eurofins TestAmerica, Savannah

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

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-22-22

Laboratory: Eurofins TestAmerica, Denver

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21

Method Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190204-1

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
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	TAL DEN
9034	Sulfide, Acid Soluble and Insoluble (Titrimetric)	SW846	TAL SAV
9060A	Organic Carbon, Total (TOC)	SW846	TAL DEN
SM 2320B	Alkalinity	SM	TAL DEN
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 TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

TAL SAV = Eurofins TestAmerica, 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 # 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 2020
Project Number: DEVENS-LTM	Contact:	
WBS Code:	Ship to:	

Comments:
A2320B (A) = Alkalinity
E353.2 (A) = Nitrite Nitrate as N
RSK175 (A) = Dissolved Gases
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9034 (A) = Sulfide

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
5	1x 125mL plastic, Cool < 6degC
7	2x 250mL plastic, ZnAc/NaOH Cool < 6degC
8	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
10	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
29	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC
47	1x 500mL, amber glass, H2SO4; Cool < 6degC

						Analytical Test Method	A2320B (A)	E353.2 (A)	RSK175 (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW8260B - VOCs	SW9034 (A)	SW9056A - SO4	SW9060A - TOC						
	Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020						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
39	G6M-13-03X-FAL20	WG	10-16-20	1255	DC					X	X	X				G6M-13-03X	N1	80.00	90.00		
40	G6M-13-04X-FAL20	WG	10-16-20	1435	CP	X	X	X	X	X	X	X	X	X	X	G6M-13-04X	N1	125.00	135.00		
41	G6M-13-05X-FAL20	WG				X	X	X	X	X	X	X	X	X	X	G6M-13-05X	N1	45.00	55.00		
42	G6M-13-06X-FAL20	WG				X	X	X	X	X	X	X	X	X	X	G6M-13-06X	N1	50.00	60.00		
43	G6M-18-01-FAL20	WG				X	X	X	X	X	X	X	X	X	X	G6M-18-01	N1	116.00	126.00		
44	G6M-18-02-FAL20	WG				X	X	X	X	X	X	X	X	X	X	G6M-18-02	N1	123.95	133.95		
45	G6M-95-19X-FAL20	WG	10-16-20	910	DC							X				G6M-95-19X	N1	48.00	58.00		
46	G6M-95-20X-FAL20	WG								X	X	X				G6M-95-20X	N1	18.00	23.00		
47	G6M-97-05B-FAL20	WG				X	X	X	X	X	X	X	X	X	X	G6M-97-05B	N1	130.00	135.00		
48	G6M-97-28X-FAL20	WG								X	X	X				G6M-97-28X	N1	100.00	105.00		
49	MW-3-FAL20	WG								X	X	X				MW-3	MS1	126.00	137.00		
50	MW-3-FAL20	WG								X	X	X				MW-3	N1	126.00	137.00		
51	MW-3-FAL20	WG								X	X	X				MW-3	SD1	126.00	137.00		
52	MW-7-FAL20	WG								X	X	X				MW-7	N1	6.58	135.00		
53	XSA-12-95X-FAL20	WG								X	X	X				XSA-12-95X	N1	120.00	130.00		
54	XSA-12-96X-FAL20	WG	10.15.20	1640	CP	X	X	X	X	X	X	X	X	X	X	XSA-12-96X	N1	120.00	130.00		
55	XSA-12-97X-FAL20	WG								X	X	X				XSA-12-97X	N1	120.00	130.00		
56	XSA-12-98X-FAL20	WG	10-16-20	1140	CP					X	X	X				XSA-12-98X	N1	60.00	70.00		

Turnaround Time: NA

Relinquished by: [signature] 10/16/20
Date
Time 1710-16-20
Received by: [signature]
AOC50_eCOC 1735

Date
Time
Shipping Date:
Received by Laboratory:
Condition:

680-190204-01 Chain of Custody

10/30/2020

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 #

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 2020
Project Number: DEVENS-LTM	Contact:	
WBS Code:	Ship to:	

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
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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 2020

						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
1	AOC50-DUP01-FAL20	WG								X	X	X				G6M-95-20X	FD1	18.00	23.00		
2	AOC50-DUP02-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-07-02X	FD1	22.50	27.50		
3	AOC50-DUP03-FAL20	WG								X	X	X				G6M-04-04X	FD1	94.00	104.00		
4	AOC50-DUP04-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-13-02X	FD1	115.00	125.00		
5	G6M-02-01X-FAL20	WG								X	X	X				G6M-02-01X	N1	80.00	95.00		
6	G6M-02-04X-FAL20	WG	10-15-20	1635	NB					X	X	X				G6M-02-04X	N1	90.00	105.00		
7	G6M-02-06X-FAL20	WG	10-16-20	1330	NB					X	X	X				G6M-02-06X	N1	55.00	65.00		
8	G6M-02-07X-FAL20	WG	10-16-20	1205	NB					X	X	X				G6M-02-07X	N1	30.00	40.00		
9	G6M-02-08X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-02-08X	N1	60.00	70.00		
10	G6M-02-11X-FAL20	WG								X	X	X				G6M-02-11X	N1	125.00	135.00		
11	G6M-02-12X-FAL20	WG								X	X	X				G6M-02-12X	N1	125.00	135.00		
12	G6M-02-13X-FAL20	WG	10-16-20	1625	NB					X	X	X				G6M-02-13X	N1	110.00	120.00		
13	G6M-03-07X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-03-07X	N1	80.00	90.00		
14	G6M-03-08X-FAL20	WG								X	X	X				G6M-03-08X	N1	125.00	140.00		
15	G6M-03-10X-FAL20	WG								X	X	X				G6M-03-10X	N1	120.00	135.00		
16	G6M-04-01X-FAL20	WG								X	X	X				G6M-04-01X	N1	82.00	92.00		
17	G6M-04-02X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-04-02X	N1	80.00	90.00		
18	G6M-04-03X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-04-03X	MS1	85.00	95.00		
19	G6M-04-03X-FAL20	WG	10-16-20	1520	DC		X	X	X	X	X	X	X	X	X	G6M-04-03X	N1	85.00	95.00		

680-190204-02 Chain of Custody

Relinquished by: Diane Chupsue
Date 10-16-20
Time 1730
Received by: Conn 10-16-20 - 1737
AOC50_eCOC

Date
Time
Shipping Date:
Received by Laboratory:
Condition:

Trip Blank for VOC

Page 52 of 56

10/30/2020

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 #

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 2020
Project Number: DEVENS-LTM	Contact:	
WBS Code:	Ship to:	

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 2020

						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
20	G6M-04-03X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-04-03X	SD1	85.00	95.00		
21	G6M-04-04X-FAL20	WG								X	X	X				G6M-04-04X	N1	94.00	104.00		
22	G6M-04-05X-FAL20	WG										X				G6M-04-05X	N1	100.00	110.00		
23	G6M-04-06X-FAL20	WG								X	X	X				G6M-04-06X	N1	95.00	136.00		
24	G6M-04-07X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-04-07X	N1	120.00	130.00		
25	G6M-04-09X-FAL20	WG								X	X	X				G6M-04-09X	N1	55.00	65.00		
26	G6M-04-10A-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-04-10A	N1	30.00	40.00		
27	G6M-04-10X-FAL20	WG										X				G6M-04-10X	N1	52.00	62.00		
28	G6M-04-11X-FAL20	WG	10-16-20	1020	DC					X	X	X				G6M-04-11X	N1	35.00	45.00		
29	G6M-04-13X-FAL20	WG										X				G6M-04-13X	N1	30.00	40.00		
30	G6M-04-14X-FAL20	WG								X	X	X				G6M-04-14X	N1	80.00	90.00		
31	G6M-04-15X-FAL20	WG								X	X	X				G6M-04-15X	N1	70.00	80.00		
32	G6M-04-22X-FAL20	WG								X	X	X				G6M-04-22X	N1	74.00	84.00		
33	G6M-04-31X-FAL20	WG								X	X	X				G6M-04-31X	N1	68.00	78.00		
34	G6M-06-01X-FAL20	WG								X	X	X				G6M-06-01X	N1	106.00	126.00		
35	G6M-07-01X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-07-01X	N1	78.00	89.00		
36	G6M-07-02X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-07-02X	N1	22.50	27.50		
37	G6M-13-01X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-13-01X	N1	125.00	135.00		
38	G6M-13-02X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-13-02X	N1	115.00	125.00		

680-190204-03 Chain of Custody

Relinquished by: Amy J
Date 10-16-20
Time
Received by:
AOCS0_eCOC

Date
Time
Shipping Date:
Received by Laboratory:
Condition:

10/30/2020

Eurofins TestAmerica, 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: Smith, Kathryn E	Carrier Tracking No(s):	COC No: 680-629803.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Kathy.Smith@Eurofinset.com	State of Origin: Massachusetts	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): Dept. of Defense ELAP - A2LA; DoD - ANAB		Job #: 680-190204-1
Address: 4955 Yarrow Street, ,	Due Date Requested: 10/28/2020			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: Fort Devens	Project #: 68023801			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, 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=wasteoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2320B/ Alkalinity	353.2_Pres	9060A/ (MOD) Waters - TOC Duplicates	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
G6M-13-04X-FAL20 (680-190204-2)	10/16/20	14:35 Eastern		Water			X	X	X	3	
XSA-12-96X-FAL20 (680-190204-4)	10/15/20	16:40 Eastern		Water			X	X	X	3	
G6M-04-03X-FAL20 (680-190204-10)	10/16/20	15:20 Eastern		Water			X	X	X	3	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica 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 TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	10-19-20 1515		[signature]	10/20/20 0430	IETA-Rep
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: 1334273

Cooler Temperature(s) °C and Other Remarks: 1.6 IR#11-03 IR#2 10/20/20

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-190204-1

Login Number: 190204

List Source: Eurofins TestAmerica, 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").	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: 680-190204-1

Login Number: 190204
List Number: 2
Creator: O'Hara, Jake F

List Source: Eurofins TestAmerica, Denver
List Creation: 10/20/20 07:52 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").	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 TestAmerica, Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

Laboratory Job ID: 680-190226-1
Client Project/Site: Fort Devens

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

Attn: Nathan R Mullens

Kathryn Smith

Authorized for release by:
11/2/2020 6:10:11 PM

Kathryn Smith, Client Service Manager
(912)250-0275
Kathy.Smith@Eurofinset.com

LINKS

Review your project results through TotalAccess

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.

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

General Chemistry

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Glossary

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

Glossary (Continued)

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

Job ID: 680-190226-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
680-190226-1	G6M-02-12X-FAL20	Water	10/15/20 12:00	10/17/20 10:10	
680-190226-2	AOC50-TB2-FAL20	Water	10/14/20 00:00	10/17/20 10:10	
680-190226-3	G6M-04-13X-FAL20	Water	10/14/20 15:40	10/17/20 10:10	
680-190226-4	G6M-18-02-FAL20	Water	10/14/20 14:45	10/17/20 10:10	
680-190226-5	G6M-97-28X-FAL20	Water	10/15/20 14:15	10/17/20 10:10	
680-190226-6	MW-3-FAL20	Water	10/15/20 13:50	10/17/20 10:10	
680-190226-7	MW-7-FAL20	Water	10/15/20 12:10	10/17/20 10:10	
680-190226-8	XSA-12-95X-FAL20	Water	10/15/20 13:40	10/17/20 10:10	

Job ID: 680-190226-1

Laboratory: Eurofins TestAmerica, Savannah

Narrative

CASE NARRATIVE
Client: Seres Engineering & Services LLC
Project: Fort Devens

Report Number: 680-190226-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

RECEIPT
The samples were received on 10/17/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.7 C.

VOLATILE ORGANIC COMPOUNDS (GC/MS)
Samples G6M-02-12X-FAL20 (680-190226-1), AOC50-TB2-FAL20 (680-190226-2), G6M-04-13X-FAL20 (680-190226-3), G6M-18-02-FAL20 (680-190226-4), G6M-97-28X-FAL20 (680-190226-5), MW-3-FAL20 (680-190226-6), MW-7-FAL20 (680-190226-7) and XSA-12-95X-FAL20 (680-190226-8) were analyzed for Volatile Organic Compounds (GC/MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 10/29/2020.

The surrogate recovery for the blank associated with analytical batch 680-641269 was marginally outside the control limits.

Surrogate recovery for the following sample was marginally outside control limits: MW-7-FAL20 (680-190226-7). Evidence of matrix interferences is not obvious.

The following samples were analyzed outside of analytical holding time due to laboratory error: AOC50-TB2-FAL20 (680-190226-2), G6M-04-13X-FAL20 (680-190226-3) and G6M-18-02-FAL20 (680-190226-4).

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

DISSOLVED GASES
Sample G6M-18-02-FAL20 (680-190226-4) was analyzed for dissolved gases in accordance with RSK-175. The samples were analyzed on 10/26/2020.

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

METALS (ICP) - DISSOLVED
Samples G6M-02-12X-FAL20 (680-190226-1), G6M-18-02-FAL20 (680-190226-4), G6M-97-28X-FAL20 (680-190226-5), MW-3-FAL20 (680-190226-6), MW-7-FAL20 (680-190226-7) and XSA-12-95X-FAL20 (680-190226-8) were analyzed for Metals (ICP) - Dissolved in accordance with EPA SW-846 Method 6010C. The samples were prepared on 10/21/2020 and analyzed on 10/23/2020.

Iron and Manganese recovered low for the MS of sample MW-3-FAL20MS (680-190226-6) in batch 680-640430.

Iron and Manganese recovered high for the MSD of sample MW-3-FAL20MSD (680-190226-6) in batch 680-640430.

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

Manganese was detected in method blank MB 680-640123/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Job ID: 680-190226-1 (Continued)

Laboratory: Eurofins TestAmerica, Savannah (Continued)

METALS (ICPMS) - DISSOLVED

Samples G6M-02-12X-FAL20 (680-190226-1), G6M-18-02-FAL20 (680-190226-4), G6M-97-28X-FAL20 (680-190226-5), MW-3-FAL20 (680-190226-6), MW-7-FAL20 (680-190226-7) and XSA-12-95X-FAL20 (680-190226-8) were analyzed for Metals (ICPMS) - Dissolved in accordance with EPA SW-846 Method 6020A. The samples were prepared on 10/21/2020 and analyzed on 10/22/2020.

Arsenic recovered low for the MS/MSD of sample MW-3-FAL20 (680-190226-6) in batch 680-640364.

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

ALKALINITY

Sample G6M-18-02-FAL20 (680-190226-4) was analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 10/26/2020.

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

NITRATE-NITRITE AS NITROGEN

Sample G6M-18-02-FAL20 (680-190226-4) was analyzed for nitrate-nitrite as nitrogen in accordance with EPA Method 353.2. The samples were analyzed on 10/28/2020.

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

SULFIDE

Sample G6M-18-02-FAL20 (680-190226-4) was analyzed for sulfide in accordance with EPA SW846 Method 9034. The samples were analyzed on 10/21/2020.

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

ANIONS BY ION CHROMATOGRAPHY (28 DAY)

Sample G6M-18-02-FAL20 (680-190226-4) was analyzed for Anions by Ion Chromatography (28 Day) in accordance with SW 846 9056A. The samples were analyzed on 10/25/2020.

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

TOTAL ORGANIC CARBON

Sample G6M-18-02-FAL20 (680-190226-4) was analyzed for total organic carbon in accordance with EPA SW-846 Method 9060A. The samples were analyzed on 10/31/2020.

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

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190226-1

Client Sample ID: G6M-02-12X-FAL20
Date Collected: 10/15/20 12:00
Date Received: 10/17/20 10:10

Lab Sample ID: 680-190226-1
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 06:14	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 06:14	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/29/20 06:14	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/29/20 06:14	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/29/20 06:14	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/29/20 06:14	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/29/20 06:14	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 06:14	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/29/20 06:14	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 06:14	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 06:14	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/29/20 06:14	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/29/20 06:14	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/29/20 06:14	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			10/29/20 06:14	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/29/20 06:14	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/29/20 06:14	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/29/20 06:14	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/29/20 06:14	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/29/20 06:14	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/29/20 06:14	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/29/20 06:14	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/29/20 06:14	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/29/20 06:14	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/29/20 06:14	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/29/20 06:14	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/29/20 06:14	1
Acetone	7.0	U	10	7.0	ug/L			10/29/20 06:14	1
Benzene	0.43	U	1.0	0.43	ug/L			10/29/20 06:14	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/29/20 06:14	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/29/20 06:14	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/29/20 06:14	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/29/20 06:14	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/29/20 06:14	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/29/20 06:14	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/29/20 06:14	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/29/20 06:14	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/29/20 06:14	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/29/20 06:14	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/29/20 06:14	1
cis-1,2-Dichloroethene	**0.42**	**J**	1.0	0.41	ug/L			10/29/20 06:14	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/29/20 06:14	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/29/20 06:14	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/29/20 06:14	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/29/20 06:14	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/29/20 06:14	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/29/20 06:14	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/29/20 06:14	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/29/20 06:14	1

Client Sample ID: G6M-02-12X-FAL20

Lab Sample ID: 680-190226-1

Date Collected: 10/15/20 12:00

Matrix: Water

Date Received: 10/17/20 10:10

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/29/20 06:14	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/29/20 06:14	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/29/20 06:14	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/29/20 06:14	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 06:14	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/29/20 06:14	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/29/20 06:14	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/29/20 06:14	1
Styrene	0.27	U	1.0	0.27	ug/L			10/29/20 06:14	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/29/20 06:14	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			10/29/20 06:14	1
Toluene	0.48	U	1.0	0.48	ug/L			10/29/20 06:14	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/29/20 06:14	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/29/20 06:14	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/29/20 06:14	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/29/20 06:14	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/29/20 06:14	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/29/20 06:14	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/29/20 06:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*		*10/29/20 06:14*	*1*
Dibromofluoromethane (Surr)	*88*		*80 - 119*		*10/29/20 06:14*	*1*
Toluene-d8 (Surr)	*89*		*89 - 112*		*10/29/20 06:14*	*1*
1,2-Dichloroethane-d4 (Surr)	*85*		*81 - 118*		*10/29/20 06:14*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**44000**		50	17	ug/L		10/21/20 17:27	10/23/20 01:39	1
Manganese	**8100**		10	1.0	ug/L		10/21/20 17:27	10/23/20 01:39	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**530**		3.0	1.5	ug/L		10/21/20 17:24	10/22/20 17:58	1

Client Sample ID: AOC50-TB2-FAL20

Lab Sample ID: 680-190226-2

Date Collected: 10/14/20 00:00

Matrix: Water

Date Received: 10/17/20 10:10

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U H	1.0	0.37	ug/L			10/29/20 02:22	1
1,1,1-Trichloroethane	0.37	U H	1.0	0.37	ug/L			10/29/20 02:22	1
1,1,2,2-Tetrachloroethane	0.62	U H	1.0	0.62	ug/L			10/29/20 02:22	1
1,1,2-Trichloroethane	0.33	U H	1.0	0.33	ug/L			10/29/20 02:22	1
1,1-Dichloroethane	0.38	U H	1.0	0.38	ug/L			10/29/20 02:22	1
1,1-Dichloroethene	0.36	U H	1.0	0.36	ug/L			10/29/20 02:22	1
1,1-Dichloropropene	0.34	U H	1.0	0.34	ug/L			10/29/20 02:22	1
1,2,3-Trichlorobenzene	2.5	U H	5.0	2.5	ug/L			10/29/20 02:22	1
1,2,3-Trichloropropane	0.39	U H	1.0	0.39	ug/L			10/29/20 02:22	1
1,2,4-Trichlorobenzene	2.5	U H	5.0	2.5	ug/L			10/29/20 02:22	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190226-1

Client Sample ID: AOC50-TB2-FAL20
Date Collected: 10/14/20 00:00
Date Received: 10/17/20 10:10

Lab Sample ID: 680-190226-2
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	0.47	U H	1.0	0.47	ug/L			10/29/20 02:22	1
1,2-Dibromo-3-Chloropropane	1.1	U H	5.0	1.1	ug/L			10/29/20 02:22	1
1,2-Dichlorobenzene	0.37	U H	1.0	0.37	ug/L			10/29/20 02:22	1
1,2-Dichloroethane	0.50	U M H	1.0	0.50	ug/L			10/29/20 02:22	1
1,2-Dichloroethene, Total	0.74	U H	2.0	0.74	ug/L			10/29/20 02:22	1
1,2-Dichloropropane	0.67	U H	1.0	0.67	ug/L			10/29/20 02:22	1
1,3,5-Trimethylbenzene	0.31	U H	1.0	0.31	ug/L			10/29/20 02:22	1
1,3-Dichlorobenzene	0.43	U H	1.0	0.43	ug/L			10/29/20 02:22	1
1,3-Dichloropropane	0.34	U H	1.0	0.34	ug/L			10/29/20 02:22	1
1,4-Dichlorobenzene	0.46	U H	1.0	0.46	ug/L			10/29/20 02:22	1
2,2-Dichloropropane	0.37	U H	1.0	0.37	ug/L			10/29/20 02:22	1
2-Butanone (MEK)	3.4	U H	10	3.4	ug/L			10/29/20 02:22	1
2-Chlorotoluene	0.27	U H	1.0	0.27	ug/L			10/29/20 02:22	1
2-Hexanone	2.0	U H	10	2.0	ug/L			10/29/20 02:22	1
4-Chlorotoluene	0.45	U H	1.0	0.45	ug/L			10/29/20 02:22	1
4-Isopropyltoluene	0.48	U H	1.0	0.48	ug/L			10/29/20 02:22	1
4-Methyl-2-pentanone (MIBK)	2.1	U H	10	2.1	ug/L			10/29/20 02:22	1
Acetone	7.0	U H	10	7.0	ug/L			10/29/20 02:22	1
Benzene	0.43	U H	1.0	0.43	ug/L			10/29/20 02:22	1
Bromobenzene	0.50	U H	1.0	0.50	ug/L			10/29/20 02:22	1
Bromoform	0.43	U H	1.0	0.43	ug/L			10/29/20 02:22	1
Bromomethane	2.5	U H	5.0	2.5	ug/L			10/29/20 02:22	1
Carbon disulfide	0.43	U H	2.0	0.43	ug/L			10/29/20 02:22	1
Carbon tetrachloride	0.33	U H	1.0	0.33	ug/L			10/29/20 02:22	1
Chlorobenzene	0.26	U H	1.0	0.26	ug/L			10/29/20 02:22	1
Chlorobromomethane	0.45	U H	1.0	0.45	ug/L			10/29/20 02:22	1
Chlorodibromomethane	0.32	U H	1.0	0.32	ug/L			10/29/20 02:22	1
Chloroethane	2.5	U H	5.0	2.5	ug/L			10/29/20 02:22	1
Chloroform	0.50	U H	1.0	0.50	ug/L			10/29/20 02:22	1
Chloromethane	0.40	U H	1.0	0.40	ug/L			10/29/20 02:22	1
cis-1,2-Dichloroethene	0.41	U H	1.0	0.41	ug/L			10/29/20 02:22	1
cis-1,3-Dichloropropene	0.40	U H	1.0	0.40	ug/L			10/29/20 02:22	1
Dibromomethane	0.35	U H	1.0	0.35	ug/L			10/29/20 02:22	1
Dichlorobromomethane	0.44	U H	1.0	0.44	ug/L			10/29/20 02:22	1
Dichlorodifluoromethane	0.60	U H	1.0	0.60	ug/L			10/29/20 02:22	1
Ethylbenzene	0.33	U H	1.0	0.33	ug/L			10/29/20 02:22	1
Ethylene Dibromide	0.44	U H	1.0	0.44	ug/L			10/29/20 02:22	1
Hexachlorobutadiene	2.5	U H	5.0	2.5	ug/L			10/29/20 02:22	1
Isopropylbenzene	0.35	U H	1.0	0.35	ug/L			10/29/20 02:22	1
Methyl tert-butyl ether	0.30	U H	10	0.30	ug/L			10/29/20 02:22	1
Methylene Chloride	2.5	U H	5.0	2.5	ug/L			10/29/20 02:22	1
m-Xylene & p-Xylene	0.35	U H	1.0	0.35	ug/L			10/29/20 02:22	1
Naphthalene	2.5	U H	5.0	2.5	ug/L			10/29/20 02:22	1
n-Butylbenzene	0.47	U H	1.0	0.47	ug/L			10/29/20 02:22	1
N-Propylbenzene	0.38	U H	1.0	0.38	ug/L			10/29/20 02:22	1
o-Xylene	0.23	U H	1.0	0.23	ug/L			10/29/20 02:22	1
sec-Butylbenzene	0.42	U H	1.0	0.42	ug/L			10/29/20 02:22	1
Styrene	0.27	U H	1.0	0.27	ug/L			10/29/20 02:22	1
tert-Butylbenzene	0.45	U H	1.0	0.45	ug/L			10/29/20 02:22	1

Client Sample ID: AOC50-TB2-FAL20

Lab Sample ID: 680-190226-2

Date Collected: 10/14/20 00:00

Matrix: Water

Date Received: 10/17/20 10:10

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	0.74	U H	1.0	0.74	ug/L			10/29/20 02:22	1
Toluene	0.48	U H	1.0	0.48	ug/L			10/29/20 02:22	1
trans-1,2-Dichloroethene	0.37	U H	1.0	0.37	ug/L			10/29/20 02:22	1
trans-1,3-Dichloropropene	0.42	U H	1.0	0.42	ug/L			10/29/20 02:22	1
Trichloroethene	0.48	U H	1.0	0.48	ug/L			10/29/20 02:22	1
Trichlorofluoromethane	0.42	U H	1.0	0.42	ug/L			10/29/20 02:22	1
Vinyl acetate	0.81	U H	2.0	0.81	ug/L			10/29/20 02:22	1
Vinyl chloride	0.50	U H	1.0	0.50	ug/L			10/29/20 02:22	1
Xylenes, Total	0.23	U H	2.0	0.23	ug/L			10/29/20 02:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*10/29/20 02:22*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 119*		*10/29/20 02:22*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*10/29/20 02:22*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*		*10/29/20 02:22*	*1*

Client Sample ID: G6M-04-13X-FAL20

Lab Sample ID: 680-190226-3

Date Collected: 10/14/20 15:40

Matrix: Water

Date Received: 10/17/20 10:10

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U H	1.0	0.37	ug/L			10/29/20 07:42	1
1,1,1-Trichloroethane	0.37	U H	1.0	0.37	ug/L			10/29/20 07:42	1
1,1,2,2-Tetrachloroethane	0.62	U H	1.0	0.62	ug/L			10/29/20 07:42	1
1,1,2-Trichloroethane	0.33	U H	1.0	0.33	ug/L			10/29/20 07:42	1
1,1-Dichloroethane	0.38	U H	1.0	0.38	ug/L			10/29/20 07:42	1
1,1-Dichloroethene	0.36	U H	1.0	0.36	ug/L			10/29/20 07:42	1
1,1-Dichloropropene	0.34	U H	1.0	0.34	ug/L			10/29/20 07:42	1
1,2,3-Trichlorobenzene	2.5	U H	5.0	2.5	ug/L			10/29/20 07:42	1
1,2,3-Trichloropropane	0.39	U H	1.0	0.39	ug/L			10/29/20 07:42	1
1,2,4-Trichlorobenzene	2.5	U H	5.0	2.5	ug/L			10/29/20 07:42	1
1,2,4-Trimethylbenzene	0.47	U H	1.0	0.47	ug/L			10/29/20 07:42	1
1,2-Dibromo-3-Chloropropane	1.1	U H	5.0	1.1	ug/L			10/29/20 07:42	1
1,2-Dichlorobenzene	0.37	U H	1.0	0.37	ug/L			10/29/20 07:42	1
1,2-Dichloroethane	0.50	U M H	1.0	0.50	ug/L			10/29/20 07:42	1
1,2-Dichloroethene, Total	0.74	U H	2.0	0.74	ug/L			10/29/20 07:42	1
1,2-Dichloropropane	0.67	U H	1.0	0.67	ug/L			10/29/20 07:42	1
1,3,5-Trimethylbenzene	0.31	U H	1.0	0.31	ug/L			10/29/20 07:42	1
1,3-Dichlorobenzene	0.43	U H	1.0	0.43	ug/L			10/29/20 07:42	1
1,3-Dichloropropane	0.34	U H	1.0	0.34	ug/L			10/29/20 07:42	1
1,4-Dichlorobenzene	0.46	U H	1.0	0.46	ug/L			10/29/20 07:42	1
2,2-Dichloropropane	0.37	U H	1.0	0.37	ug/L			10/29/20 07:42	1
2-Butanone (MEK)	3.4	U H	10	3.4	ug/L			10/29/20 07:42	1
2-Chlorotoluene	0.27	U H	1.0	0.27	ug/L			10/29/20 07:42	1
2-Hexanone	2.0	U H	10	2.0	ug/L			10/29/20 07:42	1
4-Chlorotoluene	0.45	U H	1.0	0.45	ug/L			10/29/20 07:42	1
4-Isopropyltoluene	0.48	U H	1.0	0.48	ug/L			10/29/20 07:42	1
4-Methyl-2-pentanone (MIBK)	2.1	U H	10	2.1	ug/L			10/29/20 07:42	1
Acetone	7.0	U H	10	7.0	ug/L			10/29/20 07:42	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190226-1

Client Sample ID: G6M-04-13X-FAL20
Date Collected: 10/14/20 15:40
Date Received: 10/17/20 10:10

Lab Sample ID: 680-190226-3
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.43	U H	1.0	0.43	ug/L			10/29/20 07:42	1
Bromobenzene	0.50	U H	1.0	0.50	ug/L			10/29/20 07:42	1
Bromoform	0.43	U H	1.0	0.43	ug/L			10/29/20 07:42	1
Bromomethane	2.5	U H	5.0	2.5	ug/L			10/29/20 07:42	1
Carbon disulfide	0.43	U H	2.0	0.43	ug/L			10/29/20 07:42	1
Carbon tetrachloride	0.33	U H	1.0	0.33	ug/L			10/29/20 07:42	1
Chlorobenzene	0.26	U H	1.0	0.26	ug/L			10/29/20 07:42	1
Chlorobromomethane	0.45	U H	1.0	0.45	ug/L			10/29/20 07:42	1
Chlorodibromomethane	0.32	U H	1.0	0.32	ug/L			10/29/20 07:42	1
Chloroethane	2.5	U H	5.0	2.5	ug/L			10/29/20 07:42	1
Chloroform	0.50	U H	1.0	0.50	ug/L			10/29/20 07:42	1
Chloromethane	0.40	U H	1.0	0.40	ug/L			10/29/20 07:42	1
cis-1,2-Dichloroethene	0.41	U H	1.0	0.41	ug/L			10/29/20 07:42	1
cis-1,3-Dichloropropene	0.40	U H	1.0	0.40	ug/L			10/29/20 07:42	1
Dibromomethane	0.35	U H	1.0	0.35	ug/L			10/29/20 07:42	1
Dichlorobromomethane	0.44	U H	1.0	0.44	ug/L			10/29/20 07:42	1
Dichlorodifluoromethane	0.60	U H	1.0	0.60	ug/L			10/29/20 07:42	1
Ethylbenzene	0.33	U H	1.0	0.33	ug/L			10/29/20 07:42	1
Ethylene Dibromide	0.44	U H	1.0	0.44	ug/L			10/29/20 07:42	1
Hexachlorobutadiene	2.5	U H	5.0	2.5	ug/L			10/29/20 07:42	1
Isopropylbenzene	0.35	U H	1.0	0.35	ug/L			10/29/20 07:42	1
Methyl tert-butyl ether	0.30	U H	10	0.30	ug/L			10/29/20 07:42	1
Methylene Chloride	2.5	U H	5.0	2.5	ug/L			10/29/20 07:42	1
m-Xylene & p-Xylene	0.35	U H	1.0	0.35	ug/L			10/29/20 07:42	1
Naphthalene	2.5	U H	5.0	2.5	ug/L			10/29/20 07:42	1
n-Butylbenzene	0.47	U H	1.0	0.47	ug/L			10/29/20 07:42	1
N-Propylbenzene	0.38	U H	1.0	0.38	ug/L			10/29/20 07:42	1
o-Xylene	0.23	U H	1.0	0.23	ug/L			10/29/20 07:42	1
sec-Butylbenzene	0.42	U H	1.0	0.42	ug/L			10/29/20 07:42	1
Styrene	0.27	U H	1.0	0.27	ug/L			10/29/20 07:42	1
tert-Butylbenzene	0.45	U H	1.0	0.45	ug/L			10/29/20 07:42	1
Tetrachloroethene	0.74	U H	1.0	0.74	ug/L			10/29/20 07:42	1
Toluene	0.48	U H	1.0	0.48	ug/L			10/29/20 07:42	1
trans-1,2-Dichloroethene	0.37	U H	1.0	0.37	ug/L			10/29/20 07:42	1
trans-1,3-Dichloropropene	0.42	U H	1.0	0.42	ug/L			10/29/20 07:42	1
Trichloroethene	0.48	U H	1.0	0.48	ug/L			10/29/20 07:42	1
Trichlorofluoromethane	0.42	U H	1.0	0.42	ug/L			10/29/20 07:42	1
Vinyl acetate	0.81	U H	2.0	0.81	ug/L			10/29/20 07:42	1
Vinyl chloride	0.50	U H	1.0	0.50	ug/L			10/29/20 07:42	1
Xylenes, Total	0.23	U H	2.0	0.23	ug/L			10/29/20 07:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*		*10/29/20 07:42*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*10/29/20 07:42*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*10/29/20 07:42*	*1*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*		*10/29/20 07:42*	*1*

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190226-1

Client Sample ID: G6M-18-02-FAL20
Date Collected: 10/14/20 14:45
Date Received: 10/17/20 10:10

Lab Sample ID: 680-190226-4
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U H	1.0	0.37	ug/L			10/29/20 08:06	1
1,1,1-Trichloroethane	0.37	U H	1.0	0.37	ug/L			10/29/20 08:06	1
1,1,2,2-Tetrachloroethane	0.62	U H	1.0	0.62	ug/L			10/29/20 08:06	1
1,1,2-Trichloroethane	0.33	U H	1.0	0.33	ug/L			10/29/20 08:06	1
1,1-Dichloroethane	0.38	U H	1.0	0.38	ug/L			10/29/20 08:06	1
1,1-Dichloroethene	0.36	U H	1.0	0.36	ug/L			10/29/20 08:06	1
1,1-Dichloropropene	0.34	U H	1.0	0.34	ug/L			10/29/20 08:06	1
1,2,3-Trichlorobenzene	2.5	U H	5.0	2.5	ug/L			10/29/20 08:06	1
1,2,3-Trichloropropane	0.39	U H	1.0	0.39	ug/L			10/29/20 08:06	1
1,2,4-Trichlorobenzene	2.5	U H	5.0	2.5	ug/L			10/29/20 08:06	1
1,2,4-Trimethylbenzene	0.47	U H	1.0	0.47	ug/L			10/29/20 08:06	1
1,2-Dibromo-3-Chloropropane	1.1	U H	5.0	1.1	ug/L			10/29/20 08:06	1
1,2-Dichlorobenzene	0.37	U H	1.0	0.37	ug/L			10/29/20 08:06	1
1,2-Dichloroethane	0.50	U M H	1.0	0.50	ug/L			10/29/20 08:06	1
1,2-Dichloroethene, Total	0.74	U H	2.0	0.74	ug/L			10/29/20 08:06	1
1,2-Dichloropropane	0.67	U H	1.0	0.67	ug/L			10/29/20 08:06	1
1,3,5-Trimethylbenzene	0.31	U H	1.0	0.31	ug/L			10/29/20 08:06	1
1,3-Dichlorobenzene	0.43	U H	1.0	0.43	ug/L			10/29/20 08:06	1
1,3-Dichloropropane	0.34	U H	1.0	0.34	ug/L			10/29/20 08:06	1
1,4-Dichlorobenzene	0.46	U H	1.0	0.46	ug/L			10/29/20 08:06	1
2,2-Dichloropropane	0.37	U H	1.0	0.37	ug/L			10/29/20 08:06	1
2-Butanone (MEK)	3.4	U H	10	3.4	ug/L			10/29/20 08:06	1
2-Chlorotoluene	0.27	U H	1.0	0.27	ug/L			10/29/20 08:06	1
2-Hexanone	2.0	U H	10	2.0	ug/L			10/29/20 08:06	1
4-Chlorotoluene	0.45	U H	1.0	0.45	ug/L			10/29/20 08:06	1
4-Isopropyltoluene	0.48	U H	1.0	0.48	ug/L			10/29/20 08:06	1
4-Methyl-2-pentanone (MIBK)	2.1	U H	10	2.1	ug/L			10/29/20 08:06	1
Acetone	7.0	U H	10	7.0	ug/L			10/29/20 08:06	1
Benzene	0.43	U H	1.0	0.43	ug/L			10/29/20 08:06	1
Bromobenzene	0.50	U H	1.0	0.50	ug/L			10/29/20 08:06	1
Bromoform	0.43	U H	1.0	0.43	ug/L			10/29/20 08:06	1
Bromomethane	2.5	U H	5.0	2.5	ug/L			10/29/20 08:06	1
Carbon disulfide	0.43	U H	2.0	0.43	ug/L			10/29/20 08:06	1
Carbon tetrachloride	0.33	U H	1.0	0.33	ug/L			10/29/20 08:06	1
Chlorobenzene	0.26	U H	1.0	0.26	ug/L			10/29/20 08:06	1
Chlorobromomethane	0.45	U H	1.0	0.45	ug/L			10/29/20 08:06	1
Chlorodibromomethane	0.32	U H	1.0	0.32	ug/L			10/29/20 08:06	1
Chloroethane	2.5	U H	5.0	2.5	ug/L			10/29/20 08:06	1
Chloroform	0.50	U H	1.0	0.50	ug/L			10/29/20 08:06	1
Chloromethane	0.40	U H	1.0	0.40	ug/L			10/29/20 08:06	1
cis-1,2-Dichloroethene	0.41	U H	1.0	0.41	ug/L			10/29/20 08:06	1
cis-1,3-Dichloropropene	0.40	U H	1.0	0.40	ug/L			10/29/20 08:06	1
Dibromomethane	0.35	U H	1.0	0.35	ug/L			10/29/20 08:06	1
Dichlorobromomethane	0.44	U H	1.0	0.44	ug/L			10/29/20 08:06	1
Dichlorodifluoromethane	0.60	U H	1.0	0.60	ug/L			10/29/20 08:06	1
Ethylbenzene	0.33	U H	1.0	0.33	ug/L			10/29/20 08:06	1
Ethylene Dibromide	0.44	U H	1.0	0.44	ug/L			10/29/20 08:06	1
Hexachlorobutadiene	2.5	U H	5.0	2.5	ug/L			10/29/20 08:06	1
Isopropylbenzene	0.35	U H	1.0	0.35	ug/L			10/29/20 08:06	1

Client Sample ID: G6M-18-02-FAL20
Date Collected: 10/14/20 14:45
Date Received: 10/17/20 10:10

Lab Sample ID: 680-190226-4
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.30	U H	10	0.30	ug/L			10/29/20 08:06	1
Methylene Chloride	2.5	U H	5.0	2.5	ug/L			10/29/20 08:06	1
m-Xylene & p-Xylene	0.35	U H	1.0	0.35	ug/L			10/29/20 08:06	1
Naphthalene	2.5	U H	5.0	2.5	ug/L			10/29/20 08:06	1
n-Butylbenzene	0.47	U H	1.0	0.47	ug/L			10/29/20 08:06	1
N-Propylbenzene	0.38	U H	1.0	0.38	ug/L			10/29/20 08:06	1
o-Xylene	0.23	U H	1.0	0.23	ug/L			10/29/20 08:06	1
sec-Butylbenzene	0.42	U H	1.0	0.42	ug/L			10/29/20 08:06	1
Styrene	0.27	U H	1.0	0.27	ug/L			10/29/20 08:06	1
tert-Butylbenzene	0.45	U H	1.0	0.45	ug/L			10/29/20 08:06	1
Tetrachloroethene	0.74	U H	1.0	0.74	ug/L			10/29/20 08:06	1
Toluene	0.48	U H	1.0	0.48	ug/L			10/29/20 08:06	1
trans-1,2-Dichloroethene	0.37	U H	1.0	0.37	ug/L			10/29/20 08:06	1
trans-1,3-Dichloropropene	0.42	U H	1.0	0.42	ug/L			10/29/20 08:06	1
Trichloroethene	0.48	U H	1.0	0.48	ug/L			10/29/20 08:06	1
Trichlorofluoromethane	0.42	U H	1.0	0.42	ug/L			10/29/20 08:06	1
Vinyl acetate	0.81	U H	2.0	0.81	ug/L			10/29/20 08:06	1
Vinyl chloride	0.50	U H	1.0	0.50	ug/L			10/29/20 08:06	1
Xylenes, Total	0.23	U H	2.0	0.23	ug/L			10/29/20 08:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*10/29/20 08:06*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*10/29/20 08:06*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*10/29/20 08:06*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*		*10/29/20 08:06*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	0.55	U	1.1	0.55	ug/L			10/26/20 01:21	1
Ethylene	0.50	U	1.0	0.50	ug/L			10/26/20 01:21	1
Methane	**0.51**	**J**	0.58	0.29	ug/L			10/26/20 01:21	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**14**		1.0	0.40	mg/L			10/25/20 09:40	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	17	U	50	17	ug/L		10/21/20 17:27	10/23/20 01:43	1
Manganese	**23**		10	1.0	ug/L		10/21/20 17:27	10/23/20 01:43	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5	U	3.0	1.5	ug/L		10/21/20 17:24	10/22/20 18:01	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	**1.9**		0.10	0.019	mg/L			10/28/20 19:31	1
Sulfide	0.81	U	0.81	0.81	mg/L			10/21/20 13:10	1
Total Organic Carbon - Duplicates	**1.4**		1.0	0.35	mg/L			10/31/20 08:10	1
Alkalinity	**22**		10	3.1	mg/L			10/26/20 20:35	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190226-1

Client Sample ID: G6M-97-28X-FAL20

Date Collected: 10/15/20 14:15
Date Received: 10/17/20 10:10

Lab Sample ID: 680-190226-5

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 06:37	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 06:37	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/29/20 06:37	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/29/20 06:37	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/29/20 06:37	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/29/20 06:37	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/29/20 06:37	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 06:37	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/29/20 06:37	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 06:37	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 06:37	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/29/20 06:37	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/29/20 06:37	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/29/20 06:37	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			10/29/20 06:37	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/29/20 06:37	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/29/20 06:37	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/29/20 06:37	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/29/20 06:37	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/29/20 06:37	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/29/20 06:37	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/29/20 06:37	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/29/20 06:37	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/29/20 06:37	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/29/20 06:37	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/29/20 06:37	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/29/20 06:37	1
Acetone	7.0	U	10	7.0	ug/L			10/29/20 06:37	1
Benzene	0.43	U	1.0	0.43	ug/L			10/29/20 06:37	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/29/20 06:37	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/29/20 06:37	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/29/20 06:37	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/29/20 06:37	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/29/20 06:37	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/29/20 06:37	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/29/20 06:37	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/29/20 06:37	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/29/20 06:37	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/29/20 06:37	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/29/20 06:37	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			10/29/20 06:37	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/29/20 06:37	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/29/20 06:37	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/29/20 06:37	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/29/20 06:37	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/29/20 06:37	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/29/20 06:37	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/29/20 06:37	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/29/20 06:37	1

Client Sample ID: G6M-97-28X-FAL20

Lab Sample ID: 680-190226-5

Date Collected: 10/15/20 14:15

Matrix: Water

Date Received: 10/17/20 10:10

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/29/20 06:37	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/29/20 06:37	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/29/20 06:37	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/29/20 06:37	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 06:37	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/29/20 06:37	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/29/20 06:37	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/29/20 06:37	1
Styrene	0.27	U	1.0	0.27	ug/L			10/29/20 06:37	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/29/20 06:37	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			10/29/20 06:37	1
Toluene	0.48	U	1.0	0.48	ug/L			10/29/20 06:37	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/29/20 06:37	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/29/20 06:37	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/29/20 06:37	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/29/20 06:37	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/29/20 06:37	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/29/20 06:37	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/29/20 06:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*		*10/29/20 06:37*	*1*
Dibromofluoromethane (Surr)	*88*		*80 - 119*		*10/29/20 06:37*	*1*
Toluene-d8 (Surr)	*89*		*89 - 112*		*10/29/20 06:37*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*		*10/29/20 06:37*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**8300**		50	17	ug/L		10/21/20 17:27	10/23/20 01:48	1
Manganese	**12000**		10	1.0	ug/L		10/21/20 17:27	10/23/20 01:48	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**44**		3.0	1.5	ug/L		10/21/20 17:24	10/22/20 18:04	1

Client Sample ID: MW-3-FAL20

Lab Sample ID: 680-190226-6

Date Collected: 10/15/20 13:50

Matrix: Water

Date Received: 10/17/20 10:10

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 07:00	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 07:00	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/29/20 07:00	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/29/20 07:00	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/29/20 07:00	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/29/20 07:00	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/29/20 07:00	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 07:00	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/29/20 07:00	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 07:00	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190226-1

Client Sample ID: MW-3-FAL20
Date Collected: 10/15/20 13:50
Date Received: 10/17/20 10:10

Lab Sample ID: 680-190226-6
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 07:00	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/29/20 07:00	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/29/20 07:00	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/29/20 07:00	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			10/29/20 07:00	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/29/20 07:00	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/29/20 07:00	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/29/20 07:00	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/29/20 07:00	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/29/20 07:00	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/29/20 07:00	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/29/20 07:00	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/29/20 07:00	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/29/20 07:00	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/29/20 07:00	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/29/20 07:00	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/29/20 07:00	1
Acetone	7.0	U	10	7.0	ug/L			10/29/20 07:00	1
Benzene	0.43	U	1.0	0.43	ug/L			10/29/20 07:00	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/29/20 07:00	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/29/20 07:00	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/29/20 07:00	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/29/20 07:00	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/29/20 07:00	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/29/20 07:00	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/29/20 07:00	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/29/20 07:00	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/29/20 07:00	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/29/20 07:00	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/29/20 07:00	1
cis-1,2-Dichloroethene	**0.49**	**J**	1.0	0.41	ug/L			10/29/20 07:00	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/29/20 07:00	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/29/20 07:00	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/29/20 07:00	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/29/20 07:00	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/29/20 07:00	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/29/20 07:00	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/29/20 07:00	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/29/20 07:00	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/29/20 07:00	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/29/20 07:00	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/29/20 07:00	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/29/20 07:00	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 07:00	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/29/20 07:00	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/29/20 07:00	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/29/20 07:00	1
Styrene	0.27	U	1.0	0.27	ug/L			10/29/20 07:00	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/29/20 07:00	1

Client Sample ID: MW-3-FAL20

Lab Sample ID: 680-190226-6

Date Collected: 10/15/20 13:50

Matrix: Water

Date Received: 10/17/20 10:10

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			10/29/20 07:00	1
Toluene	0.48	U	1.0	0.48	ug/L			10/29/20 07:00	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/29/20 07:00	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/29/20 07:00	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/29/20 07:00	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/29/20 07:00	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/29/20 07:00	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/29/20 07:00	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/29/20 07:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*		*10/29/20 07:00*	*1*
Dibromofluoromethane (Surr)	*87*		*80 - 119*		*10/29/20 07:00*	*1*
Toluene-d8 (Surr)	*89*		*89 - 112*		*10/29/20 07:00*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*		*10/29/20 07:00*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**43000**	**J**	50	17	ug/L		10/21/20 17:27	10/23/20 01:08	1
Manganese	**7300**	**J**	10	1.0	ug/L		10/21/20 17:27	10/23/20 01:08	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**610**	**J**	3.0	1.5	ug/L		10/21/20 17:24	10/22/20 17:43	1

Client Sample ID: MW-7-FAL20

Lab Sample ID: 680-190226-7

Date Collected: 10/15/20 12:10

Matrix: Water

Date Received: 10/17/20 10:10

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 07:23	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 07:23	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/29/20 07:23	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/29/20 07:23	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/29/20 07:23	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/29/20 07:23	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/29/20 07:23	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 07:23	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/29/20 07:23	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 07:23	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 07:23	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/29/20 07:23	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/29/20 07:23	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/29/20 07:23	1
1,2-Dichloroethene, Total	**2.2**		2.0	0.74	ug/L			10/29/20 07:23	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/29/20 07:23	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/29/20 07:23	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/29/20 07:23	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/29/20 07:23	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/29/20 07:23	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190226-1

Client Sample ID: MW-7-FAL20

Date Collected: 10/15/20 12:10
Date Received: 10/17/20 10:10

Lab Sample ID: 680-190226-7

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/29/20 07:23	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/29/20 07:23	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/29/20 07:23	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/29/20 07:23	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/29/20 07:23	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/29/20 07:23	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/29/20 07:23	1
Acetone	7.0	U	10	7.0	ug/L			10/29/20 07:23	1
Benzene	0.43	U	1.0	0.43	ug/L			10/29/20 07:23	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/29/20 07:23	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/29/20 07:23	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/29/20 07:23	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/29/20 07:23	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/29/20 07:23	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/29/20 07:23	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/29/20 07:23	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/29/20 07:23	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/29/20 07:23	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/29/20 07:23	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/29/20 07:23	1
cis-1,2-Dichloroethene	**2.2**		1.0	0.41	ug/L			10/29/20 07:23	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/29/20 07:23	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/29/20 07:23	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/29/20 07:23	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/29/20 07:23	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/29/20 07:23	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/29/20 07:23	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/29/20 07:23	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/29/20 07:23	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/29/20 07:23	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/29/20 07:23	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/29/20 07:23	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/29/20 07:23	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 07:23	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/29/20 07:23	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/29/20 07:23	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/29/20 07:23	1
Styrene	0.27	U	1.0	0.27	ug/L			10/29/20 07:23	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/29/20 07:23	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			10/29/20 07:23	1
Toluene	0.48	U	1.0	0.48	ug/L			10/29/20 07:23	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/29/20 07:23	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/29/20 07:23	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/29/20 07:23	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/29/20 07:23	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/29/20 07:23	1
Vinyl chloride	**2.0**		1.0	0.50	ug/L			10/29/20 07:23	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/29/20 07:23	1

Client Sample ID: MW-7-FAL20

Lab Sample ID: 680-190226-7

Date Collected: 10/15/20 12:10

Matrix: Water

Date Received: 10/17/20 10:10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*		*10/29/20 07:23*	*1*
Dibromofluoromethane (Surr)	*87*		*80 - 119*		*10/29/20 07:23*	*1*
Toluene-d8 (Surr)	*88*	*J*	*89 - 112*		*10/29/20 07:23*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*		*10/29/20 07:23*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**22000**		50	17	ug/L		10/21/20 17:27	10/23/20 01:52	1
Manganese	**10000**		10	1.0	ug/L		10/21/20 17:27	10/23/20 01:52	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**470**		3.0	1.5	ug/L		10/21/20 17:24	10/22/20 18:13	1

Client Sample ID: XSA-12-95X-FAL20

Lab Sample ID: 680-190226-8

Date Collected: 10/15/20 13:40

Matrix: Water

Date Received: 10/17/20 10:10

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 08:31	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 08:31	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/29/20 08:31	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/29/20 08:31	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/29/20 08:31	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/29/20 08:31	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/29/20 08:31	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 08:31	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/29/20 08:31	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 08:31	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 08:31	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/29/20 08:31	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/29/20 08:31	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/29/20 08:31	1
1,2-Dichloroethene, Total	**8.3**		2.0	0.74	ug/L			10/29/20 08:31	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/29/20 08:31	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/29/20 08:31	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/29/20 08:31	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/29/20 08:31	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/29/20 08:31	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/29/20 08:31	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/29/20 08:31	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/29/20 08:31	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/29/20 08:31	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/29/20 08:31	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/29/20 08:31	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/29/20 08:31	1
Acetone	7.0	U	10	7.0	ug/L			10/29/20 08:31	1
Benzene	0.43	U	1.0	0.43	ug/L			10/29/20 08:31	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/29/20 08:31	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/29/20 08:31	1

Client Sample ID: XSA-12-95X-FAL20

Date Collected: 10/15/20 13:40
Date Received: 10/17/20 10:10

Lab Sample ID: 680-190226-8

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Bromomethane	2.5	U	5.0	2.5	ug/L			10/29/20 08:31	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/29/20 08:31	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/29/20 08:31	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/29/20 08:31	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/29/20 08:31	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/29/20 08:31	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/29/20 08:31	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/29/20 08:31	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/29/20 08:31	1
cis-1,2-Dichloroethene	**6.1**		1.0	0.41	ug/L			10/29/20 08:31	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/29/20 08:31	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/29/20 08:31	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/29/20 08:31	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/29/20 08:31	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/29/20 08:31	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/29/20 08:31	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/29/20 08:31	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/29/20 08:31	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/29/20 08:31	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/29/20 08:31	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/29/20 08:31	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/29/20 08:31	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 08:31	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/29/20 08:31	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/29/20 08:31	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/29/20 08:31	1
Styrene	0.27	U	1.0	0.27	ug/L			10/29/20 08:31	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/29/20 08:31	1
Tetrachloroethene	**6.9**		1.0	0.74	ug/L			10/29/20 08:31	1
Toluene	0.48	U	1.0	0.48	ug/L			10/29/20 08:31	1
trans-1,2-Dichloroethene	**2.2**		1.0	0.37	ug/L			10/29/20 08:31	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/29/20 08:31	1
Trichloroethene	**3.9**		1.0	0.48	ug/L			10/29/20 08:31	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/29/20 08:31	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/29/20 08:31	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/29/20 08:31	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/29/20 08:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*		*10/29/20 08:31*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*10/29/20 08:31*	*1*
Toluene-d8 (Surr)	*103*		*89 - 112*		*10/29/20 08:31*	*1*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*		*10/29/20 08:31*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**1900**		50	17	ug/L		10/21/20 17:27	10/23/20 01:57	1
Manganese	**11000**		10	1.0	ug/L		10/21/20 17:27	10/23/20 01:57	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190226-1

Client Sample ID: XSA-12-95X-FAL20
Date Collected: 10/15/20 13:40
Date Received: 10/17/20 10:10

Lab Sample ID: 680-190226-8
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.0		3.0	1.5	ug/L		10/21/20 17:24	10/22/20 18:17	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190226-1

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

Lab Sample ID: MB 680-641269/9
Matrix: Water
Analysis Batch: 641269

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 00:26	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 00:26	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/29/20 00:26	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/29/20 00:26	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/29/20 00:26	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/29/20 00:26	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/29/20 00:26	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 00:26	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/29/20 00:26	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 00:26	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 00:26	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/29/20 00:26	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/29/20 00:26	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/29/20 00:26	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			10/29/20 00:26	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/29/20 00:26	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/29/20 00:26	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/29/20 00:26	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/29/20 00:26	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/29/20 00:26	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/29/20 00:26	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/29/20 00:26	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/29/20 00:26	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/29/20 00:26	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/29/20 00:26	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/29/20 00:26	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/29/20 00:26	1
Acetone	7.0	U	10	7.0	ug/L			10/29/20 00:26	1
Benzene	0.43	U M	1.0	0.43	ug/L			10/29/20 00:26	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/29/20 00:26	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/29/20 00:26	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/29/20 00:26	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/29/20 00:26	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/29/20 00:26	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/29/20 00:26	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/29/20 00:26	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/29/20 00:26	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/29/20 00:26	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/29/20 00:26	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/29/20 00:26	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			10/29/20 00:26	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/29/20 00:26	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/29/20 00:26	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/29/20 00:26	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/29/20 00:26	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/29/20 00:26	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/29/20 00:26	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/29/20 00:26	1

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

Lab Sample ID: MB 680-641269/9
Matrix: Water
Analysis Batch: 641269

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/29/20 00:26	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/29/20 00:26	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/29/20 00:26	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/29/20 00:26	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/29/20 00:26	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 00:26	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/29/20 00:26	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/29/20 00:26	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/29/20 00:26	1
Styrene	0.27	U	1.0	0.27	ug/L			10/29/20 00:26	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/29/20 00:26	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			10/29/20 00:26	1
Toluene	0.48	U	1.0	0.48	ug/L			10/29/20 00:26	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/29/20 00:26	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/29/20 00:26	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/29/20 00:26	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/29/20 00:26	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/29/20 00:26	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/29/20 00:26	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/29/20 00:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*10/29/20 00:26*	*1*
Dibromofluoromethane (Surr)	*87*		*80 - 119*		*10/29/20 00:26*	*1*
Toluene-d8 (Surr)	*88*	*J*	*89 - 112*		*10/29/20 00:26*	*1*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*		*10/29/20 00:26*	*1*

Lab Sample ID: LCS 680-641269/4
Matrix: Water
Analysis Batch: 641269

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	48.0		ug/L		96	78 - 124
1,1,1-Trichloroethane	50.0	49.1		ug/L		98	74 - 131
1,1,2,2-Tetrachloroethane	50.0	47.3		ug/L		95	71 - 121
1,1,2-Trichloroethane	50.0	48.7		ug/L		97	80 - 119
1,1-Dichloroethane	50.0	51.3		ug/L		103	77 - 125
1,1-Dichloroethene	50.0	43.7		ug/L		87	71 - 131
1,1-Dichloropropene	50.0	51.7	M	ug/L		103	79 - 125
1,2,3-Trichlorobenzene	50.0	47.2		ug/L		94	69 - 129
1,2,3-Trichloropropane	50.0	48.3		ug/L		97	73 - 122
1,2,4-Trichlorobenzene	50.0	46.5		ug/L		93	69 - 130
1,2,4-Trimethylbenzene	50.0	46.7		ug/L		93	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	48.4		ug/L		97	62 - 128
1,2-Dichlorobenzene	50.0	46.6		ug/L		93	80 - 119
1,2-Dichloroethane	50.0	51.3		ug/L		103	73 - 128
1,2-Dichloroethene, Total	100	94.6		ug/L		95	79 - 121
1,2-Dichloropropane	50.0	51.0		ug/L		102	78 - 122

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

Lab Sample ID: LCS 680-641269/4
Matrix: Water
Analysis Batch: 641269

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	46.8		ug/L		94	75 - 124
1,3-Dichlorobenzene	50.0	46.9		ug/L		94	80 - 119
1,3-Dichloropropane	50.0	50.9		ug/L		102	80 - 119
1,4-Dichlorobenzene	50.0	46.3		ug/L		93	79 - 118
2,2-Dichloropropane	50.0	43.0		ug/L		86	60 - 139
2-Butanone (MEK)	250	228		ug/L		91	56 - 143
2-Chlorotoluene	50.0	46.8		ug/L		94	79 - 122
2-Hexanone	250	253		ug/L		101	57 - 139
4-Chlorotoluene	50.0	45.4		ug/L		91	78 - 122
4-Isopropyltoluene	50.0	46.2		ug/L		92	77 - 127
4-Methyl-2-pentanone (MIBK)	250	259		ug/L		104	67 - 130
Acetone	250	263		ug/L		105	39 - 160
Benzene	50.0	48.1		ug/L		96	79 - 120
Bromobenzene	50.0	47.4		ug/L		95	80 - 120
Bromoform	50.0	45.6		ug/L		91	66 - 130
Bromomethane	50.0	49.2		ug/L		98	53 - 141
Carbon disulfide	50.0	47.5		ug/L		95	64 - 133
Carbon tetrachloride	50.0	49.0		ug/L		98	72 - 136
Chlorobenzene	50.0	47.7		ug/L		95	82 - 118
Chlorobromomethane	50.0	52.4		ug/L		105	78 - 123
Chlorodibromomethane	50.0	48.3		ug/L		97	74 - 126
Chloroethane	50.0	45.2		ug/L		90	60 - 138
Chloroform	50.0	49.4		ug/L		99	79 - 124
Chloromethane	50.0	43.6		ug/L		87	50 - 139
cis-1,2-Dichloroethene	50.0	48.2		ug/L		96	78 - 123
cis-1,3-Dichloropropene	50.0	49.7		ug/L		99	75 - 124
Dibromomethane	50.0	50.5		ug/L		101	79 - 123
Dichlorobromomethane	50.0	48.7		ug/L		97	79 - 125
Dichlorodifluoromethane	50.0	41.0		ug/L		82	32 - 152
Ethylbenzene	50.0	47.5		ug/L		95	79 - 121
Ethylene Dibromide	50.0	50.9		ug/L		102	75 - 127
Hexachlorobutadiene	50.0	45.7		ug/L		91	66 - 134
Isopropylbenzene	50.0	47.8		ug/L		96	72 - 131
Methyl tert-butyl ether	50.0	49.7		ug/L		99	71 - 124
Methylene Chloride	50.0	48.8		ug/L		98	74 - 124
m-Xylene & p-Xylene	50.0	47.3		ug/L		95	80 - 121
Naphthalene	50.0	49.3		ug/L		99	61 - 128
n-Butylbenzene	50.0	47.0		ug/L		94	75 - 128
N-Propylbenzene	50.0	46.8		ug/L		94	76 - 126
o-Xylene	50.0	46.9		ug/L		94	78 - 122
sec-Butylbenzene	50.0	47.0		ug/L		94	77 - 126
Styrene	50.0	49.5		ug/L		99	78 - 123
tert-Butylbenzene	50.0	46.7		ug/L		93	78 - 124
Tetrachloroethene	50.0	50.2		ug/L		100	74 - 129
Toluene	50.0	50.2		ug/L		100	80 - 121
trans-1,2-Dichloroethene	50.0	46.4		ug/L		93	75 - 124
trans-1,3-Dichloropropene	50.0	52.1		ug/L		104	73 - 127
Trichloroethene	50.0	51.5		ug/L		103	79 - 123
Trichlorofluoromethane	50.0	49.2		ug/L		98	65 - 141

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

Lab Sample ID: LCS 680-641269/4
Matrix: Water
Analysis Batch: 641269

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	103		ug/L		103	54 - 146
Vinyl chloride	50.0	45.7		ug/L		91	58 - 137
Xylenes, Total	100	94.2		ug/L		94	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*
Dibromofluoromethane (Surr)	*97*		*80 - 119*
Toluene-d8 (Surr)	*98*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*97*		*81 - 118*

Lab Sample ID: LCSD 680-641269/5
Matrix: Water
Analysis Batch: 641269

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	48.3		ug/L		97	78 - 124	1	20
1,1,1-Trichloroethane	50.0	49.1		ug/L		98	74 - 131	0	20
1,1,2,2-Tetrachloroethane	50.0	46.1		ug/L		92	71 - 121	2	20
1,1,2-Trichloroethane	50.0	47.5		ug/L		95	80 - 119	2	20
1,1-Dichloroethane	50.0	51.2		ug/L		102	77 - 125	0	20
1,1-Dichloroethene	50.0	44.0		ug/L		88	71 - 131	1	20
1,1-Dichloropropene	50.0	52.3	M	ug/L		105	79 - 125	1	20
1,2,3-Trichlorobenzene	50.0	47.4		ug/L		95	69 - 129	0	20
1,2,3-Trichloropropane	50.0	46.9		ug/L		94	73 - 122	3	20
1,2,4-Trichlorobenzene	50.0	47.6		ug/L		95	69 - 130	2	20
1,2,4-Trimethylbenzene	50.0	46.8		ug/L		94	76 - 124	0	20
1,2-Dibromo-3-Chloropropane	50.0	48.2		ug/L		96	62 - 128	0	20
1,2-Dichlorobenzene	50.0	46.6		ug/L		93	80 - 119	0	20
1,2-Dichloroethane	50.0	50.4		ug/L		101	73 - 128	2	20
1,2-Dichloroethene, Total	100	94.6		ug/L		95	79 - 121	0	20
1,2-Dichloropropane	50.0	50.5		ug/L		101	78 - 122	1	20
1,3,5-Trimethylbenzene	50.0	47.0		ug/L		94	75 - 124	1	20
1,3-Dichlorobenzene	50.0	46.9		ug/L		94	80 - 119	0	20
1,3-Dichloropropane	50.0	50.1		ug/L		100	80 - 119	2	20
1,4-Dichlorobenzene	50.0	46.4		ug/L		93	79 - 118	0	20
2,2-Dichloropropane	50.0	43.4		ug/L		87	60 - 139	1	20
2-Butanone (MEK)	250	221		ug/L		89	56 - 143	3	20
2-Chlorotoluene	50.0	47.3		ug/L		95	79 - 122	1	20
2-Hexanone	250	247		ug/L		99	57 - 139	2	20
4-Chlorotoluene	50.0	46.0		ug/L		92	78 - 122	1	20
4-Isopropyltoluene	50.0	46.4		ug/L		93	77 - 127	0	20
4-Methyl-2-pentanone (MIBK)	250	252		ug/L		101	67 - 130	3	20
Acetone	250	256		ug/L		103	39 - 160	2	20
Benzene	50.0	48.2		ug/L		96	79 - 120	0	20
Bromobenzene	50.0	47.5		ug/L		95	80 - 120	0	20
Bromoform	50.0	45.3		ug/L		91	66 - 130	1	20
Bromomethane	50.0	50.4		ug/L		101	53 - 141	2	20
Carbon disulfide	50.0	47.5		ug/L		95	64 - 133	0	20

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

Lab Sample ID: LCSD 680-641269/5
Matrix: Water
Analysis Batch: 641269

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	49.0		ug/L		98	72 - 136	0	20
Chlorobenzene	50.0	48.1		ug/L		96	82 - 118	1	20
Chlorobromomethane	50.0	51.3		ug/L		103	78 - 123	2	20
Chlorodibromomethane	50.0	47.8		ug/L		96	74 - 126	1	20
Chloroethane	50.0	45.2		ug/L		90	60 - 138	0	20
Chloroform	50.0	49.9		ug/L		100	79 - 124	1	20
Chloromethane	50.0	43.9		ug/L		88	50 - 139	1	20
cis-1,2-Dichloroethene	50.0	48.0		ug/L		96	78 - 123	0	20
cis-1,3-Dichloropropene	50.0	49.1		ug/L		98	75 - 124	1	20
Dibromomethane	50.0	49.4		ug/L		99	79 - 123	2	20
Dichlorobromomethane	50.0	47.7		ug/L		95	79 - 125	2	20
Dichlorodifluoromethane	50.0	39.2		ug/L		78	32 - 152	4	20
Ethylbenzene	50.0	48.0		ug/L		96	79 - 121	1	20
Ethylene Dibromide	50.0	48.8		ug/L		98	75 - 127	4	20
Hexachlorobutadiene	50.0	45.5		ug/L		91	66 - 134	0	20
Isopropylbenzene	50.0	48.1		ug/L		96	72 - 131	1	20
Methyl tert-butyl ether	50.0	48.9		ug/L		98	71 - 124	2	20
Methylene Chloride	50.0	48.1		ug/L		96	74 - 124	1	20
m-Xylene & p-Xylene	50.0	47.5		ug/L		95	80 - 121	1	20
Naphthalene	50.0	48.9		ug/L		98	61 - 128	1	20
n-Butylbenzene	50.0	46.4		ug/L		93	75 - 128	1	20
N-Propylbenzene	50.0	47.1		ug/L		94	76 - 126	1	20
o-Xylene	50.0	47.1		ug/L		94	78 - 122	0	20
sec-Butylbenzene	50.0	46.9		ug/L		94	77 - 126	0	20
Styrene	50.0	49.6		ug/L		99	78 - 123	0	20
tert-Butylbenzene	50.0	47.4		ug/L		95	78 - 124	2	20
Tetrachloroethene	50.0	49.7		ug/L		99	74 - 129	1	20
Toluene	50.0	50.6		ug/L		101	80 - 121	1	20
trans-1,2-Dichloroethene	50.0	46.5		ug/L		93	75 - 124	0	20
trans-1,3-Dichloropropene	50.0	50.6		ug/L		101	73 - 127	3	20
Trichloroethene	50.0	51.2		ug/L		102	79 - 123	1	20
Trichlorofluoromethane	50.0	49.1		ug/L		98	65 - 141	0	20
Vinyl acetate	100	98.3		ug/L		98	54 - 146	5	20
Vinyl chloride	50.0	45.5		ug/L		91	58 - 137	0	20
Xylenes, Total	100	94.6		ug/L		95	79 - 121	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*
Dibromofluoromethane (Surr)	*96*		*80 - 119*
Toluene-d8 (Surr)	*98*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*

Lab Sample ID: 680-190226-6 MS
Matrix: Water
Analysis Batch: 641269

Client Sample ID: MW-3-FAL20
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	0.37	U	50.0	45.6		ug/L		91	78 - 124

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

Lab Sample ID: 680-190226-6 MS
Matrix: Water
Analysis Batch: 641269

Client Sample ID: MW-3-FAL20
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	0.37	U	50.0	45.7		ug/L		91	74 - 131
1,1,2,2-Tetrachloroethane	0.62	U	50.0	42.0		ug/L		84	71 - 121
1,1,2-Trichloroethane	0.33	U	50.0	42.4		ug/L		85	80 - 119
1,1-Dichloroethane	0.38	U	50.0	47.5		ug/L		95	77 - 125
1,1-Dichloroethene	0.36	U	50.0	41.0		ug/L		82	71 - 131
1,1-Dichloropropene	0.34	U	50.0	51.7	M	ug/L		103	79 - 125
1,2,3-Trichlorobenzene	2.5	U	50.0	39.6		ug/L		79	69 - 129
1,2,3-Trichloropropane	0.39	U	50.0	42.4		ug/L		85	73 - 122
1,2,4-Trichlorobenzene	2.5	U	50.0	42.0		ug/L		84	69 - 130
1,2,4-Trimethylbenzene	0.47	U	50.0	44.2		ug/L		88	76 - 124
1,2-Dibromo-3-Chloropropane	1.1	U	50.0	40.9		ug/L		82	62 - 128
1,2-Dichlorobenzene	0.37	U	50.0	45.1		ug/L		90	80 - 119
1,2-Dichloroethane	0.50	U M	50.0	45.7		ug/L		91	73 - 128
1,2-Dichloroethene, Total	0.74	U	100	87.2		ug/L		87	79 - 121
1,2-Dichloropropane	0.67	U	50.0	46.3		ug/L		93	78 - 122
1,3,5-Trimethylbenzene	0.31	U	50.0	44.4		ug/L		89	75 - 124
1,3-Dichlorobenzene	0.43	U	50.0	45.9		ug/L		92	80 - 119
1,3-Dichloropropane	0.34	U	50.0	44.6		ug/L		89	80 - 119
1,4-Dichlorobenzene	0.46	U	50.0	44.8		ug/L		90	79 - 118
2,2-Dichloropropane	0.37	U	50.0	33.0		ug/L		66	60 - 139
2-Butanone (MEK)	3.4	U	250	185		ug/L		74	56 - 143
2-Chlorotoluene	0.27	U	50.0	44.2		ug/L		88	79 - 122
2-Hexanone	2.0	U	250	208		ug/L		83	57 - 139
4-Chlorotoluene	0.45	U	50.0	43.1		ug/L		86	78 - 122
4-Isopropyltoluene	0.48	U	50.0	46.5		ug/L		93	77 - 127
4-Methyl-2-pentanone (MIBK)	2.1	U	250	218		ug/L		87	67 - 130
Acetone	7.0	U	250	208		ug/L		83	39 - 160
Benzene	0.43	U	50.0	44.0		ug/L		88	79 - 120
Bromobenzene	0.50	U	50.0	44.2		ug/L		88	80 - 120
Bromoform	0.43	U	50.0	40.7		ug/L		81	66 - 130
Bromomethane	2.5	U	50.0	43.3		ug/L		87	53 - 141
Carbon disulfide	0.43	U	50.0	44.0		ug/L		88	64 - 133
Carbon tetrachloride	0.33	U	50.0	44.7		ug/L		89	72 - 136
Chlorobenzene	0.26	U	50.0	45.6		ug/L		91	82 - 118
Chlorobromomethane	0.45	U	50.0	45.3		ug/L		91	78 - 123
Chlorodibromomethane	0.32	U	50.0	41.7		ug/L		83	74 - 126
Chloroethane	2.5	U	50.0	42.9		ug/L		86	60 - 138
Chloroform	0.50	U	50.0	45.0		ug/L		90	79 - 124
Chloromethane	0.40	U	50.0	40.6		ug/L		81	50 - 139
cis-1,2-Dichloroethene	0.49	J	50.0	43.7		ug/L		86	78 - 123
cis-1,3-Dichloropropene	0.40	U	50.0	42.8		ug/L		86	75 - 124
Dibromomethane	0.35	U	50.0	43.1		ug/L		86	79 - 123
Dichlorobromomethane	0.44	U	50.0	43.0		ug/L		86	79 - 125
Dichlorodifluoromethane	0.60	U	50.0	37.1		ug/L		74	32 - 152
Ethylbenzene	0.33	U	50.0	46.5		ug/L		93	79 - 121
Ethylene Dibromide	0.44	U	50.0	43.7		ug/L		87	75 - 127
Hexachlorobutadiene	2.5	U	50.0	40.1		ug/L		80	66 - 134
Isopropylbenzene	0.35	U	50.0	46.3		ug/L		93	72 - 131
Methyl tert-butyl ether	0.30	U	50.0	42.4		ug/L		85	71 - 124

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

Lab Sample ID: 680-190226-6 MS
Matrix: Water
Analysis Batch: 641269

Client Sample ID: MW-3-FAL20
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylene Chloride	2.5	U	50.0	43.5		ug/L		87	74 - 124
m-Xylene & p-Xylene	0.35	U	50.0	45.4		ug/L		91	80 - 121
Naphthalene	2.5	U	50.0	39.3		ug/L		79	61 - 128
n-Butylbenzene	0.47	U	50.0	46.6		ug/L		93	75 - 128
N-Propylbenzene	0.38	U	50.0	45.3		ug/L		91	76 - 126
o-Xylene	0.23	U	50.0	44.5		ug/L		89	78 - 122
sec-Butylbenzene	0.42	U	50.0	44.9		ug/L		90	77 - 126
Styrene	0.27	U	50.0	47.1		ug/L		94	78 - 123
tert-Butylbenzene	0.45	U	50.0	44.8		ug/L		90	78 - 124
Tetrachloroethene	0.74	U	50.0	46.2		ug/L		92	74 - 129
Toluene	0.48	U	50.0	46.4		ug/L		93	80 - 121
trans-1,2-Dichloroethene	0.37	U	50.0	43.5		ug/L		87	75 - 124
trans-1,3-Dichloropropene	0.42	U	50.0	44.2		ug/L		88	73 - 127
Trichloroethene	0.48	U	50.0	46.2		ug/L		92	79 - 123
Trichlorofluoromethane	0.42	U	50.0	46.0		ug/L		92	65 - 141
Vinyl acetate	0.81	U	100	86.3		ug/L		86	54 - 146
Vinyl chloride	0.50	U	50.0	43.7		ug/L		87	58 - 137
Xylenes, Total	0.23	U	100	89.9		ug/L		90	79 - 121

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*85 - 114*
Dibromofluoromethane (Surr)	*88*		*80 - 119*
Toluene-d8 (Surr)	*90*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*85*		*81 - 118*

Lab Sample ID: 680-190226-6 MSD
Matrix: Water
Analysis Batch: 641269

Client Sample ID: MW-3-FAL20
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	0.37	U	50.0	45.6		ug/L		91	78 - 124	0	20
1,1,1-Trichloroethane	0.37	U	50.0	46.1		ug/L		92	74 - 131	1	20
1,1,2,2-Tetrachloroethane	0.62	U	50.0	43.5		ug/L		87	71 - 121	3	20
1,1,2-Trichloroethane	0.33	U	50.0	42.9		ug/L		86	80 - 119	1	20
1,1-Dichloroethane	0.38	U	50.0	47.8		ug/L		96	77 - 125	1	20
1,1-Dichloroethene	0.36	U	50.0	41.9		ug/L		84	71 - 131	2	20
1,1-Dichloropropene	0.34	U	50.0	52.1		ug/L		104	79 - 125	1	20
1,2,3-Trichlorobenzene	2.5	U	50.0	44.9		ug/L		90	69 - 129	13	20
1,2,3-Trichloropropane	0.39	U	50.0	44.0		ug/L		88	73 - 122	4	20
1,2,4-Trichlorobenzene	2.5	U	50.0	44.8		ug/L		90	69 - 130	6	20
1,2,4-Trimethylbenzene	0.47	U	50.0	44.5		ug/L		89	76 - 124	1	20
1,2-Dibromo-3-Chloropropane	1.1	U	50.0	44.4		ug/L		89	62 - 128	8	20
1,2-Dichlorobenzene	0.37	U	50.0	46.5		ug/L		93	80 - 119	3	20
1,2-Dichloroethane	0.50	U M	50.0	45.9		ug/L		92	73 - 128	0	20
1,2-Dichloroethene, Total	0.74	U	100	87.8		ug/L		88	79 - 121	1	20
1,2-Dichloropropane	0.67	U	50.0	46.8		ug/L		94	78 - 122	1	20
1,3,5-Trimethylbenzene	0.31	U	50.0	44.9		ug/L		90	75 - 124	1	20
1,3-Dichlorobenzene	0.43	U	50.0	46.9		ug/L		94	80 - 119	2	20

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

Lab Sample ID: 680-190226-6 MSD
Matrix: Water
Analysis Batch: 641269

Client Sample ID: MW-3-FAL20
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3-Dichloropropane	0.34	U	50.0	45.0		ug/L		90	80 - 119	1	20
1,4-Dichlorobenzene	0.46	U	50.0	46.2		ug/L		92	79 - 118	3	20
2,2-Dichloropropane	0.37	U	50.0	33.2		ug/L		66	60 - 139	0	20
2-Butanone (MEK)	3.4	U	250	188		ug/L		75	56 - 143	1	20
2-Chlorotoluene	0.27	U	50.0	45.0		ug/L		90	79 - 122	2	20
2-Hexanone	2.0	U	250	211		ug/L		84	57 - 139	1	20
4-Chlorotoluene	0.45	U	50.0	43.6		ug/L		87	78 - 122	1	20
4-Isopropyltoluene	0.48	U	50.0	47.2		ug/L		94	77 - 127	1	20
4-Methyl-2-pentanone (MIBK)	2.1	U	250	219		ug/L		87	67 - 130	0	20
Acetone	7.0	U	250	210		ug/L		84	39 - 160	1	20
Benzene	0.43	U	50.0	44.5		ug/L		89	79 - 120	1	20
Bromobenzene	0.50	U	50.0	44.8		ug/L		90	80 - 120	1	20
Bromoform	0.43	U	50.0	41.6		ug/L		83	66 - 130	2	20
Bromomethane	2.5	U	50.0	46.1		ug/L		92	53 - 141	6	20
Carbon disulfide	0.43	U	50.0	44.7		ug/L		89	64 - 133	2	20
Carbon tetrachloride	0.33	U	50.0	46.1		ug/L		92	72 - 136	3	20
Chlorobenzene	0.26	U	50.0	46.3		ug/L		93	82 - 118	1	20
Chlorobromomethane	0.45	U	50.0	46.3		ug/L		93	78 - 123	2	20
Chlorodibromomethane	0.32	U	50.0	42.3		ug/L		85	74 - 126	1	20
Chloroethane	2.5	U	50.0	43.3		ug/L		87	60 - 138	1	20
Chloroform	0.50	U	50.0	45.6		ug/L		91	79 - 124	1	20
Chloromethane	0.40	U	50.0	41.8		ug/L		84	50 - 139	3	20
cis-1,2-Dichloroethene	0.49	J	50.0	44.3		ug/L		88	78 - 123	1	20
cis-1,3-Dichloropropene	0.40	U	50.0	43.6		ug/L		87	75 - 124	2	20
Dibromomethane	0.35	U	50.0	43.9		ug/L		88	79 - 123	2	20
Dichlorobromomethane	0.44	U	50.0	43.5		ug/L		87	79 - 125	1	20
Dichlorodifluoromethane	0.60	U	50.0	36.6		ug/L		73	32 - 152	1	20
Ethylbenzene	0.33	U	50.0	46.8		ug/L		94	79 - 121	1	20
Ethylene Dibromide	0.44	U	50.0	44.4		ug/L		89	75 - 127	2	20
Hexachlorobutadiene	2.5	U	50.0	44.7		ug/L		89	66 - 134	11	20
Isopropylbenzene	0.35	U	50.0	46.8		ug/L		94	72 - 131	1	20
Methyl tert-butyl ether	0.30	U	50.0	42.9		ug/L		86	71 - 124	1	20
Methylene Chloride	2.5	U	50.0	43.9		ug/L		88	74 - 124	1	20
m-Xylene & p-Xylene	0.35	U	50.0	45.5		ug/L		91	80 - 121	0	20
Naphthalene	2.5	U	50.0	44.7		ug/L		89	61 - 128	13	20
n-Butylbenzene	0.47	U	50.0	47.0		ug/L		94	75 - 128	1	20
N-Propylbenzene	0.38	U	50.0	45.6		ug/L		91	76 - 126	1	20
o-Xylene	0.23	U	50.0	45.0		ug/L		90	78 - 122	1	20
sec-Butylbenzene	0.42	U	50.0	45.5		ug/L		91	77 - 126	1	20
Styrene	0.27	U	50.0	47.3		ug/L		95	78 - 123	0	20
tert-Butylbenzene	0.45	U	50.0	45.7		ug/L		91	78 - 124	2	20
Tetrachloroethene	0.74	U	50.0	45.8		ug/L		92	74 - 129	1	20
Toluene	0.48	U	50.0	46.8		ug/L		94	80 - 121	1	20
trans-1,2-Dichloroethene	0.37	U	50.0	43.5		ug/L		87	75 - 124	0	20
trans-1,3-Dichloropropene	0.42	U	50.0	44.6		ug/L		89	73 - 127	1	20
Trichloroethene	0.48	U	50.0	46.7		ug/L		93	79 - 123	1	20
Trichlorofluoromethane	0.42	U	50.0	46.7		ug/L		93	65 - 141	1	20
Vinyl acetate	0.81	U	100	89.3		ug/L		89	54 - 146	3	20
Vinyl chloride	0.50	U	50.0	43.9		ug/L		88	58 - 137	1	20

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

Lab Sample ID: 680-190226-6 MSD
Matrix: Water
Analysis Batch: 641269

Client Sample ID: MW-3-FAL20
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	0.23	U	100	90.5		ug/L		91	79 - 121	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*
Dibromofluoromethane (Surr)	*89*		*80 - 119*
Toluene-d8 (Surr)	*91*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*

Lab Sample ID: MB 680-641277/9
Matrix: Water
Analysis Batch: 641277

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 01:08	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 01:08	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/29/20 01:08	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/29/20 01:08	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/29/20 01:08	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/29/20 01:08	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/29/20 01:08	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 01:08	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/29/20 01:08	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 01:08	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 01:08	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/29/20 01:08	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/29/20 01:08	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/29/20 01:08	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			10/29/20 01:08	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/29/20 01:08	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/29/20 01:08	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/29/20 01:08	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/29/20 01:08	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/29/20 01:08	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/29/20 01:08	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/29/20 01:08	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/29/20 01:08	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/29/20 01:08	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/29/20 01:08	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/29/20 01:08	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/29/20 01:08	1
Acetone	7.0	U	10	7.0	ug/L			10/29/20 01:08	1
Benzene	0.43	U	1.0	0.43	ug/L			10/29/20 01:08	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/29/20 01:08	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/29/20 01:08	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/29/20 01:08	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/29/20 01:08	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/29/20 01:08	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/29/20 01:08	1

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

Lab Sample ID: MB 680-641277/9
Matrix: Water
Analysis Batch: 641277

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/29/20 01:08	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/29/20 01:08	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/29/20 01:08	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/29/20 01:08	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/29/20 01:08	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			10/29/20 01:08	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/29/20 01:08	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/29/20 01:08	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/29/20 01:08	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/29/20 01:08	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/29/20 01:08	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/29/20 01:08	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/29/20 01:08	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/29/20 01:08	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/29/20 01:08	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/29/20 01:08	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/29/20 01:08	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/29/20 01:08	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 01:08	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/29/20 01:08	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/29/20 01:08	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/29/20 01:08	1
Styrene	0.27	U	1.0	0.27	ug/L			10/29/20 01:08	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/29/20 01:08	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			10/29/20 01:08	1
Toluene	0.48	U	1.0	0.48	ug/L			10/29/20 01:08	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/29/20 01:08	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/29/20 01:08	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/29/20 01:08	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/29/20 01:08	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/29/20 01:08	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/29/20 01:08	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/29/20 01:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*10/29/20 01:08*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*10/29/20 01:08*	*1*
Toluene-d8 (Surr)	*104*		*89 - 112*		*10/29/20 01:08*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*		*10/29/20 01:08*	*1*

Lab Sample ID: LCS 680-641277/4
Matrix: Water
Analysis Batch: 641277

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	57.1		ug/L		114	78 - 124
1,1,1-Trichloroethane	50.0	52.0		ug/L		104	74 - 131
1,1,2,2-Tetrachloroethane	50.0	53.2		ug/L		106	71 - 121

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

Lab Sample ID: LCS 680-641277/4
Matrix: Water
Analysis Batch: 641277

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichloroethane	50.0	57.2		ug/L		114	80 - 119
1,1-Dichloroethane	50.0	49.6		ug/L		99	77 - 125
1,1-Dichloroethene	50.0	52.8		ug/L		106	71 - 131
1,1-Dichloropropene	50.0	52.4		ug/L		105	79 - 125
1,2,3-Trichlorobenzene	50.0	45.4		ug/L		91	69 - 129
1,2,3-Trichloropropane	50.0	59.2		ug/L		118	73 - 122
1,2,4-Trichlorobenzene	50.0	44.2		ug/L		88	69 - 130
1,2,4-Trimethylbenzene	50.0	50.1		ug/L		100	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	47.2		ug/L		94	62 - 128
1,2-Dichlorobenzene	50.0	48.1		ug/L		96	80 - 119
1,2-Dichloroethane	50.0	52.5		ug/L		105	73 - 128
1,2-Dichloroethene, Total	100	102		ug/L		102	79 - 121
1,2-Dichloropropane	50.0	51.5		ug/L		103	78 - 122
1,3,5-Trimethylbenzene	50.0	49.7		ug/L		99	75 - 124
1,3-Dichlorobenzene	50.0	48.5		ug/L		97	80 - 119
1,3-Dichloropropane	50.0	54.1		ug/L		108	80 - 119
1,4-Dichlorobenzene	50.0	47.9		ug/L		96	79 - 118
2,2-Dichloropropane	50.0	44.6		ug/L		89	60 - 139
2-Butanone (MEK)	250	278		ug/L		111	56 - 143
2-Chlorotoluene	50.0	50.0		ug/L		100	79 - 122
2-Hexanone	250	254		ug/L		102	57 - 139
4-Chlorotoluene	50.0	50.6		ug/L		101	78 - 122
4-Isopropyltoluene	50.0	44.1		ug/L		88	77 - 127
4-Methyl-2-pentanone (MIBK)	250	258		ug/L		103	67 - 130
Acetone	250	240		ug/L		96	39 - 160
Benzene	50.0	53.1		ug/L		106	79 - 120
Bromobenzene	50.0	55.2		ug/L		110	80 - 120
Bromoform	50.0	58.5		ug/L		117	66 - 130
Bromomethane	50.0	44.2		ug/L		88	53 - 141
Carbon disulfide	50.0	51.9		ug/L		104	64 - 133
Carbon tetrachloride	50.0	53.2		ug/L		106	72 - 136
Chlorobenzene	50.0	54.0		ug/L		108	82 - 118
Chlorobromomethane	50.0	54.3		ug/L		109	78 - 123
Chlorodibromomethane	50.0	57.1		ug/L		114	74 - 126
Chloroethane	50.0	44.7		ug/L		89	60 - 138
Chloroform	50.0	51.7		ug/L		103	79 - 124
Chloromethane	50.0	45.5		ug/L		91	50 - 139
cis-1,2-Dichloroethene	50.0	48.0		ug/L		96	78 - 123
cis-1,3-Dichloropropene	50.0	52.0		ug/L		104	75 - 124
Dibromomethane	50.0	53.9		ug/L		108	79 - 123
Dichlorobromomethane	50.0	52.9		ug/L		106	79 - 125
Dichlorodifluoromethane	50.0	49.4		ug/L		99	32 - 152
Ethylbenzene	50.0	51.5		ug/L		103	79 - 121
Ethylene Dibromide	50.0	57.6		ug/L		115	75 - 127
Hexachlorobutadiene	50.0	44.6		ug/L		89	66 - 134
Isopropylbenzene	50.0	51.0		ug/L		102	72 - 131
Methyl tert-butyl ether	50.0	51.7		ug/L		103	71 - 124
Methylene Chloride	50.0	52.6		ug/L		105	74 - 124
m-Xylene & p-Xylene	50.0	51.7		ug/L		103	80 - 121

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

Lab Sample ID: LCS 680-641277/4
Matrix: Water
Analysis Batch: 641277

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	44.7		ug/L		89	61 - 128		
n-Butylbenzene			50.0	42.0		ug/L		84	75 - 128		
N-Propylbenzene			50.0	50.2		ug/L		100	76 - 126		
o-Xylene			50.0	51.3		ug/L		103	78 - 122		
sec-Butylbenzene			50.0	49.5		ug/L		99	77 - 126		
Styrene			50.0	54.3		ug/L		109	78 - 123		
tert-Butylbenzene			50.0	50.3		ug/L		101	78 - 124		
Tetrachloroethene			50.0	59.4		ug/L		119	74 - 129		
Toluene			50.0	55.8		ug/L		112	80 - 121		
trans-1,2-Dichloroethene			50.0	53.7		ug/L		107	75 - 124		
trans-1,3-Dichloropropene			50.0	50.9		ug/L		102	73 - 127		
Trichloroethene			50.0	56.9		ug/L		114	79 - 123		
Trichlorofluoromethane			50.0	52.1		ug/L		104	65 - 141		
Vinyl acetate			100	93.7		ug/L		94	54 - 146		
Vinyl chloride			50.0	49.4		ug/L		99	58 - 137		
Xylenes, Total			100	103		ug/L		103	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*88*		*85 - 114*
Dibromofluoromethane (Surr)	*107*		*80 - 119*
Toluene-d8 (Surr)	*107*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*105*		*81 - 118*

Lab Sample ID: LCSD 680-641277/5
Matrix: Water
Analysis Batch: 641277

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	56.6		ug/L		113	78 - 124	1	20
1,1,1-Trichloroethane			50.0	52.1		ug/L		104	74 - 131	0	20
1,1,2,2-Tetrachloroethane			50.0	53.2		ug/L		106	71 - 121	0	20
1,1,2-Trichloroethane			50.0	58.4		ug/L		117	80 - 119	2	20
1,1-Dichloroethane			50.0	49.6		ug/L		99	77 - 125	0	20
1,1-Dichloroethene			50.0	53.5		ug/L		107	71 - 131	1	20
1,1-Dichloropropene			50.0	52.7		ug/L		105	79 - 125	1	20
1,2,3-Trichlorobenzene			50.0	46.2		ug/L		92	69 - 129	2	20
1,2,3-Trichloropropane			50.0	57.6		ug/L		115	73 - 122	3	20
1,2,4-Trichlorobenzene			50.0	45.0		ug/L		90	69 - 130	2	20
1,2,4-Trimethylbenzene			50.0	49.5		ug/L		99	76 - 124	1	20
1,2-Dibromo-3-Chloropropane			50.0	47.0		ug/L		94	62 - 128	0	20
1,2-Dichlorobenzene			50.0	48.0		ug/L		96	80 - 119	0	20
1,2-Dichloroethane			50.0	53.4		ug/L		107	73 - 128	2	20
1,2-Dichloroethene, Total			100	103		ug/L		103	79 - 121	1	20
1,2-Dichloropropane			50.0	52.1		ug/L		104	78 - 122	1	20
1,3,5-Trimethylbenzene			50.0	48.5		ug/L		97	75 - 124	2	20
1,3-Dichlorobenzene			50.0	48.3		ug/L		97	80 - 119	0	20
1,3-Dichloropropane			50.0	54.8		ug/L		110	80 - 119	1	20
1,4-Dichlorobenzene			50.0	47.6		ug/L		95	79 - 118	1	20

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

Lab Sample ID: LCSD 680-641277/5
Matrix: Water
Analysis Batch: 641277

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	44.3		ug/L		89	60 - 139	1	20
2-Butanone (MEK)	250	274		ug/L		110	56 - 143	2	20
2-Chlorotoluene	50.0	49.7		ug/L		99	79 - 122	0	20
2-Hexanone	250	256		ug/L		102	57 - 139	1	20
4-Chlorotoluene	50.0	50.4		ug/L		101	78 - 122	0	20
4-Isopropyltoluene	50.0	44.4		ug/L		89	77 - 127	1	20
4-Methyl-2-pentanone (MIBK)	250	255		ug/L		102	67 - 130	1	20
Acetone	250	244		ug/L		98	39 - 160	1	20
Benzene	50.0	54.0		ug/L		108	79 - 120	2	20
Bromobenzene	50.0	54.4		ug/L		109	80 - 120	1	20
Bromoform	50.0	57.2		ug/L		114	66 - 130	2	20
Bromomethane	50.0	49.1		ug/L		98	53 - 141	10	20
Carbon disulfide	50.0	52.5		ug/L		105	64 - 133	1	20
Carbon tetrachloride	50.0	54.4		ug/L		109	72 - 136	2	20
Chlorobenzene	50.0	52.5		ug/L		105	82 - 118	3	20
Chlorobromomethane	50.0	55.8		ug/L		112	78 - 123	3	20
Chlorodibromomethane	50.0	57.9		ug/L		116	74 - 126	1	20
Chloroethane	50.0	44.9		ug/L		90	60 - 138	0	20
Chloroform	50.0	52.1		ug/L		104	79 - 124	1	20
Chloromethane	50.0	45.6		ug/L		91	50 - 139	0	20
cis-1,2-Dichloroethene	50.0	48.6		ug/L		97	78 - 123	1	20
cis-1,3-Dichloropropene	50.0	52.4		ug/L		105	75 - 124	1	20
Dibromomethane	50.0	54.6		ug/L		109	79 - 123	1	20
Dichlorobromomethane	50.0	53.6		ug/L		107	79 - 125	1	20
Dichlorodifluoromethane	50.0	50.2		ug/L		100	32 - 152	2	20
Ethylbenzene	50.0	50.6		ug/L		101	79 - 121	2	20
Ethylene Dibromide	50.0	58.1		ug/L		116	75 - 127	1	20
Hexachlorobutadiene	50.0	45.3		ug/L		91	66 - 134	2	20
Isopropylbenzene	50.0	50.0		ug/L		100	72 - 131	2	20
Methyl tert-butyl ether	50.0	52.5		ug/L		105	71 - 124	1	20
Methylene Chloride	50.0	53.6		ug/L		107	74 - 124	2	20
m-Xylene & p-Xylene	50.0	50.9		ug/L		102	80 - 121	2	20
Naphthalene	50.0	45.6		ug/L		91	61 - 128	2	20
n-Butylbenzene	50.0	42.0		ug/L		84	75 - 128	0	20
N-Propylbenzene	50.0	49.7		ug/L		99	76 - 126	1	20
o-Xylene	50.0	50.6		ug/L		101	78 - 122	1	20
sec-Butylbenzene	50.0	49.1		ug/L		98	77 - 126	1	20
Styrene	50.0	53.8		ug/L		108	78 - 123	1	20
tert-Butylbenzene	50.0	49.9		ug/L		100	78 - 124	1	20
Tetrachloroethene	50.0	58.8		ug/L		118	74 - 129	1	20
Toluene	50.0	55.6		ug/L		111	80 - 121	0	20
trans-1,2-Dichloroethene	50.0	54.5		ug/L		109	75 - 124	1	20
trans-1,3-Dichloropropene	50.0	51.7		ug/L		103	73 - 127	1	20
Trichloroethene	50.0	57.1		ug/L		114	79 - 123	0	20
Trichlorofluoromethane	50.0	52.6		ug/L		105	65 - 141	1	20
Vinyl acetate	100	94.0		ug/L		94	54 - 146	0	20
Vinyl chloride	50.0	48.8		ug/L		98	58 - 137	1	20
Xylenes, Total	100	102		ug/L		102	79 - 121	1	20

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

Lab Sample ID: LCSD 680-641277/5
Matrix: Water
Analysis Batch: 641277

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

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*87*		*85 - 114*
Dibromofluoromethane (Surr)	*108*		*80 - 119*
Toluene-d8 (Surr)	*106*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*107*		*81 - 118*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-640667/38
Matrix: Water
Analysis Batch: 640667

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	0.55	U	1.1	0.55	ug/L			10/25/20 22:20	1
Ethylene	0.50	U	1.0	0.50	ug/L			10/25/20 22:20	1
Methane	0.29	U	0.58	0.29	ug/L			10/25/20 22:20	1
Methane (TCD)	39	U	390	39	ug/L			10/25/20 22:20	1

Lab Sample ID: LCS 680-640667/34
Matrix: Water
Analysis Batch: 640667

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	1720		ug/L		90	73 - 125

Lab Sample ID: LCS 680-640667/36
Matrix: Water
Analysis Batch: 640667

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	288	250		ug/L		87	74 - 131
Ethylene	269	231		ug/L		86	72 - 133
Methane	154	137		ug/L		89	73 - 125

Lab Sample ID: LCSD 680-640667/35
Matrix: Water
Analysis Batch: 640667

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	1730		ug/L		90	73 - 125	0	30

Lab Sample ID: LCSD 680-640667/37
Matrix: Water
Analysis Batch: 640667

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	288	255		ug/L		88	74 - 131	2	30
Ethylene	269	232		ug/L		86	72 - 133	0	30
Methane	154	138		ug/L		90	73 - 125	1	30

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-640614/33
Matrix: Water
Analysis Batch: 640614

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.40	U	1.0	0.40	mg/L			10/25/20 09:02	1

Lab Sample ID: LCS 680-640614/34
Matrix: Water
Analysis Batch: 640614

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	10.7		mg/L		107	87 - 112

Lab Sample ID: LCSD 680-640614/35
Matrix: Water
Analysis Batch: 640614

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	10.7		mg/L		107	87 - 112	0	15

Lab Sample ID: 680-190226-4 MS
Matrix: Water
Analysis Batch: 640614

Client Sample ID: G6M-18-02-FAL20
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	14		10.0	24.9		mg/L		107	87 - 112

Lab Sample ID: 680-190226-4 MSD
Matrix: Water
Analysis Batch: 640614

Client Sample ID: G6M-18-02-FAL20
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	14		10.0	24.9		mg/L		107	87 - 112	0	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-640123/1-A
Matrix: Water
Analysis Batch: 640430

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 640123

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	17	U	50	17	ug/L		10/21/20 17:27	10/23/20 01:00	1
Manganese	1.07	J	10	1.0	ug/L		10/21/20 17:27	10/23/20 01:00	1

Lab Sample ID: LCS 680-640123/2-A
Matrix: Water
Analysis Batch: 640430

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 640123

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	5000	4750		ug/L		95	87 - 115
Manganese	400	387		ug/L		97	90 - 114

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

Lab Sample ID: 680-190226-6 MS
Matrix: Water
Analysis Batch: 640430

Client Sample ID: MW-3-FAL20
Prep Type: Dissolved
Prep Batch: 640123

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	43000	J	5000	46600	4	ug/L		77	87 - 115
Manganese	7300	J	400	7480	4	ug/L		48	90 - 114

Lab Sample ID: 680-190226-6 MSD
Matrix: Water
Analysis Batch: 640430

Client Sample ID: MW-3-FAL20
Prep Type: Dissolved
Prep Batch: 640123

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	43000	J	5000	48600	4	ug/L		116	87 - 115	4	20
Manganese	7300	J	400	7840	4	ug/L		136	90 - 114	5	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-640122/1-A
Matrix: Water
Analysis Batch: 640364

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 640122

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5	U	3.0	1.5	ug/L		10/21/20 17:24	10/22/20 17:37	1

Lab Sample ID: LCS 680-640122/2-A
Matrix: Water
Analysis Batch: 640364

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 640122

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	100	103		ug/L		103	84 - 116

Lab Sample ID: 680-190226-6 MS
Matrix: Water
Analysis Batch: 640364

Client Sample ID: MW-3-FAL20
Prep Type: Dissolved
Prep Batch: 640122

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	610	J	100	692	4	ug/L		78	84 - 116

Lab Sample ID: 680-190226-6 MSD
Matrix: Water
Analysis Batch: 640364

Client Sample ID: MW-3-FAL20
Prep Type: Dissolved
Prep Batch: 640122

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	610	J	100	627	4	ug/L		14	84 - 116	10	20

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 280-514596/61
Matrix: Water
Analysis Batch: 514596

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.019	U	0.10	0.019	mg/L			10/28/20 18:57	1

Method: 353.2 - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: LCS 280-514596/60
Matrix: Water
Analysis Batch: 514596

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	5.06		mg/L		101	90 - 110

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 680-640062/1
Matrix: Water
Analysis Batch: 640062

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	1.0	U	1.0	1.0	mg/L			10/21/20 13:10	1

Lab Sample ID: LCS 680-640062/2
Matrix: Water
Analysis Batch: 640062

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	10.1		mg/L		101	75 - 125

Lab Sample ID: LCSD 680-640062/3
Matrix: Water
Analysis Batch: 640062

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	10.1		mg/L		101	75 - 125	0	30

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 280-514926/35
Matrix: Water
Analysis Batch: 514926

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	0.35	U	1.0	0.35	mg/L			10/31/20 05:41	1

Lab Sample ID: LCS 280-514926/34
Matrix: Water
Analysis Batch: 514926

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 - Duplicates	25.0	26.6		mg/L		106	88 - 112

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-514211/32
Matrix: Water
Analysis Batch: 514211

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	3.1	U	10	3.1	mg/L			10/26/20 18:41	1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCS 280-514211/31
Matrix: Water
Analysis Batch: 514211

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Alkalinity			200	208		mg/L		104	89 - 109		

QC Association Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190226-1

GC/MS VOA

Analysis Batch: 641269

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190226-1	G6M-02-12X-FAL20	Total/NA	Water	8260B	
680-190226-5	G6M-97-28X-FAL20	Total/NA	Water	8260B	
680-190226-6	MW-3-FAL20	Total/NA	Water	8260B	
680-190226-7	MW-7-FAL20	Total/NA	Water	8260B	
MB 680-641269/9	Method Blank	Total/NA	Water	8260B	
LCS 680-641269/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-641269/5	Lab Control Sample Dup	Total/NA	Water	8260B	
680-190226-6 MS	MW-3-FAL20	Total/NA	Water	8260B	
680-190226-6 MSD	MW-3-FAL20	Total/NA	Water	8260B	

Analysis Batch: 641277

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190226-2	AOC50-TB2-FAL20	Total/NA	Water	8260B	
680-190226-3	G6M-04-13X-FAL20	Total/NA	Water	8260B	
680-190226-4	G6M-18-02-FAL20	Total/NA	Water	8260B	
680-190226-8	XSA-12-95X-FAL20	Total/NA	Water	8260B	
MB 680-641277/9	Method Blank	Total/NA	Water	8260B	
LCS 680-641277/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-641277/5	Lab Control Sample Dup	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 640667

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190226-4	G6M-18-02-FAL20	Total/NA	Water	RSK-175	
MB 680-640667/38	Method Blank	Total/NA	Water	RSK-175	
LCS 680-640667/34	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-640667/36	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-640667/35	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-640667/37	Lab Control Sample Dup	Total/NA	Water	RSK-175	

HPLC/IC

Analysis Batch: 640614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190226-4	G6M-18-02-FAL20	Total/NA	Water	9056A	
MB 680-640614/33	Method Blank	Total/NA	Water	9056A	
LCS 680-640614/34	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-640614/35	Lab Control Sample Dup	Total/NA	Water	9056A	
680-190226-4 MS	G6M-18-02-FAL20	Total/NA	Water	9056A	
680-190226-4 MSD	G6M-18-02-FAL20	Total/NA	Water	9056A	

Metals

Prep Batch: 640122

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190226-1	G6M-02-12X-FAL20	Dissolved	Water	3005A	
680-190226-4	G6M-18-02-FAL20	Dissolved	Water	3005A	
680-190226-5	G6M-97-28X-FAL20	Dissolved	Water	3005A	
680-190226-6	MW-3-FAL20	Dissolved	Water	3005A	
680-190226-7	MW-7-FAL20	Dissolved	Water	3005A	
680-190226-8	XSA-12-95X-FAL20	Dissolved	Water	3005A	

Metals (Continued)

Prep Batch: 640122 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-640122/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-640122/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-190226-6 MS	MW-3-FAL20	Dissolved	Water	3005A	
680-190226-6 MSD	MW-3-FAL20	Dissolved	Water	3005A	

Prep Batch: 640123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190226-1	G6M-02-12X-FAL20	Dissolved	Water	3005A	
680-190226-4	G6M-18-02-FAL20	Dissolved	Water	3005A	
680-190226-5	G6M-97-28X-FAL20	Dissolved	Water	3005A	
680-190226-6	MW-3-FAL20	Dissolved	Water	3005A	
680-190226-7	MW-7-FAL20	Dissolved	Water	3005A	
680-190226-8	XSA-12-95X-FAL20	Dissolved	Water	3005A	
MB 680-640123/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-640123/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-190226-6 MS	MW-3-FAL20	Dissolved	Water	3005A	
680-190226-6 MSD	MW-3-FAL20	Dissolved	Water	3005A	

Analysis Batch: 640364

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190226-1	G6M-02-12X-FAL20	Dissolved	Water	6020A	640122
680-190226-4	G6M-18-02-FAL20	Dissolved	Water	6020A	640122
680-190226-5	G6M-97-28X-FAL20	Dissolved	Water	6020A	640122
680-190226-6	MW-3-FAL20	Dissolved	Water	6020A	640122
680-190226-7	MW-7-FAL20	Dissolved	Water	6020A	640122
680-190226-8	XSA-12-95X-FAL20	Dissolved	Water	6020A	640122
MB 680-640122/1-A	Method Blank	Total Recoverable	Water	6020A	640122
LCS 680-640122/2-A	Lab Control Sample	Total Recoverable	Water	6020A	640122
680-190226-6 MS	MW-3-FAL20	Dissolved	Water	6020A	640122
680-190226-6 MSD	MW-3-FAL20	Dissolved	Water	6020A	640122

Analysis Batch: 640430

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190226-1	G6M-02-12X-FAL20	Dissolved	Water	6010C	640123
680-190226-4	G6M-18-02-FAL20	Dissolved	Water	6010C	640123
680-190226-5	G6M-97-28X-FAL20	Dissolved	Water	6010C	640123
680-190226-6	MW-3-FAL20	Dissolved	Water	6010C	640123
680-190226-7	MW-7-FAL20	Dissolved	Water	6010C	640123
680-190226-8	XSA-12-95X-FAL20	Dissolved	Water	6010C	640123
MB 680-640123/1-A	Method Blank	Total Recoverable	Water	6010C	640123
LCS 680-640123/2-A	Lab Control Sample	Total Recoverable	Water	6010C	640123
680-190226-6 MS	MW-3-FAL20	Dissolved	Water	6010C	640123
680-190226-6 MSD	MW-3-FAL20	Dissolved	Water	6010C	640123

General Chemistry

Analysis Batch: 514211

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190226-4	G6M-18-02-FAL20	Total/NA	Water	SM 2320B	
MB 280-514211/32	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-514211/31	Lab Control Sample	Total/NA	Water	SM 2320B	

QC Association Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190226-1

General Chemistry

Analysis Batch: 514596

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190226-4	G6M-18-02-FAL20	Total/NA	Water	353.2	
MB 280-514596/61	Method Blank	Total/NA	Water	353.2	
LCS 280-514596/60	Lab Control Sample	Total/NA	Water	353.2	

Analysis Batch: 514926

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190226-4	G6M-18-02-FAL20	Total/NA	Water	9060A	
MB 280-514926/35	Method Blank	Total/NA	Water	9060A	
LCS 280-514926/34	Lab Control Sample	Total/NA	Water	9060A	

Analysis Batch: 640062

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190226-4	G6M-18-02-FAL20	Total/NA	Water	9034	
MB 680-640062/1	Method Blank	Total/NA	Water	9034	
LCS 680-640062/2	Lab Control Sample	Total/NA	Water	9034	
LCSD 680-640062/3	Lab Control Sample Dup	Total/NA	Water	9034	

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190226-1

Client Sample ID: G6M-02-12X-FAL20

Lab Sample ID: 680-190226-1
Date Collected: 10/15/20 12:00
Matrix: Water
Date Received: 10/17/20 10:10

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	641269	10/29/20 06:14	EMA	TAL SAV
	Instrument ID: CMSC									
Dissolved	Prep	3005A			50 mL	50 mL	640123	10/21/20 17:27	BCB	TAL SAV
Dissolved	Analysis	6010C		1			640430	10/23/20 01:39	BWR	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	640122	10/21/20 17:24	BCB	TAL SAV
Dissolved	Analysis	6020A		1			640364	10/22/20 17:58	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: AOC50-TB2-FAL20

Lab Sample ID: 680-190226-2
Date Collected: 10/14/20 00:00
Matrix: Water
Date Received: 10/17/20 10:10

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	641277	10/29/20 02:22	EMA	TAL SAV
	Instrument ID: CMSP2									

Client Sample ID: G6M-04-13X-FAL20

Lab Sample ID: 680-190226-3
Date Collected: 10/14/20 15:40
Matrix: Water
Date Received: 10/17/20 10:10

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	641277	10/29/20 07:42	EMA	TAL SAV
	Instrument ID: CMSP2									

Client Sample ID: G6M-18-02-FAL20

Lab Sample ID: 680-190226-4
Date Collected: 10/14/20 14:45
Matrix: Water
Date Received: 10/17/20 10:10

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	641277	10/29/20 08:06	EMA	TAL SAV
	Instrument ID: CMSP2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	640667	10/26/20 01:21	DBM	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	640614	10/25/20 09:40	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	640123	10/21/20 17:27	BCB	TAL SAV
Dissolved	Analysis	6010C		1			640430	10/23/20 01:43	BWR	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	640122	10/21/20 17:24	BCB	TAL SAV
Dissolved	Analysis	6020A		1			640364	10/22/20 18:01	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	514596	10/28/20 19:31	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	310 mL	310 mL	640062	10/21/20 13:10	NVF	TAL SAV
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190226-1

Client Sample ID: G6M-18-02-FAL20

Lab Sample ID: 680-190226-4
Date Collected: 10/14/20 14:45
Matrix: Water
Date Received: 10/17/20 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060A		1	20 mL	20 mL	514926	10/31/20 08:10	JMB	TAL DEN
Total/NA	Analysis	SM 2320B		1			514211	10/26/20 20:35	RAF	TAL DEN
	Instrument ID: WC-AT3									

Client Sample ID: G6M-97-28X-FAL20

Lab Sample ID: 680-190226-5
Date Collected: 10/15/20 14:15
Matrix: Water
Date Received: 10/17/20 10:10

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	641269	10/29/20 06:37	EMA	TAL SAV
	Instrument ID: CMSC									
Dissolved	Prep	3005A			50 mL	50 mL	640123	10/21/20 17:27	BCB	TAL SAV
Dissolved	Analysis	6010C		1			640430	10/23/20 01:48	BWR	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	640122	10/21/20 17:24	BCB	TAL SAV
Dissolved	Analysis	6020A		1			640364	10/22/20 18:04	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: MW-3-FAL20

Lab Sample ID: 680-190226-6
Date Collected: 10/15/20 13:50
Matrix: Water
Date Received: 10/17/20 10:10

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	641269	10/29/20 07:00	EMA	TAL SAV
	Instrument ID: CMSC									
Dissolved	Prep	3005A			50 mL	50 mL	640123	10/21/20 17:27	BCB	TAL SAV
Dissolved	Analysis	6010C		1			640430	10/23/20 01:08	BWR	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	640122	10/21/20 17:24	BCB	TAL SAV
Dissolved	Analysis	6020A		1			640364	10/22/20 17:43	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: MW-7-FAL20

Lab Sample ID: 680-190226-7
Date Collected: 10/15/20 12:10
Matrix: Water
Date Received: 10/17/20 10:10

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	641269	10/29/20 07:23	EMA	TAL SAV
	Instrument ID: CMSC									
Dissolved	Prep	3005A			50 mL	50 mL	640123	10/21/20 17:27	BCB	TAL SAV
Dissolved	Analysis	6010C		1			640430	10/23/20 01:52	BWR	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	640122	10/21/20 17:24	BCB	TAL SAV
Dissolved	Analysis	6020A		1			640364	10/22/20 18:13	BJB	TAL SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190226-1

Client Sample ID: XSA-12-95X-FAL20

Date Collected: 10/15/20 13:40
Date Received: 10/17/20 10:10

Lab Sample ID: 680-190226-8

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	641277	10/29/20 08:31	EMA	TAL SAV
	Instrument ID: CMSP2									
Dissolved	Prep	3005A			50 mL	50 mL	640123	10/21/20 17:27	BCB	TAL SAV
Dissolved	Analysis	6010C		1			640430	10/23/20 01:57	BWR	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	640122	10/21/20 17:24	BCB	TAL SAV
Dissolved	Analysis	6020A		1			640364	10/22/20 18:17	BJB	TAL SAV
	Instrument ID: ICPMSD									

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-190226-1
Project/Site: Fort Devens

Laboratory: Eurofins TestAmerica, Savannah

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

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-22-22

Laboratory: Eurofins TestAmerica, Denver

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21

Method Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190226-1

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
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	TAL DEN
9034	Sulfide, Acid Soluble and Insoluble (Titrimetric)	SW846	TAL SAV
9060A	Organic Carbon, Total (TOC)	SW846	TAL DEN
SM 2320B	Alkalinity	SM	TAL DEN
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 TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

TAL SAV = Eurofins TestAmerica, 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 # 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 2020
Project Number: DEVENS-LTM	Contact:	
WBS Code:	Ship to:	

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

680-190226 Chain of Custody

Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020

	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-FAL20	WG							X	X	X				G6M-95-20X	FD1	18.00	23.00		
2	AOC50-DUP02-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-07-02X	FD1	22.50	27.50		
3	AOC50-DUP03-FAL20	WG							X	X	X				G6M-04-04X	FD1	94.00	104.00		
4	AOC50-DUP04-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-13-02X	FD1	115.00	125.00		
5	G6M-02-01X-FAL20	WG							X	X	X				G6M-02-01X	N1	80.00	95.00		
6	G6M-02-04X-FAL20	WG							X	X	X				G6M-02-04X	N1	90.00	105.00		
7	G6M-02-06X-FAL20	WG							X	X	X				G6M-02-06X	N1	55.00	65.00		
8	G6M-02-07X-FAL20	WG							X	X	X				G6M-02-07X	N1	30.00	40.00		
9	G6M-02-08X-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-02-08X	N1	60.00	70.00		
10	G6M-02-11X-FAL20	WG							X	X	X				G6M-02-11X	N1	125.00	135.00		
11	G6M-02-12X-FAL20	WG	10-15-20	1200	NB				X	X	X				G6M-02-12X	N1	125.00	135.00		
12	G6M-02-13X-FAL20	WG							X	X	X				G6M-02-13X	N1	110.00	120.00		
13	G6M-03-07X-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-03-07X	N1	80.00	90.00		
14	G6M-03-08X-FAL20	WG							X	X	X				G6M-03-08X	N1	125.00	140.00		
15	G6M-03-10X-FAL20	WG							X	X	X				G6M-03-10X	N1	120.00	135.00		
16	G6M-04-01X-FAL20	WG							X	X	X				G6M-04-01X	N1	82.00	92.00		
17	G6M-04-02X-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-04-02X	N1	80.00	90.00		
18	G6M-04-03X-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-04-03X	MS1	85.00	95.00		
19	G6M-04-03X-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-04-03X	N1	85.00	95.00		1.4(CF) 1.7°C

Relinquished by: Trip Blank ① for VOC
Date
Time
Received by: Diane Chipgue
AOC50_eCOC
10-15-20 1515
10-15-20 1515

Date
Time
Shipping Date: 10-15-20
Received by Laboratory: Banda 10-17-20 1010
Condition:

11/2/2020

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 # 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 2020
Project Number: DEVENS-LTM	Contact:	
WBS Code:	Ship to:	

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 2020

						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
20	G6M-04-03X-FAL20	WG					X	X	X	X	X	X	X	X	X		G6M-04-03X	SD1	85.00	95.00		
21	G6M-04-04X-FAL20	WG								X	X	X					G6M-04-04X	N1	94.00	104.00		
22	G6M-04-05X-FAL20	WG										X					G6M-04-05X	N1	100.00	110.00		
23	G6M-04-06X-FAL20	WG								X	X	X					G6M-04-06X	N1	95.00	136.00		
24	G6M-04-07X-FAL20	WG					X	X	X	X	X	X	X	X	X		G6M-04-07X	N1	120.00	130.00		
25	G6M-04-09X-FAL20	WG								X	X	X					G6M-04-09X	N1	55.00	65.00		
26	G6M-04-10A-FAL20	WG					X	X	X	X	X	X	X	X	X		G6M-04-10A	N1	30.00	40.00		
27	G6M-04-10X-FAL20	WG										X					G6M-04-10X	N1	52.00	62.00		
28	G6M-04-11X-FAL20	WG								X	X	X					G6M-04-11X	N1	35.00	45.00		
29	G6M-04-13X-FAL20	WG	10-14-20	1540	PC							X					G6M-04-13X	N1	30.00	40.00		
30	G6M-04-14X-FAL20	WG								X	X	X					G6M-04-14X	N1	80.00	90.00		
31	G6M-04-15X-FAL20	WG								X	X	X					G6M-04-15X	N1	70.00	80.00		
32	G6M-04-22X-FAL20	WG								X	X	X					G6M-04-22X	N1	74.00	84.00		
33	G6M-04-31X-FAL20	WG								X	X	X					G6M-04-31X	N1	68.00	78.00		
34	G6M-06-01X-FAL20	WG								X	X	X					G6M-06-01X	N1	106.00	126.00		
35	G6M-07-01X-FAL20	WG					X	X	X	X	X	X	X	X	X		G6M-07-01X	N1	78.00	89.00		
36	G6M-07-02X-FAL20	WG					X	X	X	X	X	X	X	X	X		G6M-07-02X	N1	22.50	27.50		
37	G6M-13-01X-FAL20	WG					X	X	X	X	X	X	X	X	X		G6M-13-01X	N1	125.00	135.00		
38	G6M-13-02X-FAL20	WG					X	X	X	X	X	X	X	X	X		G6M-13-02X	N1	115.00	125.00		

Relinquished by:
Date
Time
Received by:
AOC50_eCOC

Date 10-15-20
Time 1540
Shipping Date:
Received by Laboratory:
Condition:
10-17-20 1010

11/2/2020

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 # 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 2020
Project Number: DEVENS-LTM	Contact:	
WBS Code:	Ship to:	

Comments:
A2320B (A) = Alkalinity
E353.2 (A) = Nitrite Nitrate as N
RSK175 (A) = Dissolved Gases
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9034 (A) = Sulfide

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
5	1x 125mL plastic, Cool < 6degC
7	2x 250mL plastic, ZnAc/NaOH Cool < 6degC
8	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
10	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
29	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC
47	1x 500mL, amber glass, H2SO4; Cool < 6degC

						Analytical Test Method	A2320B (A)	E353.2 (A)	RSK175 (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW8260B - VOCs	SW9034 (A)	SW9056A - SO4	SW9060A - TOC						
Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020							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
39	G6M-13-03X-FAL20	WG								X	X	X				G6M-13-03X	N1	80.00	90.00		
40	G6M-13-04X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-13-04X	N1	125.00	135.00		
41	G6M-13-05X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-13-05X	N1	45.00	55.00		
42	G6M-13-06X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-13-06X	N1	50.00	60.00		
43	G6M-18-01-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-18-01	N1	116.00	126.00		
44	G6M-18-02-FAL20	WG	10-14-20	1445	CP		X	X	X	X	X	X	X	X	X	G6M-18-02	N1	123.95	133.95		
45	G6M-95-19X-FAL20	WG										X				G6M-95-19X	N1	48.00	58.00		
46	G6M-95-20X-FAL20	WG								X	X	X				G6M-95-20X	N1	18.00	23.00		
47	G6M-97-05B-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-97-05B	N1	130.00	135.00		
48	G6M-97-28X-FAL20	WG	10-15-20	1415	MB					X	X	X				G6M-97-28X	N1	100.00	105.00		
49	MW-3-FAL20	WG	10-15-20	1350	DC					X	X	X				MW-3	MS1	126.00	137.00		
50	MW-3-FAL20 MS	WG	10-15-20	1350	DC					X	X	X				MW-3	N1	126.00	137.00		
51	MW-3-FAL20 MSD	WG	10-15-20	1350	DC					X	X	X				MW-3	SD1	126.00	137.00		
52	MW-7-FAL20	WG	10-15-20	1210	DC					X	X	X				MW-7	N1	6.58	135.00		
53	XSA-12-95X-FAL20	WG	10-15-20	1340	CP					X	X	X				XSA-12-95X	N1	120.00	130.00		
54	XSA-12-96X-FAL20	WG					X	X	X	X	X	X	X	X	X	XSA-12-96X	N1	120.00	130.00		
55	XSA-12-97X-FAL20	WG								X	X	X				XSA-12-97X	N1	120.00	130.00		
56	XSA-12-98X-FAL20	WG								X	X	X				XSA-12-98X	N1	60.00	70.00		

Turnaround Time: NA

Relinquished by:
Date
Time
Received by:
AOC50_eCOC

Date 10-15-20
Time 1800
Shipping Date:
Received by Laboratory: Bonda 10.17.20 1010
Condition:

11/2/2020

Eurofins TestAmerica, Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Phone: 912-354-7858 Fax: 912-352-0165

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Smith, Kathryn E	Carrier Tracking No(s):	COC No: 680-629803.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Kathy.Smith@Eurofinset.com	State of Origin: Massachusetts	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): Dept. of Defense ELAP - A2LA; DoD - ANAB		Job #: 680-190226-1
Address: 4955 Yarrow Street, .	Due Date Requested: 10/28/2020			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: Fort Devens	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)	2320B/ Alkalinity	353.2_Pres	9060A/ (MOD) Waters - TOC Duplicates	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
G6M-18-02-FAL20 (680-190226-4)	10/14/20	14:45 Eastern		Water			X	X	X	3	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica 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 TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

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]	10-19-20 1515		[signature]	10/20/20 0933	BTA-Ren
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact:	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
Δ Yes Δ No	1334213	1.6 IR#11-0.3 RP 10/20/20

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-190226-1

Login Number: 190226
List Number: 1
Creator: Banda, Christy S

List Source: Eurofins TestAmerica, 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?	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").	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: 680-190226-1

Login Number: 190226
List Number: 2
Creator: O'Hara, Jake F

List Source: Eurofins TestAmerica, Denver
List Creation: 10/20/20 07:52 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").	N/A	
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 TestAmerica, Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

Laboratory Job ID: 680-190259-1
Client Project/Site: Fort Devens

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

Attn: Nathan R Mullens

Kathryn Smith

Authorized for release by:
10/31/2020 5:31:23 PM

Kathryn Smith, Client Service Manager
(912)250-0275
Kathy.Smith@Eurofinset.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.

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190259-1

Qualifiers

GC/MS VOA

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

Metals

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

General Chemistry

Qualifier	Qualifier Description
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

Glossary (Continued)

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

Job ID: 680-190259-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
680-190259-1	AOC50-DUP04-FAL20	Water	10/19/20 14:50	10/20/20 09:20	
680-190259-2	G6M-04-14X-FAL20	Water	10/19/20 12:45	10/20/20 09:20	
680-190259-3	G6M-07-01X-FAL20	Water	10/19/20 12:40	10/20/20 09:20	
680-190259-4	G6M-13-02X-FAL20	Water	10/19/20 14:50	10/20/20 09:20	
680-190259-5	AOC50-TB3-FAL20	Water	10/19/20 00:00	10/20/20 09:20	

Job ID: 680-190259-1

Laboratory: Eurofins TestAmerica, Savannah

Narrative

CASE NARRATIVE
Client: Seres Engineering & Services LLC
Project: Fort Devens

Report Number: 680-190259-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

RECEIPT
The samples were received on 10/20/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.6 C.

VOLATILE ORGANIC COMPOUNDS (GC/MS)
Samples AOC50-DUP04-FAL20 (680-190259-1), G6M-04-14X-FAL20 (680-190259-2), G6M-07-01X-FAL20 (680-190259-3), G6M-13-02X-FAL20 (680-190259-4) and AOC50-TB3-FAL20 (680-190259-5) were analyzed for Volatile Organic Compounds (GC/MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 10/29/2020 and 10/30/2020.

The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 680-641334 recovered outside control limits for the following analytes: Chloroethane.

Surrogate recovery for the following samples were marginally outside control limits: G6M-07-01X-FAL20 (680-190259-3) and G6M-13-02X-FAL20 (680-190259-4). Evidence of matrix interferences is not obvious.

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

DISSOLVED GASES
Samples AOC50-DUP04-FAL20 (680-190259-1), G6M-07-01X-FAL20 (680-190259-3) and G6M-13-02X-FAL20 (680-190259-4) were analyzed for dissolved gases in accordance with RSK-175. The samples were analyzed on 10/27/2020.

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

METALS (ICP) - DISSOLVED
Samples AOC50-DUP04-FAL20 (680-190259-1), G6M-04-14X-FAL20 (680-190259-2), G6M-07-01X-FAL20 (680-190259-3) and G6M-13-02X-FAL20 (680-190259-4) were analyzed for Metals (ICP) - Dissolved in accordance with EPA SW-846 Method 6010C. The samples were prepared on 10/22/2020 and 10/28/2020 and analyzed on 10/23/2020 and 10/29/2020.

Manganese was detected in method blank MB 680-641144/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

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

METALS (ICPMS) - DISSOLVED
Samples AOC50-DUP04-FAL20 (680-190259-1), G6M-04-14X-FAL20 (680-190259-2), G6M-07-01X-FAL20 (680-190259-3) and G6M-13-02X-FAL20 (680-190259-4) were analyzed for Metals (ICPMS) - Dissolved in accordance with EPA SW-846 Method 6020A. The samples were prepared on 10/22/2020 and 10/28/2020 and analyzed on 10/22/2020 and 10/29/2020.

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

Job ID: 680-190259-1 (Continued)

Laboratory: Eurofins TestAmerica, Savannah (Continued)

ALKALINITY

Samples AOC50-DUP04-FAL20 (680-190259-1), G6M-07-01X-FAL20 (680-190259-3) and G6M-13-02X-FAL20 (680-190259-4) were analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 10/27/2020.

Alkalinity was detected in method blank MB 280-514389/6 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

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

NITRATE-NITRITE AS NITROGEN

Samples AOC50-DUP04-FAL20 (680-190259-1), G6M-07-01X-FAL20 (680-190259-3) and G6M-13-02X-FAL20 (680-190259-4) were analyzed for nitrate-nitrite as nitrogen in accordance with EPA Method 353.2. The samples were analyzed on 10/28/2020.

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

SULFIDE

Samples AOC50-DUP04-FAL20 (680-190259-1), G6M-07-01X-FAL20 (680-190259-3) and G6M-13-02X-FAL20 (680-190259-4) were analyzed for sulfide in accordance with EPA SW846 Method 9034. The samples were analyzed on 10/21/2020.

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

ANIONS BY ION CHROMATOGRAPHY (28 DAY)

Samples AOC50-DUP04-FAL20 (680-190259-1), G6M-07-01X-FAL20 (680-190259-3) and G6M-13-02X-FAL20 (680-190259-4) were analyzed for Anions by Ion Chromatography (28 Day) in accordance with SW 846 9056A. The samples were analyzed on 10/27/2020.

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

TOTAL ORGANIC CARBON

Samples AOC50-DUP04-FAL20 (680-190259-1), G6M-07-01X-FAL20 (680-190259-3) and G6M-13-02X-FAL20 (680-190259-4) were analyzed for total organic carbon in accordance with EPA SW-846 Method 9060A. The samples were analyzed on 10/30/2020.

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

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190259-1

Client Sample ID: AOC50-DUP04-FAL20
Date Collected: 10/19/20 14:50
Date Received: 10/20/20 09:20

Lab Sample ID: 680-190259-1
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 20:33	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 20:33	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/29/20 20:33	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/29/20 20:33	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/29/20 20:33	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/29/20 20:33	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/29/20 20:33	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 20:33	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/29/20 20:33	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 20:33	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 20:33	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/29/20 20:33	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/29/20 20:33	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/29/20 20:33	1
1,2-Dichloroethene, Total	**10**		2.0	0.74	ug/L			10/29/20 20:33	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/29/20 20:33	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/29/20 20:33	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/29/20 20:33	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/29/20 20:33	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/29/20 20:33	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/29/20 20:33	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/29/20 20:33	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/29/20 20:33	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/29/20 20:33	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/29/20 20:33	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/29/20 20:33	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/29/20 20:33	1
Acetone	**11**		10	7.0	ug/L			10/29/20 20:33	1
Benzene	0.43	U	1.0	0.43	ug/L			10/29/20 20:33	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/29/20 20:33	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/29/20 20:33	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/29/20 20:33	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/29/20 20:33	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/29/20 20:33	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/29/20 20:33	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/29/20 20:33	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/29/20 20:33	1
Chloroethane	2.5	U Q	5.0	2.5	ug/L			10/29/20 20:33	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/29/20 20:33	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/29/20 20:33	1
cis-1,2-Dichloroethene	**9.4**		1.0	0.41	ug/L			10/29/20 20:33	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/29/20 20:33	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/29/20 20:33	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/29/20 20:33	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/29/20 20:33	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/29/20 20:33	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/29/20 20:33	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/29/20 20:33	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/29/20 20:33	1

Client Sample ID: AOC50-DUP04-FAL20
Date Collected: 10/19/20 14:50
Date Received: 10/20/20 09:20

Lab Sample ID: 680-190259-1
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/29/20 20:33	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/29/20 20:33	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/29/20 20:33	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/29/20 20:33	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 20:33	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/29/20 20:33	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/29/20 20:33	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/29/20 20:33	1
Styrene	0.27	U	1.0	0.27	ug/L			10/29/20 20:33	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/29/20 20:33	1
Tetrachloroethene	**17**		1.0	0.74	ug/L			10/29/20 20:33	1
Toluene	0.48	U	1.0	0.48	ug/L			10/29/20 20:33	1
trans-1,2-Dichloroethene	**0.68**	**J**	1.0	0.37	ug/L			10/29/20 20:33	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/29/20 20:33	1
Trichloroethene	**10**		1.0	0.48	ug/L			10/29/20 20:33	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/29/20 20:33	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/29/20 20:33	1
Vinyl chloride	**4.9**		1.0	0.50	ug/L			10/29/20 20:33	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/29/20 20:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*10/29/20 20:33*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 119*		*10/29/20 20:33*	*1*
Toluene-d8 (Surr)	*104*		*89 - 112*		*10/29/20 20:33*	*1*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*		*10/29/20 20:33*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**1.0**	**J**	1.1	0.55	ug/L			10/27/20 22:04	1
Ethylene	**1.4**		1.0	0.50	ug/L			10/27/20 22:04	1
Methane (TCD)	**19000**		390	39	ug/L			10/27/20 22:04	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**7.0**	**M**	1.0	0.40	mg/L			10/27/20 18:25	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**2400**		50	17	ug/L		10/22/20 10:11	10/23/20 23:44	1
Manganese	**500**		10	1.0	ug/L		10/22/20 10:11	10/23/20 23:44	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**11**		3.0	1.5	ug/L		10/22/20 10:11	10/22/20 20:11	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.019	U	0.10	0.019	mg/L			10/28/20 18:49	1
Sulfide	0.96	U	0.96	0.96	mg/L			10/21/20 14:08	1
Total Organic Carbon - Duplicates	**4.8**		1.0	0.35	mg/L			10/30/20 04:39	1
Alkalinity	**71**		10	3.1	mg/L			10/27/20 16:23	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190259-1

Client Sample ID: G6M-04-14X-FAL20
Date Collected: 10/19/20 12:45
Date Received: 10/20/20 09:20

Lab Sample ID: 680-190259-2
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 20:57	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 20:57	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/29/20 20:57	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/29/20 20:57	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/29/20 20:57	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/29/20 20:57	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/29/20 20:57	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 20:57	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/29/20 20:57	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 20:57	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 20:57	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/29/20 20:57	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/29/20 20:57	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/29/20 20:57	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			10/29/20 20:57	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/29/20 20:57	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/29/20 20:57	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/29/20 20:57	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/29/20 20:57	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/29/20 20:57	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/29/20 20:57	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/29/20 20:57	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/29/20 20:57	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/29/20 20:57	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/29/20 20:57	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/29/20 20:57	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/29/20 20:57	1
Acetone	7.0	U	10	7.0	ug/L			10/29/20 20:57	1
Benzene	0.43	U	1.0	0.43	ug/L			10/29/20 20:57	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/29/20 20:57	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/29/20 20:57	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/29/20 20:57	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/29/20 20:57	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/29/20 20:57	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/29/20 20:57	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/29/20 20:57	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/29/20 20:57	1
Chloroethane	2.5	U Q	5.0	2.5	ug/L			10/29/20 20:57	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/29/20 20:57	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/29/20 20:57	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			10/29/20 20:57	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/29/20 20:57	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/29/20 20:57	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/29/20 20:57	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/29/20 20:57	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/29/20 20:57	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/29/20 20:57	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/29/20 20:57	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/29/20 20:57	1

Client Sample ID: G6M-04-14X-FAL20

Lab Sample ID: 680-190259-2

Date Collected: 10/19/20 12:45

Matrix: Water

Date Received: 10/20/20 09:20

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/29/20 20:57	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/29/20 20:57	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/29/20 20:57	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/29/20 20:57	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 20:57	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/29/20 20:57	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/29/20 20:57	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/29/20 20:57	1
Styrene	0.27	U	1.0	0.27	ug/L			10/29/20 20:57	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/29/20 20:57	1
Tetrachloroethene	**0.80**	**J**	1.0	0.74	ug/L			10/29/20 20:57	1
Toluene	0.48	U	1.0	0.48	ug/L			10/29/20 20:57	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/29/20 20:57	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/29/20 20:57	1
Trichloroethene	0.48	U M	1.0	0.48	ug/L			10/29/20 20:57	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/29/20 20:57	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/29/20 20:57	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/29/20 20:57	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/29/20 20:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*85 - 114*		*10/29/20 20:57*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 119*		*10/29/20 20:57*	*1*
Toluene-d8 (Surr)	*103*		*89 - 112*		*10/29/20 20:57*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*81 - 118*		*10/29/20 20:57*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**33**	**J**	50	17	ug/L		10/22/20 10:11	10/23/20 23:40	1
Manganese	**3.0**	**J**	10	1.0	ug/L		10/22/20 10:11	10/23/20 23:40	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**7.1**		3.0	1.5	ug/L		10/22/20 10:11	10/22/20 20:07	1

Client Sample ID: G6M-07-01X-FAL20

Lab Sample ID: 680-190259-3

Date Collected: 10/19/20 12:40

Matrix: Water

Date Received: 10/20/20 09:20

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 19:50	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 19:50	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/29/20 19:50	1
1,1,2-Trichloroethane	0.33	U M	1.0	0.33	ug/L			10/29/20 19:50	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/29/20 19:50	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/29/20 19:50	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/29/20 19:50	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 19:50	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/29/20 19:50	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 19:50	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190259-1

Client Sample ID: G6M-07-01X-FAL20
Date Collected: 10/19/20 12:40
Date Received: 10/20/20 09:20

Lab Sample ID: 680-190259-3
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 19:50	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/29/20 19:50	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/29/20 19:50	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/29/20 19:50	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			10/29/20 19:50	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/29/20 19:50	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/29/20 19:50	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/29/20 19:50	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/29/20 19:50	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/29/20 19:50	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/29/20 19:50	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/29/20 19:50	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/29/20 19:50	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/29/20 19:50	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/29/20 19:50	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/29/20 19:50	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/29/20 19:50	1
Acetone	7.0	U	10	7.0	ug/L			10/29/20 19:50	1
Benzene	0.43	U M	1.0	0.43	ug/L			10/29/20 19:50	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/29/20 19:50	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/29/20 19:50	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			10/29/20 19:50	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/29/20 19:50	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/29/20 19:50	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/29/20 19:50	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/29/20 19:50	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/29/20 19:50	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/29/20 19:50	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/29/20 19:50	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/29/20 19:50	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			10/29/20 19:50	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/29/20 19:50	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/29/20 19:50	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/29/20 19:50	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/29/20 19:50	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/29/20 19:50	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/29/20 19:50	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/29/20 19:50	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/29/20 19:50	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/29/20 19:50	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/29/20 19:50	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/29/20 19:50	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/29/20 19:50	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 19:50	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/29/20 19:50	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/29/20 19:50	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/29/20 19:50	1
Styrene	0.27	U	1.0	0.27	ug/L			10/29/20 19:50	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/29/20 19:50	1

Client Sample ID: G6M-07-01X-FAL20

Lab Sample ID: 680-190259-3

Date Collected: 10/19/20 12:40
Matrix: Water
Date Received: 10/20/20 09:20

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	32		1.0	0.74	ug/L			10/29/20 19:50	1
Toluene	0.48	U	1.0	0.48	ug/L			10/29/20 19:50	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/29/20 19:50	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/29/20 19:50	1
Trichloroethene	0.71	J	1.0	0.48	ug/L			10/29/20 19:50	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/29/20 19:50	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/29/20 19:50	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/29/20 19:50	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/29/20 19:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*		*10/29/20 19:50*	*1*
Dibromofluoromethane (Surr)	*87*		*80 - 119*		*10/29/20 19:50*	*1*
Toluene-d8 (Surr)	*88*	*J*	*89 - 112*		*10/29/20 19:50*	*1*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*		*10/29/20 19:50*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	0.55	U	1.1	0.55	ug/L			10/27/20 22:16	1
Ethylene	0.50	U	1.0	0.50	ug/L			10/27/20 22:16	1
Methane	34		0.58	0.29	ug/L			10/27/20 22:16	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	3.6		1.0	0.40	mg/L			10/27/20 18:37	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	120		50	17	ug/L		10/22/20 10:11	10/23/20 23:36	1
Manganese	30		10	1.0	ug/L		10/22/20 10:11	10/23/20 23:36	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.1	J	3.0	1.5	ug/L		10/22/20 10:11	10/22/20 20:04	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	1.5		0.10	0.019	mg/L			10/28/20 18:51	1
Sulfide	0.81	U	0.81	0.81	mg/L			10/21/20 14:08	1
Total Organic Carbon - Duplicates	3.3		1.0	0.35	mg/L			10/30/20 06:02	1
Alkalinity	31		10	3.1	mg/L			10/27/20 16:28	1

Client Sample ID: G6M-13-02X-FAL20

Lab Sample ID: 680-190259-4

Date Collected: 10/19/20 14:50
Matrix: Water
Date Received: 10/20/20 09:20

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 20:13	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 20:13	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/29/20 20:13	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190259-1

Client Sample ID: G6M-13-02X-FAL20
Date Collected: 10/19/20 14:50
Date Received: 10/20/20 09:20

Lab Sample ID: 680-190259-4
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	0.33	U M	1.0	0.33	ug/L			10/29/20 20:13	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/29/20 20:13	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/29/20 20:13	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/29/20 20:13	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 20:13	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/29/20 20:13	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 20:13	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 20:13	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/29/20 20:13	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/29/20 20:13	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/29/20 20:13	1
1,2-Dichloroethene, Total	**9.7**		2.0	0.74	ug/L			10/29/20 20:13	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/29/20 20:13	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/29/20 20:13	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/29/20 20:13	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/29/20 20:13	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/29/20 20:13	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/29/20 20:13	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/29/20 20:13	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/29/20 20:13	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/29/20 20:13	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/29/20 20:13	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/29/20 20:13	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/29/20 20:13	1
Acetone	7.0	U M	10	7.0	ug/L			10/29/20 20:13	1
Benzene	0.43	U	1.0	0.43	ug/L			10/29/20 20:13	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/29/20 20:13	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/29/20 20:13	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			10/29/20 20:13	1
Carbon disulfide	**0.46**	**J**	2.0	0.43	ug/L			10/29/20 20:13	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/29/20 20:13	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/29/20 20:13	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/29/20 20:13	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/29/20 20:13	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/29/20 20:13	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/29/20 20:13	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/29/20 20:13	1
cis-1,2-Dichloroethene	**8.9**		1.0	0.41	ug/L			10/29/20 20:13	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/29/20 20:13	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/29/20 20:13	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/29/20 20:13	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/29/20 20:13	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/29/20 20:13	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/29/20 20:13	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/29/20 20:13	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/29/20 20:13	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/29/20 20:13	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/29/20 20:13	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/29/20 20:13	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190259-1

Client Sample ID: G6M-13-02X-FAL20
Date Collected: 10/19/20 14:50
Date Received: 10/20/20 09:20

Lab Sample ID: 680-190259-4
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	2.5	U	5.0	2.5	ug/L			10/29/20 20:13	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 20:13	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/29/20 20:13	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/29/20 20:13	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/29/20 20:13	1
Styrene	0.27	U	1.0	0.27	ug/L			10/29/20 20:13	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/29/20 20:13	1
Tetrachloroethene	**14**		1.0	0.74	ug/L			10/29/20 20:13	1
Toluene	0.48	U	1.0	0.48	ug/L			10/29/20 20:13	1
trans-1,2-Dichloroethene	**0.74**	**J**	1.0	0.37	ug/L			10/29/20 20:13	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/29/20 20:13	1
Trichloroethene	**8.4**		1.0	0.48	ug/L			10/29/20 20:13	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/29/20 20:13	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/29/20 20:13	1
Vinyl chloride	**3.8**		1.0	0.50	ug/L			10/29/20 20:13	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/29/20 20:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*		*10/29/20 20:13*	*1*
Dibromofluoromethane (Surr)	*86*		*80 - 119*		*10/29/20 20:13*	*1*
Toluene-d8 (Surr)	*87*	*J*	*89 - 112*		*10/29/20 20:13*	*1*
1,2-Dichloroethane-d4 (Surr)	*85*		*81 - 118*		*10/29/20 20:13*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**1.0**	**J**	1.1	0.55	ug/L			10/27/20 22:29	1
Ethylene	0.50	U	1.0	0.50	ug/L			10/27/20 22:29	1
Methane (TCD)	**18000**		390	39	ug/L			10/27/20 22:29	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**7.3**	**M**	1.0	0.40	mg/L			10/27/20 18:50	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**2500**		50	17	ug/L		10/28/20 11:48	10/29/20 10:19	1
Manganese	**540**		10	1.0	ug/L		10/28/20 11:48	10/29/20 10:19	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**10**		3.0	1.5	ug/L		10/28/20 11:48	10/29/20 09:21	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.019	U	0.10	0.019	mg/L			10/28/20 18:53	1
Sulfide	0.93	U	0.93	0.93	mg/L			10/21/20 14:08	1
Total Organic Carbon - Duplicates	**4.5**		1.0	0.35	mg/L			10/30/20 06:19	1
Alkalinity	**78**		10	3.1	mg/L			10/27/20 16:32	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190259-1

Client Sample ID: AOC50-TB3-FAL20
Date Collected: 10/19/20 00:00
Date Received: 10/20/20 09:20

Lab Sample ID: 680-190259-5
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/30/20 15:51	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/30/20 15:51	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/30/20 15:51	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/30/20 15:51	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/30/20 15:51	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/30/20 15:51	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/30/20 15:51	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/30/20 15:51	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/30/20 15:51	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/30/20 15:51	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/30/20 15:51	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/30/20 15:51	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/30/20 15:51	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/30/20 15:51	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			10/30/20 15:51	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/30/20 15:51	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/30/20 15:51	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/30/20 15:51	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/30/20 15:51	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/30/20 15:51	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/30/20 15:51	1
2-Butanone (MEK)	**16**		10	3.4	ug/L			10/30/20 15:51	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/30/20 15:51	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/30/20 15:51	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/30/20 15:51	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/30/20 15:51	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/30/20 15:51	1
Acetone	**9.8**	**J**	10	7.0	ug/L			10/30/20 15:51	1
Benzene	0.43	U	1.0	0.43	ug/L			10/30/20 15:51	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/30/20 15:51	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/30/20 15:51	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			10/30/20 15:51	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/30/20 15:51	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/30/20 15:51	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/30/20 15:51	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/30/20 15:51	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/30/20 15:51	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/30/20 15:51	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/30/20 15:51	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/30/20 15:51	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			10/30/20 15:51	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/30/20 15:51	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/30/20 15:51	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/30/20 15:51	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/30/20 15:51	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/30/20 15:51	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/30/20 15:51	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/30/20 15:51	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/30/20 15:51	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190259-1

Client Sample ID: AOC50-TB3-FAL20
Date Collected: 10/19/20 00:00
Date Received: 10/20/20 09:20

Lab Sample ID: 680-190259-5
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/30/20 15:51	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/30/20 15:51	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/30/20 15:51	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/30/20 15:51	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/30/20 15:51	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/30/20 15:51	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/30/20 15:51	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/30/20 15:51	1
Styrene	0.27	U	1.0	0.27	ug/L			10/30/20 15:51	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/30/20 15:51	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			10/30/20 15:51	1
Toluene	0.48	U	1.0	0.48	ug/L			10/30/20 15:51	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/30/20 15:51	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/30/20 15:51	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/30/20 15:51	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/30/20 15:51	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/30/20 15:51	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/30/20 15:51	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/30/20 15:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*10/30/20 15:51*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 119*		*10/30/20 15:51*	*1*
Toluene-d8 (Surr)	*104*		*89 - 112*		*10/30/20 15:51*	*1*
1,2-Dichloroethane-d4 (Surr)	*84*		*81 - 118*		*10/30/20 15:51*	*1*

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

Lab Sample ID: MB 680-641326/9
Matrix: Water
Analysis Batch: 641326

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 14:07	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 14:07	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/29/20 14:07	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/29/20 14:07	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/29/20 14:07	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/29/20 14:07	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/29/20 14:07	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 14:07	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/29/20 14:07	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 14:07	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 14:07	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/29/20 14:07	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/29/20 14:07	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/29/20 14:07	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			10/29/20 14:07	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/29/20 14:07	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/29/20 14:07	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/29/20 14:07	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/29/20 14:07	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/29/20 14:07	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/29/20 14:07	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/29/20 14:07	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/29/20 14:07	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/29/20 14:07	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/29/20 14:07	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/29/20 14:07	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/29/20 14:07	1
Acetone	7.0	U	10	7.0	ug/L			10/29/20 14:07	1
Benzene	0.43	U M	1.0	0.43	ug/L			10/29/20 14:07	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/29/20 14:07	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/29/20 14:07	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/29/20 14:07	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/29/20 14:07	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/29/20 14:07	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/29/20 14:07	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/29/20 14:07	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/29/20 14:07	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/29/20 14:07	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/29/20 14:07	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/29/20 14:07	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			10/29/20 14:07	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/29/20 14:07	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/29/20 14:07	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/29/20 14:07	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/29/20 14:07	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/29/20 14:07	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/29/20 14:07	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/29/20 14:07	1

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

Lab Sample ID: MB 680-641326/9
Matrix: Water
Analysis Batch: 641326

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/29/20 14:07	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/29/20 14:07	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/29/20 14:07	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/29/20 14:07	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/29/20 14:07	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 14:07	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/29/20 14:07	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/29/20 14:07	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/29/20 14:07	1
Styrene	0.27	U	1.0	0.27	ug/L			10/29/20 14:07	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/29/20 14:07	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			10/29/20 14:07	1
Toluene	0.48	U	1.0	0.48	ug/L			10/29/20 14:07	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/29/20 14:07	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/29/20 14:07	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/29/20 14:07	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/29/20 14:07	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/29/20 14:07	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/29/20 14:07	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/29/20 14:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*10/29/20 14:07*	*1*
Dibromofluoromethane (Surr)	*87*		*80 - 119*		*10/29/20 14:07*	*1*
Toluene-d8 (Surr)	*88*	*J*	*89 - 112*		*10/29/20 14:07*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*		*10/29/20 14:07*	*1*

Lab Sample ID: LCS 680-641326/4
Matrix: Water
Analysis Batch: 641326

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	46.1		ug/L		92	78 - 124
1,1,1-Trichloroethane	50.0	46.8		ug/L		94	74 - 131
1,1,2,2-Tetrachloroethane	50.0	46.6		ug/L		93	71 - 121
1,1,2-Trichloroethane	50.0	46.9		ug/L		94	80 - 119
1,1-Dichloroethane	50.0	49.4		ug/L		99	77 - 125
1,1-Dichloroethene	50.0	45.0		ug/L		90	71 - 131
1,1-Dichloropropene	50.0	49.4	M	ug/L		99	79 - 125
1,2,3-Trichlorobenzene	50.0	50.8		ug/L		102	69 - 129
1,2,3-Trichloropropane	50.0	46.8		ug/L		94	73 - 122
1,2,4-Trichlorobenzene	50.0	51.0		ug/L		102	69 - 130
1,2,4-Trimethylbenzene	50.0	48.0		ug/L		96	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	46.3		ug/L		93	62 - 128
1,2-Dichlorobenzene	50.0	48.2		ug/L		96	80 - 119
1,2-Dichloroethane	50.0	49.2		ug/L		98	73 - 128
1,2-Dichloroethene, Total	100	95.3		ug/L		95	79 - 121
1,2-Dichloropropane	50.0	50.1		ug/L		100	78 - 122

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

Lab Sample ID: LCS 680-641326/4
Matrix: Water
Analysis Batch: 641326

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	48.6		ug/L		97	80 - 119
1,3-Dichloropropane	50.0	48.6		ug/L		97	80 - 119
1,4-Dichlorobenzene	50.0	48.3		ug/L		97	79 - 118
2,2-Dichloropropane	50.0	47.6		ug/L		95	60 - 139
2-Butanone (MEK)	250	224		ug/L		90	56 - 143
2-Chlorotoluene	50.0	47.2		ug/L		94	79 - 122
2-Hexanone	250	246		ug/L		98	57 - 139
4-Chlorotoluene	50.0	46.0		ug/L		92	78 - 122
4-Isopropyltoluene	50.0	48.2		ug/L		96	77 - 127
4-Methyl-2-pentanone (MIBK)	250	244		ug/L		97	67 - 130
Acetone	250	250		ug/L		100	39 - 160
Benzene	50.0	46.6		ug/L		93	79 - 120
Bromobenzene	50.0	47.3		ug/L		95	80 - 120
Bromoform	50.0	44.3		ug/L		89	66 - 130
Bromomethane	50.0	31.9		ug/L		64	53 - 141
Carbon disulfide	50.0	48.7		ug/L		97	64 - 133
Carbon tetrachloride	50.0	46.2		ug/L		92	72 - 136
Chlorobenzene	50.0	47.4		ug/L		95	82 - 118
Chlorobromomethane	50.0	47.8		ug/L		96	78 - 123
Chlorodibromomethane	50.0	47.1		ug/L		94	74 - 126
Chloroethane	50.0	46.6		ug/L		93	60 - 138
Chloroform	50.0	47.6		ug/L		95	79 - 124
Chloromethane	50.0	44.3	M	ug/L		89	50 - 139
cis-1,2-Dichloroethene	50.0	48.9		ug/L		98	78 - 123
cis-1,3-Dichloropropene	50.0	48.8		ug/L		98	75 - 124
Dibromomethane	50.0	47.1		ug/L		94	79 - 123
Dichlorobromomethane	50.0	47.1		ug/L		94	79 - 125
Dichlorodifluoromethane	50.0	42.0		ug/L		84	32 - 152
Ethylbenzene	50.0	47.1		ug/L		94	79 - 121
Ethylene Dibromide	50.0	47.9		ug/L		96	75 - 127
Hexachlorobutadiene	50.0	48.8		ug/L		98	66 - 134
Isopropylbenzene	50.0	47.6		ug/L		95	72 - 131
Methyl tert-butyl ether	50.0	47.6		ug/L		95	71 - 124
Methylene Chloride	50.0	47.7		ug/L		95	74 - 124
m-Xylene & p-Xylene	50.0	46.9		ug/L		94	80 - 121
Naphthalene	50.0	50.0		ug/L		100	61 - 128
n-Butylbenzene	50.0	50.0		ug/L		100	75 - 128
N-Propylbenzene	50.0	47.4		ug/L		95	76 - 126
o-Xylene	50.0	46.6		ug/L		93	78 - 122
sec-Butylbenzene	50.0	48.0		ug/L		96	77 - 126
Styrene	50.0	48.1		ug/L		96	78 - 123
tert-Butylbenzene	50.0	47.6		ug/L		95	78 - 124
Tetrachloroethene	50.0	49.4		ug/L		99	74 - 129
Toluene	50.0	49.2		ug/L		98	80 - 121
trans-1,2-Dichloroethene	50.0	46.4		ug/L		93	75 - 124
trans-1,3-Dichloropropene	50.0	47.7	M	ug/L		95	73 - 127
Trichloroethene	50.0	48.5		ug/L		97	79 - 123
Trichlorofluoromethane	50.0	47.4		ug/L		95	65 - 141

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

Lab Sample ID: LCS 680-641326/4
Matrix: Water
Analysis Batch: 641326

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	98.4		ug/L		98	54 - 146		
Vinyl chloride			50.0	47.1		ug/L		94	58 - 137		
Xylenes, Total			100	93.5		ug/L		94	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*
Dibromofluoromethane (Surr)	*94*		*80 - 119*
Toluene-d8 (Surr)	*97*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*

Lab Sample ID: LCSD 680-641326/5
Matrix: Water
Analysis Batch: 641326

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	45.5		ug/L		91	78 - 124	1	20
1,1,1-Trichloroethane			50.0	46.9		ug/L		94	74 - 131	0	20
1,1,2,2-Tetrachloroethane			50.0	46.3		ug/L		93	71 - 121	1	20
1,1,2-Trichloroethane			50.0	47.7		ug/L		95	80 - 119	2	20
1,1-Dichloroethane			50.0	49.5		ug/L		99	77 - 125	0	20
1,1-Dichloroethene			50.0	44.9		ug/L		90	71 - 131	0	20
1,1-Dichloropropene			50.0	49.0	M	ug/L		98	79 - 125	1	20
1,2,3-Trichlorobenzene			50.0	51.3		ug/L		103	69 - 129	1	20
1,2,3-Trichloropropane			50.0	46.2		ug/L		92	73 - 122	1	20
1,2,4-Trichlorobenzene			50.0	50.4		ug/L		101	69 - 130	1	20
1,2,4-Trimethylbenzene			50.0	47.1		ug/L		94	76 - 124	2	20
1,2-Dibromo-3-Chloropropane			50.0	46.7		ug/L		93	62 - 128	1	20
1,2-Dichlorobenzene			50.0	48.0		ug/L		96	80 - 119	0	20
1,2-Dichloroethane			50.0	49.5		ug/L		99	73 - 128	1	20
1,2-Dichloroethene, Total			100	96.2		ug/L		96	79 - 121	1	20
1,2-Dichloropropane			50.0	50.5		ug/L		101	78 - 122	1	20
1,3,5-Trimethylbenzene			50.0	46.5		ug/L		93	75 - 124	3	20
1,3-Dichlorobenzene			50.0	47.6		ug/L		95	80 - 119	2	20
1,3-Dichloropropane			50.0	49.0		ug/L		98	80 - 119	1	20
1,4-Dichlorobenzene			50.0	47.6		ug/L		95	79 - 118	1	20
2,2-Dichloropropane			50.0	47.7		ug/L		95	60 - 139	0	20
2-Butanone (MEK)			250	231		ug/L		93	56 - 143	3	20
2-Chlorotoluene			50.0	46.5		ug/L		93	79 - 122	2	20
2-Hexanone			250	249		ug/L		100	57 - 139	1	20
4-Chlorotoluene			50.0	45.8		ug/L		92	78 - 122	1	20
4-Isopropyltoluene			50.0	47.0		ug/L		94	77 - 127	2	20
4-Methyl-2-pentanone (MIBK)			250	247		ug/L		99	67 - 130	2	20
Acetone			250	255		ug/L		102	39 - 160	2	20
Benzene			50.0	47.0		ug/L		94	79 - 120	1	20
Bromobenzene			50.0	46.8		ug/L		94	80 - 120	1	20
Bromoform			50.0	43.7		ug/L		87	66 - 130	1	20
Bromomethane			50.0	28.7		ug/L		57	53 - 141	11	20
Carbon disulfide			50.0	48.4		ug/L		97	64 - 133	1	20

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

Lab Sample ID: LCSD 680-641326/5
Matrix: Water
Analysis Batch: 641326

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	45.8		ug/L		92	72 - 136	1	20
Chlorobenzene	50.0	46.9		ug/L		94	82 - 118	1	20
Chlorobromomethane	50.0	48.6		ug/L		97	78 - 123	2	20
Chlorodibromomethane	50.0	47.5		ug/L		95	74 - 126	1	20
Chloroethane	50.0	43.6		ug/L		87	60 - 138	7	20
Chloroform	50.0	47.8		ug/L		96	79 - 124	0	20
Chloromethane	50.0	44.0	M	ug/L		88	50 - 139	1	20
cis-1,2-Dichloroethene	50.0	49.5		ug/L		99	78 - 123	1	20
cis-1,3-Dichloropropene	50.0	49.4		ug/L		99	75 - 124	1	20
Dibromomethane	50.0	47.8		ug/L		96	79 - 123	2	20
Dichlorobromomethane	50.0	47.6		ug/L		95	79 - 125	1	20
Dichlorodifluoromethane	50.0	41.5		ug/L		83	32 - 152	1	20
Ethylbenzene	50.0	46.3		ug/L		93	79 - 121	2	20
Ethylene Dibromide	50.0	48.4		ug/L		97	75 - 127	1	20
Hexachlorobutadiene	50.0	48.7		ug/L		97	66 - 134	0	20
Isopropylbenzene	50.0	46.6		ug/L		93	72 - 131	2	20
Methyl tert-butyl ether	50.0	48.4		ug/L		97	71 - 124	2	20
Methylene Chloride	50.0	48.6		ug/L		97	74 - 124	2	20
m-Xylene & p-Xylene	50.0	46.0		ug/L		92	80 - 121	2	20
Naphthalene	50.0	50.7		ug/L		101	61 - 128	1	20
n-Butylbenzene	50.0	48.3		ug/L		97	75 - 128	3	20
N-Propylbenzene	50.0	46.6		ug/L		93	76 - 126	2	20
o-Xylene	50.0	46.0		ug/L		92	78 - 122	1	20
sec-Butylbenzene	50.0	46.9		ug/L		94	77 - 126	2	20
Styrene	50.0	47.5		ug/L		95	78 - 123	1	20
tert-Butylbenzene	50.0	46.2		ug/L		92	78 - 124	3	20
Tetrachloroethene	50.0	47.7		ug/L		95	74 - 129	3	20
Toluene	50.0	49.2		ug/L		98	80 - 121	0	20
trans-1,2-Dichloroethene	50.0	46.7		ug/L		93	75 - 124	1	20
trans-1,3-Dichloropropene	50.0	48.7		ug/L		97	73 - 127	2	20
Trichloroethene	50.0	47.8		ug/L		96	79 - 123	1	20
Trichlorofluoromethane	50.0	46.9		ug/L		94	65 - 141	1	20
Vinyl acetate	100	98.5		ug/L		99	54 - 146	0	20
Vinyl chloride	50.0	46.9		ug/L		94	58 - 137	1	20
Xylenes, Total	100	92.0		ug/L		92	79 - 121	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*
Dibromofluoromethane (Surr)	*94*		*80 - 119*
Toluene-d8 (Surr)	*96*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*

Lab Sample ID: MB 680-641334/8
Matrix: Water
Analysis Batch: 641334

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 13:52	1

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

Lab Sample ID: MB 680-641334/8
Matrix: Water
Analysis Batch: 641334

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 13:52	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/29/20 13:52	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/29/20 13:52	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/29/20 13:52	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/29/20 13:52	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/29/20 13:52	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 13:52	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/29/20 13:52	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 13:52	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 13:52	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/29/20 13:52	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/29/20 13:52	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/29/20 13:52	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			10/29/20 13:52	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/29/20 13:52	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/29/20 13:52	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/29/20 13:52	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/29/20 13:52	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/29/20 13:52	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/29/20 13:52	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/29/20 13:52	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/29/20 13:52	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/29/20 13:52	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/29/20 13:52	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/29/20 13:52	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/29/20 13:52	1
Acetone	7.0	U	10	7.0	ug/L			10/29/20 13:52	1
Benzene	0.43	U	1.0	0.43	ug/L			10/29/20 13:52	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/29/20 13:52	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/29/20 13:52	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/29/20 13:52	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/29/20 13:52	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/29/20 13:52	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/29/20 13:52	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/29/20 13:52	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/29/20 13:52	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/29/20 13:52	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/29/20 13:52	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/29/20 13:52	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			10/29/20 13:52	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/29/20 13:52	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/29/20 13:52	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/29/20 13:52	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/29/20 13:52	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/29/20 13:52	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/29/20 13:52	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/29/20 13:52	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/29/20 13:52	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/29/20 13:52	1

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

Lab Sample ID: MB 680-641334/8
Matrix: Water
Analysis Batch: 641334

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/29/20 13:52	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/29/20 13:52	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/29/20 13:52	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 13:52	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/29/20 13:52	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/29/20 13:52	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/29/20 13:52	1
Styrene	0.27	U	1.0	0.27	ug/L			10/29/20 13:52	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/29/20 13:52	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			10/29/20 13:52	1
Toluene	0.48	U	1.0	0.48	ug/L			10/29/20 13:52	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/29/20 13:52	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/29/20 13:52	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/29/20 13:52	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/29/20 13:52	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/29/20 13:52	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/29/20 13:52	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/29/20 13:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*10/29/20 13:52*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*10/29/20 13:52*	*1*
Toluene-d8 (Surr)	*104*		*89 - 112*		*10/29/20 13:52*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*81 - 118*		*10/29/20 13:52*	*1*

Lab Sample ID: LCS 680-641334/3
Matrix: Water
Analysis Batch: 641334

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	55.0		ug/L		110	78 - 124
1,1,1-Trichloroethane	50.0	51.3		ug/L		103	74 - 131
1,1,2,2-Tetrachloroethane	50.0	51.1		ug/L		102	71 - 121
1,1,2-Trichloroethane	50.0	53.3		ug/L		107	80 - 119
1,1-Dichloroethane	50.0	48.6		ug/L		97	77 - 125
1,1-Dichloroethene	50.0	56.9		ug/L		114	71 - 131
1,1-Dichloropropene	50.0	51.0		ug/L		102	79 - 125
1,2,3-Trichlorobenzene	50.0	48.0		ug/L		96	69 - 129
1,2,3-Trichloropropane	50.0	53.4		ug/L		107	73 - 122
1,2,4-Trichlorobenzene	50.0	48.0		ug/L		96	69 - 130
1,2,4-Trimethylbenzene	50.0	50.2		ug/L		100	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	47.8		ug/L		96	62 - 128
1,2-Dichlorobenzene	50.0	49.2		ug/L		98	80 - 119
1,2-Dichloroethane	50.0	49.8		ug/L		100	73 - 128
1,2-Dichloroethene, Total	100	105		ug/L		105	79 - 121
1,2-Dichloropropane	50.0	49.9		ug/L		100	78 - 122
1,3,5-Trimethylbenzene	50.0	49.2		ug/L		98	75 - 124
1,3-Dichlorobenzene	50.0	50.0		ug/L		100	80 - 119

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

Lab Sample ID: LCS 680-641334/3
Matrix: Water
Analysis Batch: 641334

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	49.9		ug/L		100	80 - 119
1,4-Dichlorobenzene	50.0	50.0		ug/L		100	79 - 118
2,2-Dichloropropane	50.0	52.1		ug/L		104	60 - 139
2-Butanone (MEK)	250	273		ug/L		109	56 - 143
2-Chlorotoluene	50.0	48.7		ug/L		97	79 - 122
2-Hexanone	250	228		ug/L		91	57 - 139
4-Chlorotoluene	50.0	50.1		ug/L		100	78 - 122
4-Isopropyltoluene	50.0	46.5		ug/L		93	77 - 127
4-Methyl-2-pentanone (MIBK)	250	219		ug/L		88	67 - 130
Acetone	250	247		ug/L		99	39 - 160
Benzene	50.0	52.0		ug/L		104	79 - 120
Bromobenzene	50.0	53.5		ug/L		107	80 - 120
Bromoform	50.0	54.9		ug/L		110	66 - 130
Bromomethane	50.0	34.3		ug/L		69	53 - 141
Carbon disulfide	50.0	54.2		ug/L		108	64 - 133
Carbon tetrachloride	50.0	52.5		ug/L		105	72 - 136
Chlorobenzene	50.0	53.4		ug/L		107	82 - 118
Chlorobromomethane	50.0	50.2		ug/L		100	78 - 123
Chlorodibromomethane	50.0	53.7		ug/L		107	74 - 126
Chloroethane	50.0	45.5		ug/L		91	60 - 138
Chloroform	50.0	50.3		ug/L		101	79 - 124
Chloromethane	50.0	43.9		ug/L		88	50 - 139
cis-1,2-Dichloroethene	50.0	49.6		ug/L		99	78 - 123
cis-1,3-Dichloropropene	50.0	50.5		ug/L		101	75 - 124
Dibromomethane	50.0	49.5		ug/L		99	79 - 123
Dichlorobromomethane	50.0	51.8		ug/L		104	79 - 125
Dichlorodifluoromethane	50.0	51.4		ug/L		103	32 - 152
Ethylbenzene	50.0	50.1		ug/L		100	79 - 121
Ethylene Dibromide	50.0	53.1		ug/L		106	75 - 127
Hexachlorobutadiene	50.0	51.2		ug/L		102	66 - 134
Isopropylbenzene	50.0	49.8		ug/L		100	72 - 131
Methyl tert-butyl ether	50.0	47.8		ug/L		96	71 - 124
Methylene Chloride	50.0	52.1		ug/L		104	74 - 124
m-Xylene & p-Xylene	50.0	50.4		ug/L		101	80 - 121
Naphthalene	50.0	46.4		ug/L		93	61 - 128
n-Butylbenzene	50.0	44.8		ug/L		90	75 - 128
N-Propylbenzene	50.0	49.4		ug/L		99	76 - 126
o-Xylene	50.0	49.7		ug/L		99	78 - 122
sec-Butylbenzene	50.0	49.5		ug/L		99	77 - 126
Styrene	50.0	51.5		ug/L		103	78 - 123
tert-Butylbenzene	50.0	49.0		ug/L		98	78 - 124
Tetrachloroethene	50.0	56.3		ug/L		113	74 - 129
Toluene	50.0	52.2		ug/L		104	80 - 121
trans-1,2-Dichloroethene	50.0	55.9		ug/L		112	75 - 124
trans-1,3-Dichloropropene	50.0	46.6		ug/L		93	73 - 127
Trichloroethene	50.0	54.0		ug/L		108	79 - 123
Trichlorofluoromethane	50.0	55.0		ug/L		110	65 - 141
Vinyl acetate	100	90.1		ug/L		90	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 680-641334/3
Matrix: Water
Analysis Batch: 641334

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	100		ug/L		100	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*90*		*85 - 114*
Dibromofluoromethane (Surr)	*105*		*80 - 119*
Toluene-d8 (Surr)	*107*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*102*		*81 - 118*

Lab Sample ID: LCSD 680-641334/4
Matrix: Water
Analysis Batch: 641334

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	54.1		ug/L		108	78 - 124	2	20
1,1,1-Trichloroethane			50.0	50.8		ug/L		102	74 - 131	1	20
1,1,2,2-Tetrachloroethane			50.0	52.1		ug/L		104	71 - 121	2	20
1,1,2-Trichloroethane			50.0	54.8		ug/L		110	80 - 119	3	20
1,1-Dichloroethane			50.0	48.8		ug/L		98	77 - 125	0	20
1,1-Dichloroethene			50.0	55.8		ug/L		112	71 - 131	2	20
1,1-Dichloropropene			50.0	50.5		ug/L		101	79 - 125	1	20
1,2,3-Trichlorobenzene			50.0	49.3		ug/L		99	69 - 129	3	20
1,2,3-Trichloropropane			50.0	54.7		ug/L		109	73 - 122	2	20
1,2,4-Trichlorobenzene			50.0	48.0		ug/L		96	69 - 130	0	20
1,2,4-Trimethylbenzene			50.0	49.4		ug/L		99	76 - 124	2	20
1,2-Dibromo-3-Chloropropane			50.0	47.6		ug/L		95	62 - 128	0	20
1,2-Dichlorobenzene			50.0	48.3		ug/L		97	80 - 119	2	20
1,2-Dichloroethane			50.0	50.8		ug/L		102	73 - 128	2	20
1,2-Dichloroethene, Total			100	106		ug/L		106	79 - 121	0	20
1,2-Dichloropropane			50.0	50.9		ug/L		102	78 - 122	2	20
1,3,5-Trimethylbenzene			50.0	48.9		ug/L		98	75 - 124	0	20
1,3-Dichlorobenzene			50.0	48.1		ug/L		96	80 - 119	4	20
1,3-Dichloropropane			50.0	50.1		ug/L		100	80 - 119	0	20
1,4-Dichlorobenzene			50.0	48.8		ug/L		98	79 - 118	2	20
2,2-Dichloropropane			50.0	51.4		ug/L		103	60 - 139	1	20
2-Butanone (MEK)			250	284		ug/L		114	56 - 143	4	20
2-Chlorotoluene			50.0	49.3		ug/L		99	79 - 122	1	20
2-Hexanone			250	246		ug/L		99	57 - 139	8	20
4-Chlorotoluene			50.0	49.9		ug/L		100	78 - 122	0	20
4-Isopropyltoluene			50.0	44.3		ug/L		89	77 - 127	5	20
4-Methyl-2-pentanone (MIBK)			250	232		ug/L		93	67 - 130	6	20
Acetone			250	265		ug/L		106	39 - 160	7	20
Benzene			50.0	51.9		ug/L		104	79 - 120	0	20
Bromobenzene			50.0	54.6		ug/L		109	80 - 120	2	20
Bromoform			50.0	54.4		ug/L		109	66 - 130	1	20
Bromomethane			50.0	31.6		ug/L		63	53 - 141	8	20
Carbon disulfide			50.0	53.8		ug/L		108	64 - 133	1	20
Carbon tetrachloride			50.0	52.3		ug/L		105	72 - 136	0	20
Chlorobenzene			50.0	51.7		ug/L		103	82 - 118	3	20

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

Lab Sample ID: LCSD 680-641334/4
Matrix: Water
Analysis Batch: 641334

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	50.6		ug/L		101	78 - 123	1	20
Chlorodibromomethane	50.0	55.1		ug/L		110	74 - 126	3	20
Chloroethane	50.0	34.7	Q	ug/L		69	60 - 138	27	20
Chloroform	50.0	50.6		ug/L		101	79 - 124	1	20
Chloromethane	50.0	43.1		ug/L		86	50 - 139	2	20
cis-1,2-Dichloroethene	50.0	49.7		ug/L		99	78 - 123	0	20
cis-1,3-Dichloropropene	50.0	51.4		ug/L		103	75 - 124	2	20
Dibromomethane	50.0	51.7		ug/L		103	79 - 123	4	20
Dichlorobromomethane	50.0	52.6		ug/L		105	79 - 125	2	20
Dichlorodifluoromethane	50.0	51.1		ug/L		102	32 - 152	1	20
Ethylbenzene	50.0	49.3		ug/L		99	79 - 121	2	20
Ethylene Dibromide	50.0	54.9		ug/L		110	75 - 127	3	20
Hexachlorobutadiene	50.0	50.2		ug/L		100	66 - 134	2	20
Isopropylbenzene	50.0	48.9		ug/L		98	72 - 131	2	20
Methyl tert-butyl ether	50.0	49.7		ug/L		99	71 - 124	4	20
Methylene Chloride	50.0	52.2		ug/L		104	74 - 124	0	20
m-Xylene & p-Xylene	50.0	49.9		ug/L		100	80 - 121	1	20
Naphthalene	50.0	47.5		ug/L		95	61 - 128	2	20
n-Butylbenzene	50.0	43.4		ug/L		87	75 - 128	3	20
N-Propylbenzene	50.0	49.2		ug/L		98	76 - 126	0	20
o-Xylene	50.0	49.9		ug/L		100	78 - 122	0	20
sec-Butylbenzene	50.0	48.7		ug/L		97	77 - 126	2	20
Styrene	50.0	50.4		ug/L		101	78 - 123	2	20
tert-Butylbenzene	50.0	48.9		ug/L		98	78 - 124	0	20
Tetrachloroethene	50.0	56.3		ug/L		113	74 - 129	0	20
Toluene	50.0	52.4		ug/L		105	80 - 121	0	20
trans-1,2-Dichloroethene	50.0	56.1		ug/L		112	75 - 124	0	20
trans-1,3-Dichloropropene	50.0	47.2		ug/L		94	73 - 127	1	20
Trichloroethene	50.0	54.3		ug/L		109	79 - 123	1	20
Trichlorofluoromethane	50.0	54.8		ug/L		110	65 - 141	0	20
Vinyl acetate	100	92.5		ug/L		93	54 - 146	3	20
Vinyl chloride	50.0	48.0		ug/L		96	58 - 137	1	20
Xylenes, Total	100	99.8		ug/L		100	79 - 121	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*85 - 114*
Dibromofluoromethane (Surr)	*107*		*80 - 119*
Toluene-d8 (Surr)	*104*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*103*		*81 - 118*

Lab Sample ID: MB 680-641609/8
Matrix: Water
Analysis Batch: 641609

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/30/20 15:08	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/30/20 15:08	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/30/20 15:08	1

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

Lab Sample ID: MB 680-641609/8
Matrix: Water
Analysis Batch: 641609

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/30/20 15:08	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/30/20 15:08	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/30/20 15:08	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/30/20 15:08	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/30/20 15:08	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/30/20 15:08	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/30/20 15:08	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/30/20 15:08	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/30/20 15:08	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/30/20 15:08	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/30/20 15:08	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			10/30/20 15:08	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/30/20 15:08	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/30/20 15:08	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/30/20 15:08	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/30/20 15:08	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/30/20 15:08	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/30/20 15:08	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/30/20 15:08	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/30/20 15:08	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/30/20 15:08	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/30/20 15:08	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/30/20 15:08	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/30/20 15:08	1
Acetone	7.0	U	10	7.0	ug/L			10/30/20 15:08	1
Benzene	0.43	U	1.0	0.43	ug/L			10/30/20 15:08	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/30/20 15:08	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/30/20 15:08	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/30/20 15:08	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/30/20 15:08	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/30/20 15:08	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/30/20 15:08	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/30/20 15:08	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/30/20 15:08	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/30/20 15:08	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/30/20 15:08	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/30/20 15:08	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			10/30/20 15:08	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/30/20 15:08	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/30/20 15:08	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/30/20 15:08	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/30/20 15:08	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/30/20 15:08	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/30/20 15:08	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/30/20 15:08	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/30/20 15:08	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/30/20 15:08	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/30/20 15:08	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/30/20 15:08	1

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

Lab Sample ID: MB 680-641609/8
Matrix: Water
Analysis Batch: 641609

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	2.5	U	5.0	2.5	ug/L			10/30/20 15:08	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/30/20 15:08	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/30/20 15:08	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/30/20 15:08	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/30/20 15:08	1
Styrene	0.27	U	1.0	0.27	ug/L			10/30/20 15:08	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/30/20 15:08	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			10/30/20 15:08	1
Toluene	0.48	U	1.0	0.48	ug/L			10/30/20 15:08	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/30/20 15:08	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/30/20 15:08	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/30/20 15:08	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/30/20 15:08	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/30/20 15:08	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/30/20 15:08	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/30/20 15:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*		*10/30/20 15:08*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 119*		*10/30/20 15:08*	*1*
Toluene-d8 (Surr)	*103*		*89 - 112*		*10/30/20 15:08*	*1*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*		*10/30/20 15:08*	*1*

Lab Sample ID: LCS 680-641609/3
Matrix: Water
Analysis Batch: 641609

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	56.5		ug/L		113	78 - 124
1,1,1-Trichloroethane	50.0	48.8		ug/L		98	74 - 131
1,1,2,2-Tetrachloroethane	50.0	53.2		ug/L		106	71 - 121
1,1,2-Trichloroethane	50.0	54.7		ug/L		109	80 - 119
1,1-Dichloroethane	50.0	47.7		ug/L		95	77 - 125
1,1-Dichloroethene	50.0	53.6		ug/L		107	71 - 131
1,1-Dichloropropene	50.0	48.2		ug/L		96	79 - 125
1,2,3-Trichlorobenzene	50.0	48.4		ug/L		97	69 - 129
1,2,3-Trichloropropane	50.0	55.5		ug/L		111	73 - 122
1,2,4-Trichlorobenzene	50.0	47.7		ug/L		95	69 - 130
1,2,4-Trimethylbenzene	50.0	50.5		ug/L		101	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	48.9		ug/L		98	62 - 128
1,2-Dichlorobenzene	50.0	49.9		ug/L		100	80 - 119
1,2-Dichloroethane	50.0	49.8		ug/L		100	73 - 128
1,2-Dichloroethene, Total	100	104		ug/L		104	79 - 121
1,2-Dichloropropane	50.0	50.3		ug/L		101	78 - 122
1,3,5-Trimethylbenzene	50.0	49.2		ug/L		98	75 - 124
1,3-Dichlorobenzene	50.0	50.5		ug/L		101	80 - 119
1,3-Dichloropropane	50.0	50.9		ug/L		102	80 - 119
1,4-Dichlorobenzene	50.0	50.8		ug/L		102	79 - 118

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

Lab Sample ID: LCS 680-641609/3
Matrix: Water
Analysis Batch: 641609

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	49.1		ug/L		98	60 - 139
2-Butanone (MEK)	250	277		ug/L		111	56 - 143
2-Chlorotoluene	50.0	50.5		ug/L		101	79 - 122
2-Hexanone	250	239		ug/L		96	57 - 139
4-Chlorotoluene	50.0	51.9		ug/L		104	78 - 122
4-Isopropyltoluene	50.0	46.2		ug/L		92	77 - 127
4-Methyl-2-pentanone (MIBK)	250	233		ug/L		93	67 - 130
Acetone	250	254		ug/L		101	39 - 160
Benzene	50.0	51.6		ug/L		103	79 - 120
Bromobenzene	50.0	54.7		ug/L		109	80 - 120
Bromoform	50.0	57.9		ug/L		116	66 - 130
Bromomethane	50.0	53.4		ug/L		107	53 - 141
Carbon disulfide	50.0	53.9		ug/L		108	64 - 133
Carbon tetrachloride	50.0	50.6		ug/L		101	72 - 136
Chlorobenzene	50.0	53.3		ug/L		107	82 - 118
Chlorobromomethane	50.0	52.6		ug/L		105	78 - 123
Chlorodibromomethane	50.0	57.0		ug/L		114	74 - 126
Chloroethane	50.0	45.5		ug/L		91	60 - 138
Chloroform	50.0	49.2		ug/L		98	79 - 124
Chloromethane	50.0	46.5		ug/L		93	50 - 139
cis-1,2-Dichloroethene	50.0	49.0		ug/L		98	78 - 123
cis-1,3-Dichloropropene	50.0	51.7		ug/L		103	75 - 124
Dibromomethane	50.0	51.2		ug/L		102	79 - 123
Dichlorobromomethane	50.0	52.8		ug/L		106	79 - 125
Dichlorodifluoromethane	50.0	54.7		ug/L		109	32 - 152
Ethylbenzene	50.0	50.7		ug/L		101	79 - 121
Ethylene Dibromide	50.0	55.9		ug/L		112	75 - 127
Hexachlorobutadiene	50.0	49.6		ug/L		99	66 - 134
Isopropylbenzene	50.0	50.0		ug/L		100	72 - 131
Methyl tert-butyl ether	50.0	48.2		ug/L		96	71 - 124
Methylene Chloride	50.0	52.0		ug/L		104	74 - 124
m-Xylene & p-Xylene	50.0	51.1		ug/L		102	80 - 121
Naphthalene	50.0	46.1		ug/L		92	61 - 128
n-Butylbenzene	50.0	43.8		ug/L		88	75 - 128
N-Propylbenzene	50.0	50.8		ug/L		102	76 - 126
o-Xylene	50.0	50.9		ug/L		102	78 - 122
sec-Butylbenzene	50.0	49.3		ug/L		99	77 - 126
Styrene	50.0	52.9		ug/L		106	78 - 123
tert-Butylbenzene	50.0	49.8		ug/L		100	78 - 124
Tetrachloroethene	50.0	56.3		ug/L		113	74 - 129
Toluene	50.0	52.8		ug/L		106	80 - 121
trans-1,2-Dichloroethene	50.0	54.5		ug/L		109	75 - 124
trans-1,3-Dichloropropene	50.0	48.2		ug/L		96	73 - 127
Trichloroethene	50.0	53.4		ug/L		107	79 - 123
Trichlorofluoromethane	50.0	50.3		ug/L		101	65 - 141
Vinyl acetate	100	92.9		ug/L		93	54 - 146
Vinyl chloride	50.0	49.9		ug/L		100	58 - 137
Xylenes, Total	100	102		ug/L		102	79 - 121

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

Lab Sample ID: LCS 680-641609/3
Matrix: Water
Analysis Batch: 641609

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

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*
Dibromofluoromethane (Surr)	*104*		*80 - 119*
Toluene-d8 (Surr)	*106*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*102*		*81 - 118*

Lab Sample ID: LCSD 680-641609/4
Matrix: Water
Analysis Batch: 641609

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	57.4		ug/L		115	78 - 124	2	20
1,1,1-Trichloroethane			50.0	50.1		ug/L		100	74 - 131	3	20
1,1,2,2-Tetrachloroethane			50.0	52.6		ug/L		105	71 - 121	1	20
1,1,2-Trichloroethane			50.0	54.6		ug/L		109	80 - 119	0	20
1,1-Dichloroethane			50.0	48.5		ug/L		97	77 - 125	1	20
1,1-Dichloroethene			50.0	55.4		ug/L		111	71 - 131	3	20
1,1-Dichloropropene			50.0	49.8		ug/L		100	79 - 125	3	20
1,2,3-Trichlorobenzene			50.0	49.1		ug/L		98	69 - 129	1	20
1,2,3-Trichloropropane			50.0	55.7		ug/L		111	73 - 122	0	20
1,2,4-Trichlorobenzene			50.0	48.1		ug/L		96	69 - 130	1	20
1,2,4-Trimethylbenzene			50.0	50.9		ug/L		102	76 - 124	1	20
1,2-Dibromo-3-Chloropropane			50.0	50.7		ug/L		101	62 - 128	4	20
1,2-Dichlorobenzene			50.0	49.9		ug/L		100	80 - 119	0	20
1,2-Dichloroethane			50.0	50.3		ug/L		101	73 - 128	1	20
1,2-Dichloroethene, Total			100	104		ug/L		104	79 - 121	0	20
1,2-Dichloropropane			50.0	50.6		ug/L		101	78 - 122	1	20
1,3,5-Trimethylbenzene			50.0	50.0		ug/L		100	75 - 124	2	20
1,3-Dichlorobenzene			50.0	51.6		ug/L		103	80 - 119	2	20
1,3-Dichloropropane			50.0	51.3		ug/L		103	80 - 119	1	20
1,4-Dichlorobenzene			50.0	51.2		ug/L		102	79 - 118	1	20
2,2-Dichloropropane			50.0	50.5		ug/L		101	60 - 139	3	20
2-Butanone (MEK)			250	275		ug/L		110	56 - 143	1	20
2-Chlorotoluene			50.0	50.0		ug/L		100	79 - 122	1	20
2-Hexanone			250	239		ug/L		95	57 - 139	0	20
4-Chlorotoluene			50.0	52.2		ug/L		104	78 - 122	1	20
4-Isopropyltoluene			50.0	47.6		ug/L		95	77 - 127	3	20
4-Methyl-2-pentanone (MIBK)			250	230		ug/L		92	67 - 130	1	20
Acetone			250	245		ug/L		98	39 - 160	4	20
Benzene			50.0	51.8		ug/L		104	79 - 120	0	20
Bromobenzene			50.0	55.5		ug/L		111	80 - 120	1	20
Bromoform			50.0	58.2		ug/L		116	66 - 130	0	20
Bromomethane			50.0	51.4		ug/L		103	53 - 141	4	20
Carbon disulfide			50.0	55.4		ug/L		111	64 - 133	3	20
Carbon tetrachloride			50.0	53.5		ug/L		107	72 - 136	5	20
Chlorobenzene			50.0	53.6		ug/L		107	82 - 118	1	20
Chlorobromomethane			50.0	52.4		ug/L		105	78 - 123	0	20
Chlorodibromomethane			50.0	57.0		ug/L		114	74 - 126	0	20
Chloroethane			50.0	46.9		ug/L		94	60 - 138	3	20

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

Lab Sample ID: LCSD 680-641609/4
Matrix: Water
Analysis Batch: 641609

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	50.1		ug/L		100	79 - 124	2	20
Chloromethane			50.0	47.7		ug/L		95	50 - 139	3	20
cis-1,2-Dichloroethene			50.0	48.8		ug/L		98	78 - 123	1	20
cis-1,3-Dichloropropene			50.0	51.8		ug/L		104	75 - 124	0	20
Dibromomethane			50.0	51.7		ug/L		103	79 - 123	1	20
Dichlorobromomethane			50.0	53.0		ug/L		106	79 - 125	0	20
Dichlorodifluoromethane			50.0	58.0		ug/L		116	32 - 152	6	20
Ethylbenzene			50.0	51.8		ug/L		104	79 - 121	2	20
Ethylene Dibromide			50.0	56.1		ug/L		112	75 - 127	1	20
Hexachlorobutadiene			50.0	51.2		ug/L		102	66 - 134	3	20
Isopropylbenzene			50.0	51.2		ug/L		102	72 - 131	2	20
Methyl tert-butyl ether			50.0	48.3		ug/L		97	71 - 124	0	20
Methylene Chloride			50.0	52.6		ug/L		105	74 - 124	1	20
m-Xylene & p-Xylene			50.0	51.6		ug/L		103	80 - 121	1	20
Naphthalene			50.0	47.4		ug/L		95	61 - 128	3	20
n-Butylbenzene			50.0	45.1		ug/L		90	75 - 128	3	20
N-Propylbenzene			50.0	51.7		ug/L		103	76 - 126	2	20
o-Xylene			50.0	52.0		ug/L		104	78 - 122	2	20
sec-Butylbenzene			50.0	50.8		ug/L		102	77 - 126	3	20
Styrene			50.0	53.3		ug/L		107	78 - 123	1	20
tert-Butylbenzene			50.0	50.5		ug/L		101	78 - 124	1	20
Tetrachloroethene			50.0	57.8		ug/L		116	74 - 129	3	20
Toluene			50.0	53.3		ug/L		107	80 - 121	1	20
trans-1,2-Dichloroethene			50.0	54.9		ug/L		110	75 - 124	1	20
trans-1,3-Dichloropropene			50.0	48.1		ug/L		96	73 - 127	0	20
Trichloroethene			50.0	54.5		ug/L		109	79 - 123	2	20
Trichlorofluoromethane			50.0	52.7		ug/L		105	65 - 141	5	20
Vinyl acetate			100	91.5		ug/L		92	54 - 146	2	20
Vinyl chloride			50.0	51.0		ug/L		102	58 - 137	2	20
Xylenes, Total			100	104		ug/L		104	79 - 121	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*
Dibromofluoromethane (Surr)	*106*		*80 - 119*
Toluene-d8 (Surr)	*108*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*102*		*81 - 118*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-640969/8
Matrix: Water
Analysis Batch: 640969

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	0.55	U	1.1	0.55	ug/L			10/27/20 16:51	1
Ethylene	0.50	U	1.0	0.50	ug/L			10/27/20 16:51	1
Methane	0.29	U	0.58	0.29	ug/L			10/27/20 16:51	1
Methane (TCD)	39	U	390	39	ug/L			10/27/20 16:51	1

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

Lab Sample ID: LCS 680-640969/3
Matrix: Water
Analysis Batch: 640969

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	1910		ug/L		99	73 - 125

Lab Sample ID: LCS 680-640969/6
Matrix: Water
Analysis Batch: 640969

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	288	317		ug/L		110	74 - 131
Ethylene	269	288		ug/L		107	72 - 133
Methane	154	162		ug/L		105	73 - 125

Lab Sample ID: LCSD 680-640969/4
Matrix: Water
Analysis Batch: 640969

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	1920		ug/L		100	73 - 125	1	30

Lab Sample ID: LCSD 680-640969/7
Matrix: Water
Analysis Batch: 640969

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	288	299		ug/L		104	74 - 131	6	30
Ethylene	269	271		ug/L		101	72 - 133	6	30
Methane	154	156		ug/L		101	73 - 125	4	30

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-640951/2
Matrix: Water
Analysis Batch: 640951

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.40	U	1.0	0.40	mg/L			10/27/20 12:35	1

Lab Sample ID: LCS 680-640951/3
Matrix: Water
Analysis Batch: 640951

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 680-640951/4
Matrix: Water
Analysis Batch: 640951

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	0	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-640204/1-A
Matrix: Water
Analysis Batch: 640642

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 640204

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	17	U	50	17	ug/L		10/22/20 10:11	10/23/20 22:56	1
Manganese	1.0	U	10	1.0	ug/L		10/22/20 10:11	10/23/20 22:56	1

Lab Sample ID: LCS 680-640204/2-A
Matrix: Water
Analysis Batch: 640642

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 640204

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	5000	4820		ug/L		96	87 - 115
Manganese	400	388		ug/L		97	90 - 114

Lab Sample ID: MB 680-641144/1-A
Matrix: Water
Analysis Batch: 641443

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 641144

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	17	U	50	17	ug/L		10/28/20 11:48	10/29/20 09:22	1
Manganese	1.64	J	10	1.0	ug/L		10/28/20 11:48	10/29/20 09:22	1

Lab Sample ID: LCS 680-641144/2-A
Matrix: Water
Analysis Batch: 641443

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 641144

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	5000	5150		ug/L		103	87 - 115
Manganese	400	420		ug/L		105	90 - 114

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-640196/1-A
Matrix: Water
Analysis Batch: 640364

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 640196

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5	U	3.0	1.5	ug/L		10/22/20 10:11	10/22/20 19:43	1

Lab Sample ID: LCS 680-640196/2-A
Matrix: Water
Analysis Batch: 640364

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 640196

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	100	95.4		ug/L		95	84 - 116

Lab Sample ID: MB 680-641142/1-A
Matrix: Water
Analysis Batch: 641362

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 641142

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5	U	3.0	1.5	ug/L		10/28/20 11:48	10/29/20 09:00	1

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

Lab Sample ID: LCS 680-641142/2-A
Matrix: Water
Analysis Batch: 641362

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 641142

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic			100	99.9		ug/L		100	84 - 116		

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 280-514596/23
Matrix: Water
Analysis Batch: 514596

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.019	U	0.10	0.019	mg/L			10/28/20 17:41	1

Lab Sample ID: LCS 280-514596/21
Matrix: Water
Analysis Batch: 514596

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	4.83		mg/L		97	90 - 110		

Lab Sample ID: LCSD 280-514596/22
Matrix: Water
Analysis Batch: 514596

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
Nitrate/Nitrite-N			5.00	5.04		mg/L		101	90 - 110	4	10

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 680-640071/1
Matrix: Water
Analysis Batch: 640071

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	1.0	U	1.0	1.0	mg/L			10/21/20 14:08	1

Lab Sample ID: LCS 680-640071/2
Matrix: Water
Analysis Batch: 640071

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	9.55		mg/L		96	75 - 125		

Lab Sample ID: LCSD 680-640071/3
Matrix: Water
Analysis Batch: 640071

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	9.62		mg/L		96	75 - 125	1	30

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 280-514839/34
Matrix: Water
Analysis Batch: 514839

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	0.35	U	1.0	0.35	mg/L			10/30/20 04:07	1

Lab Sample ID: LCS 280-514839/33
Matrix: Water
Analysis Batch: 514839

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 - Duplicates	25.0	26.4		mg/L		106	88 - 112

Lab Sample ID: 680-190259-1 MS
Matrix: Water
Analysis Batch: 514839

Client Sample ID: AOC50-DUP04-FAL20
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Duplicates	4.8		25.0	30.0		mg/L		101	88 - 112

Lab Sample ID: 680-190259-1 MSD
Matrix: Water
Analysis Batch: 514839

Client Sample ID: AOC50-DUP04-FAL20
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 - Duplicates	4.8		25.0	29.6		mg/L		99	88 - 112	1	15

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-514389/6
Matrix: Water
Analysis Batch: 514389

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	4.00	J	10	3.1	mg/L			10/27/20 15:17	1

Lab Sample ID: LCS 280-514389/4
Matrix: Water
Analysis Batch: 514389

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	200	200		mg/L		100	89 - 109

Lab Sample ID: LCSD 280-514389/5
Matrix: Water
Analysis Batch: 514389

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	200	203		mg/L		101	89 - 109	1	10

GC/MS VOA

Analysis Batch: 641326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190259-3	G6M-07-01X-FAL20	Total/NA	Water	8260B	
680-190259-4	G6M-13-02X-FAL20	Total/NA	Water	8260B	
MB 680-641326/9	Method Blank	Total/NA	Water	8260B	
LCS 680-641326/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-641326/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 641334

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190259-1	AOC50-DUP04-FAL20	Total/NA	Water	8260B	
680-190259-2	G6M-04-14X-FAL20	Total/NA	Water	8260B	
MB 680-641334/8	Method Blank	Total/NA	Water	8260B	
LCS 680-641334/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-641334/4	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 641609

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190259-5	AOC50-TB3-FAL20	Total/NA	Water	8260B	
MB 680-641609/8	Method Blank	Total/NA	Water	8260B	
LCS 680-641609/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-641609/4	Lab Control Sample Dup	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 640969

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190259-1	AOC50-DUP04-FAL20	Total/NA	Water	RSK-175	
680-190259-3	G6M-07-01X-FAL20	Total/NA	Water	RSK-175	
680-190259-4	G6M-13-02X-FAL20	Total/NA	Water	RSK-175	
MB 680-640969/8	Method Blank	Total/NA	Water	RSK-175	
LCS 680-640969/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-640969/6	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-640969/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-640969/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	

HPLC/IC

Analysis Batch: 640951

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190259-1	AOC50-DUP04-FAL20	Total/NA	Water	9056A	
680-190259-3	G6M-07-01X-FAL20	Total/NA	Water	9056A	
680-190259-4	G6M-13-02X-FAL20	Total/NA	Water	9056A	
MB 680-640951/2	Method Blank	Total/NA	Water	9056A	
LCS 680-640951/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-640951/4	Lab Control Sample Dup	Total/NA	Water	9056A	

Metals

Prep Batch: 640196

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190259-1	AOC50-DUP04-FAL20	Dissolved	Water	3005A	
680-190259-2	G6M-04-14X-FAL20	Dissolved	Water	3005A	
680-190259-3	G6M-07-01X-FAL20	Dissolved	Water	3005A	

Metals (Continued)

Prep Batch: 640196 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-640196/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-640196/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 640204

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190259-1	AOC50-DUP04-FAL20	Dissolved	Water	3005A	
680-190259-2	G6M-04-14X-FAL20	Dissolved	Water	3005A	
680-190259-3	G6M-07-01X-FAL20	Dissolved	Water	3005A	
MB 680-640204/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-640204/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 640364

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190259-1	AOC50-DUP04-FAL20	Dissolved	Water	6020A	640196
680-190259-2	G6M-04-14X-FAL20	Dissolved	Water	6020A	640196
680-190259-3	G6M-07-01X-FAL20	Dissolved	Water	6020A	640196
MB 680-640196/1-A	Method Blank	Total Recoverable	Water	6020A	640196
LCS 680-640196/2-A	Lab Control Sample	Total Recoverable	Water	6020A	640196

Analysis Batch: 640642

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190259-1	AOC50-DUP04-FAL20	Dissolved	Water	6010C	640204
680-190259-2	G6M-04-14X-FAL20	Dissolved	Water	6010C	640204
680-190259-3	G6M-07-01X-FAL20	Dissolved	Water	6010C	640204
MB 680-640204/1-A	Method Blank	Total Recoverable	Water	6010C	640204
LCS 680-640204/2-A	Lab Control Sample	Total Recoverable	Water	6010C	640204

Prep Batch: 641142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190259-4	G6M-13-02X-FAL20	Dissolved	Water	3005A	
MB 680-641142/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-641142/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 641144

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190259-4	G6M-13-02X-FAL20	Dissolved	Water	3005A	
MB 680-641144/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-641144/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 641362

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190259-4	G6M-13-02X-FAL20	Dissolved	Water	6020A	641142
MB 680-641142/1-A	Method Blank	Total Recoverable	Water	6020A	641142
LCS 680-641142/2-A	Lab Control Sample	Total Recoverable	Water	6020A	641142

Analysis Batch: 641443

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190259-4	G6M-13-02X-FAL20	Dissolved	Water	6010C	641144
MB 680-641144/1-A	Method Blank	Total Recoverable	Water	6010C	641144
LCS 680-641144/2-A	Lab Control Sample	Total Recoverable	Water	6010C	641144

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190259-1

General Chemistry

Analysis Batch: 514389

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190259-1	AOC50-DUP04-FAL20	Total/NA	Water	SM 2320B	
680-190259-3	G6M-07-01X-FAL20	Total/NA	Water	SM 2320B	
680-190259-4	G6M-13-02X-FAL20	Total/NA	Water	SM 2320B	
MB 280-514389/6	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-514389/4	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 280-514389/5	Lab Control Sample Dup	Total/NA	Water	SM 2320B	

Analysis Batch: 514596

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190259-1	AOC50-DUP04-FAL20	Total/NA	Water	353.2	
680-190259-3	G6M-07-01X-FAL20	Total/NA	Water	353.2	
680-190259-4	G6M-13-02X-FAL20	Total/NA	Water	353.2	
MB 280-514596/23	Method Blank	Total/NA	Water	353.2	
LCS 280-514596/21	Lab Control Sample	Total/NA	Water	353.2	
LCSD 280-514596/22	Lab Control Sample Dup	Total/NA	Water	353.2	

Analysis Batch: 514839

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190259-1	AOC50-DUP04-FAL20	Total/NA	Water	9060A	
680-190259-3	G6M-07-01X-FAL20	Total/NA	Water	9060A	
680-190259-4	G6M-13-02X-FAL20	Total/NA	Water	9060A	
MB 280-514839/34	Method Blank	Total/NA	Water	9060A	
LCS 280-514839/33	Lab Control Sample	Total/NA	Water	9060A	
680-190259-1 MS	AOC50-DUP04-FAL20	Total/NA	Water	9060A	
680-190259-1 MSD	AOC50-DUP04-FAL20	Total/NA	Water	9060A	

Analysis Batch: 640071

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190259-1	AOC50-DUP04-FAL20	Total/NA	Water	9034	
680-190259-3	G6M-07-01X-FAL20	Total/NA	Water	9034	
680-190259-4	G6M-13-02X-FAL20	Total/NA	Water	9034	
MB 680-640071/1	Method Blank	Total/NA	Water	9034	
LCS 680-640071/2	Lab Control Sample	Total/NA	Water	9034	
LCSD 680-640071/3	Lab Control Sample Dup	Total/NA	Water	9034	

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190259-1

Client Sample ID: AOC50-DUP04-FAL20

Lab Sample ID: 680-190259-1

Date Collected: 10/19/20 14:50

Matrix: Water

Date Received: 10/20/20 09:20

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	641334	10/29/20 20:33	Y1S	TAL SAV
	Instrument ID: CMSP2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	640969	10/27/20 22:04	DBM	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	640951	10/27/20 18:25	EKB	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	640204	10/22/20 10:11	AJR	TAL SAV
Dissolved	Analysis	6010C		1			640642	10/23/20 23:44	BWR	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	640196	10/22/20 10:11	AJR	TAL SAV
Dissolved	Analysis	6020A		1			640364	10/22/20 20:11	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	514596	10/28/20 18:49	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	260 mL	260 mL	640071	10/21/20 14:08	NVF	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1	20 mL	20 mL	514839	10/30/20 04:39	JMB	TAL DEN
	Instrument ID: WC_SHI2									
Total/NA	Analysis	SM 2320B		1			514389	10/27/20 16:23	RAF	TAL DEN
	Instrument ID: WC-AT3									

Client Sample ID: G6M-04-14X-FAL20

Lab Sample ID: 680-190259-2

Date Collected: 10/19/20 12:45

Matrix: Water

Date Received: 10/20/20 09:20

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	641334	10/29/20 20:57	Y1S	TAL SAV
	Instrument ID: CMSP2									
Dissolved	Prep	3005A			50 mL	50 mL	640204	10/22/20 10:11	AJR	TAL SAV
Dissolved	Analysis	6010C		1			640642	10/23/20 23:40	BWR	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	640196	10/22/20 10:11	AJR	TAL SAV
Dissolved	Analysis	6020A		1			640364	10/22/20 20:07	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-07-01X-FAL20

Lab Sample ID: 680-190259-3

Date Collected: 10/19/20 12:40

Matrix: Water

Date Received: 10/20/20 09:20

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	641326	10/29/20 19:50	P1C	TAL SAV
	Instrument ID: CMSC									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	640969	10/27/20 22:16	DBM	TAL SAV
	Instrument ID: CVGU									

Client Sample ID: G6M-07-01X-FAL20

Lab Sample ID: 680-190259-3

Date Collected: 10/19/20 12:40

Matrix: Water

Date Received: 10/20/20 09:20

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	640951	10/27/20 18:37	EKB	TAL SAV
Dissolved	Prep	3005A			50 mL	50 mL	640204	10/22/20 10:11	AJR	TAL SAV
Dissolved	Analysis	6010C		1			640642	10/23/20 23:36	BWR	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	640196	10/22/20 10:11	AJR	TAL SAV
Dissolved	Analysis	6020A		1			640364	10/22/20 20:04	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	514596	10/28/20 18:51	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	310 mL	310 mL	640071	10/21/20 14:08	NVF	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1	20 mL	20 mL	514839	10/30/20 06:02	JMB	TAL DEN
	Instrument ID: WC_SHI2									
Total/NA	Analysis	SM 2320B		1			514389	10/27/20 16:28	RAF	TAL DEN
	Instrument ID: WC-AT3									

Client Sample ID: G6M-13-02X-FAL20

Lab Sample ID: 680-190259-4

Date Collected: 10/19/20 14:50

Matrix: Water

Date Received: 10/20/20 09:20

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	641326	10/29/20 20:13	P1C	TAL SAV
	Instrument ID: CMSC									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	640969	10/27/20 22:29	DBM	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	640951	10/27/20 18:50	EKB	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	641144	10/28/20 11:48	AJR	TAL SAV
Dissolved	Analysis	6010C		1			641443	10/29/20 10:19	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	641142	10/28/20 11:48	AJR	TAL SAV
Dissolved	Analysis	6020A		1			641362	10/29/20 09:21	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	514596	10/28/20 18:53	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	270 mL	270 mL	640071	10/21/20 14:08	NVF	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1	20 mL	20 mL	514839	10/30/20 06:19	JMB	TAL DEN
	Instrument ID: WC_SHI2									
Total/NA	Analysis	SM 2320B		1			514389	10/27/20 16:32	RAF	TAL DEN
	Instrument ID: WC-AT3									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190259-1

Client Sample ID: AOC50-TB3-FAL20

Date Collected: 10/19/20 00:00
Date Received: 10/20/20 09:20

Lab Sample ID: 680-190259-5

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	8260B		1	5 mL	5 mL	641609	10/30/20 15:51	SMP	TAL SAV
	Instrument ID: CMSP2									

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-190259-1
Project/Site: Fort Devens

Laboratory: Eurofins TestAmerica, Savannah

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

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-22-22

Laboratory: Eurofins TestAmerica, Denver

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21

Method Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190259-1

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
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	TAL DEN
9034	Sulfide, Acid Soluble and Insoluble (Titrimetric)	SW846	TAL SAV
9060A	Organic Carbon, Total (TOC)	SW846	TAL DEN
SM 2320B	Alkalinity	SM	TAL DEN
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 TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

TAL SAV = Eurofins TestAmerica, 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 # 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 2020
Project Number: DEVENS-LTM	Contact:	
WBS Code:	Ship to:	

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 2020

	Sample ID	Matrix	Date	Time	Samp Init.	A2320B (A) 46	E353.2 (A) 47	RSK175 (A) 8	SW6010C/FLDFLT (B) 9	SW6020A/FLDFLT (B) 9	SW8260B - VOCs 29	SW9034 (A) 7	SW9056A - SO4 5	SW9060A - TOC 10	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
1	AOC50-DUP01-FAL20	WG							X	X	X				G6M-95-20X	FD1	18.00	23.00		
2	AOC50-DUP02-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-07-02X	FD1	22.50	27.50		
3	AOC50-DUP03-FAL20	WG							X	X	X				G6M-04-04X	FD1	94.00	104.00		
4	AOC50-DUP04-FAL20	WG	10-19-20	1450	NB	X	X	X	X	X	X	X	X	X	G6M-13-02X	FD1	115.00	125.00		
5	G6M-02-01X-FAL20	WG							X	X	X				G6M-02-01X	N1	80.00	95.00		
6	G6M-02-04X-FAL20	WG							X	X	X				G6M-02-04X	N1	90.00	105.00		
7	G6M-02-06X-FAL20	WG							X	X	X				G6M-02-06X	N1	55.00	65.00		
8	G6M-02-07X-FAL20	WG							X	X	X				G6M-02-07X	N1	30.00	40.00		
9	G6M-02-08X-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-02-08X	N1	60.00	70.00		
10	G6M-02-11X-FAL20	WG							X	X	X				G6M-02-11X	N1	125.00	135.00		
11	G6M-02-12X-FAL20	WG							X	X	X				G6M-02-12X	N1	125.00	135.00		
12	G6M-02-13X-FAL20	WG							X	X	X				G6M-02-13X	N1	110.00	120.00		
13	G6M-03-07X-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-03-07X	N1	80.00	90.00		
14	G6M-03-08X-FAL20	WG							X	X	X				G6M-03-08X	N1	125.00	140.00		
15	G6M-03-10X-FAL20	WG							X	X	X				G6M-03-10X	N1	120.00	135.00		
16	G6M-04-01X-FAL20	WG							X	X	X				G6M-04-01X	N1	82.00	92.00		
17	G6M-04-02X-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-04-02X	N1	80.00	90.00		
18	G6M-04-03X-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-04-03X	MS1	85.00	95.00		
19	G6M-04-03X-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-04-03X	N1	85.00	95.00		

680-190259 Chain of Custody

Relinquished by: Drew Ellis
Date 10-19-20
Time 1530
Received by: [signature]
10/19/20 15:45

[signature]
10/19/20 17:00

Date
Time
Shipping Date:
Received by Laboratory: MTH
Condition: 10/20/20 920
1.3 (1.0°C)

AOC50_eCOC

10/31/2020

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 # 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 2020
Project Number: DEVENS-LTM	Contact:	
WBS Code:	Ship to:	

Comments:
A2320B (A) = Alkalinity
E353.2 (A) = Nitrite Nitrate as N
RSK175 (A) = Dissolved Gases
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9034 (A) = Sulfide

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
5	1x 125mL plastic, Cool < 6degC
7	2x 250mL plastic, ZnAc/NaOH Cool < 6degC
8	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
10	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
29	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC
47	1x 500mL, amber glass, H2SO4; Cool < 6degC

						Analytical Test Method	A2320B (A)	E353.2 (A)	RSK175 (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW8260B - VOCs	SW9034 (A)	SW9056A - SO4	SW9060A - TOC						
Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020							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
20	G6M-04-03X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-04-03X	SD1	85.00	95.00		
21	G6M-04-04X-FAL20	WG								X	X	X				G6M-04-04X	N1	94.00	104.00		
22	G6M-04-05X-FAL20	WG										X				G6M-04-05X	N1	100.00	110.00		
23	G6M-04-06X-FAL20	WG								X	X	X				G6M-04-06X	N1	95.00	136.00		
24	G6M-04-07X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-04-07X	N1	120.00	130.00		
25	G6M-04-09X-FAL20	WG								X	X	X				G6M-04-09X	N1	55.00	65.00		
26	G6M-04-10A-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-04-10A	N1	30.00	40.00		
27	G6M-04-10X-FAL20	WG										X				G6M-04-10X	N1	52.00	62.00		
28	G6M-04-11X-FAL20	WG								X	X	X				G6M-04-11X	N1	35.00	45.00		
29	G6M-04-13X-FAL20	WG										X				G6M-04-13X	N1	30.00	40.00		
30	G6M-04-14X-FAL20	WG	10-19-20	1245	NB					X	X	X				G6M-04-14X	N1	80.00	90.00		
31	G6M-04-15X-FAL20	WG								X	X	X				G6M-04-15X	N1	70.00	80.00		
32	G6M-04-22X-FAL20	WG								X	X	X				G6M-04-22X	N1	74.00	84.00		
33	G6M-04-31X-FAL20	WG								X	X	X				G6M-04-31X	N1	68.00	78.00		
34	G6M-06-01X-FAL20	WG								X	X	X				G6M-06-01X	N1	106.00	126.00		
35	G6M-07-01X-FAL20	WG	10-19-20	1240	DC		X	X	X	X	X	X	X	X	X	G6M-07-01X	N1	78.00	89.00		
36	G6M-07-02X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-07-02X	N1	22.50	27.50		
37	G6M-13-01X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-13-01X	N1	125.00	135.00		
38	G6M-13-02X-FAL20	WG	10-19-20	1450	NB		X	X	X	X	X	X	X	X	X	G6M-13-02X	N1	115.00	125.00		

Relinquished by: Diane Clapsaddle
Date 10-19-20
Time 1530
Received by: [signature] 10/19/20 1545
AOC50_eCOC

[signature] 10/19/20 1200

Date
Time
Shipping Date:
Received by Laboratory:
Condition:

TRIP Blank for VOC's
MTJ 10/20/20 920
1.3 (1.6°C)

10/31/2020

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 # 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 2020
Project Number: DEVENS-LTM	Contact:	
WBS Code:	Ship to:	

Comments:
A2320B (A) = Alkalinity
E353.2 (A) = Nitrite Nitrate as N
RSK175 (A) = Dissolved Gases
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9034 (A) = Sulfide

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
5	1x 125mL plastic, Cool < 6degC
7	2x 250mL plastic, ZnAc/NaOH Cool < 6degC
8	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
10	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
29	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC
47	1x 500mL, amber glass, H2SO4; Cool < 6degC

						Analytical Test Method	A2320B (A)	E353.2 (A)	RSK175 (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW8260B - VOCs	SW9034 (A)	SW9056A - SO4	SW9060A - TOC					
	Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020						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
39	G6M-13-03X-FAL20	WG								X	X	X				G6M-13-03X	N1	80.00	90.00		
40	G6M-13-04X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-13-04X	N1	125.00	135.00		
41	G6M-13-05X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-13-05X	N1	45.00	55.00		
42	G6M-13-06X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-13-06X	N1	50.00	60.00		
43	G6M-18-01-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-18-01	N1	116.00	126.00		
44	G6M-18-02-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-18-02	N1	123.95	133.95		
45	G6M-95-19X-FAL20	WG										X				G6M-95-19X	N1	48.00	58.00		
46	G6M-95-20X-FAL20	WG								X	X	X				G6M-95-20X	N1	18.00	23.00		
47	G6M-97-05B-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-97-05B	N1	130.00	135.00		
48	G6M-97-28X-FAL20	WG								X	X	X				G6M-97-28X	N1	100.00	105.00		
49	MW-3-FAL20	WG								X	X	X				MW-3	MS1	126.00	137.00		
50	MW-3-FAL20	WG								X	X	X				MW-3	N1	126.00	137.00		
51	MW-3-FAL20	WG								X	X	X				MW-3	SD1	126.00	137.00		
52	MW-7-FAL20	WG								X	X	X				MW-7	N1	6.58	135.00		
53	XSA-12-95X-FAL20	WG								X	X	X				XSA-12-95X	N1	120.00	130.00		
54	XSA-12-96X-FAL20	WG					X	X	X	X	X	X	X	X	X	XSA-12-96X	N1	120.00	130.00		
55	XSA-12-97X-FAL20	WG								X	X	X				XSA-12-97X	N1	120.00	130.00		
56	XSA-12-98X-FAL20	WG								X	X	X				XSA-12-98X	N1	60.00	70.00		

Turnaround Time: NA

Relinquished by:
Date
Time
Received by:
AOC50_eCOC

10/19/20 1514S — 10/19/20 17:00

Date
Time
Shipping Date:
Received by Laboratory:
Condition:

MTJ 10/20/20 920
1.3 (1.6°C)

10/31/2020

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-190259-1

Login Number: 190259

List Source: Eurofins TestAmerica, Savannah

List Number: 1

Creator: Tyler, Matthew M

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Received Trip Blank(s) not listed on COC.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	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: 680-190259-1

Login Number: 190259
List Number: 2
Creator: O'Hara, Jake F

List Source: Eurofins TestAmerica, Denver
List Creation: 10/21/20 11:31 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").	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 TestAmerica, Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

Laboratory Job ID: 680-190296-1
Client Project/Site: Fort Devens

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

Attn: Nathan R Mullens

Kathryn Smith

Authorized for release by:
11/5/2020 2:56:36 PM

Kathryn Smith, Client Service Manager
(912)250-0275
Kathy.Smith@Eurofinset.com

LINKS

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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: Fort Devens

Job ID: 680-190296-1

Qualifiers

GC/MS VOA

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

HPLC/IC

Qualifier	Qualifier Description
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
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 quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
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

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: Fort Devens

Job ID: 680-190296-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
680-190296-1	G6M-04-05X-FAL20	Water	10/20/20 10:10	10/21/20 09:40	
680-190296-2	G6M-04-09X-FAL20	Water	10/20/20 11:00	10/21/20 09:40	
680-190296-3	G6M-04-15X-FAL20	Water	10/20/20 02:45	10/21/20 09:40	
680-190296-4	G6M-04-22X-FAL20	Water	10/20/20 11:35	10/21/20 09:40	
680-190296-5	G6M-04-31X-FAL20	Water	10/20/20 12:45	10/21/20 09:40	
680-190296-6	G6M-02-01X-FAL20	Water	10/20/20 10:30	10/21/20 09:40	
680-190296-7	G6M-04-01X-FAL20	Water	10/19/20 16:24	10/21/20 09:40	
680-190296-8	G6M-04-02X-FAL20	Water	10/19/20 14:25	10/21/20 09:40	
680-190296-9	TB5-FAL20	Water	10/20/20 00:00	10/21/20 09:40	

Job ID: 680-190296-1

Laboratory: Eurofins TestAmerica, Savannah

Narrative

CASE NARRATIVE
Client: Seres Engineering & Services LLC
Project: Fort Devens

Report Number: 680-190296-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

RECEIPT
The samples were received on 10/21/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 5.6º C.

VOLATILE ORGANIC COMPOUNDS (GC/MS)
Samples G6M-04-05X-FAL20 (680-190296-1), G6M-04-09X-FAL20 (680-190296-2), G6M-04-15X-FAL20 (680-190296-3), G6M-04-22X-FAL20 (680-190296-4), G6M-04-31X-FAL20 (680-190296-5), G6M-02-01X-FAL20 (680-190296-6), G6M-04-01X-FAL20 (680-190296-7), G6M-04-02X-FAL20 (680-190296-8) and TB5-FAL20 (680-190296-9) were analyzed for Volatile Organic Compounds (GC/MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 10/29/2020 and 11/01/2020.

Surrogate recovery for the following samples were marginally outside control limits: G6M-04-31X-FAL20 (680-190296-5), G6M-04-01X-FAL20 (680-190296-7) and G6M-04-02X-FAL20 (680-190296-8). Evidence of matrix interferences is not obvious.

The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 680-641789 recovered outside control limits for the following analytes: Chloroethane. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

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

DISSOLVED GASES
Sample G6M-04-02X-FAL20 (680-190296-8) was analyzed for dissolved gases in accordance with RSK-175. The samples were analyzed on 11/02/2020.

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

METALS (ICP) - DISSOLVED
Samples G6M-04-09X-FAL20 (680-190296-2), G6M-04-15X-FAL20 (680-190296-3), G6M-04-22X-FAL20 (680-190296-4), G6M-04-31X-FAL20 (680-190296-5), G6M-02-01X-FAL20 (680-190296-6), G6M-04-01X-FAL20 (680-190296-7) and G6M-04-02X-FAL20 (680-190296-8) were analyzed for Metals (ICP) - Dissolved in accordance with EPA SW-846 Method 6010C. The samples were prepared on 10/22/2020 and 10/23/2020 and analyzed on 10/23/2020 and 10/24/2020.

Iron and Manganese were detected in method blank MB 680-640392/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Iron and Manganese recovered high for the MSD of sample G6M-04-31X-FAL20MSD (680-190296-5) in batch 680-640642.

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

METALS (ICPMS) - DISSOLVED
Samples G6M-04-09X-FAL20 (680-190296-2), G6M-04-15X-FAL20 (680-190296-3), G6M-04-22X-FAL20 (680-190296-4),

Job ID: 680-190296-1 (Continued)

Laboratory: Eurofins TestAmerica, Savannah (Continued)

G6M-04-31X-FAL20 (680-190296-5), G6M-02-01X-FAL20 (680-190296-6), G6M-04-01X-FAL20 (680-190296-7) and G6M-04-02X-FAL20 (680-190296-8) were analyzed for Metals (ICPMS) - Dissolved in accordance with EPA SW-846 Method 6020A. The samples were prepared and analyzed on 10/22/2020 and 10/23/2020.

Arsenic recovered high for the MS of sample G6M-04-31X-FAL20MS (680-190296-5) in batch 680-640364.

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

ALKALINITY
Sample G6M-04-02X-FAL20 (680-190296-8) was analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 10/29/2020.

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

NITRATE-NITRITE AS NITROGEN
Sample G6M-04-02X-FAL20 (680-190296-8) was analyzed for nitrate-nitrite as nitrogen in accordance with EPA Method 353.2. The samples were analyzed on 11/02/2020.

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

SULFIDE
Sample G6M-04-02X-FAL20 (680-190296-8) was analyzed for sulfide in accordance with EPA SW846 Method 9034. The samples were analyzed on 10/22/2020.

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

ANIONS BY ION CHROMATOGRAPHY (28 DAY)
Sample G6M-04-02X-FAL20 (680-190296-8) was analyzed for Anions by Ion Chromatography (28 Day) in accordance with SW 846 9056A. The samples were analyzed on 10/28/2020.

Sample G6M-04-02X-FAL20 (680-190296-8)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

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

TOTAL ORGANIC CARBON
Sample G6M-04-02X-FAL20 (680-190296-8) was analyzed for total organic carbon in accordance with EPA SW-846 Method 9060A. The samples were analyzed on 11/04/2020.

Sample G6M-04-02X-FAL20 (680-190296-8)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

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

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190296-1

Client Sample ID: G6M-04-05X-FAL20

Date Collected: 10/20/20 10:10
Date Received: 10/21/20 09:40

Lab Sample ID: 680-190296-1

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			11/01/20 14:12	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			11/01/20 14:12	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			11/01/20 14:12	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			11/01/20 14:12	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			11/01/20 14:12	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/01/20 14:12	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			11/01/20 14:12	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/01/20 14:12	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			11/01/20 14:12	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/01/20 14:12	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			11/01/20 14:12	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			11/01/20 14:12	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			11/01/20 14:12	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			11/01/20 14:12	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			11/01/20 14:12	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			11/01/20 14:12	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			11/01/20 14:12	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			11/01/20 14:12	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			11/01/20 14:12	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			11/01/20 14:12	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			11/01/20 14:12	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			11/01/20 14:12	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/01/20 14:12	1
2-Hexanone	2.0	U	10	2.0	ug/L			11/01/20 14:12	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			11/01/20 14:12	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			11/01/20 14:12	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			11/01/20 14:12	1
Acetone	7.0	U	10	7.0	ug/L			11/01/20 14:12	1
Benzene	0.43	U	1.0	0.43	ug/L			11/01/20 14:12	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			11/01/20 14:12	1
Bromoform	0.43	U	1.0	0.43	ug/L			11/01/20 14:12	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			11/01/20 14:12	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			11/01/20 14:12	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			11/01/20 14:12	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			11/01/20 14:12	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			11/01/20 14:12	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			11/01/20 14:12	1
Chloroethane	2.5	U Q	5.0	2.5	ug/L			11/01/20 14:12	1
Chloroform	0.50	U	1.0	0.50	ug/L			11/01/20 14:12	1
Chloromethane	0.40	U	1.0	0.40	ug/L			11/01/20 14:12	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/01/20 14:12	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			11/01/20 14:12	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			11/01/20 14:12	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			11/01/20 14:12	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			11/01/20 14:12	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			11/01/20 14:12	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			11/01/20 14:12	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			11/01/20 14:12	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			11/01/20 14:12	1

Client Sample ID: G6M-04-05X-FAL20

Lab Sample ID: 680-190296-1

Date Collected: 10/20/20 10:10

Matrix: Water

Date Received: 10/21/20 09:40

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			11/01/20 14:12	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			11/01/20 14:12	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			11/01/20 14:12	1
Naphthalene	2.5	U	5.0	2.5	ug/L			11/01/20 14:12	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			11/01/20 14:12	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			11/01/20 14:12	1
o-Xylene	0.23	U	1.0	0.23	ug/L			11/01/20 14:12	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			11/01/20 14:12	1
Styrene	0.27	U	1.0	0.27	ug/L			11/01/20 14:12	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			11/01/20 14:12	1
Tetrachloroethene	**0.75**	**J**	1.0	0.74	ug/L			11/01/20 14:12	1
Toluene	0.48	U	1.0	0.48	ug/L			11/01/20 14:12	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/01/20 14:12	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			11/01/20 14:12	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/01/20 14:12	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			11/01/20 14:12	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			11/01/20 14:12	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/01/20 14:12	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			11/01/20 14:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*85 - 114*		*11/01/20 14:12*	*1*
Dibromofluoromethane (Surr)	*93*		*80 - 119*		*11/01/20 14:12*	*1*
Toluene-d8 (Surr)	*93*		*89 - 112*		*11/01/20 14:12*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*81 - 118*		*11/01/20 14:12*	*1*

Client Sample ID: G6M-04-09X-FAL20

Lab Sample ID: 680-190296-2

Date Collected: 10/20/20 11:00

Matrix: Water

Date Received: 10/21/20 09:40

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			11/01/20 14:32	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			11/01/20 14:32	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			11/01/20 14:32	1
1,1,2-Trichloroethane	0.33	U M	1.0	0.33	ug/L			11/01/20 14:32	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			11/01/20 14:32	1
1,1-Dichloroethene	**0.94**	**J**	1.0	0.36	ug/L			11/01/20 14:32	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			11/01/20 14:32	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/01/20 14:32	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			11/01/20 14:32	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/01/20 14:32	1
1,2,4-Trimethylbenzene	**0.72**	**J**	1.0	0.47	ug/L			11/01/20 14:32	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			11/01/20 14:32	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			11/01/20 14:32	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			11/01/20 14:32	1
1,2-Dichloroethene, Total	**70**		2.0	0.74	ug/L			11/01/20 14:32	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			11/01/20 14:32	1
1,3,5-Trimethylbenzene	0.31	U M	1.0	0.31	ug/L			11/01/20 14:32	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			11/01/20 14:32	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190296-1

Client Sample ID: G6M-04-09X-FAL20
Date Collected: 10/20/20 11:00
Date Received: 10/21/20 09:40

Lab Sample ID: 680-190296-2
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			11/01/20 14:32	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			11/01/20 14:32	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			11/01/20 14:32	1
2-Butanone (MEK)	3.4	U M	10	3.4	ug/L			11/01/20 14:32	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/01/20 14:32	1
2-Hexanone	2.0	U	10	2.0	ug/L			11/01/20 14:32	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			11/01/20 14:32	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			11/01/20 14:32	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			11/01/20 14:32	1
Acetone	7.0	U	10	7.0	ug/L			11/01/20 14:32	1
Benzene	0.43	U	1.0	0.43	ug/L			11/01/20 14:32	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			11/01/20 14:32	1
Bromoform	0.43	U	1.0	0.43	ug/L			11/01/20 14:32	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			11/01/20 14:32	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			11/01/20 14:32	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			11/01/20 14:32	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			11/01/20 14:32	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			11/01/20 14:32	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			11/01/20 14:32	1
Chloroethane	2.5	U Q	5.0	2.5	ug/L			11/01/20 14:32	1
Chloroform	0.50	U	1.0	0.50	ug/L			11/01/20 14:32	1
Chloromethane	0.40	U	1.0	0.40	ug/L			11/01/20 14:32	1
cis-1,2-Dichloroethene	**68**		1.0	0.41	ug/L			11/01/20 14:32	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			11/01/20 14:32	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			11/01/20 14:32	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			11/01/20 14:32	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			11/01/20 14:32	1
Ethylbenzene	0.33	U M	1.0	0.33	ug/L			11/01/20 14:32	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			11/01/20 14:32	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			11/01/20 14:32	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			11/01/20 14:32	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			11/01/20 14:32	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			11/01/20 14:32	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			11/01/20 14:32	1
Naphthalene	2.5	U	5.0	2.5	ug/L			11/01/20 14:32	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			11/01/20 14:32	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			11/01/20 14:32	1
o-Xylene	0.23	U	1.0	0.23	ug/L			11/01/20 14:32	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			11/01/20 14:32	1
Styrene	0.27	U	1.0	0.27	ug/L			11/01/20 14:32	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			11/01/20 14:32	1
Tetrachloroethene	**110**		1.0	0.74	ug/L			11/01/20 14:32	1
Toluene	0.48	U	1.0	0.48	ug/L			11/01/20 14:32	1
trans-1,2-Dichloroethene	**2.3**		1.0	0.37	ug/L			11/01/20 14:32	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			11/01/20 14:32	1
Trichloroethene	**110**		1.0	0.48	ug/L			11/01/20 14:32	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			11/01/20 14:32	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			11/01/20 14:32	1
Vinyl chloride	**34**		1.0	0.50	ug/L			11/01/20 14:32	1

Client Sample ID: G6M-04-09X-FAL20

Lab Sample ID: 680-190296-2

Date Collected: 10/20/20 11:00

Matrix: Water

Date Received: 10/21/20 09:40

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	0.23	U	2.0	0.23	ug/L			11/01/20 14:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*85 - 114*		*11/01/20 14:32*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 119*		*11/01/20 14:32*	*1*
Toluene-d8 (Surr)	*93*		*89 - 112*		*11/01/20 14:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*		*11/01/20 14:32*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**44000**		50	17	ug/L		10/22/20 10:11	10/23/20 23:49	1
Manganese	**2100**		10	1.0	ug/L		10/22/20 10:11	10/23/20 23:49	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**200**		3.0	1.5	ug/L		10/22/20 10:11	10/22/20 20:20	1

Client Sample ID: G6M-04-15X-FAL20

Lab Sample ID: 680-190296-3

Date Collected: 10/20/20 02:45

Matrix: Water

Date Received: 10/21/20 09:40

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			11/01/20 14:52	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			11/01/20 14:52	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			11/01/20 14:52	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			11/01/20 14:52	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			11/01/20 14:52	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/01/20 14:52	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			11/01/20 14:52	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/01/20 14:52	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			11/01/20 14:52	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/01/20 14:52	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			11/01/20 14:52	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			11/01/20 14:52	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			11/01/20 14:52	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			11/01/20 14:52	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			11/01/20 14:52	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			11/01/20 14:52	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			11/01/20 14:52	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			11/01/20 14:52	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			11/01/20 14:52	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			11/01/20 14:52	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			11/01/20 14:52	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			11/01/20 14:52	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/01/20 14:52	1
2-Hexanone	2.0	U M	10	2.0	ug/L			11/01/20 14:52	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			11/01/20 14:52	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			11/01/20 14:52	1
4-Methyl-2-pentanone (MIBK)	2.1	U M	10	2.1	ug/L			11/01/20 14:52	1
Acetone	7.0	U	10	7.0	ug/L			11/01/20 14:52	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190296-1

Client Sample ID: G6M-04-15X-FAL20

Date Collected: 10/20/20 02:45
Date Received: 10/21/20 09:40

Lab Sample ID: 680-190296-3

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.43	U	1.0	0.43	ug/L			11/01/20 14:52	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			11/01/20 14:52	1
Bromoform	0.43	U	1.0	0.43	ug/L			11/01/20 14:52	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			11/01/20 14:52	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			11/01/20 14:52	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			11/01/20 14:52	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			11/01/20 14:52	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			11/01/20 14:52	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			11/01/20 14:52	1
Chloroethane	2.5	U Q	5.0	2.5	ug/L			11/01/20 14:52	1
Chloroform	0.50	U	1.0	0.50	ug/L			11/01/20 14:52	1
Chloromethane	0.40	U	1.0	0.40	ug/L			11/01/20 14:52	1
cis-1,2-Dichloroethene	**0.62**	**J**	1.0	0.41	ug/L			11/01/20 14:52	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			11/01/20 14:52	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			11/01/20 14:52	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			11/01/20 14:52	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			11/01/20 14:52	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			11/01/20 14:52	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			11/01/20 14:52	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			11/01/20 14:52	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			11/01/20 14:52	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			11/01/20 14:52	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			11/01/20 14:52	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			11/01/20 14:52	1
Naphthalene	2.5	U	5.0	2.5	ug/L			11/01/20 14:52	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			11/01/20 14:52	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			11/01/20 14:52	1
o-Xylene	0.23	U	1.0	0.23	ug/L			11/01/20 14:52	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			11/01/20 14:52	1
Styrene	0.27	U	1.0	0.27	ug/L			11/01/20 14:52	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			11/01/20 14:52	1
Tetrachloroethene	**0.86**	**J**	1.0	0.74	ug/L			11/01/20 14:52	1
Toluene	0.48	U	1.0	0.48	ug/L			11/01/20 14:52	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/01/20 14:52	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			11/01/20 14:52	1
Trichloroethene	**0.86**	**J**	1.0	0.48	ug/L			11/01/20 14:52	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			11/01/20 14:52	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			11/01/20 14:52	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/01/20 14:52	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			11/01/20 14:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*85 - 114*		*11/01/20 14:52*	*1*
Dibromofluoromethane (Surr)	*95*		*80 - 119*		*11/01/20 14:52*	*1*
Toluene-d8 (Surr)	*93*		*89 - 112*		*11/01/20 14:52*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*		*11/01/20 14:52*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**5200**		50	17	ug/L		10/23/20 09:33	10/24/20 04:17	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190296-1

Client Sample ID: G6M-04-15X-FAL20

Lab Sample ID: 680-190296-3

Date Collected: 10/20/20 02:45
Matrix: Water
Date Received: 10/21/20 09:40

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	630		10	1.0	ug/L		10/23/20 09:33	10/24/20 04:17	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	75		3.0	1.5	ug/L		10/23/20 09:33	10/23/20 16:18	1

Client Sample ID: G6M-04-22X-FAL20

Lab Sample ID: 680-190296-4

Date Collected: 10/20/20 11:35
Matrix: Water
Date Received: 10/21/20 09:40

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			11/01/20 15:12	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			11/01/20 15:12	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			11/01/20 15:12	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			11/01/20 15:12	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			11/01/20 15:12	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/01/20 15:12	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			11/01/20 15:12	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/01/20 15:12	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			11/01/20 15:12	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/01/20 15:12	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			11/01/20 15:12	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			11/01/20 15:12	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			11/01/20 15:12	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			11/01/20 15:12	1
1,2-Dichloroethene, Total	2.0		2.0	0.74	ug/L			11/01/20 15:12	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			11/01/20 15:12	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			11/01/20 15:12	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			11/01/20 15:12	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			11/01/20 15:12	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			11/01/20 15:12	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			11/01/20 15:12	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			11/01/20 15:12	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/01/20 15:12	1
2-Hexanone	2.0	U	10	2.0	ug/L			11/01/20 15:12	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			11/01/20 15:12	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			11/01/20 15:12	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			11/01/20 15:12	1
Acetone	7.0	U	10	7.0	ug/L			11/01/20 15:12	1
Benzene	0.43	U	1.0	0.43	ug/L			11/01/20 15:12	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			11/01/20 15:12	1
Bromoform	0.43	U	1.0	0.43	ug/L			11/01/20 15:12	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			11/01/20 15:12	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			11/01/20 15:12	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			11/01/20 15:12	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			11/01/20 15:12	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			11/01/20 15:12	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			11/01/20 15:12	1
Chloroethane	2.5	U Q	5.0	2.5	ug/L			11/01/20 15:12	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190296-1

Client Sample ID: G6M-04-22X-FAL20

Date Collected: 10/20/20 11:35
Date Received: 10/21/20 09:40

Lab Sample ID: 680-190296-4

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	0.50	U	1.0	0.50	ug/L			11/01/20 15:12	1
Chloromethane	0.40	U	1.0	0.40	ug/L			11/01/20 15:12	1
cis-1,2-Dichloroethene	**2.0**		1.0	0.41	ug/L			11/01/20 15:12	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			11/01/20 15:12	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			11/01/20 15:12	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			11/01/20 15:12	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			11/01/20 15:12	1
Ethylbenzene	**0.50**	**J**	1.0	0.33	ug/L			11/01/20 15:12	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			11/01/20 15:12	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			11/01/20 15:12	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			11/01/20 15:12	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			11/01/20 15:12	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			11/01/20 15:12	1
m-Xylene & p-Xylene	**0.35**	**J**	1.0	0.35	ug/L			11/01/20 15:12	1
Naphthalene	2.5	U	5.0	2.5	ug/L			11/01/20 15:12	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			11/01/20 15:12	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			11/01/20 15:12	1
o-Xylene	0.23	U	1.0	0.23	ug/L			11/01/20 15:12	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			11/01/20 15:12	1
Styrene	0.27	U	1.0	0.27	ug/L			11/01/20 15:12	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			11/01/20 15:12	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			11/01/20 15:12	1
Toluene	**70**		1.0	0.48	ug/L			11/01/20 15:12	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/01/20 15:12	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			11/01/20 15:12	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/01/20 15:12	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			11/01/20 15:12	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			11/01/20 15:12	1
Vinyl chloride	**1.8**		1.0	0.50	ug/L			11/01/20 15:12	1
Xylenes, Total	**0.35**	**J**	2.0	0.23	ug/L			11/01/20 15:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*85 - 114*		*11/01/20 15:12*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 119*		*11/01/20 15:12*	*1*
Toluene-d8 (Surr)	*95*		*89 - 112*		*11/01/20 15:12*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*		*11/01/20 15:12*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**120000**		50	17	ug/L		10/23/20 09:33	10/24/20 04:21	1
Manganese	**890**		10	1.0	ug/L		10/23/20 09:33	10/24/20 04:21	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**780**		3.0	1.5	ug/L		10/23/20 09:33	10/23/20 16:21	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190296-1

Client Sample ID: G6M-04-31X-FAL20

Date Collected: 10/20/20 12:45
Date Received: 10/21/20 09:40

Lab Sample ID: 680-190296-5

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			11/01/20 15:32	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			11/01/20 15:32	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			11/01/20 15:32	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			11/01/20 15:32	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			11/01/20 15:32	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/01/20 15:32	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			11/01/20 15:32	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/01/20 15:32	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			11/01/20 15:32	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/01/20 15:32	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			11/01/20 15:32	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			11/01/20 15:32	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			11/01/20 15:32	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			11/01/20 15:32	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			11/01/20 15:32	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			11/01/20 15:32	1
1,3,5-Trimethylbenzene	0.31	U M	1.0	0.31	ug/L			11/01/20 15:32	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			11/01/20 15:32	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			11/01/20 15:32	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			11/01/20 15:32	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			11/01/20 15:32	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			11/01/20 15:32	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/01/20 15:32	1
2-Hexanone	2.0	U	10	2.0	ug/L			11/01/20 15:32	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			11/01/20 15:32	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			11/01/20 15:32	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			11/01/20 15:32	1
Acetone	7.0	U	10	7.0	ug/L			11/01/20 15:32	1
Benzene	0.43	U	1.0	0.43	ug/L			11/01/20 15:32	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			11/01/20 15:32	1
Bromoform	0.43	U	1.0	0.43	ug/L			11/01/20 15:32	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			11/01/20 15:32	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			11/01/20 15:32	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			11/01/20 15:32	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			11/01/20 15:32	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			11/01/20 15:32	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			11/01/20 15:32	1
Chloroethane	2.5	U Q	5.0	2.5	ug/L			11/01/20 15:32	1
Chloroform	0.50	U	1.0	0.50	ug/L			11/01/20 15:32	1
Chloromethane	0.40	U	1.0	0.40	ug/L			11/01/20 15:32	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/01/20 15:32	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			11/01/20 15:32	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			11/01/20 15:32	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			11/01/20 15:32	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			11/01/20 15:32	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			11/01/20 15:32	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			11/01/20 15:32	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			11/01/20 15:32	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			11/01/20 15:32	1

Client Sample ID: G6M-04-31X-FAL20

Lab Sample ID: 680-190296-5

Date Collected: 10/20/20 12:45

Matrix: Water

Date Received: 10/21/20 09:40

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			11/01/20 15:32	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			11/01/20 15:32	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			11/01/20 15:32	1
Naphthalene	2.5	U	5.0	2.5	ug/L			11/01/20 15:32	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			11/01/20 15:32	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			11/01/20 15:32	1
o-Xylene	0.23	U	1.0	0.23	ug/L			11/01/20 15:32	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			11/01/20 15:32	1
Styrene	0.27	U	1.0	0.27	ug/L			11/01/20 15:32	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			11/01/20 15:32	1
Tetrachloroethene	**1.5**		1.0	0.74	ug/L			11/01/20 15:32	1
Toluene	0.48	U	1.0	0.48	ug/L			11/01/20 15:32	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/01/20 15:32	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			11/01/20 15:32	1
Trichloroethene	0.48	U M	1.0	0.48	ug/L			11/01/20 15:32	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			11/01/20 15:32	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			11/01/20 15:32	1
Vinyl chloride	**0.98**	**J**	1.0	0.50	ug/L			11/01/20 15:32	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			11/01/20 15:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*	*J*	*85 - 114*		*11/01/20 15:32*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 119*		*11/01/20 15:32*	*1*
Toluene-d8 (Surr)	*94*		*89 - 112*		*11/01/20 15:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*11/01/20 15:32*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**30000**	**J**	50	17	ug/L		10/22/20 10:11	10/23/20 23:05	1
Manganese	**2100**	**J**	10	1.0	ug/L		10/22/20 10:11	10/23/20 23:05	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**360**	**J**	3.0	1.5	ug/L		10/22/20 10:11	10/22/20 19:49	1

Client Sample ID: G6M-02-01X-FAL20

Lab Sample ID: 680-190296-6

Date Collected: 10/20/20 10:30

Matrix: Water

Date Received: 10/21/20 09:40

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			11/01/20 15:52	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			11/01/20 15:52	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			11/01/20 15:52	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			11/01/20 15:52	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			11/01/20 15:52	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/01/20 15:52	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			11/01/20 15:52	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/01/20 15:52	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			11/01/20 15:52	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/01/20 15:52	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190296-1

Client Sample ID: G6M-02-01X-FAL20
Date Collected: 10/20/20 10:30
Date Received: 10/21/20 09:40

Lab Sample ID: 680-190296-6
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			11/01/20 15:52	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			11/01/20 15:52	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			11/01/20 15:52	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			11/01/20 15:52	1
1,2-Dichloroethene, Total	**4.5**		2.0	0.74	ug/L			11/01/20 15:52	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			11/01/20 15:52	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			11/01/20 15:52	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			11/01/20 15:52	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			11/01/20 15:52	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			11/01/20 15:52	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			11/01/20 15:52	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			11/01/20 15:52	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/01/20 15:52	1
2-Hexanone	2.0	U	10	2.0	ug/L			11/01/20 15:52	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			11/01/20 15:52	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			11/01/20 15:52	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			11/01/20 15:52	1
Acetone	7.0	U	10	7.0	ug/L			11/01/20 15:52	1
Benzene	0.43	U	1.0	0.43	ug/L			11/01/20 15:52	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			11/01/20 15:52	1
Bromoform	0.43	U	1.0	0.43	ug/L			11/01/20 15:52	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			11/01/20 15:52	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			11/01/20 15:52	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			11/01/20 15:52	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			11/01/20 15:52	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			11/01/20 15:52	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			11/01/20 15:52	1
Chloroethane	2.5	U Q	5.0	2.5	ug/L			11/01/20 15:52	1
Chloroform	0.50	U	1.0	0.50	ug/L			11/01/20 15:52	1
Chloromethane	0.40	U	1.0	0.40	ug/L			11/01/20 15:52	1
cis-1,2-Dichloroethene	**4.5**		1.0	0.41	ug/L			11/01/20 15:52	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			11/01/20 15:52	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			11/01/20 15:52	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			11/01/20 15:52	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			11/01/20 15:52	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			11/01/20 15:52	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			11/01/20 15:52	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			11/01/20 15:52	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			11/01/20 15:52	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			11/01/20 15:52	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			11/01/20 15:52	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			11/01/20 15:52	1
Naphthalene	2.5	U	5.0	2.5	ug/L			11/01/20 15:52	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			11/01/20 15:52	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			11/01/20 15:52	1
o-Xylene	0.23	U	1.0	0.23	ug/L			11/01/20 15:52	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			11/01/20 15:52	1
Styrene	0.27	U	1.0	0.27	ug/L			11/01/20 15:52	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			11/01/20 15:52	1

Client Sample ID: G6M-02-01X-FAL20

Lab Sample ID: 680-190296-6

Date Collected: 10/20/20 10:30

Matrix: Water

Date Received: 10/21/20 09:40

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**5.3**		1.0	0.74	ug/L			11/01/20 15:52	1
Toluene	0.48	U	1.0	0.48	ug/L			11/01/20 15:52	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/01/20 15:52	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			11/01/20 15:52	1
Trichloroethene	**25**		1.0	0.48	ug/L			11/01/20 15:52	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			11/01/20 15:52	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			11/01/20 15:52	1
Vinyl chloride	**2.8**		1.0	0.50	ug/L			11/01/20 15:52	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			11/01/20 15:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*85 - 114*		*11/01/20 15:52*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 119*		*11/01/20 15:52*	*1*
Toluene-d8 (Surr)	*96*		*89 - 112*		*11/01/20 15:52*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*		*11/01/20 15:52*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**27000**		50	17	ug/L		10/22/20 09:50	10/23/20 21:19	1
Manganese	**2000**		10	1.0	ug/L		10/22/20 09:50	10/23/20 21:19	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**270**		3.0	1.5	ug/L		10/22/20 09:50	10/22/20 19:31	1

Client Sample ID: G6M-04-01X-FAL20

Lab Sample ID: 680-190296-7

Date Collected: 10/19/20 16:24

Matrix: Water

Date Received: 10/21/20 09:40

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 20:59	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 20:59	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/29/20 20:59	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/29/20 20:59	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/29/20 20:59	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/29/20 20:59	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/29/20 20:59	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 20:59	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/29/20 20:59	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 20:59	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 20:59	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/29/20 20:59	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/29/20 20:59	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/29/20 20:59	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			10/29/20 20:59	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/29/20 20:59	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/29/20 20:59	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/29/20 20:59	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/29/20 20:59	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/29/20 20:59	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190296-1

Client Sample ID: G6M-04-01X-FAL20
Date Collected: 10/19/20 16:24
Date Received: 10/21/20 09:40

Lab Sample ID: 680-190296-7
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/29/20 20:59	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/29/20 20:59	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/29/20 20:59	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/29/20 20:59	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/29/20 20:59	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/29/20 20:59	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/29/20 20:59	1
Acetone	7.0	U	10	7.0	ug/L			10/29/20 20:59	1
Benzene	0.43	U M	1.0	0.43	ug/L			10/29/20 20:59	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/29/20 20:59	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/29/20 20:59	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			10/29/20 20:59	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/29/20 20:59	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/29/20 20:59	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/29/20 20:59	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/29/20 20:59	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/29/20 20:59	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/29/20 20:59	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/29/20 20:59	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/29/20 20:59	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			10/29/20 20:59	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/29/20 20:59	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/29/20 20:59	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/29/20 20:59	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/29/20 20:59	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/29/20 20:59	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/29/20 20:59	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/29/20 20:59	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/29/20 20:59	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/29/20 20:59	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/29/20 20:59	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/29/20 20:59	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/29/20 20:59	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 20:59	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/29/20 20:59	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/29/20 20:59	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/29/20 20:59	1
Styrene	0.27	U	1.0	0.27	ug/L			10/29/20 20:59	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/29/20 20:59	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			10/29/20 20:59	1
Toluene	0.48	U	1.0	0.48	ug/L			10/29/20 20:59	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/29/20 20:59	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/29/20 20:59	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/29/20 20:59	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/29/20 20:59	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/29/20 20:59	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/29/20 20:59	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/29/20 20:59	1

Client Sample ID: G6M-04-01X-FAL20

Lab Sample ID: 680-190296-7

Date Collected: 10/19/20 16:24

Matrix: Water

Date Received: 10/21/20 09:40

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*10/29/20 20:59*	*1*
Dibromofluoromethane (Surr)	*86*		*80 - 119*		*10/29/20 20:59*	*1*
Toluene-d8 (Surr)	*88*	*J*	*89 - 112*		*10/29/20 20:59*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*		*10/29/20 20:59*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**45000**		50	17	ug/L		10/22/20 09:50	10/23/20 21:11	1
Manganese	**13000**		10	1.0	ug/L		10/22/20 09:50	10/23/20 21:11	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**580**		3.0	1.5	ug/L		10/22/20 09:50	10/22/20 19:24	1

Client Sample ID: G6M-04-02X-FAL20

Lab Sample ID: 680-190296-8

Date Collected: 10/19/20 14:25

Matrix: Water

Date Received: 10/21/20 09:40

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 21:23	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 21:23	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/29/20 21:23	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/29/20 21:23	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/29/20 21:23	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/29/20 21:23	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/29/20 21:23	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 21:23	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/29/20 21:23	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 21:23	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 21:23	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/29/20 21:23	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/29/20 21:23	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/29/20 21:23	1
1,2-Dichloroethene, Total	**120**		2.0	0.74	ug/L			10/29/20 21:23	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/29/20 21:23	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/29/20 21:23	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/29/20 21:23	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/29/20 21:23	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/29/20 21:23	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/29/20 21:23	1
2-Butanone (MEK)	**39**		10	3.4	ug/L			10/29/20 21:23	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/29/20 21:23	1
2-Hexanone	**14**		10	2.0	ug/L			10/29/20 21:23	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/29/20 21:23	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/29/20 21:23	1
4-Methyl-2-pentanone (MIBK)	**4.2**	**J**	10	2.1	ug/L			10/29/20 21:23	1
Acetone	**47**		10	7.0	ug/L			10/29/20 21:23	1
Benzene	0.43	U	1.0	0.43	ug/L			10/29/20 21:23	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/29/20 21:23	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/29/20 21:23	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190296-1

Client Sample ID: G6M-04-02X-FAL20

Date Collected: 10/19/20 14:25
Date Received: 10/21/20 09:40

Lab Sample ID: 680-190296-8

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Bromomethane	2.5	U Q	5.0	2.5	ug/L			10/29/20 21:23	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/29/20 21:23	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/29/20 21:23	1
Chlorobenzene	0.26	U M	1.0	0.26	ug/L			10/29/20 21:23	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/29/20 21:23	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/29/20 21:23	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/29/20 21:23	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/29/20 21:23	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/29/20 21:23	1
cis-1,2-Dichloroethene	**120**		1.0	0.41	ug/L			10/29/20 21:23	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/29/20 21:23	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/29/20 21:23	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/29/20 21:23	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/29/20 21:23	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/29/20 21:23	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/29/20 21:23	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/29/20 21:23	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/29/20 21:23	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/29/20 21:23	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/29/20 21:23	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/29/20 21:23	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/29/20 21:23	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 21:23	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/29/20 21:23	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/29/20 21:23	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/29/20 21:23	1
Styrene	0.27	U	1.0	0.27	ug/L			10/29/20 21:23	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/29/20 21:23	1
Tetrachloroethene	**5.7**		1.0	0.74	ug/L			10/29/20 21:23	1
Toluene	0.48	U	1.0	0.48	ug/L			10/29/20 21:23	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/29/20 21:23	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/29/20 21:23	1
Trichloroethene	**6.1**		1.0	0.48	ug/L			10/29/20 21:23	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/29/20 21:23	1
Vinyl acetate	0.81	U M	2.0	0.81	ug/L			10/29/20 21:23	1
Vinyl chloride	**5.1**		1.0	0.50	ug/L			10/29/20 21:23	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/29/20 21:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*10/29/20 21:23*	*1*
Dibromofluoromethane (Surr)	*87*		*80 - 119*		*10/29/20 21:23*	*1*
Toluene-d8 (Surr)	*84*	*J*	*89 - 112*		*10/29/20 21:23*	*1*
1,2-Dichloroethane-d4 (Surr)	*85*		*81 - 118*		*10/29/20 21:23*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**3.7**		1.1	0.55	ug/L			11/02/20 16:55	1
Ethylene	**8.6**		1.0	0.50	ug/L			11/02/20 16:55	1
Methane (TCD)	**2600**		390	39	ug/L			11/02/20 16:55	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190296-1

Client Sample ID: G6M-04-02X-FAL20

Lab Sample ID: 680-190296-8

Date Collected: 10/19/20 14:25
Date Received: 10/21/20 09:40

Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	4.0	U M	10	4.0	mg/L			10/28/20 22:48	10

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	44000		50	17	ug/L		10/22/20 09:50	10/23/20 21:15	1
Manganese	8200		10	1.0	ug/L		10/22/20 09:50	10/23/20 21:15	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	82		3.0	1.5	ug/L		10/22/20 09:50	10/22/20 19:27	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.067	J	0.10	0.019	mg/L			11/02/20 18:24	1
Sulfide	4.0		0.81	0.81	mg/L			10/22/20 10:55	1
Total Organic Carbon - Duplicates	220		10	3.5	mg/L			11/04/20 01:08	10
Alkalinity	100		10	3.1	mg/L			10/29/20 22:46	1

Client Sample ID: TB5-FAL20

Lab Sample ID: 680-190296-9

Date Collected: 10/20/20 00:00
Date Received: 10/21/20 09:40

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			11/01/20 13:11	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			11/01/20 13:11	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			11/01/20 13:11	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			11/01/20 13:11	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			11/01/20 13:11	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/01/20 13:11	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			11/01/20 13:11	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/01/20 13:11	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			11/01/20 13:11	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/01/20 13:11	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			11/01/20 13:11	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			11/01/20 13:11	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			11/01/20 13:11	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			11/01/20 13:11	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			11/01/20 13:11	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			11/01/20 13:11	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			11/01/20 13:11	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			11/01/20 13:11	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			11/01/20 13:11	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			11/01/20 13:11	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			11/01/20 13:11	1
2-Butanone (MEK)	21		10	3.4	ug/L			11/01/20 13:11	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/01/20 13:11	1
2-Hexanone	2.0	U	10	2.0	ug/L			11/01/20 13:11	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			11/01/20 13:11	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			11/01/20 13:11	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			11/01/20 13:11	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190296-1

Client Sample ID: TB5-FAL20

Date Collected: 10/20/20 00:00
Date Received: 10/21/20 09:40

Lab Sample ID: 680-190296-9

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**12**		10	7.0	ug/L			11/01/20 13:11	1
Benzene	0.43	U	1.0	0.43	ug/L			11/01/20 13:11	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			11/01/20 13:11	1
Bromoform	0.43	U	1.0	0.43	ug/L			11/01/20 13:11	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			11/01/20 13:11	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			11/01/20 13:11	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			11/01/20 13:11	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			11/01/20 13:11	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			11/01/20 13:11	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			11/01/20 13:11	1
Chloroethane	2.5	U Q	5.0	2.5	ug/L			11/01/20 13:11	1
Chloroform	0.50	U	1.0	0.50	ug/L			11/01/20 13:11	1
Chloromethane	0.40	U	1.0	0.40	ug/L			11/01/20 13:11	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/01/20 13:11	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			11/01/20 13:11	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			11/01/20 13:11	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			11/01/20 13:11	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			11/01/20 13:11	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			11/01/20 13:11	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			11/01/20 13:11	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			11/01/20 13:11	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			11/01/20 13:11	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			11/01/20 13:11	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			11/01/20 13:11	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			11/01/20 13:11	1
Naphthalene	2.5	U	5.0	2.5	ug/L			11/01/20 13:11	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			11/01/20 13:11	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			11/01/20 13:11	1
o-Xylene	0.23	U	1.0	0.23	ug/L			11/01/20 13:11	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			11/01/20 13:11	1
Styrene	0.27	U	1.0	0.27	ug/L			11/01/20 13:11	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			11/01/20 13:11	1
Tetrachloroethene	**0.81**	**J**	1.0	0.74	ug/L			11/01/20 13:11	1
Toluene	0.48	U	1.0	0.48	ug/L			11/01/20 13:11	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/01/20 13:11	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			11/01/20 13:11	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/01/20 13:11	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			11/01/20 13:11	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			11/01/20 13:11	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/01/20 13:11	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			11/01/20 13:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*85 - 114*		*11/01/20 13:11*	*1*
Dibromofluoromethane (Surr)	*95*		*80 - 119*		*11/01/20 13:11*	*1*
Toluene-d8 (Surr)	*94*		*89 - 112*		*11/01/20 13:11*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*		*11/01/20 13:11*	*1*

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190296-1

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

Lab Sample ID: MB 680-641326/9
Matrix: Water
Analysis Batch: 641326

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 14:07	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/29/20 14:07	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/29/20 14:07	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/29/20 14:07	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/29/20 14:07	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/29/20 14:07	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/29/20 14:07	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 14:07	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/29/20 14:07	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/29/20 14:07	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 14:07	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/29/20 14:07	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/29/20 14:07	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/29/20 14:07	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			10/29/20 14:07	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/29/20 14:07	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/29/20 14:07	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/29/20 14:07	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/29/20 14:07	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/29/20 14:07	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/29/20 14:07	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/29/20 14:07	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/29/20 14:07	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/29/20 14:07	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/29/20 14:07	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/29/20 14:07	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/29/20 14:07	1
Acetone	7.0	U	10	7.0	ug/L			10/29/20 14:07	1
Benzene	0.43	U M	1.0	0.43	ug/L			10/29/20 14:07	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/29/20 14:07	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/29/20 14:07	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/29/20 14:07	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/29/20 14:07	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/29/20 14:07	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/29/20 14:07	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/29/20 14:07	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/29/20 14:07	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/29/20 14:07	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/29/20 14:07	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/29/20 14:07	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			10/29/20 14:07	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/29/20 14:07	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/29/20 14:07	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/29/20 14:07	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/29/20 14:07	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/29/20 14:07	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/29/20 14:07	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/29/20 14:07	1

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

Lab Sample ID: MB 680-641326/9
Matrix: Water
Analysis Batch: 641326

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/29/20 14:07	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/29/20 14:07	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/29/20 14:07	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/29/20 14:07	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/29/20 14:07	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/29/20 14:07	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/29/20 14:07	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/29/20 14:07	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/29/20 14:07	1
Styrene	0.27	U	1.0	0.27	ug/L			10/29/20 14:07	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/29/20 14:07	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			10/29/20 14:07	1
Toluene	0.48	U	1.0	0.48	ug/L			10/29/20 14:07	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/29/20 14:07	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/29/20 14:07	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/29/20 14:07	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/29/20 14:07	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/29/20 14:07	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/29/20 14:07	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/29/20 14:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*10/29/20 14:07*	*1*
Dibromofluoromethane (Surr)	*87*		*80 - 119*		*10/29/20 14:07*	*1*
Toluene-d8 (Surr)	*88*	*J*	*89 - 112*		*10/29/20 14:07*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*		*10/29/20 14:07*	*1*

Lab Sample ID: LCS 680-641326/4
Matrix: Water
Analysis Batch: 641326

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	46.1		ug/L		92	78 - 124
1,1,1-Trichloroethane	50.0	46.8		ug/L		94	74 - 131
1,1,2,2-Tetrachloroethane	50.0	46.6		ug/L		93	71 - 121
1,1,2-Trichloroethane	50.0	46.9		ug/L		94	80 - 119
1,1-Dichloroethane	50.0	49.4		ug/L		99	77 - 125
1,1-Dichloroethene	50.0	45.0		ug/L		90	71 - 131
1,1-Dichloropropene	50.0	49.4	M	ug/L		99	79 - 125
1,2,3-Trichlorobenzene	50.0	50.8		ug/L		102	69 - 129
1,2,3-Trichloropropane	50.0	46.8		ug/L		94	73 - 122
1,2,4-Trichlorobenzene	50.0	51.0		ug/L		102	69 - 130
1,2,4-Trimethylbenzene	50.0	48.0		ug/L		96	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	46.3		ug/L		93	62 - 128
1,2-Dichlorobenzene	50.0	48.2		ug/L		96	80 - 119
1,2-Dichloroethane	50.0	49.2		ug/L		98	73 - 128
1,2-Dichloroethene, Total	100	95.3		ug/L		95	79 - 121
1,2-Dichloropropane	50.0	50.1		ug/L		100	78 - 122

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

Lab Sample ID: LCS 680-641326/4
Matrix: Water
Analysis Batch: 641326

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	48.6		ug/L		97	80 - 119
1,3-Dichloropropane	50.0	48.6		ug/L		97	80 - 119
1,4-Dichlorobenzene	50.0	48.3		ug/L		97	79 - 118
2,2-Dichloropropane	50.0	47.6		ug/L		95	60 - 139
2-Butanone (MEK)	250	224		ug/L		90	56 - 143
2-Chlorotoluene	50.0	47.2		ug/L		94	79 - 122
2-Hexanone	250	246		ug/L		98	57 - 139
4-Chlorotoluene	50.0	46.0		ug/L		92	78 - 122
4-Isopropyltoluene	50.0	48.2		ug/L		96	77 - 127
4-Methyl-2-pentanone (MIBK)	250	244		ug/L		97	67 - 130
Acetone	250	250		ug/L		100	39 - 160
Benzene	50.0	46.6		ug/L		93	79 - 120
Bromobenzene	50.0	47.3		ug/L		95	80 - 120
Bromoform	50.0	44.3		ug/L		89	66 - 130
Bromomethane	50.0	31.9		ug/L		64	53 - 141
Carbon disulfide	50.0	48.7		ug/L		97	64 - 133
Carbon tetrachloride	50.0	46.2		ug/L		92	72 - 136
Chlorobenzene	50.0	47.4		ug/L		95	82 - 118
Chlorobromomethane	50.0	47.8		ug/L		96	78 - 123
Chlorodibromomethane	50.0	47.1		ug/L		94	74 - 126
Chloroethane	50.0	46.6		ug/L		93	60 - 138
Chloroform	50.0	47.6		ug/L		95	79 - 124
Chloromethane	50.0	44.3	M	ug/L		89	50 - 139
cis-1,2-Dichloroethene	50.0	48.9		ug/L		98	78 - 123
cis-1,3-Dichloropropene	50.0	48.8		ug/L		98	75 - 124
Dibromomethane	50.0	47.1		ug/L		94	79 - 123
Dichlorobromomethane	50.0	47.1		ug/L		94	79 - 125
Dichlorodifluoromethane	50.0	42.0		ug/L		84	32 - 152
Ethylbenzene	50.0	47.1		ug/L		94	79 - 121
Ethylene Dibromide	50.0	47.9		ug/L		96	75 - 127
Hexachlorobutadiene	50.0	48.8		ug/L		98	66 - 134
Isopropylbenzene	50.0	47.6		ug/L		95	72 - 131
Methyl tert-butyl ether	50.0	47.6		ug/L		95	71 - 124
Methylene Chloride	50.0	47.7		ug/L		95	74 - 124
m-Xylene & p-Xylene	50.0	46.9		ug/L		94	80 - 121
Naphthalene	50.0	50.0		ug/L		100	61 - 128
n-Butylbenzene	50.0	50.0		ug/L		100	75 - 128
N-Propylbenzene	50.0	47.4		ug/L		95	76 - 126
o-Xylene	50.0	46.6		ug/L		93	78 - 122
sec-Butylbenzene	50.0	48.0		ug/L		96	77 - 126
Styrene	50.0	48.1		ug/L		96	78 - 123
tert-Butylbenzene	50.0	47.6		ug/L		95	78 - 124
Tetrachloroethene	50.0	49.4		ug/L		99	74 - 129
Toluene	50.0	49.2		ug/L		98	80 - 121
trans-1,2-Dichloroethene	50.0	46.4		ug/L		93	75 - 124
trans-1,3-Dichloropropene	50.0	47.7	M	ug/L		95	73 - 127
Trichloroethene	50.0	48.5		ug/L		97	79 - 123
Trichlorofluoromethane	50.0	47.4		ug/L		95	65 - 141

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

Lab Sample ID: LCS 680-641326/4
Matrix: Water
Analysis Batch: 641326

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	98.4		ug/L		98	54 - 146
Vinyl chloride	50.0	47.1		ug/L		94	58 - 137
Xylenes, Total	100	93.5		ug/L		94	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*
Dibromofluoromethane (Surr)	*94*		*80 - 119*
Toluene-d8 (Surr)	*97*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*

Lab Sample ID: LCSD 680-641326/5
Matrix: Water
Analysis Batch: 641326

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	45.5		ug/L		91	78 - 124	1	20
1,1,1-Trichloroethane	50.0	46.9		ug/L		94	74 - 131	0	20
1,1,2,2-Tetrachloroethane	50.0	46.3		ug/L		93	71 - 121	1	20
1,1,2-Trichloroethane	50.0	47.7		ug/L		95	80 - 119	2	20
1,1-Dichloroethane	50.0	49.5		ug/L		99	77 - 125	0	20
1,1-Dichloroethene	50.0	44.9		ug/L		90	71 - 131	0	20
1,1-Dichloropropene	50.0	49.0	M	ug/L		98	79 - 125	1	20
1,2,3-Trichlorobenzene	50.0	51.3		ug/L		103	69 - 129	1	20
1,2,3-Trichloropropane	50.0	46.2		ug/L		92	73 - 122	1	20
1,2,4-Trichlorobenzene	50.0	50.4		ug/L		101	69 - 130	1	20
1,2,4-Trimethylbenzene	50.0	47.1		ug/L		94	76 - 124	2	20
1,2-Dibromo-3-Chloropropane	50.0	46.7		ug/L		93	62 - 128	1	20
1,2-Dichlorobenzene	50.0	48.0		ug/L		96	80 - 119	0	20
1,2-Dichloroethane	50.0	49.5		ug/L		99	73 - 128	1	20
1,2-Dichloroethene, Total	100	96.2		ug/L		96	79 - 121	1	20
1,2-Dichloropropane	50.0	50.5		ug/L		101	78 - 122	1	20
1,3,5-Trimethylbenzene	50.0	46.5		ug/L		93	75 - 124	3	20
1,3-Dichlorobenzene	50.0	47.6		ug/L		95	80 - 119	2	20
1,3-Dichloropropane	50.0	49.0		ug/L		98	80 - 119	1	20
1,4-Dichlorobenzene	50.0	47.6		ug/L		95	79 - 118	1	20
2,2-Dichloropropane	50.0	47.7		ug/L		95	60 - 139	0	20
2-Butanone (MEK)	250	231		ug/L		93	56 - 143	3	20
2-Chlorotoluene	50.0	46.5		ug/L		93	79 - 122	2	20
2-Hexanone	250	249		ug/L		100	57 - 139	1	20
4-Chlorotoluene	50.0	45.8		ug/L		92	78 - 122	1	20
4-Isopropyltoluene	50.0	47.0		ug/L		94	77 - 127	2	20
4-Methyl-2-pentanone (MIBK)	250	247		ug/L		99	67 - 130	2	20
Acetone	250	255		ug/L		102	39 - 160	2	20
Benzene	50.0	47.0		ug/L		94	79 - 120	1	20
Bromobenzene	50.0	46.8		ug/L		94	80 - 120	1	20
Bromoform	50.0	43.7		ug/L		87	66 - 130	1	20
Bromomethane	50.0	28.7		ug/L		57	53 - 141	11	20
Carbon disulfide	50.0	48.4		ug/L		97	64 - 133	1	20

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

Lab Sample ID: LCSD 680-641326/5
Matrix: Water
Analysis Batch: 641326

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	45.8		ug/L		92	72 - 136	1	20
Chlorobenzene	50.0	46.9		ug/L		94	82 - 118	1	20
Chlorobromomethane	50.0	48.6		ug/L		97	78 - 123	2	20
Chlorodibromomethane	50.0	47.5		ug/L		95	74 - 126	1	20
Chloroethane	50.0	43.6		ug/L		87	60 - 138	7	20
Chloroform	50.0	47.8		ug/L		96	79 - 124	0	20
Chloromethane	50.0	44.0	M	ug/L		88	50 - 139	1	20
cis-1,2-Dichloroethene	50.0	49.5		ug/L		99	78 - 123	1	20
cis-1,3-Dichloropropene	50.0	49.4		ug/L		99	75 - 124	1	20
Dibromomethane	50.0	47.8		ug/L		96	79 - 123	2	20
Dichlorobromomethane	50.0	47.6		ug/L		95	79 - 125	1	20
Dichlorodifluoromethane	50.0	41.5		ug/L		83	32 - 152	1	20
Ethylbenzene	50.0	46.3		ug/L		93	79 - 121	2	20
Ethylene Dibromide	50.0	48.4		ug/L		97	75 - 127	1	20
Hexachlorobutadiene	50.0	48.7		ug/L		97	66 - 134	0	20
Isopropylbenzene	50.0	46.6		ug/L		93	72 - 131	2	20
Methyl tert-butyl ether	50.0	48.4		ug/L		97	71 - 124	2	20
Methylene Chloride	50.0	48.6		ug/L		97	74 - 124	2	20
m-Xylene & p-Xylene	50.0	46.0		ug/L		92	80 - 121	2	20
Naphthalene	50.0	50.7		ug/L		101	61 - 128	1	20
n-Butylbenzene	50.0	48.3		ug/L		97	75 - 128	3	20
N-Propylbenzene	50.0	46.6		ug/L		93	76 - 126	2	20
o-Xylene	50.0	46.0		ug/L		92	78 - 122	1	20
sec-Butylbenzene	50.0	46.9		ug/L		94	77 - 126	2	20
Styrene	50.0	47.5		ug/L		95	78 - 123	1	20
tert-Butylbenzene	50.0	46.2		ug/L		92	78 - 124	3	20
Tetrachloroethene	50.0	47.7		ug/L		95	74 - 129	3	20
Toluene	50.0	49.2		ug/L		98	80 - 121	0	20
trans-1,2-Dichloroethene	50.0	46.7		ug/L		93	75 - 124	1	20
trans-1,3-Dichloropropene	50.0	48.7		ug/L		97	73 - 127	2	20
Trichloroethene	50.0	47.8		ug/L		96	79 - 123	1	20
Trichlorofluoromethane	50.0	46.9		ug/L		94	65 - 141	1	20
Vinyl acetate	100	98.5		ug/L		99	54 - 146	0	20
Vinyl chloride	50.0	46.9		ug/L		94	58 - 137	1	20
Xylenes, Total	100	92.0		ug/L		92	79 - 121	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*
Dibromofluoromethane (Surr)	*94*		*80 - 119*
Toluene-d8 (Surr)	*96*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*

Lab Sample ID: MB 680-641789/8
Matrix: Water
Analysis Batch: 641789

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			11/01/20 12:22	1

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

Lab Sample ID: MB 680-641789/8
Matrix: Water
Analysis Batch: 641789

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			11/01/20 12:22	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			11/01/20 12:22	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			11/01/20 12:22	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			11/01/20 12:22	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/01/20 12:22	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			11/01/20 12:22	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/01/20 12:22	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			11/01/20 12:22	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/01/20 12:22	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			11/01/20 12:22	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			11/01/20 12:22	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			11/01/20 12:22	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			11/01/20 12:22	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			11/01/20 12:22	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			11/01/20 12:22	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			11/01/20 12:22	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			11/01/20 12:22	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			11/01/20 12:22	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			11/01/20 12:22	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			11/01/20 12:22	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			11/01/20 12:22	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/01/20 12:22	1
2-Hexanone	2.0	U	10	2.0	ug/L			11/01/20 12:22	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			11/01/20 12:22	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			11/01/20 12:22	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			11/01/20 12:22	1
Acetone	7.0	U	10	7.0	ug/L			11/01/20 12:22	1
Benzene	0.43	U	1.0	0.43	ug/L			11/01/20 12:22	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			11/01/20 12:22	1
Bromoform	0.43	U	1.0	0.43	ug/L			11/01/20 12:22	1
Bromomethane	2.5	U	5.0	2.5	ug/L			11/01/20 12:22	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			11/01/20 12:22	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			11/01/20 12:22	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			11/01/20 12:22	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			11/01/20 12:22	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			11/01/20 12:22	1
Chloroethane	2.5	U	5.0	2.5	ug/L			11/01/20 12:22	1
Chloroform	0.50	U	1.0	0.50	ug/L			11/01/20 12:22	1
Chloromethane	0.40	U	1.0	0.40	ug/L			11/01/20 12:22	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/01/20 12:22	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			11/01/20 12:22	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			11/01/20 12:22	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			11/01/20 12:22	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			11/01/20 12:22	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			11/01/20 12:22	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			11/01/20 12:22	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			11/01/20 12:22	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			11/01/20 12:22	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			11/01/20 12:22	1

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

Lab Sample ID: MB 680-641789/8
Matrix: Water
Analysis Batch: 641789

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	2.5	U	5.0	2.5	ug/L			11/01/20 12:22	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			11/01/20 12:22	1
Naphthalene	2.5	U	5.0	2.5	ug/L			11/01/20 12:22	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			11/01/20 12:22	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			11/01/20 12:22	1
o-Xylene	0.23	U	1.0	0.23	ug/L			11/01/20 12:22	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			11/01/20 12:22	1
Styrene	0.27	U	1.0	0.27	ug/L			11/01/20 12:22	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			11/01/20 12:22	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			11/01/20 12:22	1
Toluene	0.48	U	1.0	0.48	ug/L			11/01/20 12:22	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/01/20 12:22	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			11/01/20 12:22	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/01/20 12:22	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			11/01/20 12:22	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			11/01/20 12:22	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/01/20 12:22	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			11/01/20 12:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*85 - 114*		*11/01/20 12:22*	*1*
Dibromofluoromethane (Surr)	*95*		*80 - 119*		*11/01/20 12:22*	*1*
Toluene-d8 (Surr)	*94*		*89 - 112*		*11/01/20 12:22*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*		*11/01/20 12:22*	*1*

Lab Sample ID: LCS 680-641789/4
Matrix: Water
Analysis Batch: 641789

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	51.2		ug/L		102	78 - 124
1,1,1-Trichloroethane	50.0	54.0		ug/L		108	74 - 131
1,1,2,2-Tetrachloroethane	50.0	47.4		ug/L		95	71 - 121
1,1,2-Trichloroethane	50.0	49.7		ug/L		99	80 - 119
1,1-Dichloroethane	50.0	52.0		ug/L		104	77 - 125
1,1-Dichloroethene	50.0	53.0		ug/L		106	71 - 131
1,1-Dichloropropene	50.0	52.8		ug/L		106	79 - 125
1,2,3-Trichlorobenzene	50.0	48.3		ug/L		97	69 - 129
1,2,3-Trichloropropane	50.0	46.7		ug/L		93	73 - 122
1,2,4-Trichlorobenzene	50.0	52.3		ug/L		105	69 - 130
1,2,4-Trimethylbenzene	50.0	49.9		ug/L		100	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	45.6		ug/L		91	62 - 128
1,2-Dichlorobenzene	50.0	50.3		ug/L		101	80 - 119
1,2-Dichloroethane	50.0	50.2		ug/L		100	73 - 128
1,2-Dichloroethene, Total	100	104		ug/L		104	79 - 121
1,2-Dichloropropane	50.0	49.9		ug/L		100	78 - 122
1,3,5-Trimethylbenzene	50.0	49.9		ug/L		100	75 - 124
1,3-Dichlorobenzene	50.0	50.7		ug/L		101	80 - 119

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

Lab Sample ID: LCS 680-641789/4
Matrix: Water
Analysis Batch: 641789

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	50.5		ug/L		101	80 - 119
1,4-Dichlorobenzene	50.0	49.3		ug/L		99	79 - 118
2,2-Dichloropropane	50.0	53.5		ug/L		107	60 - 139
2-Butanone (MEK)	250	208		ug/L		83	56 - 143
2-Chlorotoluene	50.0	50.5		ug/L		101	79 - 122
2-Hexanone	250	213		ug/L		85	57 - 139
4-Chlorotoluene	50.0	51.3		ug/L		103	78 - 122
4-Isopropyltoluene	50.0	55.2		ug/L		110	77 - 127
4-Methyl-2-pentanone (MIBK)	250	215		ug/L		86	67 - 130
Acetone	250	241		ug/L		96	39 - 160
Benzene	50.0	51.6		ug/L		103	79 - 120
Bromobenzene	50.0	50.3		ug/L		101	80 - 120
Bromoform	50.0	50.7		ug/L		101	66 - 130
Bromomethane	50.0	66.1		ug/L		132	53 - 141
Carbon disulfide	50.0	59.3		ug/L		119	64 - 133
Carbon tetrachloride	50.0	52.7		ug/L		105	72 - 136
Chlorobenzene	50.0	49.9		ug/L		100	82 - 118
Chlorobromomethane	50.0	56.3		ug/L		113	78 - 123
Chlorodibromomethane	50.0	50.8		ug/L		102	74 - 126
Chloroethane	50.0	70.4	Q	ug/L		141	60 - 138
Chloroform	50.0	51.7		ug/L		103	79 - 124
Chloromethane	50.0	51.9	M	ug/L		104	50 - 139
cis-1,2-Dichloroethene	50.0	51.0		ug/L		102	78 - 123
cis-1,3-Dichloropropene	50.0	52.3		ug/L		105	75 - 124
Dibromomethane	50.0	50.4		ug/L		101	79 - 123
Dichlorobromomethane	50.0	51.1		ug/L		102	79 - 125
Dichlorodifluoromethane	50.0	52.3		ug/L		105	32 - 152
Ethylbenzene	50.0	50.9		ug/L		102	79 - 121
Ethylene Dibromide	50.0	52.3		ug/L		105	75 - 127
Hexachlorobutadiene	50.0	50.7		ug/L		101	66 - 134
Isopropylbenzene	50.0	50.7		ug/L		101	72 - 131
Methyl tert-butyl ether	50.0	49.0		ug/L		98	71 - 124
Methylene Chloride	50.0	54.6		ug/L		109	74 - 124
m-Xylene & p-Xylene	50.0	51.0		ug/L		102	80 - 121
Naphthalene	50.0	45.4		ug/L		91	61 - 128
n-Butylbenzene	50.0	50.9		ug/L		102	75 - 128
N-Propylbenzene	50.0	53.4		ug/L		107	76 - 126
o-Xylene	50.0	51.2		ug/L		102	78 - 122
sec-Butylbenzene	50.0	48.3		ug/L		97	77 - 126
Styrene	50.0	54.5		ug/L		109	78 - 123
tert-Butylbenzene	50.0	53.2		ug/L		106	78 - 124
Tetrachloroethene	50.0	53.2		ug/L		106	74 - 129
Toluene	50.0	52.0		ug/L		104	80 - 121
trans-1,2-Dichloroethene	50.0	52.6		ug/L		105	75 - 124
trans-1,3-Dichloropropene	50.0	55.8		ug/L		112	73 - 127
Trichloroethene	50.0	53.0		ug/L		106	79 - 123
Trichlorofluoromethane	50.0	56.0		ug/L		112	65 - 141
Vinyl acetate	100	107		ug/L		107	54 - 146
Vinyl chloride	50.0	50.9		ug/L		102	58 - 137

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

Lab Sample ID: LCS 680-641789/4
Matrix: Water
Analysis Batch: 641789

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	102		ug/L		102	79 - 121		

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

Lab Sample ID: LCSD 680-641789/5
Matrix: Water
Analysis Batch: 641789

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	51.2		ug/L		102	78 - 124	0	20
1,1,1-Trichloroethane			50.0	53.4		ug/L		107	74 - 131	1	20
1,1,2,2-Tetrachloroethane			50.0	47.0		ug/L		94	71 - 121	1	20
1,1,2-Trichloroethane			50.0	50.4		ug/L		101	80 - 119	1	20
1,1-Dichloroethane			50.0	52.5		ug/L		105	77 - 125	1	20
1,1-Dichloroethene			50.0	52.8		ug/L		106	71 - 131	0	20
1,1-Dichloropropene			50.0	53.1		ug/L		106	79 - 125	0	20
1,2,3-Trichlorobenzene			50.0	48.2		ug/L		96	69 - 129	0	20
1,2,3-Trichloropropane			50.0	48.2		ug/L		96	73 - 122	3	20
1,2,4-Trichlorobenzene			50.0	50.0		ug/L		100	69 - 130	5	20
1,2,4-Trimethylbenzene			50.0	45.7		ug/L		91	76 - 124	9	20
1,2-Dibromo-3-Chloropropane			50.0	46.9		ug/L		94	62 - 128	3	20
1,2-Dichlorobenzene			50.0	50.6		ug/L		101	80 - 119	1	20
1,2-Dichloroethane			50.0	52.0		ug/L		104	73 - 128	4	20
1,2-Dichloroethene, Total			100	104		ug/L		104	79 - 121	0	20
1,2-Dichloropropane			50.0	50.8		ug/L		102	78 - 122	2	20
1,3,5-Trimethylbenzene			50.0	45.5		ug/L		91	75 - 124	9	20
1,3-Dichlorobenzene			50.0	49.9		ug/L		100	80 - 119	1	20
1,3-Dichloropropane			50.0	51.4		ug/L		103	80 - 119	2	20
1,4-Dichlorobenzene			50.0	50.1		ug/L		100	79 - 118	1	20
2,2-Dichloropropane			50.0	53.4		ug/L		107	60 - 139	0	20
2-Butanone (MEK)			250	224		ug/L		90	56 - 143	7	20
2-Chlorotoluene			50.0	49.7		ug/L		99	79 - 122	2	20
2-Hexanone			250	219		ug/L		88	57 - 139	3	20
4-Chlorotoluene			50.0	49.5		ug/L		99	78 - 122	4	20
4-Isopropyltoluene			50.0	54.1		ug/L		108	77 - 127	2	20
4-Methyl-2-pentanone (MIBK)			250	221		ug/L		88	67 - 130	3	20
Acetone			250	247		ug/L		99	39 - 160	2	20
Benzene			50.0	51.5		ug/L		103	79 - 120	0	20
Bromobenzene			50.0	50.3		ug/L		101	80 - 120	0	20
Bromoform			50.0	50.4		ug/L		101	66 - 130	1	20
Bromomethane			50.0	65.9		ug/L		132	53 - 141	0	20
Carbon disulfide			50.0	59.0		ug/L		118	64 - 133	0	20
Carbon tetrachloride			50.0	53.3		ug/L		107	72 - 136	1	20
Chlorobenzene			50.0	49.4		ug/L		99	82 - 118	1	20

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

Lab Sample ID: LCSD 680-641789/5
Matrix: Water
Analysis Batch: 641789

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	56.7		ug/L		113	78 - 123	1	20
Chlorodibromomethane			50.0	51.7		ug/L		103	74 - 126	2	20
Chloroethane			50.0	70.0	M Q	ug/L		140	60 - 138	0	20
Chloroform			50.0	51.9		ug/L		104	79 - 124	0	20
Chloromethane			50.0	51.1	M	ug/L		102	50 - 139	2	20
cis-1,2-Dichloroethene			50.0	51.9		ug/L		104	78 - 123	2	20
cis-1,3-Dichloropropene			50.0	53.4		ug/L		107	75 - 124	2	20
Dibromomethane			50.0	52.1		ug/L		104	79 - 123	3	20
Dichlorobromomethane			50.0	51.4		ug/L		103	79 - 125	1	20
Dichlorodifluoromethane			50.0	51.8		ug/L		104	32 - 152	1	20
Ethylbenzene			50.0	50.8		ug/L		102	79 - 121	0	20
Ethylene Dibromide			50.0	52.7		ug/L		105	75 - 127	1	20
Hexachlorobutadiene			50.0	50.8		ug/L		102	66 - 134	0	20
Isopropylbenzene			50.0	50.2		ug/L		100	72 - 131	1	20
Methyl tert-butyl ether			50.0	49.9		ug/L		100	71 - 124	2	20
Methylene Chloride			50.0	52.2		ug/L		104	74 - 124	4	20
m-Xylene & p-Xylene			50.0	50.1		ug/L		100	80 - 121	2	20
Naphthalene			50.0	46.8		ug/L		94	61 - 128	3	20
n-Butylbenzene			50.0	49.3		ug/L		99	75 - 128	3	20
N-Propylbenzene			50.0	51.7		ug/L		103	76 - 126	3	20
o-Xylene			50.0	50.1		ug/L		100	78 - 122	2	20
sec-Butylbenzene			50.0	46.7		ug/L		93	77 - 126	3	20
Styrene			50.0	53.5		ug/L		107	78 - 123	2	20
tert-Butylbenzene			50.0	51.9		ug/L		104	78 - 124	3	20
Tetrachloroethene			50.0	53.3		ug/L		107	74 - 129	0	20
Toluene			50.0	52.4		ug/L		105	80 - 121	1	20
trans-1,2-Dichloroethene			50.0	51.9		ug/L		104	75 - 124	1	20
trans-1,3-Dichloropropene			50.0	56.5		ug/L		113	73 - 127	1	20
Trichloroethene			50.0	51.5		ug/L		103	79 - 123	3	20
Trichlorofluoromethane			50.0	56.2		ug/L		112	65 - 141	0	20
Vinyl acetate			100	110		ug/L		110	54 - 146	3	20
Vinyl chloride			50.0	50.0		ug/L		100	58 - 137	2	20
Xylenes, Total			100	100		ug/L		100	79 - 121	2	20

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

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-641884/8
Matrix: Water
Analysis Batch: 641884

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	0.55	U	1.1	0.55	ug/L			11/02/20 14:34	1
Ethylene	0.50	U	1.0	0.50	ug/L			11/02/20 14:34	1

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

Lab Sample ID: MB 680-641884/8
Matrix: Water
Analysis Batch: 641884

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	0.29	U	0.58	0.29	ug/L			11/02/20 14:34	1
Methane (TCD)	39	U	390	39	ug/L			11/02/20 14:34	1

Lab Sample ID: LCS 680-641884/3
Matrix: Water
Analysis Batch: 641884

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane (TCD)	1920	1880		ug/L		98	73 - 125

Lab Sample ID: LCS 680-641884/6
Matrix: Water
Analysis Batch: 641884

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	288	285		ug/L		99	74 - 131
Ethylene	269	264		ug/L		98	72 - 133
Methane	154	153		ug/L		99	73 - 125

Lab Sample ID: LCSD 680-641884/4
Matrix: Water
Analysis Batch: 641884

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	1650		ug/L		86	73 - 125	13	30

Lab Sample ID: LCSD 680-641884/7
Matrix: Water
Analysis Batch: 641884

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	288	273		ug/L		95	74 - 131	4	30
Ethylene	269	253		ug/L		94	72 - 133	4	30
Methane	154	146		ug/L		95	73 - 125	5	30

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-641087/33
Matrix: Water
Analysis Batch: 641087

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.40	U	1.0	0.40	mg/L			10/28/20 16:54	1

Lab Sample ID: LCS 680-641087/34
Matrix: Water
Analysis Batch: 641087

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

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

Lab Sample ID: LCSD 680-641087/35
Matrix: Water
Analysis Batch: 641087

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	10.3		mg/L		103	87 - 112	1	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-640177/1-A
Matrix: Water
Analysis Batch: 640641

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 640177

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	17	U	50	17	ug/L		10/22/20 09:50	10/23/20 19:21	1
Manganese	1.0	U	10	1.0	ug/L		10/22/20 09:50	10/23/20 19:21	1

Lab Sample ID: LCS 680-640177/2-A
Matrix: Water
Analysis Batch: 640641

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 640177

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Iron			5000	4790		ug/L		96	87 - 115		
Manganese			400	389		ug/L		97	90 - 114		

Lab Sample ID: MB 680-640204/1-A
Matrix: Water
Analysis Batch: 640642

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 640204

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	17	U	50	17	ug/L		10/22/20 10:11	10/23/20 22:56	1
Manganese	1.0	U	10	1.0	ug/L		10/22/20 10:11	10/23/20 22:56	1

Lab Sample ID: LCS 680-640204/2-A
Matrix: Water
Analysis Batch: 640642

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 640204

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Iron			5000	4820		ug/L		96	87 - 115		
Manganese			400	388		ug/L		97	90 - 114		

Lab Sample ID: MB 680-640392/1-A
Matrix: Water
Analysis Batch: 640641

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 640392

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	23.2	J	50	17	ug/L		10/23/20 09:33	10/24/20 03:11	1
Manganese	1.92	J	10	1.0	ug/L		10/23/20 09:33	10/24/20 03:11	1

Lab Sample ID: LCS 680-640392/2-A
Matrix: Water
Analysis Batch: 640641

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 640392

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Iron			5000	4910		ug/L		98	87 - 115		

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

Lab Sample ID: LCS 680-640392/2-A
Matrix: Water
Analysis Batch: 640641

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 640392

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Manganese			400	401		ug/L		100	90 - 114		

Lab Sample ID: 680-190296-5 MS
Matrix: Water
Analysis Batch: 640642

Client Sample ID: G6M-04-31X-FAL20
Prep Type: Dissolved
Prep Batch: 640204

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Iron	30000	J	5000	35400	4	ug/L		112	87 - 115		
Manganese	2100	J	400	2600	4	ug/L		113	90 - 114		

Lab Sample ID: 680-190296-5 MSD
Matrix: Water
Analysis Batch: 640642

Client Sample ID: G6M-04-31X-FAL20
Prep Type: Dissolved
Prep Batch: 640204

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	30000	J	5000	36200	4	ug/L		128	87 - 115	2	20
Manganese	2100	J	400	2660	4	ug/L		129	90 - 114	2	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-640175/1-A
Matrix: Water
Analysis Batch: 640364

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 640175

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5	U	3.0	1.5	ug/L		10/22/20 09:50	10/22/20 18:47	1

Lab Sample ID: LCS 680-640175/2-A
Matrix: Water
Analysis Batch: 640364

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 640175

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic			100	101		ug/L		101	84 - 116		

Lab Sample ID: MB 680-640196/1-A
Matrix: Water
Analysis Batch: 640364

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 640196

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5	U	3.0	1.5	ug/L		10/22/20 10:11	10/22/20 19:43	1

Lab Sample ID: LCS 680-640196/2-A
Matrix: Water
Analysis Batch: 640364

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 640196

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic			100	95.4		ug/L		95	84 - 116		

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

Lab Sample ID: MB 680-640391/1-A
Matrix: Water
Analysis Batch: 640579

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 640391

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5	U	3.0	1.5	ug/L		10/23/20 09:33	10/23/20 14:39	1

Lab Sample ID: LCS 680-640391/2-A
Matrix: Water
Analysis Batch: 640579

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 640391

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	100	97.1		ug/L		97	84 - 116

Lab Sample ID: 680-190296-5 MS
Matrix: Water
Analysis Batch: 640364

Client Sample ID: G6M-04-31X-FAL20
Prep Type: Dissolved
Prep Batch: 640196

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	360	J	100	507	J	ug/L		151	84 - 116

Lab Sample ID: 680-190296-5 MSD
Matrix: Water
Analysis Batch: 640364

Client Sample ID: G6M-04-31X-FAL20
Prep Type: Dissolved
Prep Batch: 640196

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	360	J	100	464		ug/L		108	84 - 116	9	20

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 280-515154/22
Matrix: Water
Analysis Batch: 515154

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.019	U	0.10	0.019	mg/L			11/02/20 17:34	1

Lab Sample ID: LCS 280-515154/21
Matrix: Water
Analysis Batch: 515154

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	4.92		mg/L		98	90 - 110

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 680-640218/1
Matrix: Water
Analysis Batch: 640218

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	1.0	U	1.0	1.0	mg/L			10/22/20 10:55	1

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric) (Continued)

Lab Sample ID: LCS 680-640218/2
Matrix: Water
Analysis Batch: 640218

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	9.97		mg/L		100	75 - 125

Lab Sample ID: LCSD 680-640218/3
Matrix: Water
Analysis Batch: 640218

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	9.62		mg/L		96	75 - 125	4	30

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 280-515351/34
Matrix: Water
Analysis Batch: 515351

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	0.35	U	1.0	0.35	mg/L			11/03/20 22:46	1

Lab Sample ID: LCS 280-515351/33
Matrix: Water
Analysis Batch: 515351

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 - Duplicates	25.0	25.3		mg/L		101	88 - 112

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-514805/58
Matrix: Water
Analysis Batch: 514805

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	3.1	U	10	3.1	mg/L			10/29/20 22:10	1

Lab Sample ID: LCS 280-514805/56
Matrix: Water
Analysis Batch: 514805

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	200	194		mg/L		97	89 - 109

Lab Sample ID: LCSD 280-514805/57
Matrix: Water
Analysis Batch: 514805

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	200	194		mg/L		97	89 - 109	0	10

GC/MS VOA

Analysis Batch: 641326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190296-7	G6M-04-01X-FAL20	Total/NA	Water	8260B	
680-190296-8	G6M-04-02X-FAL20	Total/NA	Water	8260B	
MB 680-641326/9	Method Blank	Total/NA	Water	8260B	
LCS 680-641326/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-641326/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 641789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190296-1	G6M-04-05X-FAL20	Total/NA	Water	8260B	
680-190296-2	G6M-04-09X-FAL20	Total/NA	Water	8260B	
680-190296-3	G6M-04-15X-FAL20	Total/NA	Water	8260B	
680-190296-4	G6M-04-22X-FAL20	Total/NA	Water	8260B	
680-190296-5	G6M-04-31X-FAL20	Total/NA	Water	8260B	
680-190296-6	G6M-02-01X-FAL20	Total/NA	Water	8260B	
680-190296-9	TB5-FAL20	Total/NA	Water	8260B	
MB 680-641789/8	Method Blank	Total/NA	Water	8260B	
LCS 680-641789/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-641789/5	Lab Control Sample Dup	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 641884

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190296-8	G6M-04-02X-FAL20	Total/NA	Water	RSK-175	
MB 680-641884/8	Method Blank	Total/NA	Water	RSK-175	
LCS 680-641884/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-641884/6	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-641884/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-641884/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	

HPLC/IC

Analysis Batch: 641087

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190296-8	G6M-04-02X-FAL20	Total/NA	Water	9056A	
MB 680-641087/33	Method Blank	Total/NA	Water	9056A	
LCS 680-641087/34	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-641087/35	Lab Control Sample Dup	Total/NA	Water	9056A	

Metals

Prep Batch: 640175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190296-6	G6M-02-01X-FAL20	Dissolved	Water	3005A	
680-190296-7	G6M-04-01X-FAL20	Dissolved	Water	3005A	
680-190296-8	G6M-04-02X-FAL20	Dissolved	Water	3005A	
MB 680-640175/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-640175/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 640177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190296-6	G6M-02-01X-FAL20	Dissolved	Water	3005A	

Metals (Continued)

Prep Batch: 640177 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190296-7	G6M-04-01X-FAL20	Dissolved	Water	3005A	
680-190296-8	G6M-04-02X-FAL20	Dissolved	Water	3005A	
MB 680-640177/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-640177/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 640196

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190296-2	G6M-04-09X-FAL20	Dissolved	Water	3005A	
680-190296-5	G6M-04-31X-FAL20	Dissolved	Water	3005A	
MB 680-640196/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-640196/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-190296-5 MS	G6M-04-31X-FAL20	Dissolved	Water	3005A	
680-190296-5 MSD	G6M-04-31X-FAL20	Dissolved	Water	3005A	

Prep Batch: 640204

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190296-2	G6M-04-09X-FAL20	Dissolved	Water	3005A	
680-190296-5	G6M-04-31X-FAL20	Dissolved	Water	3005A	
MB 680-640204/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-640204/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-190296-5 MS	G6M-04-31X-FAL20	Dissolved	Water	3005A	
680-190296-5 MSD	G6M-04-31X-FAL20	Dissolved	Water	3005A	

Analysis Batch: 640364

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190296-2	G6M-04-09X-FAL20	Dissolved	Water	6020A	640196
680-190296-5	G6M-04-31X-FAL20	Dissolved	Water	6020A	640196
680-190296-6	G6M-02-01X-FAL20	Dissolved	Water	6020A	640175
680-190296-7	G6M-04-01X-FAL20	Dissolved	Water	6020A	640175
680-190296-8	G6M-04-02X-FAL20	Dissolved	Water	6020A	640175
MB 680-640175/1-A	Method Blank	Total Recoverable	Water	6020A	640175
MB 680-640196/1-A	Method Blank	Total Recoverable	Water	6020A	640196
LCS 680-640175/2-A	Lab Control Sample	Total Recoverable	Water	6020A	640175
LCS 680-640196/2-A	Lab Control Sample	Total Recoverable	Water	6020A	640196
680-190296-5 MS	G6M-04-31X-FAL20	Dissolved	Water	6020A	640196
680-190296-5 MSD	G6M-04-31X-FAL20	Dissolved	Water	6020A	640196

Prep Batch: 640391

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190296-3	G6M-04-15X-FAL20	Dissolved	Water	3005A	
680-190296-4	G6M-04-22X-FAL20	Dissolved	Water	3005A	
MB 680-640391/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-640391/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 640392

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190296-3	G6M-04-15X-FAL20	Dissolved	Water	3005A	
680-190296-4	G6M-04-22X-FAL20	Dissolved	Water	3005A	
MB 680-640392/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-640392/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Metals

Analysis Batch: 640579

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190296-3	G6M-04-15X-FAL20	Dissolved	Water	6020A	640391
680-190296-4	G6M-04-22X-FAL20	Dissolved	Water	6020A	640391
MB 680-640391/1-A	Method Blank	Total Recoverable	Water	6020A	640391
LCS 680-640391/2-A	Lab Control Sample	Total Recoverable	Water	6020A	640391

Analysis Batch: 640641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190296-3	G6M-04-15X-FAL20	Dissolved	Water	6010C	640392
680-190296-4	G6M-04-22X-FAL20	Dissolved	Water	6010C	640392
680-190296-6	G6M-02-01X-FAL20	Dissolved	Water	6010C	640177
680-190296-7	G6M-04-01X-FAL20	Dissolved	Water	6010C	640177
680-190296-8	G6M-04-02X-FAL20	Dissolved	Water	6010C	640177
MB 680-640177/1-A	Method Blank	Total Recoverable	Water	6010C	640177
MB 680-640392/1-A	Method Blank	Total Recoverable	Water	6010C	640392
LCS 680-640177/2-A	Lab Control Sample	Total Recoverable	Water	6010C	640177
LCS 680-640392/2-A	Lab Control Sample	Total Recoverable	Water	6010C	640392

Analysis Batch: 640642

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190296-2	G6M-04-09X-FAL20	Dissolved	Water	6010C	640204
680-190296-5	G6M-04-31X-FAL20	Dissolved	Water	6010C	640204
MB 680-640204/1-A	Method Blank	Total Recoverable	Water	6010C	640204
LCS 680-640204/2-A	Lab Control Sample	Total Recoverable	Water	6010C	640204
680-190296-5 MS	G6M-04-31X-FAL20	Dissolved	Water	6010C	640204
680-190296-5 MSD	G6M-04-31X-FAL20	Dissolved	Water	6010C	640204

General Chemistry

Analysis Batch: 514805

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190296-8	G6M-04-02X-FAL20	Total/NA	Water	SM 2320B	
MB 280-514805/58	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-514805/56	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 280-514805/57	Lab Control Sample Dup	Total/NA	Water	SM 2320B	

Analysis Batch: 515154

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190296-8	G6M-04-02X-FAL20	Total/NA	Water	353.2	
MB 280-515154/22	Method Blank	Total/NA	Water	353.2	
LCS 280-515154/21	Lab Control Sample	Total/NA	Water	353.2	

Analysis Batch: 515351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190296-8	G6M-04-02X-FAL20	Total/NA	Water	9060A	
MB 280-515351/34	Method Blank	Total/NA	Water	9060A	
LCS 280-515351/33	Lab Control Sample	Total/NA	Water	9060A	

Analysis Batch: 640218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190296-8	G6M-04-02X-FAL20	Total/NA	Water	9034	
MB 680-640218/1	Method Blank	Total/NA	Water	9034	

General Chemistry (Continued)

Analysis Batch: 640218 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 680-640218/2	Lab Control Sample	Total/NA	Water	9034	
LCSD 680-640218/3	Lab Control Sample Dup	Total/NA	Water	9034	

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190296-1

Client Sample ID: G6M-04-05X-FAL20

Lab Sample ID: 680-190296-1
Matrix: Water
Date Collected: 10/20/20 10:10
Date Received: 10/21/20 09:40

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	641789	11/01/20 14:12	Y1S	TAL SAV
	Instrument ID: CMSU									

Client Sample ID: G6M-04-09X-FAL20

Lab Sample ID: 680-190296-2
Matrix: Water
Date Collected: 10/20/20 11:00
Date Received: 10/21/20 09:40

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	641789	11/01/20 14:32	Y1S	TAL SAV
	Instrument ID: CMSU									
Dissolved	Prep	3005A			50 mL	50 mL	640204	10/22/20 10:11	AJR	TAL SAV
Dissolved	Analysis	6010C		1			640642	10/23/20 23:49	BWR	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	640196	10/22/20 10:11	AJR	TAL SAV
Dissolved	Analysis	6020A		1			640364	10/22/20 20:20	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-04-15X-FAL20

Lab Sample ID: 680-190296-3
Matrix: Water
Date Collected: 10/20/20 02:45
Date Received: 10/21/20 09:40

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	641789	11/01/20 14:52	Y1S	TAL SAV
	Instrument ID: CMSU									
Dissolved	Prep	3005A			50 mL	50 mL	640392	10/23/20 09:33	AJR	TAL SAV
Dissolved	Analysis	6010C		1			640641	10/24/20 04:17	BWR	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	640391	10/23/20 09:33	AJR	TAL SAV
Dissolved	Analysis	6020A		1			640579	10/23/20 16:18	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-04-22X-FAL20

Lab Sample ID: 680-190296-4
Matrix: Water
Date Collected: 10/20/20 11:35
Date Received: 10/21/20 09:40

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	641789	11/01/20 15:12	Y1S	TAL SAV
	Instrument ID: CMSU									
Dissolved	Prep	3005A			50 mL	50 mL	640392	10/23/20 09:33	AJR	TAL SAV
Dissolved	Analysis	6010C		1			640641	10/24/20 04:21	BWR	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	640391	10/23/20 09:33	AJR	TAL SAV
Dissolved	Analysis	6020A		1			640579	10/23/20 16:21	BJB	TAL SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190296-1

Client Sample ID: G6M-04-31X-FAL20

Lab Sample ID: 680-190296-5
Date Collected: 10/20/20 12:45
Matrix: Water
Date Received: 10/21/20 09:40

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	641789	11/01/20 15:32	Y1S	TAL SAV
	Instrument ID: CMSU									
Dissolved	Prep	3005A			50 mL	50 mL	640204	10/22/20 10:11	AJR	TAL SAV
Dissolved	Analysis	6010C		1			640642	10/23/20 23:05	BWR	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	640196	10/22/20 10:11	AJR	TAL SAV
Dissolved	Analysis	6020A		1			640364	10/22/20 19:49	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-02-01X-FAL20

Lab Sample ID: 680-190296-6
Date Collected: 10/20/20 10:30
Matrix: Water
Date Received: 10/21/20 09:40

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	641789	11/01/20 15:52	Y1S	TAL SAV
	Instrument ID: CMSU									
Dissolved	Prep	3005A			50 mL	50 mL	640177	10/22/20 09:50	AJR	TAL SAV
Dissolved	Analysis	6010C		1			640641	10/23/20 21:19	BWR	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	640175	10/22/20 09:50	AJR	TAL SAV
Dissolved	Analysis	6020A		1			640364	10/22/20 19:31	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-04-01X-FAL20

Lab Sample ID: 680-190296-7
Date Collected: 10/19/20 16:24
Matrix: Water
Date Received: 10/21/20 09:40

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	641326	10/29/20 20:59	P1C	TAL SAV
	Instrument ID: CMSC									
Dissolved	Prep	3005A			50 mL	50 mL	640177	10/22/20 09:50	AJR	TAL SAV
Dissolved	Analysis	6010C		1			640641	10/23/20 21:11	BWR	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	640175	10/22/20 09:50	AJR	TAL SAV
Dissolved	Analysis	6020A		1			640364	10/22/20 19:24	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-04-02X-FAL20

Lab Sample ID: 680-190296-8
Date Collected: 10/19/20 14:25
Matrix: Water
Date Received: 10/21/20 09:40

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	641326	10/29/20 21:23	P1C	TAL SAV
	Instrument ID: CMSC									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	641884	11/02/20 16:55	DBM	TAL SAV
	Instrument ID: CVGU									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190296-1

Client Sample ID: G6M-04-02X-FAL20

Lab Sample ID: 680-190296-8

Date Collected: 10/19/20 14:25
Date Received: 10/21/20 09:40

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	9056A		10	5 mL	5 mL	641087	10/28/20 22:48	UI	TAL SAV
Dissolved	Prep	3005A			50 mL	50 mL	640177	10/22/20 09:50	AJR	TAL SAV
Dissolved	Analysis	6010C		1			640641	10/23/20 21:15	BWR	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	640175	10/22/20 09:50	AJR	TAL SAV
Dissolved	Analysis	6020A		1			640364	10/22/20 19:27	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	515154	11/02/20 18:24	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	310 mL	310 mL	640218	10/22/20 10:55	NVF	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		10	20 mL	20 mL	515351	11/04/20 01:08	JMB	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			514805	10/29/20 22:46	RAF	TAL DEN
	Instrument ID: WC_AT4									

Client Sample ID: TB5-FAL20

Lab Sample ID: 680-190296-9

Date Collected: 10/20/20 00:00
Date Received: 10/21/20 09:40

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	641789	11/01/20 13:11	Y1S	TAL SAV
	Instrument ID: CMSU									

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-190296-1
Project/Site: Fort Devens

Laboratory: Eurofins TestAmerica, Savannah

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

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-22-22

Laboratory: Eurofins TestAmerica, Denver

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21

Method Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190296-1

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
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	TAL DEN
9034	Sulfide, Acid Soluble and Insoluble (Titrimetric)	SW846	TAL SAV
9060A	Organic Carbon, Total (TOC)	SW846	TAL DEN
SM 2320B	Alkalinity	SM	TAL DEN
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 TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

TAL SAV = Eurofins TestAmerica, 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 # Boston #215

11/5/2020

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 2020
Project Number: DEVENS-LTM	Contact:	
WBS Code:	Ship to:	

Comments:
A2320B (A) = Alkalinity
E353.2 (A) = Nitrite Nitrate as N
RSK175 (A) = Dissolved Gases
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9034 (A) = Sulfide

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
5	1x 125mL, plastic, Cool < 6degC
7	2x 250mL, plastic, ZnAc/NaOH Cool < 6degC
8	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
10	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
29	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC
47	1x 500mL, amber glass, H2SO4; Cool < 6degC

						Analytical Test Method	A2320B (A)	E353.2 (A)	RSK175 (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW8260B - VOCs	SW9034 (A)	SW9056A - SO4	SW9060A - TOC					
	Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020						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
20	G6M-04-03X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-04-03X	SD1	85.00	95.00	
21	G6M-04-04X-FAL20	WG								X	X	X				G6M-04-04X	N1	94.00	104.00	
22	G6M-04-05X-FAL20	WG	10.20.20	1010	NB							X				G6M-04-05X	N1	100.00	110.00	
23	G6M-04-06X-FAL20	WG								X	X	X				G6M-04-06X	N1	95.00	136.00	
24	G6M-04-07X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-04-07X	N1	120.00	130.00	
25	G6M-04-09X-FAL20	WG	10.20.20	1100	EF					X	X	X				G6M-04-09X	N1	55.00	65.00	
26	G6M-04-10A-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-04-10A	N1	30.00	40.00	
27	G6M-04-10X-FAL20	WG										X				G6M-04-10X	N1	52.00	62.00	
28	G6M-04-11X-FAL20	WG								X	X	X				G6M-04-11X	N1	35.00	45.00	
29	G6M-04-13X-FAL20	WG										X				G6M-04-13X	N1	30.00	40.00	
30	G6M-04-14X-FAL20	WG								X	X	X				G6M-04-14X	N1	80.00	90.00	
31	G6M-04-15X-FAL20	WG	10-20.20	245	EF					X	X	X				G6M-04-15X	N1	70.00	80.00	
32	G6M-04-22X-FAL20	WG	10.20.20	1135	NB					X	X	X				G6M-04-22X	N1	74.00	84.00	
33	G6M-04-31X-FAL20	WG	10-20-20	1245	EF					X	X	X				G6M-04-31X	N1	68.00	78.00	
34	G6M-06-01X-FAL20	WG								X	X	X				G6M-06-01X	N1	106.00	126.00	
35	G6M-07-01X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-07-01X	N1	78.00	89.00	
36	G6M-07-02X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-07-02X	N1	22.50	27.50	
37	G6M-13-01X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-13-01X	N1	125.00	135.00	
38	G6M-13-02X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-13-02X	N1	115.00	125.00	

680-190296-01 Chain of Custody

Relinquished by:
Date
Time
Received by:
AOC50_eCOC
10 20 20 1500

Date
Time
Shipping Date:
Received by Laboratory:
Condition:
10-20-20 1845
10-21-20 940 5.3/5.1

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 #

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 2020
Project Number: DEVENS-LTM	Contact:	
WBS Code:	Ship to:	

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 2020

	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
	Analytical Test Method					46	47	8	9	9	29	7	5	10					
1	AOC50-DUP01-FAL20	WG							X	X	X				G6M-95-20X	FD1	18.00	23.00	
2	AOC50-DUP02-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-07-02X	FD1	22.50	27.50	
3	AOC50-DUP03-FAL20	WG							X	X	X				G6M-04-04X	FD1	94.00	104.00	
4	AOC50-DUP04-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-13-02X	FD1	115.00	125.00	
5	G6M-02-01X-FAL20	WG	10-20-20	1030	DC				X	X	X				G6M-02-01X	N1	80.00	95.00	
6	G6M-02-04X-FAL20	WG							X	X	X				G6M-02-04X	N1	90.00	105.00	
7	G6M-02-06X-FAL20	WG							X	X	X				G6M-02-06X	N1	55.00	65.00	
8	G6M-02-07X-FAL20	WG							X	X	X				G6M-02-07X	N1	30.00	40.00	
9	G6M-02-08X-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-02-08X	N1	60.00	70.00	
10	G6M-02-11X-FAL20	WG							X	X	X				G6M-02-11X	N1	125.00	135.00	
11	G6M-02-12X-FAL20	WG							X	X	X				G6M-02-12X	N1	125.00	135.00	
12	G6M-02-13X-FAL20	WG							X	X	X				G6M-02-13X	N1	110.00	120.00	
13	G6M-03-07X-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-03-07X	N1	80.00	90.00	
14	G6M-03-08X-FAL20	WG							X	X	X				G6M-03-08X	N1	125.00	140.00	
15	G6M-03-10X-FAL20	WG							X	X	X				G6M-03-10X	N1	120.00	135.00	
16	G6M-04-01X-FAL20	WG	10-19-20	1625	DC				X	X	X				G6M-04-01X	N1	82.00	92.00	
17	G6M-04-02X-FAL20	WG	10-20-20	1425	DC	X	X	X	X	X	X	X	X	X	G6M-04-02X	N1	80.00	90.00	
18	G6M-04-03X-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-04-03X	MS1	85.00	95.00	
19	G6M-04-03X-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-04-03X	N1	85.00	95.00	

680-190296-02 Chain of Custody

Trip Blank

Relinquished by:
Date
Time
Received by: Diane Dopp
AOC50_eCOC
10-20-20
10-20-20 - 1500

Date
Time
Shipping Date:
Received by Laboratory: 10-20-20 180
Condition: TA 10-21-20 940 5.3/5.6

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 #

Boston #215

11/5/2020

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 2020
Project Number: DEVENS-LTM	Contact:	
WBS Code:	Ship to:	

Comments:
A2320B (A) = Alkalinity
E353.2 (A) = Nitrite Nitrate as N
RSK175 (A) = Dissolved Gases
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9034 (A) = Sulfide

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
5	1x 125mL plastic, Cool < 6degC
7	2x 250mL plastic, ZnAc/NaOH Cool < 6degC
8	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
10	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
29	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC
47	1x 500mL, amber glass, H2SO4; Cool < 6degC

						Analytical Test Method	A2320B (A)	E353.2 (A)	RSK175 (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW8260B - VOCs	SW9034 (A)	SW9056A - SO4	SW9060A - TOC					
	Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020						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
39	G6M-13-03X-FAL20	WG								X	X	X				G6M-13-03X	N1	80.00	90.00	
40	G6M-13-04X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-13-04X	N1	125.00	135.00	
41	G6M-13-05X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-13-05X	N1	45.00	55.00	
42	G6M-13-06X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-13-06X	N1	50.00	60.00	
43	G6M-18-01-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-18-01	N1	116.00	126.00	
44	G6M-18-02-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-18-02	N1	123.95	133.95	
45	G6M-95-19X-FAL20	WG										X				G6M-95-19X	N1	48.00	58.00	
46	G6M-95-20X-FAL20	WG								X	X	X				G6M-95-20X	N1	18.00	23.00	
47	G6M-97-05B-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-97-05B	N1	130.00	135.00	
48	G6M-97-28X-FAL20	WG								X	X	X				G6M-97-28X	N1	100.00	105.00	
49	MW-3-FAL20	WG								X	X	X				MW-3	MS1	126.00	137.00	
50	MW-3-FAL20	WG								X	X	X				MW-3	N1	126.00	137.00	
51	MW-3-FAL20	WG								X	X	X				MW-3	SD1	126.00	137.00	
52	MW-7-FAL20	WG								X	X	X				MW-7	N1	6.58	135.00	
53	XSA-12-95X-FAL20	WG								X	X	X				XSA-12-95X	N1	120.00	130.00	
54	XSA-12-96X-FAL20	WG					X	X	X	X	X	X	X	X	X	XSA-12-96X	N1	120.00	130.00	
55	XSA-12-97X-FAL20	WG								X	X	X				XSA-12-97X	N1	120.00	130.00	
56	XSA-12-98X-FAL20	WG								X	X	X				XSA-12-98X	N1	60.00	70.00	

680-190296-03 Chain of Custody

Turnaround Time: NA

Relinquished by:
Date
Time
Received by:
AOC50_xCOC

10-20-20 1500

Date
Time
Shipping Date:
Received by Laboratory:
Condition:

10/20/20 1500

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-190296-1

Login Number: 190296
List Number: 1
Creator: Sims, Robert D

List Source: Eurofins TestAmerica, 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?	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	

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-190296-1

Login Number: 190296
List Number: 2
Creator: O'Hara, Jake F

List Source: Eurofins TestAmerica, Denver
List Creation: 10/22/20 08:37 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.	False	Not present
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").	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 TestAmerica, Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

Laboratory Job ID: 680-190373-1
Client Project/Site: Fort Devens

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

Attn: Nathan R Mullens

Kathryn Smith

Authorized for release by:
11/5/2020 2:56:22 PM

Kathryn Smith, Client Service Manager
(912)250-0275
Kathy.Smith@Eurofinset.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
J	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
U	Undetected at the Limit of Detection.

HPLC/IC

Qualifier	Qualifier Description
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

Metals

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

General Chemistry

Qualifier	Qualifier Description
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)

Glossary (Continued)

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

Job ID: 680-190373-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
680-190373-1	AOC50-DUP03-FAL20	Water	10/21/20 13:50	10/22/20 09:30	
680-190373-2	G6M-03-07X-FAL20	Water	10/21/20 02:30	10/22/20 09:30	
680-190373-3	G6M-04-04X-FAL20	Water	10/21/20 13:50	10/22/20 09:30	
680-190373-4	TB6-FAL20	Water	10/21/20 00:00	10/22/20 09:30	

Job ID: 680-190373-1

Laboratory: Eurofins TestAmerica, Savannah

Narrative

CASE NARRATIVE
Client: Seres Engineering & Services LLC
Project: Fort Devens

Report Number: 680-190373-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

RECEIPT
The samples were received on 10/22/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 1.6º C.

VOLATILE ORGANIC COMPOUNDS (GC/MS)
Samples AOC50-DUP03-FAL20 (680-190373-1), G6M-03-07X-FAL20 (680-190373-2), G6M-04-04X-FAL20 (680-190373-3) and TB6-FAL20 (680-190373-4) were analyzed for Volatile Organic Compounds (GC/MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 11/03/2020 and 11/04/2020.

The laboratory control sample duplicate (LCSD) for analytical batch 680-642014 recovered outside control limits for the following analyte: Chloroethane. This analyte was biased high in the LCSD and was not detected in the associated samples; therefore, the data have been reported.

The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 680-642014 recovered outside control limits for the following analytes: 2-Hexanone, 4-Methyl-2-pentanone (MIBK), Bromomethane and Chloroethane.

Surrogate recovery for the following samples were outside control limits: G6M-03-07X-FAL20 (680-190373-2), TB6-FAL20 (680-190373-4) and (MB 680-642258/9). Evidence of matrix interferences is not obvious.

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

DISSOLVED GASES
Sample G6M-03-07X-FAL20 (680-190373-2) was analyzed for dissolved gases in accordance with RSK-175. The samples were analyzed on 11/02/2020.

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

METALS (ICP) - DISSOLVED
Samples AOC50-DUP03-FAL20 (680-190373-1), G6M-03-07X-FAL20 (680-190373-2) and G6M-04-04X-FAL20 (680-190373-3) were analyzed for Metals (ICP) - Dissolved in accordance with EPA SW-846 Method 6010C. The samples were prepared on 10/26/2020 and analyzed on 10/27/2020.

Manganese was detected in method blank MB 680-640742/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

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

METALS (ICPMS) - DISSOLVED
Samples AOC50-DUP03-FAL20 (680-190373-1), G6M-03-07X-FAL20 (680-190373-2) and G6M-04-04X-FAL20 (680-190373-3) were analyzed for Metals (ICPMS) - Dissolved in accordance with EPA SW-846 Method 6020A. The samples were prepared on 10/26/2020 and

Job ID: 680-190373-1 (Continued)

Laboratory: Eurofins TestAmerica, Savannah (Continued)

analyzed on 10/27/2020.

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

ALKALINITY
Sample G6M-03-07X-FAL20 (680-190373-2) was analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 11/02/2020.

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

NITRATE-NITRITE AS NITROGEN
Sample G6M-03-07X-FAL20 (680-190373-2) was analyzed for nitrate-nitrite as nitrogen in accordance with EPA Method 353.2. The samples were analyzed on 11/02/2020.

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

SULFIDE
Sample G6M-03-07X-FAL20 (680-190373-2) was analyzed for sulfide in accordance with EPA SW846 Method 9034. The samples were analyzed on 10/26/2020.

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

ANIONS BY ION CHROMATOGRAPHY (28 DAY)
Sample G6M-03-07X-FAL20 (680-190373-2) was analyzed for Anions by Ion Chromatography (28 Day) in accordance with SW 846 9056A. The samples were analyzed on 10/28/2020.

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

TOTAL ORGANIC CARBON
Sample G6M-03-07X-FAL20 (680-190373-2) was analyzed for total organic carbon in accordance with EPA SW-846 Method 9060A. The samples were analyzed on 11/04/2020.

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

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190373-1

Client Sample ID: AOC50-DUP03-FAL20

Date Collected: 10/21/20 13:50
Date Received: 10/22/20 09:30

Lab Sample ID: 680-190373-1

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			11/03/20 16:47	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			11/03/20 16:47	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			11/03/20 16:47	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			11/03/20 16:47	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			11/03/20 16:47	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/03/20 16:47	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			11/03/20 16:47	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/03/20 16:47	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			11/03/20 16:47	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/03/20 16:47	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			11/03/20 16:47	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			11/03/20 16:47	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			11/03/20 16:47	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			11/03/20 16:47	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			11/03/20 16:47	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			11/03/20 16:47	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			11/03/20 16:47	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			11/03/20 16:47	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			11/03/20 16:47	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			11/03/20 16:47	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			11/03/20 16:47	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			11/03/20 16:47	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/03/20 16:47	1
2-Hexanone	2.0	U	10	2.0	ug/L			11/03/20 16:47	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			11/03/20 16:47	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			11/03/20 16:47	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			11/03/20 16:47	1
Acetone	7.0	U	10	7.0	ug/L			11/03/20 16:47	1
Benzene	0.43	U	1.0	0.43	ug/L			11/03/20 16:47	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			11/03/20 16:47	1
Bromoform	0.43	U	1.0	0.43	ug/L			11/03/20 16:47	1
Bromomethane	2.5	U	5.0	2.5	ug/L			11/03/20 16:47	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			11/03/20 16:47	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			11/03/20 16:47	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			11/03/20 16:47	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			11/03/20 16:47	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			11/03/20 16:47	1
Chloroethane	2.5	U	5.0	2.5	ug/L			11/03/20 16:47	1
Chloroform	0.50	U	1.0	0.50	ug/L			11/03/20 16:47	1
Chloromethane	0.40	U	1.0	0.40	ug/L			11/03/20 16:47	1
cis-1,2-Dichloroethene	**0.67**	**J**	1.0	0.41	ug/L			11/03/20 16:47	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			11/03/20 16:47	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			11/03/20 16:47	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			11/03/20 16:47	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			11/03/20 16:47	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			11/03/20 16:47	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			11/03/20 16:47	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			11/03/20 16:47	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			11/03/20 16:47	1

Client Sample ID: AOC50-DUP03-FAL20

Lab Sample ID: 680-190373-1

Date Collected: 10/21/20 13:50

Matrix: Water

Date Received: 10/22/20 09:30

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			11/03/20 16:47	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			11/03/20 16:47	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			11/03/20 16:47	1
Naphthalene	2.5	U	5.0	2.5	ug/L			11/03/20 16:47	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			11/03/20 16:47	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			11/03/20 16:47	1
o-Xylene	0.23	U	1.0	0.23	ug/L			11/03/20 16:47	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			11/03/20 16:47	1
Styrene	0.27	U	1.0	0.27	ug/L			11/03/20 16:47	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			11/03/20 16:47	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			11/03/20 16:47	1
Toluene	0.48	U	1.0	0.48	ug/L			11/03/20 16:47	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/03/20 16:47	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			11/03/20 16:47	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/03/20 16:47	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			11/03/20 16:47	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			11/03/20 16:47	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/03/20 16:47	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			11/03/20 16:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*		*11/03/20 16:47*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 119*		*11/03/20 16:47*	*1*
Toluene-d8 (Surr)	*105*		*89 - 112*		*11/03/20 16:47*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*81 - 118*		*11/03/20 16:47*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**120000**		50	17	ug/L		10/26/20 11:32	10/27/20 03:29	1
Manganese	**15000**		10	1.0	ug/L		10/26/20 11:32	10/27/20 03:29	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**480**		3.0	1.5	ug/L		10/26/20 11:32	10/27/20 00:30	1

Client Sample ID: G6M-03-07X-FAL20

Lab Sample ID: 680-190373-2

Date Collected: 10/21/20 02:30

Matrix: Water

Date Received: 10/22/20 09:30

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			11/04/20 17:44	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			11/04/20 17:44	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			11/04/20 17:44	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			11/04/20 17:44	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			11/04/20 17:44	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/04/20 17:44	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			11/04/20 17:44	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/04/20 17:44	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			11/04/20 17:44	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/04/20 17:44	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190373-1

Client Sample ID: G6M-03-07X-FAL20
Date Collected: 10/21/20 02:30
Date Received: 10/22/20 09:30

Lab Sample ID: 680-190373-2
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			11/04/20 17:44	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			11/04/20 17:44	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			11/04/20 17:44	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			11/04/20 17:44	1
1,2-Dichloroethene, Total	**0.91**	**J**	2.0	0.74	ug/L			11/04/20 17:44	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			11/04/20 17:44	1
1,3,5-Trimethylbenzene	**0.61**	**J**	1.0	0.31	ug/L			11/04/20 17:44	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			11/04/20 17:44	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			11/04/20 17:44	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			11/04/20 17:44	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			11/04/20 17:44	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			11/04/20 17:44	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/04/20 17:44	1
2-Hexanone	2.0	U	10	2.0	ug/L			11/04/20 17:44	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			11/04/20 17:44	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			11/04/20 17:44	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			11/04/20 17:44	1
Acetone	7.0	U	10	7.0	ug/L			11/04/20 17:44	1
Benzene	0.43	U	1.0	0.43	ug/L			11/04/20 17:44	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			11/04/20 17:44	1
Bromoform	0.43	U	1.0	0.43	ug/L			11/04/20 17:44	1
Bromomethane	2.5	U	5.0	2.5	ug/L			11/04/20 17:44	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			11/04/20 17:44	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			11/04/20 17:44	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			11/04/20 17:44	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			11/04/20 17:44	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			11/04/20 17:44	1
Chloroethane	2.5	U Q	5.0	2.5	ug/L			11/04/20 17:44	1
Chloroform	0.50	U	1.0	0.50	ug/L			11/04/20 17:44	1
Chloromethane	0.40	U	1.0	0.40	ug/L			11/04/20 17:44	1
cis-1,2-Dichloroethene	**0.58**	**J**	1.0	0.41	ug/L			11/04/20 17:44	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			11/04/20 17:44	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			11/04/20 17:44	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			11/04/20 17:44	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			11/04/20 17:44	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			11/04/20 17:44	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			11/04/20 17:44	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			11/04/20 17:44	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			11/04/20 17:44	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			11/04/20 17:44	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			11/04/20 17:44	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			11/04/20 17:44	1
Naphthalene	2.5	U	5.0	2.5	ug/L			11/04/20 17:44	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			11/04/20 17:44	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			11/04/20 17:44	1
o-Xylene	0.23	U	1.0	0.23	ug/L			11/04/20 17:44	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			11/04/20 17:44	1
Styrene	0.27	U	1.0	0.27	ug/L			11/04/20 17:44	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			11/04/20 17:44	1

Client Sample ID: G6M-03-07X-FAL20

Lab Sample ID: 680-190373-2

Date Collected: 10/21/20 02:30

Matrix: Water

Date Received: 10/22/20 09:30

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			11/04/20 17:44	1
Toluene	**2.2**		1.0	0.48	ug/L			11/04/20 17:44	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/04/20 17:44	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			11/04/20 17:44	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/04/20 17:44	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			11/04/20 17:44	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			11/04/20 17:44	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/04/20 17:44	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			11/04/20 17:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*121*	*J*	*85 - 114*		*11/04/20 17:44*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*11/04/20 17:44*	*1*
Toluene-d8 (Surr)	*98*		*89 - 112*		*11/04/20 17:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*81 - 118*		*11/04/20 17:44*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**4.3**		1.1	0.55	ug/L			11/02/20 18:21	1
Ethylene	**12**		1.0	0.50	ug/L			11/02/20 18:21	1
Methane (TCD)	**34000**		390	39	ug/L			11/02/20 18:21	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.40	U M	1.0	0.40	mg/L			10/28/20 16:29	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**110000**		50	17	ug/L		10/26/20 11:32	10/27/20 03:38	1
Manganese	**2900**		10	1.0	ug/L		10/26/20 11:32	10/27/20 03:38	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**410**		3.0	1.5	ug/L		10/26/20 11:32	10/27/20 00:36	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.057**	**J**	0.10	0.019	mg/L			11/02/20 18:10	1
Sulfide	0.89	U	0.89	0.89	mg/L			10/26/20 13:28	1
Total Organic Carbon - Duplicates	**14**		1.0	0.35	mg/L			11/04/20 02:45	1
Alkalinity	**150**		10	3.1	mg/L			11/02/20 18:05	1

Client Sample ID: G6M-04-04X-FAL20

Lab Sample ID: 680-190373-3

Date Collected: 10/21/20 13:50

Matrix: Water

Date Received: 10/22/20 09:30

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			11/03/20 17:12	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			11/03/20 17:12	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			11/03/20 17:12	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190373-1

Client Sample ID: G6M-04-04X-FAL20
Date Collected: 10/21/20 13:50
Date Received: 10/22/20 09:30

Lab Sample ID: 680-190373-3
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			11/03/20 17:12	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			11/03/20 17:12	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/03/20 17:12	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			11/03/20 17:12	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/03/20 17:12	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			11/03/20 17:12	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/03/20 17:12	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			11/03/20 17:12	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			11/03/20 17:12	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			11/03/20 17:12	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			11/03/20 17:12	1
1,2-Dichloroethene, Total	**1.0**	**J**	2.0	0.74	ug/L			11/03/20 17:12	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			11/03/20 17:12	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			11/03/20 17:12	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			11/03/20 17:12	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			11/03/20 17:12	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			11/03/20 17:12	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			11/03/20 17:12	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			11/03/20 17:12	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/03/20 17:12	1
2-Hexanone	2.0	U	10	2.0	ug/L			11/03/20 17:12	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			11/03/20 17:12	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			11/03/20 17:12	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			11/03/20 17:12	1
Acetone	7.0	U	10	7.0	ug/L			11/03/20 17:12	1
Benzene	0.43	U	1.0	0.43	ug/L			11/03/20 17:12	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			11/03/20 17:12	1
Bromoform	0.43	U	1.0	0.43	ug/L			11/03/20 17:12	1
Bromomethane	2.5	U	5.0	2.5	ug/L			11/03/20 17:12	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			11/03/20 17:12	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			11/03/20 17:12	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			11/03/20 17:12	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			11/03/20 17:12	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			11/03/20 17:12	1
Chloroethane	2.5	U	5.0	2.5	ug/L			11/03/20 17:12	1
Chloroform	0.50	U	1.0	0.50	ug/L			11/03/20 17:12	1
Chloromethane	0.40	U	1.0	0.40	ug/L			11/03/20 17:12	1
cis-1,2-Dichloroethene	**0.64**	**J**	1.0	0.41	ug/L			11/03/20 17:12	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			11/03/20 17:12	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			11/03/20 17:12	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			11/03/20 17:12	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			11/03/20 17:12	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			11/03/20 17:12	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			11/03/20 17:12	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			11/03/20 17:12	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			11/03/20 17:12	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			11/03/20 17:12	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			11/03/20 17:12	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			11/03/20 17:12	1

Client Sample ID: G6M-04-04X-FAL20

Lab Sample ID: 680-190373-3

Date Collected: 10/21/20 13:50
Date Received: 10/22/20 09:30

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	2.5	U	5.0	2.5	ug/L			11/03/20 17:12	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			11/03/20 17:12	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			11/03/20 17:12	1
o-Xylene	0.23	U	1.0	0.23	ug/L			11/03/20 17:12	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			11/03/20 17:12	1
Styrene	0.27	U	1.0	0.27	ug/L			11/03/20 17:12	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			11/03/20 17:12	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			11/03/20 17:12	1
Toluene	0.48	U	1.0	0.48	ug/L			11/03/20 17:12	1
trans-1,2-Dichloroethene	**0.39**	**J**	1.0	0.37	ug/L			11/03/20 17:12	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			11/03/20 17:12	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/03/20 17:12	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			11/03/20 17:12	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			11/03/20 17:12	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/03/20 17:12	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			11/03/20 17:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*		*11/03/20 17:12*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*11/03/20 17:12*	*1*
Toluene-d8 (Surr)	*105*		*89 - 112*		*11/03/20 17:12*	*1*
1,2-Dichloroethane-d4 (Surr)	*90*		*81 - 118*		*11/03/20 17:12*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**130000**		50	17	ug/L		10/26/20 11:32	10/27/20 03:33	1
Manganese	**16000**		10	1.0	ug/L		10/26/20 11:32	10/27/20 03:33	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**510**		3.0	1.5	ug/L		10/26/20 11:32	10/27/20 00:33	1

Client Sample ID: TB6-FAL20

Lab Sample ID: 680-190373-4

Date Collected: 10/21/20 00:00
Date Received: 10/22/20 09:30

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			11/03/20 15:25	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			11/03/20 15:25	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			11/03/20 15:25	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			11/03/20 15:25	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			11/03/20 15:25	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/03/20 15:25	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			11/03/20 15:25	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/03/20 15:25	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			11/03/20 15:25	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/03/20 15:25	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			11/03/20 15:25	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			11/03/20 15:25	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			11/03/20 15:25	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190373-1

Client Sample ID: TB6-FAL20
Date Collected: 10/21/20 00:00
Date Received: 10/22/20 09:30

Lab Sample ID: 680-190373-4
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	0.50	U	1.0	0.50	ug/L			11/03/20 15:25	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			11/03/20 15:25	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			11/03/20 15:25	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			11/03/20 15:25	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			11/03/20 15:25	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			11/03/20 15:25	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			11/03/20 15:25	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			11/03/20 15:25	1
2-Butanone (MEK)	**22**		10	3.4	ug/L			11/03/20 15:25	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/03/20 15:25	1
2-Hexanone	2.0	U Q	10	2.0	ug/L			11/03/20 15:25	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			11/03/20 15:25	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			11/03/20 15:25	1
4-Methyl-2-pentanone (MIBK)	2.1	U Q	10	2.1	ug/L			11/03/20 15:25	1
Acetone	**11**		10	7.0	ug/L			11/03/20 15:25	1
Benzene	0.43	U	1.0	0.43	ug/L			11/03/20 15:25	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			11/03/20 15:25	1
Bromoform	0.43	U	1.0	0.43	ug/L			11/03/20 15:25	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			11/03/20 15:25	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			11/03/20 15:25	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			11/03/20 15:25	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			11/03/20 15:25	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			11/03/20 15:25	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			11/03/20 15:25	1
Chloroethane	2.5	U Q	5.0	2.5	ug/L			11/03/20 15:25	1
Chloroform	0.50	U	1.0	0.50	ug/L			11/03/20 15:25	1
Chloromethane	0.40	U	1.0	0.40	ug/L			11/03/20 15:25	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/03/20 15:25	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			11/03/20 15:25	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			11/03/20 15:25	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			11/03/20 15:25	1
Dichlorodifluoromethane	0.60	U M	1.0	0.60	ug/L			11/03/20 15:25	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			11/03/20 15:25	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			11/03/20 15:25	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			11/03/20 15:25	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			11/03/20 15:25	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			11/03/20 15:25	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			11/03/20 15:25	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			11/03/20 15:25	1
Naphthalene	2.5	U	5.0	2.5	ug/L			11/03/20 15:25	1
n-Butylbenzene	**0.61**	**J**	1.0	0.47	ug/L			11/03/20 15:25	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			11/03/20 15:25	1
o-Xylene	0.23	U	1.0	0.23	ug/L			11/03/20 15:25	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			11/03/20 15:25	1
Styrene	0.27	U	1.0	0.27	ug/L			11/03/20 15:25	1
tert-Butylbenzene	0.45	U M	1.0	0.45	ug/L			11/03/20 15:25	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			11/03/20 15:25	1
Toluene	0.48	U	1.0	0.48	ug/L			11/03/20 15:25	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/03/20 15:25	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190373-1

Client Sample ID: TB6-FAL20
Date Collected: 10/21/20 00:00
Date Received: 10/22/20 09:30

Lab Sample ID: 680-190373-4
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			11/03/20 15:25	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/03/20 15:25	1
Trichlorofluoromethane	0.42	U Q	1.0	0.42	ug/L			11/03/20 15:25	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			11/03/20 15:25	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/03/20 15:25	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			11/03/20 15:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*85 - 114*		*11/03/20 15:25*	*1*
Dibromofluoromethane (Surr)	*88*		*80 - 119*		*11/03/20 15:25*	*1*
Toluene-d8 (Surr)	*96*		*89 - 112*		*11/03/20 15:25*	*1*
1,2-Dichloroethane-d4 (Surr)	*80*	*J*	*81 - 118*		*11/03/20 15:25*	*1*

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190373-1

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

Lab Sample ID: MB 680-642014/9
Matrix: Water
Analysis Batch: 642014

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			11/03/20 14:50	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			11/03/20 14:50	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			11/03/20 14:50	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			11/03/20 14:50	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			11/03/20 14:50	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/03/20 14:50	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			11/03/20 14:50	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/03/20 14:50	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			11/03/20 14:50	1
1,2,4-Trichlorobenzene	2.5	U M	5.0	2.5	ug/L			11/03/20 14:50	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			11/03/20 14:50	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			11/03/20 14:50	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			11/03/20 14:50	1
1,2-Dichloroethane	0.50	U	1.0	0.50	ug/L			11/03/20 14:50	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			11/03/20 14:50	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			11/03/20 14:50	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			11/03/20 14:50	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			11/03/20 14:50	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			11/03/20 14:50	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			11/03/20 14:50	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			11/03/20 14:50	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			11/03/20 14:50	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/03/20 14:50	1
2-Hexanone	2.0	U	10	2.0	ug/L			11/03/20 14:50	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			11/03/20 14:50	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			11/03/20 14:50	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			11/03/20 14:50	1
Acetone	7.0	U	10	7.0	ug/L			11/03/20 14:50	1
Benzene	0.43	U	1.0	0.43	ug/L			11/03/20 14:50	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			11/03/20 14:50	1
Bromoform	0.43	U	1.0	0.43	ug/L			11/03/20 14:50	1
Bromomethane	2.5	U	5.0	2.5	ug/L			11/03/20 14:50	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			11/03/20 14:50	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			11/03/20 14:50	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			11/03/20 14:50	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			11/03/20 14:50	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			11/03/20 14:50	1
Chloroethane	2.5	U	5.0	2.5	ug/L			11/03/20 14:50	1
Chloroform	0.50	U	1.0	0.50	ug/L			11/03/20 14:50	1
Chloromethane	0.40	U	1.0	0.40	ug/L			11/03/20 14:50	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/03/20 14:50	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			11/03/20 14:50	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			11/03/20 14:50	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			11/03/20 14:50	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			11/03/20 14:50	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			11/03/20 14:50	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			11/03/20 14:50	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			11/03/20 14:50	1

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

Lab Sample ID: MB 680-642014/9
Matrix: Water
Analysis Batch: 642014

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			11/03/20 14:50	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			11/03/20 14:50	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			11/03/20 14:50	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			11/03/20 14:50	1
Naphthalene	2.5	U	5.0	2.5	ug/L			11/03/20 14:50	1
n-Butylbenzene	0.47	U M	1.0	0.47	ug/L			11/03/20 14:50	1
N-Propylbenzene	0.38	U M	1.0	0.38	ug/L			11/03/20 14:50	1
o-Xylene	0.23	U	1.0	0.23	ug/L			11/03/20 14:50	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			11/03/20 14:50	1
Styrene	0.27	U M	1.0	0.27	ug/L			11/03/20 14:50	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			11/03/20 14:50	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			11/03/20 14:50	1
Toluene	0.48	U	1.0	0.48	ug/L			11/03/20 14:50	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/03/20 14:50	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			11/03/20 14:50	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/03/20 14:50	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			11/03/20 14:50	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			11/03/20 14:50	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/03/20 14:50	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			11/03/20 14:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*85 - 114*		*11/03/20 14:50*	*1*
Dibromofluoromethane (Surr)	*89*		*80 - 119*		*11/03/20 14:50*	*1*
Toluene-d8 (Surr)	*94*		*89 - 112*		*11/03/20 14:50*	*1*
1,2-Dichloroethane-d4 (Surr)	*85*		*81 - 118*		*11/03/20 14:50*	*1*

Lab Sample ID: LCS 680-642014/4
Matrix: Water
Analysis Batch: 642014

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	46.7		ug/L		93	78 - 124
1,1,1-Trichloroethane	50.0	44.4		ug/L		89	74 - 131
1,1,2,2-Tetrachloroethane	50.0	52.1		ug/L		104	71 - 121
1,1,2-Trichloroethane	50.0	55.7		ug/L		111	80 - 119
1,1-Dichloroethane	50.0	47.7		ug/L		95	77 - 125
1,1-Dichloroethene	50.0	44.0		ug/L		88	71 - 131
1,1-Dichloropropene	50.0	44.6		ug/L		89	79 - 125
1,2,3-Trichlorobenzene	50.0	46.1		ug/L		92	69 - 129
1,2,3-Trichloropropane	50.0	51.0		ug/L		102	73 - 122
1,2,4-Trichlorobenzene	50.0	48.4		ug/L		97	69 - 130
1,2,4-Trimethylbenzene	50.0	53.5		ug/L		107	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	46.6		ug/L		93	62 - 128
1,2-Dichlorobenzene	50.0	48.8		ug/L		98	80 - 119
1,2-Dichloroethane	50.0	47.5		ug/L		95	73 - 128
1,2-Dichloroethene, Total	100	92.7		ug/L		93	79 - 121
1,2-Dichloropropane	50.0	51.0		ug/L		102	78 - 122

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

Lab Sample ID: LCS 680-642014/4
Matrix: Water
Analysis Batch: 642014

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	48.0		ug/L		96	75 - 124
1,3-Dichlorobenzene	50.0	48.7		ug/L		97	80 - 119
1,3-Dichloropropane	50.0	54.9		ug/L		110	80 - 119
1,4-Dichlorobenzene	50.0	48.4		ug/L		97	79 - 118
2,2-Dichloropropane	50.0	45.7		ug/L		91	60 - 139
2-Butanone (MEK)	250	261		ug/L		104	56 - 143
2-Chlorotoluene	50.0	47.5		ug/L		95	79 - 122
2-Hexanone	250	249		ug/L		99	57 - 139
4-Chlorotoluene	50.0	47.5		ug/L		95	78 - 122
4-Isopropyltoluene	50.0	50.3		ug/L		101	77 - 127
4-Methyl-2-pentanone (MIBK)	250	258		ug/L		103	67 - 130
Acetone	250	267		ug/L		107	39 - 160
Benzene	50.0	50.6		ug/L		101	79 - 120
Bromobenzene	50.0	47.1		ug/L		94	80 - 120
Bromoform	50.0	48.4		ug/L		97	66 - 130
Bromomethane	50.0	40.0		ug/L		80	53 - 141
Carbon disulfide	50.0	46.9		ug/L		94	64 - 133
Carbon tetrachloride	50.0	43.6		ug/L		87	72 - 136
Chlorobenzene	50.0	48.4		ug/L		97	82 - 118
Chlorobromomethane	50.0	50.3		ug/L		101	78 - 123
Chlorodibromomethane	50.0	50.8		ug/L		102	74 - 126
Chloroethane	50.0	40.1		ug/L		80	60 - 138
Chloroform	50.0	48.0		ug/L		96	79 - 124
Chloromethane	50.0	45.6		ug/L		91	50 - 139
cis-1,2-Dichloroethene	50.0	46.7		ug/L		93	78 - 123
cis-1,3-Dichloropropene	50.0	51.4		ug/L		103	75 - 124
Dibromomethane	50.0	50.3		ug/L		101	79 - 123
Dichlorobromomethane	50.0	47.2		ug/L		94	79 - 125
Dichlorodifluoromethane	50.0	46.7		ug/L		93	32 - 152
Ethylbenzene	50.0	47.3		ug/L		95	79 - 121
Ethylene Dibromide	50.0	54.4		ug/L		109	75 - 127
Hexachlorobutadiene	50.0	43.2		ug/L		86	66 - 134
Isopropylbenzene	50.0	47.0		ug/L		94	72 - 131
Methyl tert-butyl ether	50.0	52.3		ug/L		105	71 - 124
Methylene Chloride	50.0	51.3		ug/L		103	74 - 124
m-Xylene & p-Xylene	50.0	46.6		ug/L		93	80 - 121
Naphthalene	50.0	57.3		ug/L		115	61 - 128
n-Butylbenzene	50.0	49.2		ug/L		98	75 - 128
N-Propylbenzene	50.0	48.0		ug/L		96	76 - 126
o-Xylene	50.0	46.7		ug/L		93	78 - 122
sec-Butylbenzene	50.0	48.2		ug/L		96	77 - 126
Styrene	50.0	48.8		ug/L		98	78 - 123
tert-Butylbenzene	50.0	46.4		ug/L		93	78 - 124
Tetrachloroethene	50.0	48.4		ug/L		97	74 - 129
Toluene	50.0	50.8		ug/L		102	80 - 121
trans-1,2-Dichloroethene	50.0	45.9		ug/L		92	75 - 124
trans-1,3-Dichloropropene	50.0	52.5		ug/L		105	73 - 127
Trichloroethene	50.0	48.4		ug/L		97	79 - 123
Trichlorofluoromethane	50.0	43.9		ug/L		88	65 - 141

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

Lab Sample ID: LCS 680-642014/4
Matrix: Water
Analysis Batch: 642014

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	111		ug/L		111	54 - 146
Vinyl chloride	50.0	46.8		ug/L		94	58 - 137
Xylenes, Total	100	93.3		ug/L		93	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*
Dibromofluoromethane (Surr)	*97*		*80 - 119*
Toluene-d8 (Surr)	*101*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*

Lab Sample ID: LCSD 680-642014/5
Matrix: Water
Analysis Batch: 642014

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	46.9		ug/L		94	78 - 124	0	20
1,1,1-Trichloroethane	50.0	47.4		ug/L		95	74 - 131	7	20
1,1,2,2-Tetrachloroethane	50.0	47.2		ug/L		94	71 - 121	10	20
1,1,2-Trichloroethane	50.0	48.6		ug/L		97	80 - 119	14	20
1,1-Dichloroethane	50.0	48.1		ug/L		96	77 - 125	1	20
1,1-Dichloroethene	50.0	48.2		ug/L		96	71 - 131	9	20
1,1-Dichloropropene	50.0	48.4		ug/L		97	79 - 125	8	20
1,2,3-Trichlorobenzene	50.0	51.4		ug/L		103	69 - 129	11	20
1,2,3-Trichloropropane	50.0	47.0		ug/L		94	73 - 122	8	20
1,2,4-Trichlorobenzene	50.0	49.5		ug/L		99	69 - 130	2	20
1,2,4-Trimethylbenzene	50.0	56.1		ug/L		112	76 - 124	5	20
1,2-Dibromo-3-Chloropropane	50.0	44.1		ug/L		88	62 - 128	6	20
1,2-Dichlorobenzene	50.0	48.4		ug/L		97	80 - 119	1	20
1,2-Dichloroethane	50.0	44.2		ug/L		88	73 - 128	7	20
1,2-Dichloroethene, Total	100	95.0		ug/L		95	79 - 121	2	20
1,2-Dichloropropane	50.0	48.4		ug/L		97	78 - 122	5	20
1,3,5-Trimethylbenzene	50.0	51.7		ug/L		103	75 - 124	7	20
1,3-Dichlorobenzene	50.0	49.5		ug/L		99	80 - 119	2	20
1,3-Dichloropropane	50.0	48.7		ug/L		97	80 - 119	12	20
1,4-Dichlorobenzene	50.0	48.3		ug/L		97	79 - 118	0	20
2,2-Dichloropropane	50.0	47.6		ug/L		95	60 - 139	4	20
2-Butanone (MEK)	250	233		ug/L		93	56 - 143	11	20
2-Chlorotoluene	50.0	49.6		ug/L		99	79 - 122	4	20
2-Hexanone	250	202	Q	ug/L		81	57 - 139	21	20
4-Chlorotoluene	50.0	49.1		ug/L		98	78 - 122	3	20
4-Isopropyltoluene	50.0	54.2		ug/L		108	77 - 127	7	20
4-Methyl-2-pentanone (MIBK)	250	207	Q	ug/L		83	67 - 130	22	20
Acetone	250	219		ug/L		88	39 - 160	20	20
Benzene	50.0	50.0		ug/L		100	79 - 120	1	20
Bromobenzene	50.0	48.3		ug/L		97	80 - 120	3	20
Bromoform	50.0	44.7		ug/L		89	66 - 130	8	20
Bromomethane	50.0	56.1	Q	ug/L		112	53 - 141	33	20
Carbon disulfide	50.0	51.0		ug/L		102	64 - 133	8	20

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

Lab Sample ID: LCSD 680-642014/5
Matrix: Water
Analysis Batch: 642014

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	45.7		ug/L		91	72 - 136	5	20
Chlorobenzene	50.0	50.5		ug/L		101	82 - 118	4	20
Chlorobromomethane	50.0	47.8		ug/L		96	78 - 123	5	20
Chlorodibromomethane	50.0	44.9		ug/L		90	74 - 126	12	20
Chloroethane	50.0	70.8	Q	ug/L		142	60 - 138	55	20
Chloroform	50.0	47.2		ug/L		94	79 - 124	2	20
Chloromethane	50.0	47.0		ug/L		94	50 - 139	3	20
cis-1,2-Dichloroethene	50.0	46.7		ug/L		93	78 - 123	0	20
cis-1,3-Dichloropropene	50.0	47.9		ug/L		96	75 - 124	7	20
Dibromomethane	50.0	45.0		ug/L		90	79 - 123	11	20
Dichlorobromomethane	50.0	45.0		ug/L		90	79 - 125	5	20
Dichlorodifluoromethane	50.0	48.5		ug/L		97	32 - 152	4	20
Ethylbenzene	50.0	51.1		ug/L		102	79 - 121	8	20
Ethylene Dibromide	50.0	46.9		ug/L		94	75 - 127	15	20
Hexachlorobutadiene	50.0	48.7		ug/L		97	66 - 134	12	20
Isopropylbenzene	50.0	50.9		ug/L		102	72 - 131	8	20
Methyl tert-butyl ether	50.0	46.5		ug/L		93	71 - 124	12	20
Methylene Chloride	50.0	47.2		ug/L		94	74 - 124	8	20
m-Xylene & p-Xylene	50.0	49.7		ug/L		99	80 - 121	7	20
Naphthalene	50.0	60.0		ug/L		120	61 - 128	5	20
n-Butylbenzene	50.0	53.1		ug/L		106	75 - 128	7	20
N-Propylbenzene	50.0	52.7		ug/L		105	76 - 126	9	20
o-Xylene	50.0	49.1		ug/L		98	78 - 122	5	20
sec-Butylbenzene	50.0	53.2		ug/L		106	77 - 126	10	20
Styrene	50.0	49.8		ug/L		100	78 - 123	2	20
tert-Butylbenzene	50.0	50.0		ug/L		100	78 - 124	7	20
Tetrachloroethene	50.0	51.2		ug/L		102	74 - 129	6	20
Toluene	50.0	50.6		ug/L		101	80 - 121	0	20
trans-1,2-Dichloroethene	50.0	48.3		ug/L		97	75 - 124	5	20
trans-1,3-Dichloropropene	50.0	47.1		ug/L		94	73 - 127	11	20
Trichloroethene	50.0	49.4		ug/L		99	79 - 123	2	20
Trichlorofluoromethane	50.0	48.6		ug/L		97	65 - 141	10	20
Vinyl acetate	100	96.9		ug/L		97	54 - 146	14	20
Vinyl chloride	50.0	48.4		ug/L		97	58 - 137	3	20
Xylenes, Total	100	98.8		ug/L		99	79 - 121	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*
Dibromofluoromethane (Surr)	*92*		*80 - 119*
Toluene-d8 (Surr)	*99*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*

Lab Sample ID: MB 680-642022/8
Matrix: Water
Analysis Batch: 642022

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			11/03/20 15:01	1

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

Lab Sample ID: MB 680-642022/8
Matrix: Water
Analysis Batch: 642022

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			11/03/20 15:01	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			11/03/20 15:01	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			11/03/20 15:01	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			11/03/20 15:01	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/03/20 15:01	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			11/03/20 15:01	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/03/20 15:01	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			11/03/20 15:01	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/03/20 15:01	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			11/03/20 15:01	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			11/03/20 15:01	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			11/03/20 15:01	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			11/03/20 15:01	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			11/03/20 15:01	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			11/03/20 15:01	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			11/03/20 15:01	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			11/03/20 15:01	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			11/03/20 15:01	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			11/03/20 15:01	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			11/03/20 15:01	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			11/03/20 15:01	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/03/20 15:01	1
2-Hexanone	2.0	U	10	2.0	ug/L			11/03/20 15:01	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			11/03/20 15:01	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			11/03/20 15:01	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			11/03/20 15:01	1
Acetone	7.0	U	10	7.0	ug/L			11/03/20 15:01	1
Benzene	0.43	U	1.0	0.43	ug/L			11/03/20 15:01	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			11/03/20 15:01	1
Bromoform	0.43	U	1.0	0.43	ug/L			11/03/20 15:01	1
Bromomethane	2.5	U	5.0	2.5	ug/L			11/03/20 15:01	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			11/03/20 15:01	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			11/03/20 15:01	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			11/03/20 15:01	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			11/03/20 15:01	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			11/03/20 15:01	1
Chloroethane	2.5	U	5.0	2.5	ug/L			11/03/20 15:01	1
Chloroform	0.50	U	1.0	0.50	ug/L			11/03/20 15:01	1
Chloromethane	0.40	U	1.0	0.40	ug/L			11/03/20 15:01	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/03/20 15:01	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			11/03/20 15:01	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			11/03/20 15:01	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			11/03/20 15:01	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			11/03/20 15:01	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			11/03/20 15:01	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			11/03/20 15:01	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			11/03/20 15:01	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			11/03/20 15:01	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			11/03/20 15:01	1

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

Lab Sample ID: MB 680-642022/8
Matrix: Water
Analysis Batch: 642022

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	2.5	U	5.0	2.5	ug/L			11/03/20 15:01	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			11/03/20 15:01	1
Naphthalene	2.5	U	5.0	2.5	ug/L			11/03/20 15:01	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			11/03/20 15:01	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			11/03/20 15:01	1
o-Xylene	0.23	U	1.0	0.23	ug/L			11/03/20 15:01	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			11/03/20 15:01	1
Styrene	0.27	U	1.0	0.27	ug/L			11/03/20 15:01	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			11/03/20 15:01	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			11/03/20 15:01	1
Toluene	0.48	U	1.0	0.48	ug/L			11/03/20 15:01	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/03/20 15:01	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			11/03/20 15:01	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/03/20 15:01	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			11/03/20 15:01	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			11/03/20 15:01	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/03/20 15:01	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			11/03/20 15:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*		*11/03/20 15:01*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 119*		*11/03/20 15:01*	*1*
Toluene-d8 (Surr)	*104*		*89 - 112*		*11/03/20 15:01*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*81 - 118*		*11/03/20 15:01*	*1*

Lab Sample ID: LCS 680-642022/3
Matrix: Water
Analysis Batch: 642022

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	55.0		ug/L		110	78 - 124
1,1,1-Trichloroethane	50.0	50.4		ug/L		101	74 - 131
1,1,2,2-Tetrachloroethane	50.0	49.9		ug/L		100	71 - 121
1,1,2-Trichloroethane	50.0	51.8		ug/L		104	80 - 119
1,1-Dichloroethane	50.0	47.3		ug/L		95	77 - 125
1,1-Dichloroethene	50.0	55.6		ug/L		111	71 - 131
1,1-Dichloropropene	50.0	49.8		ug/L		100	79 - 125
1,2,3-Trichlorobenzene	50.0	47.1		ug/L		94	69 - 129
1,2,3-Trichloropropane	50.0	53.7		ug/L		107	73 - 122
1,2,4-Trichlorobenzene	50.0	47.1		ug/L		94	69 - 130
1,2,4-Trimethylbenzene	50.0	50.8		ug/L		102	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	45.3		ug/L		91	62 - 128
1,2-Dichlorobenzene	50.0	48.9		ug/L		98	80 - 119
1,2-Dichloroethane	50.0	48.7		ug/L		97	73 - 128
1,2-Dichloroethene, Total	100	102		ug/L		102	79 - 121
1,2-Dichloropropane	50.0	48.9		ug/L		98	78 - 122
1,3,5-Trimethylbenzene	50.0	50.4		ug/L		101	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 680-642022/3
Matrix: Water
Analysis Batch: 642022

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	48.1		ug/L		96	80 - 119
1,4-Dichlorobenzene	50.0	49.8		ug/L		100	79 - 118
2,2-Dichloropropane	50.0	50.9		ug/L		102	60 - 139
2-Butanone (MEK)	250	241		ug/L		97	56 - 143
2-Chlorotoluene	50.0	50.7		ug/L		101	79 - 122
2-Hexanone	250	214		ug/L		85	57 - 139
4-Chlorotoluene	50.0	51.7		ug/L		103	78 - 122
4-Isopropyltoluene	50.0	46.4		ug/L		93	77 - 127
4-Methyl-2-pentanone (MIBK)	250	211		ug/L		84	67 - 130
Acetone	250	217		ug/L		87	39 - 160
Benzene	50.0	50.5		ug/L		101	79 - 120
Bromobenzene	50.0	54.7		ug/L		109	80 - 120
Bromoform	50.0	54.4		ug/L		109	66 - 130
Bromomethane	50.0	42.8		ug/L		86	53 - 141
Carbon disulfide	50.0	53.6		ug/L		107	64 - 133
Carbon tetrachloride	50.0	52.3		ug/L		105	72 - 136
Chlorobenzene	50.0	52.4		ug/L		105	82 - 118
Chlorobromomethane	50.0	50.4		ug/L		101	78 - 123
Chlorodibromomethane	50.0	52.7		ug/L		105	74 - 126
Chloroethane	50.0	49.9		ug/L		100	60 - 138
Chloroform	50.0	49.2		ug/L		98	79 - 124
Chloromethane	50.0	45.5		ug/L		91	50 - 139
cis-1,2-Dichloroethene	50.0	48.2		ug/L		96	78 - 123
cis-1,3-Dichloropropene	50.0	49.4		ug/L		99	75 - 124
Dibromomethane	50.0	48.7		ug/L		97	79 - 123
Dichlorobromomethane	50.0	50.6		ug/L		101	79 - 125
Dichlorodifluoromethane	50.0	59.4		ug/L		119	32 - 152
Ethylbenzene	50.0	50.5		ug/L		101	79 - 121
Ethylene Dibromide	50.0	52.6		ug/L		105	75 - 127
Hexachlorobutadiene	50.0	49.7		ug/L		99	66 - 134
Isopropylbenzene	50.0	51.0		ug/L		102	72 - 131
Methyl tert-butyl ether	50.0	47.2		ug/L		94	71 - 124
Methylene Chloride	50.0	51.2		ug/L		102	74 - 124
m-Xylene & p-Xylene	50.0	51.2		ug/L		102	80 - 121
Naphthalene	50.0	43.2		ug/L		86	61 - 128
n-Butylbenzene	50.0	44.7		ug/L		89	75 - 128
N-Propylbenzene	50.0	51.1		ug/L		102	76 - 126
o-Xylene	50.0	51.8		ug/L		104	78 - 122
sec-Butylbenzene	50.0	51.1		ug/L		102	77 - 126
Styrene	50.0	51.6		ug/L		103	78 - 123
tert-Butylbenzene	50.0	50.6		ug/L		101	78 - 124
Tetrachloroethene	50.0	55.4		ug/L		111	74 - 129
Toluene	50.0	51.3		ug/L		103	80 - 121
trans-1,2-Dichloroethene	50.0	53.8		ug/L		108	75 - 124
trans-1,3-Dichloropropene	50.0	45.0		ug/L		90	73 - 127
Trichloroethene	50.0	53.4		ug/L		107	79 - 123
Trichlorofluoromethane	50.0	52.6		ug/L		105	65 - 141
Vinyl acetate	100	88.0		ug/L		88	54 - 146
Vinyl chloride	50.0	50.6		ug/L		101	58 - 137

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

Lab Sample ID: LCS 680-642022/3
Matrix: Water
Analysis Batch: 642022

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Xylenes, Total			100	103		ug/L		103	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*90*		*85 - 114*
Dibromofluoromethane (Surr)	*102*		*80 - 119*
Toluene-d8 (Surr)	*106*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*98*		*81 - 118*

Lab Sample ID: LCSD 680-642022/4
Matrix: Water
Analysis Batch: 642022

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	55.6		ug/L		111	78 - 124	1	20
1,1,1-Trichloroethane			50.0	49.2		ug/L		98	74 - 131	2	20
1,1,2,2-Tetrachloroethane			50.0	51.1		ug/L		102	71 - 121	2	20
1,1,2-Trichloroethane			50.0	52.2		ug/L		104	80 - 119	1	20
1,1-Dichloroethane			50.0	46.4		ug/L		93	77 - 125	2	20
1,1-Dichloroethene			50.0	55.1		ug/L		110	71 - 131	1	20
1,1-Dichloropropene			50.0	48.6		ug/L		97	79 - 125	2	20
1,2,3-Trichlorobenzene			50.0	48.5		ug/L		97	69 - 129	3	20
1,2,3-Trichloropropane			50.0	53.7		ug/L		107	73 - 122	0	20
1,2,4-Trichlorobenzene			50.0	48.0		ug/L		96	69 - 130	2	20
1,2,4-Trimethylbenzene			50.0	51.0		ug/L		102	76 - 124	0	20
1,2-Dibromo-3-Chloropropane			50.0	45.3		ug/L		91	62 - 128	0	20
1,2-Dichlorobenzene			50.0	50.2		ug/L		100	80 - 119	3	20
1,2-Dichloroethane			50.0	47.6		ug/L		95	73 - 128	2	20
1,2-Dichloroethene, Total			100	101		ug/L		101	79 - 121	1	20
1,2-Dichloropropane			50.0	47.9		ug/L		96	78 - 122	2	20
1,3,5-Trimethylbenzene			50.0	50.7		ug/L		101	75 - 124	1	20
1,3-Dichlorobenzene			50.0	50.2		ug/L		100	80 - 119	0	20
1,3-Dichloropropane			50.0	48.1		ug/L		96	80 - 119	0	20
1,4-Dichlorobenzene			50.0	50.0		ug/L		100	79 - 118	0	20
2,2-Dichloropropane			50.0	49.5		ug/L		99	60 - 139	3	20
2-Butanone (MEK)			250	239		ug/L		95	56 - 143	1	20
2-Chlorotoluene			50.0	50.9		ug/L		102	79 - 122	0	20
2-Hexanone			250	213		ug/L		85	57 - 139	0	20
4-Chlorotoluene			50.0	51.7		ug/L		103	78 - 122	0	20
4-Isopropyltoluene			50.0	47.0		ug/L		94	77 - 127	1	20
4-Methyl-2-pentanone (MIBK)			250	214		ug/L		85	67 - 130	1	20
Acetone			250	220		ug/L		88	39 - 160	1	20
Benzene			50.0	49.4		ug/L		99	79 - 120	2	20
Bromobenzene			50.0	55.6		ug/L		111	80 - 120	2	20
Bromoform			50.0	55.7		ug/L		111	66 - 130	2	20
Bromomethane			50.0	42.5		ug/L		85	53 - 141	1	20
Carbon disulfide			50.0	52.7		ug/L		105	64 - 133	2	20
Carbon tetrachloride			50.0	51.5		ug/L		103	72 - 136	2	20
Chlorobenzene			50.0	52.9		ug/L		106	82 - 118	1	20

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

Lab Sample ID: LCSD 680-642022/4
Matrix: Water
Analysis Batch: 642022

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	49.2		ug/L		98	78 - 123	2	20
Chlorodibromomethane	50.0	52.0		ug/L		104	74 - 126	1	20
Chloroethane	50.0	49.3		ug/L		99	60 - 138	1	20
Chloroform	50.0	48.0		ug/L		96	79 - 124	3	20
Chloromethane	50.0	45.3		ug/L		91	50 - 139	1	20
cis-1,2-Dichloroethene	50.0	47.8		ug/L		96	78 - 123	1	20
cis-1,3-Dichloropropene	50.0	48.1		ug/L		96	75 - 124	3	20
Dibromomethane	50.0	47.2		ug/L		94	79 - 123	3	20
Dichlorobromomethane	50.0	49.3		ug/L		99	79 - 125	3	20
Dichlorodifluoromethane	50.0	57.6		ug/L		115	32 - 152	3	20
Ethylbenzene	50.0	51.7		ug/L		103	79 - 121	2	20
Ethylene Dibromide	50.0	51.7		ug/L		103	75 - 127	2	20
Hexachlorobutadiene	50.0	51.2		ug/L		102	66 - 134	3	20
Isopropylbenzene	50.0	52.2		ug/L		104	72 - 131	2	20
Methyl tert-butyl ether	50.0	47.0		ug/L		94	71 - 124	0	20
Methylene Chloride	50.0	49.6		ug/L		99	74 - 124	3	20
m-Xylene & p-Xylene	50.0	51.7		ug/L		103	80 - 121	1	20
Naphthalene	50.0	44.3		ug/L		89	61 - 128	3	20
n-Butylbenzene	50.0	44.6		ug/L		89	75 - 128	0	20
N-Propylbenzene	50.0	50.6		ug/L		101	76 - 126	1	20
o-Xylene	50.0	52.0		ug/L		104	78 - 122	1	20
sec-Butylbenzene	50.0	51.1		ug/L		102	77 - 126	0	20
Styrene	50.0	52.2		ug/L		104	78 - 123	1	20
tert-Butylbenzene	50.0	51.3		ug/L		103	78 - 124	1	20
Tetrachloroethene	50.0	55.4		ug/L		111	74 - 129	0	20
Toluene	50.0	50.7		ug/L		101	80 - 121	1	20
trans-1,2-Dichloroethene	50.0	52.9		ug/L		106	75 - 124	2	20
trans-1,3-Dichloropropene	50.0	44.5		ug/L		89	73 - 127	1	20
Trichloroethene	50.0	52.3		ug/L		105	79 - 123	2	20
Trichlorofluoromethane	50.0	51.8		ug/L		104	65 - 141	1	20
Vinyl acetate	100	83.6		ug/L		84	54 - 146	5	20
Vinyl chloride	50.0	49.5		ug/L		99	58 - 137	2	20
Xylenes, Total	100	104		ug/L		104	79 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*85 - 114*
Dibromofluoromethane (Surr)	*100*		*80 - 119*
Toluene-d8 (Surr)	*107*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*

Lab Sample ID: MB 680-642258/9
Matrix: Water
Analysis Batch: 642258

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			11/04/20 13:13	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			11/04/20 13:13	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			11/04/20 13:13	1

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

Lab Sample ID: MB 680-642258/9
Matrix: Water
Analysis Batch: 642258

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			11/04/20 13:13	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			11/04/20 13:13	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/04/20 13:13	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			11/04/20 13:13	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/04/20 13:13	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			11/04/20 13:13	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/04/20 13:13	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			11/04/20 13:13	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			11/04/20 13:13	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			11/04/20 13:13	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			11/04/20 13:13	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			11/04/20 13:13	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			11/04/20 13:13	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			11/04/20 13:13	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			11/04/20 13:13	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			11/04/20 13:13	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			11/04/20 13:13	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			11/04/20 13:13	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			11/04/20 13:13	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/04/20 13:13	1
2-Hexanone	2.0	U	10	2.0	ug/L			11/04/20 13:13	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			11/04/20 13:13	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			11/04/20 13:13	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			11/04/20 13:13	1
Acetone	7.0	U	10	7.0	ug/L			11/04/20 13:13	1
Benzene	0.43	U	1.0	0.43	ug/L			11/04/20 13:13	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			11/04/20 13:13	1
Bromoform	0.43	U	1.0	0.43	ug/L			11/04/20 13:13	1
Bromomethane	2.5	U	5.0	2.5	ug/L			11/04/20 13:13	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			11/04/20 13:13	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			11/04/20 13:13	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			11/04/20 13:13	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			11/04/20 13:13	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			11/04/20 13:13	1
Chloroethane	2.5	U	5.0	2.5	ug/L			11/04/20 13:13	1
Chloroform	0.50	U	1.0	0.50	ug/L			11/04/20 13:13	1
Chloromethane	0.40	U	1.0	0.40	ug/L			11/04/20 13:13	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/04/20 13:13	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			11/04/20 13:13	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			11/04/20 13:13	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			11/04/20 13:13	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			11/04/20 13:13	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			11/04/20 13:13	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			11/04/20 13:13	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			11/04/20 13:13	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			11/04/20 13:13	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			11/04/20 13:13	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			11/04/20 13:13	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			11/04/20 13:13	1

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

Lab Sample ID: MB 680-642258/9
Matrix: Water
Analysis Batch: 642258

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	2.5	U	5.0	2.5	ug/L			11/04/20 13:13	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			11/04/20 13:13	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			11/04/20 13:13	1
o-Xylene	0.23	U	1.0	0.23	ug/L			11/04/20 13:13	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			11/04/20 13:13	1
Styrene	0.27	U	1.0	0.27	ug/L			11/04/20 13:13	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			11/04/20 13:13	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			11/04/20 13:13	1
Toluene	0.48	U	1.0	0.48	ug/L			11/04/20 13:13	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/04/20 13:13	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			11/04/20 13:13	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/04/20 13:13	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			11/04/20 13:13	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			11/04/20 13:13	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/04/20 13:13	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			11/04/20 13:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*	*J*	*85 - 114*		*11/04/20 13:13*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 119*		*11/04/20 13:13*	*1*
Toluene-d8 (Surr)	*98*		*89 - 112*		*11/04/20 13:13*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*81 - 118*		*11/04/20 13:13*	*1*

Lab Sample ID: LCS 680-642258/4
Matrix: Water
Analysis Batch: 642258

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	47.9		ug/L		96	78 - 124
1,1,1-Trichloroethane	50.0	50.9		ug/L		102	74 - 131
1,1,2,2-Tetrachloroethane	50.0	43.7		ug/L		87	71 - 121
1,1,2-Trichloroethane	50.0	48.0		ug/L		96	80 - 119
1,1-Dichloroethane	50.0	49.8		ug/L		100	77 - 125
1,1-Dichloroethene	50.0	50.7		ug/L		101	71 - 131
1,1-Dichloropropene	50.0	49.9		ug/L		100	79 - 125
1,2,3-Trichlorobenzene	50.0	45.0		ug/L		90	69 - 129
1,2,3-Trichloropropane	50.0	44.5		ug/L		89	73 - 122
1,2,4-Trichlorobenzene	50.0	47.2		ug/L		94	69 - 130
1,2,4-Trimethylbenzene	50.0	46.3		ug/L		93	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	39.7		ug/L		79	62 - 128
1,2-Dichlorobenzene	50.0	46.5		ug/L		93	80 - 119
1,2-Dichloroethane	50.0	49.9		ug/L		100	73 - 128
1,2-Dichloroethene, Total	100	102		ug/L		102	79 - 121
1,2-Dichloropropane	50.0	48.4		ug/L		97	78 - 122
1,3,5-Trimethylbenzene	50.0	46.7		ug/L		93	75 - 124
1,3-Dichlorobenzene	50.0	46.8		ug/L		94	80 - 119
1,3-Dichloropropane	50.0	47.9		ug/L		96	80 - 119
1,4-Dichlorobenzene	50.0	46.9		ug/L		94	79 - 118

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

Lab Sample ID: LCS 680-642258/4
Matrix: Water
Analysis Batch: 642258

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	51.8		ug/L		104	60 - 139
2-Butanone (MEK)	250	207		ug/L		83	56 - 143
2-Chlorotoluene	50.0	48.3		ug/L		97	79 - 122
2-Hexanone	250	196		ug/L		79	57 - 139
4-Chlorotoluene	50.0	49.5		ug/L		99	78 - 122
4-Isopropyltoluene	50.0	51.2		ug/L		102	77 - 127
4-Methyl-2-pentanone (MIBK)	250	196		ug/L		79	67 - 130
Acetone	250	215		ug/L		86	39 - 160
Benzene	50.0	49.6		ug/L		99	79 - 120
Bromobenzene	50.0	47.3		ug/L		95	80 - 120
Bromoform	50.0	45.5		ug/L		91	66 - 130
Bromomethane	50.0	55.2		ug/L		110	53 - 141
Carbon disulfide	50.0	57.8		ug/L		116	64 - 133
Carbon tetrachloride	50.0	50.5		ug/L		101	72 - 136
Chlorobenzene	50.0	47.1		ug/L		94	82 - 118
Chlorobromomethane	50.0	51.6		ug/L		103	78 - 123
Chlorodibromomethane	50.0	48.3		ug/L		97	74 - 126
Chloroethane	50.0	68.3	M	ug/L		137	60 - 138
Chloroform	50.0	49.5		ug/L		99	79 - 124
Chloromethane	50.0	47.3	M	ug/L		95	50 - 139
cis-1,2-Dichloroethene	50.0	50.7		ug/L		101	78 - 123
cis-1,3-Dichloropropene	50.0	49.0		ug/L		98	75 - 124
Dibromomethane	50.0	49.3		ug/L		99	79 - 123
Dichlorobromomethane	50.0	49.0		ug/L		98	79 - 125
Dichlorodifluoromethane	50.0	45.0		ug/L		90	32 - 152
Ethylbenzene	50.0	48.9		ug/L		98	79 - 121
Ethylene Dibromide	50.0	50.0		ug/L		100	75 - 127
Hexachlorobutadiene	50.0	46.7		ug/L		93	66 - 134
Isopropylbenzene	50.0	48.7		ug/L		97	72 - 131
Methyl tert-butyl ether	50.0	46.7		ug/L		93	71 - 124
Methylene Chloride	50.0	54.9		ug/L		110	74 - 124
m-Xylene & p-Xylene	50.0	49.1		ug/L		98	80 - 121
Naphthalene	50.0	41.5		ug/L		83	61 - 128
n-Butylbenzene	50.0	46.0		ug/L		92	75 - 128
N-Propylbenzene	50.0	50.7		ug/L		101	76 - 126
o-Xylene	50.0	49.1		ug/L		98	78 - 122
sec-Butylbenzene	50.0	44.9		ug/L		90	77 - 126
Styrene	50.0	50.7		ug/L		101	78 - 123
tert-Butylbenzene	50.0	50.1		ug/L		100	78 - 124
Tetrachloroethene	50.0	49.9		ug/L		100	74 - 129
Toluene	50.0	49.2		ug/L		98	80 - 121
trans-1,2-Dichloroethene	50.0	51.0		ug/L		102	75 - 124
trans-1,3-Dichloropropene	50.0	49.3		ug/L		99	73 - 127
Trichloroethene	50.0	48.9		ug/L		98	79 - 123
Trichlorofluoromethane	50.0	52.5		ug/L		105	65 - 141
Vinyl acetate	100	93.7		ug/L		94	54 - 146
Vinyl chloride	50.0	48.6		ug/L		97	58 - 137
Xylenes, Total	100	98.2		ug/L		98	79 - 121

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

Lab Sample ID: LCS 680-642258/4
Matrix: Water
Analysis Batch: 642258

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

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*
Dibromofluoromethane (Surr)	*99*		*80 - 119*
Toluene-d8 (Surr)	*99*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*

Lab Sample ID: LCSD 680-642258/5
Matrix: Water
Analysis Batch: 642258

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	47.7		ug/L		95	78 - 124	0	20
1,1,1-Trichloroethane			50.0	51.5		ug/L		103	74 - 131	1	20
1,1,2,2-Tetrachloroethane			50.0	43.5		ug/L		87	71 - 121	0	20
1,1,2-Trichloroethane			50.0	47.4		ug/L		95	80 - 119	1	20
1,1-Dichloroethane			50.0	50.3		ug/L		101	77 - 125	1	20
1,1-Dichloroethene			50.0	51.7		ug/L		103	71 - 131	2	20
1,1-Dichloropropene			50.0	50.6		ug/L		101	79 - 125	1	20
1,2,3-Trichlorobenzene			50.0	45.5		ug/L		91	69 - 129	1	20
1,2,3-Trichloropropane			50.0	43.5		ug/L		87	73 - 122	2	20
1,2,4-Trichlorobenzene			50.0	49.0		ug/L		98	69 - 130	4	20
1,2,4-Trimethylbenzene			50.0	47.3		ug/L		95	76 - 124	2	20
1,2-Dibromo-3-Chloropropane			50.0	39.2		ug/L		78	62 - 128	1	20
1,2-Dichlorobenzene			50.0	46.3		ug/L		93	80 - 119	1	20
1,2-Dichloroethane			50.0	48.3		ug/L		97	73 - 128	3	20
1,2-Dichloroethene, Total			100	103		ug/L		103	79 - 121	1	20
1,2-Dichloropropane			50.0	49.0		ug/L		98	78 - 122	1	20
1,3,5-Trimethylbenzene			50.0	47.8		ug/L		96	75 - 124	2	20
1,3-Dichlorobenzene			50.0	46.8		ug/L		94	80 - 119	0	20
1,3-Dichloropropane			50.0	47.4		ug/L		95	80 - 119	1	20
1,4-Dichlorobenzene			50.0	46.8		ug/L		94	79 - 118	0	20
2,2-Dichloropropane			50.0	52.2		ug/L		104	60 - 139	1	20
2-Butanone (MEK)			250	203		ug/L		81	56 - 143	2	20
2-Chlorotoluene			50.0	49.2		ug/L		98	79 - 122	2	20
2-Hexanone			250	198		ug/L		79	57 - 139	1	20
4-Chlorotoluene			50.0	50.8		ug/L		102	78 - 122	3	20
4-Isopropyltoluene			50.0	51.4		ug/L		103	77 - 127	0	20
4-Methyl-2-pentanone (MIBK)			250	198		ug/L		79	67 - 130	1	20
Acetone			250	194		ug/L		78	39 - 160	10	20
Benzene			50.0	50.2		ug/L		100	79 - 120	1	20
Bromobenzene			50.0	47.5		ug/L		95	80 - 120	0	20
Bromoform			50.0	45.7		ug/L		91	66 - 130	1	20
Bromomethane			50.0	55.2		ug/L		110	53 - 141	0	20
Carbon disulfide			50.0	58.3		ug/L		117	64 - 133	1	20
Carbon tetrachloride			50.0	50.6		ug/L		101	72 - 136	0	20
Chlorobenzene			50.0	47.6		ug/L		95	82 - 118	1	20
Chlorobromomethane			50.0	50.5		ug/L		101	78 - 123	2	20
Chlorodibromomethane			50.0	48.2		ug/L		96	74 - 126	0	20
Chloroethane			50.0	68.7		ug/L		137	60 - 138	1	20

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

Lab Sample ID: LCSD 680-642258/5
Matrix: Water
Analysis Batch: 642258

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	49.7		ug/L		99	79 - 124	0	20
Chloromethane	50.0	48.6	M	ug/L		97	50 - 139	3	20
cis-1,2-Dichloroethene	50.0	50.8		ug/L		102	78 - 123	0	20
cis-1,3-Dichloropropene	50.0	49.2		ug/L		98	75 - 124	1	20
Dibromomethane	50.0	49.6		ug/L		99	79 - 123	1	20
Dichlorobromomethane	50.0	49.8		ug/L		100	79 - 125	2	20
Dichlorodifluoromethane	50.0	44.1		ug/L		88	32 - 152	2	20
Ethylbenzene	50.0	49.6		ug/L		99	79 - 121	1	20
Ethylene Dibromide	50.0	48.9		ug/L		98	75 - 127	2	20
Hexachlorobutadiene	50.0	45.8		ug/L		92	66 - 134	2	20
Isopropylbenzene	50.0	49.2		ug/L		98	72 - 131	1	20
Methyl tert-butyl ether	50.0	47.0		ug/L		94	71 - 124	1	20
Methylene Chloride	50.0	51.7		ug/L		103	74 - 124	6	20
m-Xylene & p-Xylene	50.0	50.2		ug/L		100	80 - 121	2	20
Naphthalene	50.0	42.9		ug/L		86	61 - 128	3	20
n-Butylbenzene	50.0	46.8		ug/L		94	75 - 128	2	20
N-Propylbenzene	50.0	51.9		ug/L		104	76 - 126	2	20
o-Xylene	50.0	50.3		ug/L		101	78 - 122	2	20
sec-Butylbenzene	50.0	45.8		ug/L		92	77 - 126	2	20
Styrene	50.0	51.1		ug/L		102	78 - 123	1	20
tert-Butylbenzene	50.0	50.0		ug/L		100	78 - 124	0	20
Tetrachloroethene	50.0	49.5		ug/L		99	74 - 129	1	20
Toluene	50.0	49.6		ug/L		99	80 - 121	1	20
trans-1,2-Dichloroethene	50.0	52.0		ug/L		104	75 - 124	2	20
trans-1,3-Dichloropropene	50.0	49.9		ug/L		100	73 - 127	1	20
Trichloroethene	50.0	50.0		ug/L		100	79 - 123	2	20
Trichlorofluoromethane	50.0	52.8		ug/L		106	65 - 141	1	20
Vinyl acetate	100	94.4		ug/L		94	54 - 146	1	20
Vinyl chloride	50.0	48.6		ug/L		97	58 - 137	0	20
Xylenes, Total	100	101		ug/L		101	79 - 121	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*
Dibromofluoromethane (Surr)	*99*		*80 - 119*
Toluene-d8 (Surr)	*98*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*98*		*81 - 118*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-641884/8
Matrix: Water
Analysis Batch: 641884

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	0.55	U	1.1	0.55	ug/L			11/02/20 14:34	1
Ethylene	0.50	U	1.0	0.50	ug/L			11/02/20 14:34	1
Methane	0.29	U	0.58	0.29	ug/L			11/02/20 14:34	1
Methane (TCD)	39	U	390	39	ug/L			11/02/20 14:34	1

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

Lab Sample ID: LCS 680-641884/3
Matrix: Water
Analysis Batch: 641884

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane (TCD)	1920	1880		ug/L		98	73 - 125

Lab Sample ID: LCS 680-641884/6
Matrix: Water
Analysis Batch: 641884

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	288	285		ug/L		99	74 - 131
Ethylene	269	264		ug/L		98	72 - 133
Methane	154	153		ug/L		99	73 - 125

Lab Sample ID: LCSD 680-641884/4
Matrix: Water
Analysis Batch: 641884

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	1650		ug/L		86	73 - 125	13	30

Lab Sample ID: LCSD 680-641884/7
Matrix: Water
Analysis Batch: 641884

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	288	273		ug/L		95	74 - 131	4	30
Ethylene	269	253		ug/L		94	72 - 133	4	30
Methane	154	146		ug/L		95	73 - 125	5	30

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-641086/2
Matrix: Water
Analysis Batch: 641086

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.40	U M	1.0	0.40	mg/L			10/28/20 10:22	1

Lab Sample ID: LCS 680-641086/3
Matrix: Water
Analysis Batch: 641086

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 680-641086/4
Matrix: Water
Analysis Batch: 641086

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	0	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-640742/1-A
Matrix: Water
Analysis Batch: 640897

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 640742

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	17	U	50	17	ug/L		10/26/20 11:32	10/27/20 02:05	1
Manganese	1.74	J	10	1.0	ug/L		10/26/20 11:32	10/27/20 02:05	1

Lab Sample ID: LCS 680-640742/2-A
Matrix: Water
Analysis Batch: 640897

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 640742

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	5000	4990		ug/L		100	87 - 115
Manganese	400	406		ug/L		101	90 - 114

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-640741/1-A
Matrix: Water
Analysis Batch: 640876

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 640741

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5	U	3.0	1.5	ug/L		10/26/20 11:32	10/26/20 23:31	1

Lab Sample ID: LCS 680-640741/2-A
Matrix: Water
Analysis Batch: 640876

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 640741

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	100	103		ug/L		103	84 - 116

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 280-515154/22
Matrix: Water
Analysis Batch: 515154

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.019	U	0.10	0.019	mg/L			11/02/20 17:34	1

Lab Sample ID: LCS 280-515154/21
Matrix: Water
Analysis Batch: 515154

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	4.92		mg/L		98	90 - 110

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 680-640787/1
Matrix: Water
Analysis Batch: 640787

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	1.0	U	1.0	1.0	mg/L			10/26/20 13:28	1

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: LCS 680-640787/2
Matrix: Water
Analysis Batch: 640787

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	9.66		mg/L		97	75 - 125

Lab Sample ID: LCSD 680-640787/3
Matrix: Water
Analysis Batch: 640787

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	9.87		mg/L		99	75 - 125	2	30

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 280-515351/34
Matrix: Water
Analysis Batch: 515351

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	0.35	U	1.0	0.35	mg/L			11/03/20 22:46	1

Lab Sample ID: LCS 280-515351/33
Matrix: Water
Analysis Batch: 515351

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 - Duplicates	25.0	25.3		mg/L		101	88 - 112

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-515193/31
Matrix: Water
Analysis Batch: 515193

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	3.1	U	10	3.1	mg/L			11/02/20 16:15	1

Lab Sample ID: LCS 280-515193/30
Matrix: Water
Analysis Batch: 515193

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	200	212		mg/L		106	89 - 109

GC/MS VOA

Analysis Batch: 642014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190373-4	TB6-FAL20	Total/NA	Water	8260B	
MB 680-642014/9	Method Blank	Total/NA	Water	8260B	
LCS 680-642014/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-642014/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 642022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190373-1	AOC50-DUP03-FAL20	Total/NA	Water	8260B	
680-190373-3	G6M-04-04X-FAL20	Total/NA	Water	8260B	
MB 680-642022/8	Method Blank	Total/NA	Water	8260B	
LCS 680-642022/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-642022/4	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 642258

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190373-2	G6M-03-07X-FAL20	Total/NA	Water	8260B	
MB 680-642258/9	Method Blank	Total/NA	Water	8260B	
LCS 680-642258/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-642258/5	Lab Control Sample Dup	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 641884

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190373-2	G6M-03-07X-FAL20	Total/NA	Water	RSK-175	
MB 680-641884/8	Method Blank	Total/NA	Water	RSK-175	
LCS 680-641884/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-641884/6	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-641884/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-641884/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	

HPLC/IC

Analysis Batch: 641086

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190373-2	G6M-03-07X-FAL20	Total/NA	Water	9056A	
MB 680-641086/2	Method Blank	Total/NA	Water	9056A	
LCS 680-641086/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-641086/4	Lab Control Sample Dup	Total/NA	Water	9056A	

Metals

Prep Batch: 640741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190373-1	AOC50-DUP03-FAL20	Dissolved	Water	3005A	
680-190373-2	G6M-03-07X-FAL20	Dissolved	Water	3005A	
680-190373-3	G6M-04-04X-FAL20	Dissolved	Water	3005A	
MB 680-640741/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-640741/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Metals

Prep Batch: 640742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190373-1	AOC50-DUP03-FAL20	Dissolved	Water	3005A	
680-190373-2	G6M-03-07X-FAL20	Dissolved	Water	3005A	
680-190373-3	G6M-04-04X-FAL20	Dissolved	Water	3005A	
MB 680-640742/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-640742/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 640876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190373-1	AOC50-DUP03-FAL20	Dissolved	Water	6020A	640741
680-190373-2	G6M-03-07X-FAL20	Dissolved	Water	6020A	640741
680-190373-3	G6M-04-04X-FAL20	Dissolved	Water	6020A	640741
MB 680-640741/1-A	Method Blank	Total Recoverable	Water	6020A	640741
LCS 680-640741/2-A	Lab Control Sample	Total Recoverable	Water	6020A	640741

Analysis Batch: 640897

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190373-1	AOC50-DUP03-FAL20	Dissolved	Water	6010C	640742
680-190373-2	G6M-03-07X-FAL20	Dissolved	Water	6010C	640742
680-190373-3	G6M-04-04X-FAL20	Dissolved	Water	6010C	640742
MB 680-640742/1-A	Method Blank	Total Recoverable	Water	6010C	640742
LCS 680-640742/2-A	Lab Control Sample	Total Recoverable	Water	6010C	640742

General Chemistry

Analysis Batch: 515154

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190373-2	G6M-03-07X-FAL20	Total/NA	Water	353.2	
MB 280-515154/22	Method Blank	Total/NA	Water	353.2	
LCS 280-515154/21	Lab Control Sample	Total/NA	Water	353.2	

Analysis Batch: 515193

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190373-2	G6M-03-07X-FAL20	Total/NA	Water	SM 2320B	
MB 280-515193/31	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-515193/30	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 515351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190373-2	G6M-03-07X-FAL20	Total/NA	Water	9060A	
MB 280-515351/34	Method Blank	Total/NA	Water	9060A	
LCS 280-515351/33	Lab Control Sample	Total/NA	Water	9060A	

Analysis Batch: 640787

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190373-2	G6M-03-07X-FAL20	Total/NA	Water	9034	
MB 680-640787/1	Method Blank	Total/NA	Water	9034	
LCS 680-640787/2	Lab Control Sample	Total/NA	Water	9034	
LCSD 680-640787/3	Lab Control Sample Dup	Total/NA	Water	9034	

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190373-1

Client Sample ID: AOC50-DUP03-FAL20

Lab Sample ID: 680-190373-1

Date Collected: 10/21/20 13:50

Matrix: Water

Date Received: 10/22/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	642022	11/03/20 16:47	Y1S	TAL SAV
	Instrument ID: CMSP2									
Dissolved	Prep	3005A			50 mL	50 mL	640742	10/26/20 11:32	AJR	TAL SAV
Dissolved	Analysis	6010C		1			640897	10/27/20 03:29	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	640741	10/26/20 11:32	AJR	TAL SAV
Dissolved	Analysis	6020A		1			640876	10/27/20 00:30	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-03-07X-FAL20

Lab Sample ID: 680-190373-2

Date Collected: 10/21/20 02:30

Matrix: Water

Date Received: 10/22/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	642258	11/04/20 17:44	Y1S	TAL SAV
	Instrument ID: CMSU									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	641884	11/02/20 18:21	DBM	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	641086	10/28/20 16:29	UI	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	640742	10/26/20 11:32	AJR	TAL SAV
Dissolved	Analysis	6010C		1			640897	10/27/20 03:38	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	640741	10/26/20 11:32	AJR	TAL SAV
Dissolved	Analysis	6020A		1			640876	10/27/20 00:36	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	515154	11/02/20 18:10	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	280 mL	280 mL	640787	10/26/20 13:28	NVF	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1	20 mL	20 mL	515351	11/04/20 02:45	JMB	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			515193	11/02/20 18:05	RAF	TAL DEN
	Instrument ID: WC_AT4									

Client Sample ID: G6M-04-04X-FAL20

Lab Sample ID: 680-190373-3

Date Collected: 10/21/20 13:50

Matrix: Water

Date Received: 10/22/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	642022	11/03/20 17:12	Y1S	TAL SAV
	Instrument ID: CMSP2									
Dissolved	Prep	3005A			50 mL	50 mL	640742	10/26/20 11:32	AJR	TAL SAV
Dissolved	Analysis	6010C		1			640897	10/27/20 03:33	BCB	TAL SAV
	Instrument ID: ICPE									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190373-1

Client Sample ID: G6M-04-04X-FAL20

Lab Sample ID: 680-190373-3

Date Collected: 10/21/20 13:50

Matrix: Water

Date Received: 10/22/20 09:30

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	640741	10/26/20 11:32	AJR	TAL SAV
Dissolved	Analysis	6020A		1			640876	10/27/20 00:33	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: TB6-FAL20

Lab Sample ID: 680-190373-4

Date Collected: 10/21/20 00:00

Matrix: Water

Date Received: 10/22/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	642014	11/03/20 15:25	UI	TAL SAV
	Instrument ID: CMSO2									

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-190373-1
Project/Site: Fort Devens

Laboratory: Eurofins TestAmerica, Savannah

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

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-22-22

Laboratory: Eurofins TestAmerica, Denver

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21

Method Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190373-1

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
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	TAL DEN
9034	Sulfide, Acid Soluble and Insoluble (Titrimetric)	SW846	TAL SAV
9060A	Organic Carbon, Total (TOC)	SW846	TAL DEN
SM 2320B	Alkalinity	SM	TAL DEN
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 TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

TAL SAV = Eurofins TestAmerica, 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 # 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 2020
Project Number: DEVENS-LTM	Contact:	
WBS Code:	Ship to:	

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 2020

						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
1	AOC50-DUP01-FAL20	WG								X	X	X				G6M-95-20X	FD1	18.00	23.00		
2	AOC50-DUP02-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-07-02X	FD1	22.50	27.50		
3	AOC50-DUP03-FAL20	WG	10-21-20	1350	DC					X	X	X				G6M-04-04X	FD1	94.00	104.00		
4	AOC50-DUP04-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-13-02X	FD1	115.00	125.00		
5	G6M-02-01X-FAL20	WG								X	X	X				G6M-02-01X	N1	80.00	95.00		
6	G6M-02-04X-FAL20	WG								X	X	X				G6M-02-04X	N1	90.00	105.00		
7	G6M-02-06X-FAL20	WG								X	X	X				G6M-02-06X	N1	55.00	65.00		
8	G6M-02-07X-FAL20	WG								X	X	X				G6M-02-07X	N1	30.00	40.00		
9	G6M-02-08X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-02-08X	N1	60.00	70.00		
10	G6M-02-11X-FAL20	WG								X	X	X				G6M-02-11X	N1	125.00	135.00		
11	G6M-02-12X-FAL20	WG								X	X	X				G6M-02-12X	N1	125.00	135.00		
12	G6M-02-13X-FAL20	WG								X	X	X				G6M-02-13X	N1	110.00	120.00		
13	G6M-03-07X-FAL20	WG	10-21-20	230	EF		X	X	X	X	X	X	X	X	X	G6M-03-07X	N1	80.00	90.00		
14	G6M-03-08X-FAL20	WG								X	X	X				G6M-03-08X	N1	125.00	140.00		
15	G6M-03-10X-FAL20	WG								X	X	X				G6M-03-10X	N1	120.00	135.00		
16	G6M-04-01X-FAL20	WG								X	X	X				G6M-04-01X	N1	82.00	92.00		
17	G6M-04-02X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-04-02X	N1	80.00	90.00		
18	G6M-04-03X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-04-03X	MS1	85.00	95.00		
19	G6M-04-03X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-04-03X	N1	85.00	95.00		

680-190373-01 Chain of Custody

Relinquished by: Diane Chupgne
Date 10-21-20
Time 1500
Received by: 10/21/20 1500
AOC50_eCOC

Date
Time
Shipping Date:
Received by Laboratory: 10/21/20 17:10
Condition:

TRIP Blank for VOC
TA 10.22.20 930
6.3|1.6

11/5/2020

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 # 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 2020
Project Number: DEVENS-LTM	Contact:	
WBS Code:	Ship to:	

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 2020

	Sample ID	Matrix	Date	Time	Samp Init.	A2320B (A) 46	E353.2 (A) 47	RSK175 (A) 8	SW6010C/FLDFLT (B) 9	SW6020A/FLDFLT (B) 9	SW8260B - VOCs 29	SW9034 (A) 7	SW9056A - SO4 5	SW9060A - TOC 10	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
20	G6M-04-03X-FAL20	WG	[redacted]		[redacted]	X	X	X	X	X	X	X	X	X	G6M-04-03X	SD1	85.00	95.00		
21	G6M-04-04X-FAL20	WG	10-21-20	1350	DC				X	X	X				G6M-04-04X	N1	94.00	104.00		
22	G6M-04-05X-FAL20	WG									X				G6M-04-05X	N1	100.00	110.00		
23	G6M-04-06X-FAL20	WG							X	X	X				G6M-04-06X	N1	95.00	136.00		
24	G6M-04-07X-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-04-07X	N1	120.00	130.00		
25	G6M-04-09X-FAL20	WG							X	X	X				G6M-04-09X	N1	55.00	65.00		
26	G6M-04-10A-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-04-10A	N1	30.00	40.00		
27	G6M-04-10X-FAL20	WG									X				G6M-04-10X	N1	52.00	62.00		
28	G6M-04-11X-FAL20	WG							X	X	X				G6M-04-11X	N1	35.00	45.00		
29	G6M-04-13X-FAL20	WG									X				G6M-04-13X	N1	30.00	40.00		
30	G6M-04-14X-FAL20	WG							X	X	X				G6M-04-14X	N1	80.00	90.00		
31	G6M-04-15X-FAL20	WG							X	X	X				G6M-04-15X	N1	70.00	80.00		
32	G6M-04-22X-FAL20	WG							X	X	X				G6M-04-22X	N1	74.00	84.00		
33	G6M-04-31X-FAL20	WG							X	X	X				G6M-04-31X	N1	68.00	78.00		
34	G6M-06-01X-FAL20	WG							X	X	X				G6M-06-01X	N1	106.00	126.00		
35	G6M-07-01X-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-07-01X	N1	78.00	89.00		
36	G6M-07-02X-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-07-02X	N1	22.50	27.50		
37	G6M-13-01X-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-13-01X	N1	125.00	135.00		
38	G6M-13-02X-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-13-02X	N1	115.00	125.00		

680-190373-02 Chain of Custody

Relinquished by: [signature] 10/21/20 1510
Date
Time
Received by: [signature]
AOC50_eCOC

Date
Time
Shipping Date: 10/21/20 1700
Received by Laboratory: [signature] TA 10-22-20 930
Condition:

11/5/2020

Eurofins TestAmerica, 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: Smith, Kathryn E	Carrier Tracking No(s):	COC No: 680-630303.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Kathy.Smith@Eurofinset.com	State of Origin: Massachusetts	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): Dept. of Defense ELAP - A2LA; DoD - ANAB		Job #: 680-190373-1
Address: 4955 Yarrow Street, ,	Due Date Requested: 11/3/2020			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: Fort Devens	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=wasteoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2320B/ Alkalinity	353.2_Pres	9060A/ (MOD) Waters - TOC Duplicates	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
G6M-03-07X-FAL20 (680-190373-2)	10/21/20	02:30 Eastern		Water			X	X	X	3	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica 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 TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by: [signature]	Date/Time: 10-22-2020/1616	Company	Received by: [signature]	Date/Time: 10/23/2020 0910	Company EMADEN
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: 0.4 IR11-0.3 JD 10/23/2020		

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-190373-1

Login Number: 190373
List Number: 1
Creator: Sims, Robert D

List Source: Eurofins TestAmerica, 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?	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	

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-190373-1

Login Number: 190373
List Number: 2
Creator: O'Hara, Jake F

List Source: Eurofins TestAmerica, Denver
List Creation: 10/23/20 10:43 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").	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 TestAmerica, Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

Laboratory Job ID: 680-190481-1
Client Project/Site: Fort Devens
Revision: 1

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

Attn: Nathan R Mullens

Kathryn Smith

Authorized for release by:
11/10/2020 2:50:08 PM

Kathryn Smith, Client Service Manager
(912)250-0275
Kathy.Smith@Eurofinset.com

LINKS

Review your project results through TotalAccess

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.

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
B	Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
J	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.

Metals

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

Glossary

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

Sample Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190481-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
680-190481-2	G6M-03-10X-FAL20	Water	10/22/20 11:40	10/23/20 09:40	
680-190481-3	AOC50-TB7-FAL20	Water	10/22/20 00:00	10/23/20 09:40	

Job ID: 680-190481-1

Laboratory: Eurofins TestAmerica, Savannah

Narrative

CASE NARRATIVE
Client: Seres Engineering & Services LLC
Project: Fort Devens

Report Number: 680-190481-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

RECEIPT

The samples were received on 10/23/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.9 C.

Sample G6M-18-02 was cancelled per the client's request upon sample receipt.

VOLATILE ORGANIC COMPOUNDS (GC/MS)

Samples G6M-03-10X-FAL20 (680-190481-2) and AOC50-TB7-FAL20 (680-190481-3) were analyzed for Volatile Organic Compounds (GC/MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 11/03/2020, 11/04/2020 and 11/05/2020.

1,2-Dichloroethene, Total and cis-1,2-Dichloroethene were detected in method blank MB 680-642552/8 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

The laboratory control sample duplicate (LCSD) for analytical batch 680-642014 recovered outside control limits for the following analyte: Chloroethane. This analyte was biased high in the LCSD and was not detected in the associated samples; therefore, the data have been reported.

The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 680-642014 recovered outside control limits for the following analytes: 2-Hexanone, 4-Methyl-2-pentanone (MIBK), Bromomethane and Chloroethane.

Surrogate recovery for the following samples were outside the upper control limit: G6M-03-10X-FAL20 (680-190481-2) and (MB 680-642258/9). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

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

METALS (ICP) - DISSOLVED

Sample G6M-03-10X-FAL20 (680-190481-2) was analyzed for Metals (ICP) - Dissolved in accordance with EPA SW-846 Method 6010C. The samples were prepared on 10/28/2020 and analyzed on 10/29/2020.

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

Manganese was detected in method blank MB 680-641144/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

METALS (ICPMS) - DISSOLVED

Sample G6M-03-10X-FAL20 (680-190481-2) was analyzed for Metals (ICPMS) - Dissolved in accordance with EPA SW-846 Method 6020A. The samples were prepared on 10/28/2020 and analyzed on 10/29/2020.

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

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190481-1

Client Sample ID: G6M-03-10X-FAL20
Date Collected: 10/22/20 11:40
Date Received: 10/23/20 09:40

Lab Sample ID: 680-190481-2
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			11/03/20 21:32	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			11/03/20 21:32	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			11/03/20 21:32	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			11/03/20 21:32	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			11/03/20 21:32	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/03/20 21:32	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			11/03/20 21:32	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/03/20 21:32	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			11/03/20 21:32	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/03/20 21:32	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			11/03/20 21:32	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			11/03/20 21:32	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			11/03/20 21:32	1
1,2-Dichloroethane	0.50	U	1.0	0.50	ug/L			11/03/20 21:32	1
1,2-Dichloroethene, Total	**1.0**	**J**	2.0	0.74	ug/L			11/03/20 21:32	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			11/03/20 21:32	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			11/03/20 21:32	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			11/03/20 21:32	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			11/03/20 21:32	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			11/03/20 21:32	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			11/03/20 21:32	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			11/03/20 21:32	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/03/20 21:32	1
2-Hexanone	2.0	U Q	10	2.0	ug/L			11/03/20 21:32	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			11/03/20 21:32	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			11/03/20 21:32	1
4-Methyl-2-pentanone (MIBK)	2.1	U Q	10	2.1	ug/L			11/03/20 21:32	1
Acetone	7.0	U	10	7.0	ug/L			11/03/20 21:32	1
Benzene	0.43	U	1.0	0.43	ug/L			11/03/20 21:32	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			11/03/20 21:32	1
Bromoform	0.43	U	1.0	0.43	ug/L			11/03/20 21:32	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			11/03/20 21:32	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			11/03/20 21:32	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			11/03/20 21:32	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			11/03/20 21:32	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			11/03/20 21:32	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			11/03/20 21:32	1
Chloroethane	2.5	U Q	5.0	2.5	ug/L			11/03/20 21:32	1
Chloroform	0.50	U	1.0	0.50	ug/L			11/03/20 21:32	1
Chloromethane	0.40	U	1.0	0.40	ug/L			11/03/20 21:32	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			11/03/20 21:32	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			11/03/20 21:32	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			11/03/20 21:32	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			11/03/20 21:32	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			11/03/20 21:32	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			11/03/20 21:32	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			11/03/20 21:32	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			11/03/20 21:32	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			11/03/20 21:32	1

Client Sample ID: G6M-03-10X-FAL20

Lab Sample ID: 680-190481-2

Date Collected: 10/22/20 11:40
Matrix: Water
Date Received: 10/23/20 09:40

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	2.5	U	5.0	2.5	ug/L			11/03/20 21:32	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			11/03/20 21:32	1
Naphthalene	2.5	U	5.0	2.5	ug/L			11/03/20 21:32	1
n-Butylbenzene	**0.61**	**J**	1.0	0.47	ug/L			11/03/20 21:32	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			11/03/20 21:32	1
o-Xylene	0.23	U	1.0	0.23	ug/L			11/03/20 21:32	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			11/03/20 21:32	1
Styrene	0.27	U	1.0	0.27	ug/L			11/03/20 21:32	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			11/03/20 21:32	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			11/03/20 21:32	1
Toluene	0.48	U	1.0	0.48	ug/L			11/03/20 21:32	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/03/20 21:32	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			11/03/20 21:32	1
Trichlorofluoromethane	0.42	U Q	1.0	0.42	ug/L			11/03/20 21:32	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			11/03/20 21:32	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/03/20 21:32	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			11/03/20 21:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*85 - 114*		*11/03/20 21:32*	*1*
Dibromofluoromethane (Surr)	*90*		*80 - 119*		*11/03/20 21:32*	*1*
Toluene-d8 (Surr)	*96*		*89 - 112*		*11/03/20 21:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*81 - 118*		*11/03/20 21:32*	*1*

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/04/20 17:24	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/04/20 17:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*	*J*	*85 - 114*		*11/04/20 17:24*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*11/04/20 17:24*	*1*
Toluene-d8 (Surr)	*98*		*89 - 112*		*11/04/20 17:24*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*81 - 118*		*11/04/20 17:24*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**59000**		50	17	ug/L		10/28/20 11:48	10/29/20 10:35	1
Manganese	**2000**		10	1.0	ug/L		10/28/20 11:48	10/29/20 10:35	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**360**		3.0	1.5	ug/L		10/28/20 11:48	10/29/20 09:46	1

Client Sample ID: AOC50-TB7-FAL20

Lab Sample ID: 680-190481-3

Date Collected: 10/22/20 00:00
Matrix: Water
Date Received: 10/23/20 09:40

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			11/05/20 21:23	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190481-1

Client Sample ID: AOC50-TB7-FAL20
Date Collected: 10/22/20 00:00
Date Received: 10/23/20 09:40

Lab Sample ID: 680-190481-3
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			11/05/20 21:23	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			11/05/20 21:23	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			11/05/20 21:23	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			11/05/20 21:23	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/05/20 21:23	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			11/05/20 21:23	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/05/20 21:23	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			11/05/20 21:23	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/05/20 21:23	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			11/05/20 21:23	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			11/05/20 21:23	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			11/05/20 21:23	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			11/05/20 21:23	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			11/05/20 21:23	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			11/05/20 21:23	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			11/05/20 21:23	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			11/05/20 21:23	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			11/05/20 21:23	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			11/05/20 21:23	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			11/05/20 21:23	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			11/05/20 21:23	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/05/20 21:23	1
2-Hexanone	2.0	U	10	2.0	ug/L			11/05/20 21:23	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			11/05/20 21:23	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			11/05/20 21:23	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			11/05/20 21:23	1
Acetone	7.0	U	10	7.0	ug/L			11/05/20 21:23	1
Benzene	0.43	U	1.0	0.43	ug/L			11/05/20 21:23	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			11/05/20 21:23	1
Bromoform	0.43	U	1.0	0.43	ug/L			11/05/20 21:23	1
Bromomethane	2.5	U	5.0	2.5	ug/L			11/05/20 21:23	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			11/05/20 21:23	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			11/05/20 21:23	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			11/05/20 21:23	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			11/05/20 21:23	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			11/05/20 21:23	1
Chloroethane	2.5	U	5.0	2.5	ug/L			11/05/20 21:23	1
Chloroform	0.50	U	1.0	0.50	ug/L			11/05/20 21:23	1
Chloromethane	0.40	U	1.0	0.40	ug/L			11/05/20 21:23	1
cis-1,2-Dichloroethene	**0.69**	**J B**	1.0	0.41	ug/L			11/05/20 21:23	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			11/05/20 21:23	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			11/05/20 21:23	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			11/05/20 21:23	1
Dichlorodifluoromethane	0.60	U Q	1.0	0.60	ug/L			11/05/20 21:23	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			11/05/20 21:23	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			11/05/20 21:23	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			11/05/20 21:23	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			11/05/20 21:23	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			11/05/20 21:23	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190481-1

Client Sample ID: AOC50-TB7-FAL20
Date Collected: 10/22/20 00:00
Date Received: 10/23/20 09:40

Lab Sample ID: 680-190481-3
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	2.5	U	5.0	2.5	ug/L			11/05/20 21:23	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			11/05/20 21:23	1
Naphthalene	2.5	U	5.0	2.5	ug/L			11/05/20 21:23	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			11/05/20 21:23	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			11/05/20 21:23	1
o-Xylene	0.23	U	1.0	0.23	ug/L			11/05/20 21:23	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			11/05/20 21:23	1
Styrene	0.27	U	1.0	0.27	ug/L			11/05/20 21:23	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			11/05/20 21:23	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			11/05/20 21:23	1
Toluene	0.48	U	1.0	0.48	ug/L			11/05/20 21:23	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/05/20 21:23	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			11/05/20 21:23	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/05/20 21:23	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			11/05/20 21:23	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			11/05/20 21:23	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/05/20 21:23	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			11/05/20 21:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*		*11/05/20 21:23*	*1*
Dibromofluoromethane (Surr)	*90*		*80 - 119*		*11/05/20 21:23*	*1*
Toluene-d8 (Surr)	*92*		*89 - 112*		*11/05/20 21:23*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*81 - 118*		*11/05/20 21:23*	*1*

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

Lab Sample ID: MB 680-642014/9
Matrix: Water
Analysis Batch: 642014

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			11/03/20 14:50	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			11/03/20 14:50	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			11/03/20 14:50	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			11/03/20 14:50	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			11/03/20 14:50	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/03/20 14:50	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			11/03/20 14:50	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/03/20 14:50	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			11/03/20 14:50	1
1,2,4-Trichlorobenzene	2.5	U M	5.0	2.5	ug/L			11/03/20 14:50	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			11/03/20 14:50	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			11/03/20 14:50	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			11/03/20 14:50	1
1,2-Dichloroethane	0.50	U	1.0	0.50	ug/L			11/03/20 14:50	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			11/03/20 14:50	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			11/03/20 14:50	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			11/03/20 14:50	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			11/03/20 14:50	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			11/03/20 14:50	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			11/03/20 14:50	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			11/03/20 14:50	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			11/03/20 14:50	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/03/20 14:50	1
2-Hexanone	2.0	U	10	2.0	ug/L			11/03/20 14:50	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			11/03/20 14:50	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			11/03/20 14:50	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			11/03/20 14:50	1
Acetone	7.0	U	10	7.0	ug/L			11/03/20 14:50	1
Benzene	0.43	U	1.0	0.43	ug/L			11/03/20 14:50	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			11/03/20 14:50	1
Bromoform	0.43	U	1.0	0.43	ug/L			11/03/20 14:50	1
Bromomethane	2.5	U	5.0	2.5	ug/L			11/03/20 14:50	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			11/03/20 14:50	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			11/03/20 14:50	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			11/03/20 14:50	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			11/03/20 14:50	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			11/03/20 14:50	1
Chloroethane	2.5	U	5.0	2.5	ug/L			11/03/20 14:50	1
Chloroform	0.50	U	1.0	0.50	ug/L			11/03/20 14:50	1
Chloromethane	0.40	U	1.0	0.40	ug/L			11/03/20 14:50	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/03/20 14:50	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			11/03/20 14:50	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			11/03/20 14:50	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			11/03/20 14:50	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			11/03/20 14:50	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			11/03/20 14:50	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			11/03/20 14:50	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			11/03/20 14:50	1

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

Lab Sample ID: MB 680-642014/9
Matrix: Water
Analysis Batch: 642014

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			11/03/20 14:50	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			11/03/20 14:50	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			11/03/20 14:50	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			11/03/20 14:50	1
Naphthalene	2.5	U	5.0	2.5	ug/L			11/03/20 14:50	1
n-Butylbenzene	0.47	U M	1.0	0.47	ug/L			11/03/20 14:50	1
N-Propylbenzene	0.38	U M	1.0	0.38	ug/L			11/03/20 14:50	1
o-Xylene	0.23	U	1.0	0.23	ug/L			11/03/20 14:50	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			11/03/20 14:50	1
Styrene	0.27	U M	1.0	0.27	ug/L			11/03/20 14:50	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			11/03/20 14:50	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			11/03/20 14:50	1
Toluene	0.48	U	1.0	0.48	ug/L			11/03/20 14:50	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/03/20 14:50	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			11/03/20 14:50	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/03/20 14:50	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			11/03/20 14:50	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			11/03/20 14:50	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/03/20 14:50	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			11/03/20 14:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*85 - 114*		*11/03/20 14:50*	*1*
Dibromofluoromethane (Surr)	*89*		*80 - 119*		*11/03/20 14:50*	*1*
Toluene-d8 (Surr)	*94*		*89 - 112*		*11/03/20 14:50*	*1*
1,2-Dichloroethane-d4 (Surr)	*85*		*81 - 118*		*11/03/20 14:50*	*1*

Lab Sample ID: LCS 680-642014/4
Matrix: Water
Analysis Batch: 642014

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	46.7		ug/L		93	78 - 124
1,1,1-Trichloroethane	50.0	44.4		ug/L		89	74 - 131
1,1,2,2-Tetrachloroethane	50.0	52.1		ug/L		104	71 - 121
1,1,2-Trichloroethane	50.0	55.7		ug/L		111	80 - 119
1,1-Dichloroethane	50.0	47.7		ug/L		95	77 - 125
1,1-Dichloroethene	50.0	44.0		ug/L		88	71 - 131
1,1-Dichloropropene	50.0	44.6		ug/L		89	79 - 125
1,2,3-Trichlorobenzene	50.0	46.1		ug/L		92	69 - 129
1,2,3-Trichloropropane	50.0	51.0		ug/L		102	73 - 122
1,2,4-Trichlorobenzene	50.0	48.4		ug/L		97	69 - 130
1,2,4-Trimethylbenzene	50.0	53.5		ug/L		107	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	46.6		ug/L		93	62 - 128
1,2-Dichlorobenzene	50.0	48.8		ug/L		98	80 - 119
1,2-Dichloroethane	50.0	47.5		ug/L		95	73 - 128
1,2-Dichloroethene, Total	100	92.7		ug/L		93	79 - 121
1,2-Dichloropropane	50.0	51.0		ug/L		102	78 - 122

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

Lab Sample ID: LCS 680-642014/4
Matrix: Water
Analysis Batch: 642014

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	48.0		ug/L		96	75 - 124
1,3-Dichlorobenzene	50.0	48.7		ug/L		97	80 - 119
1,3-Dichloropropane	50.0	54.9		ug/L		110	80 - 119
1,4-Dichlorobenzene	50.0	48.4		ug/L		97	79 - 118
2,2-Dichloropropane	50.0	45.7		ug/L		91	60 - 139
2-Butanone (MEK)	250	261		ug/L		104	56 - 143
2-Chlorotoluene	50.0	47.5		ug/L		95	79 - 122
2-Hexanone	250	249		ug/L		99	57 - 139
4-Chlorotoluene	50.0	47.5		ug/L		95	78 - 122
4-Isopropyltoluene	50.0	50.3		ug/L		101	77 - 127
4-Methyl-2-pentanone (MIBK)	250	258		ug/L		103	67 - 130
Acetone	250	267		ug/L		107	39 - 160
Benzene	50.0	50.6		ug/L		101	79 - 120
Bromobenzene	50.0	47.1		ug/L		94	80 - 120
Bromoform	50.0	48.4		ug/L		97	66 - 130
Bromomethane	50.0	40.0		ug/L		80	53 - 141
Carbon disulfide	50.0	46.9		ug/L		94	64 - 133
Carbon tetrachloride	50.0	43.6		ug/L		87	72 - 136
Chlorobenzene	50.0	48.4		ug/L		97	82 - 118
Chlorobromomethane	50.0	50.3		ug/L		101	78 - 123
Chlorodibromomethane	50.0	50.8		ug/L		102	74 - 126
Chloroethane	50.0	40.1		ug/L		80	60 - 138
Chloroform	50.0	48.0		ug/L		96	79 - 124
Chloromethane	50.0	45.6		ug/L		91	50 - 139
cis-1,2-Dichloroethene	50.0	46.7		ug/L		93	78 - 123
cis-1,3-Dichloropropene	50.0	51.4		ug/L		103	75 - 124
Dibromomethane	50.0	50.3		ug/L		101	79 - 123
Dichlorobromomethane	50.0	47.2		ug/L		94	79 - 125
Dichlorodifluoromethane	50.0	46.7		ug/L		93	32 - 152
Ethylbenzene	50.0	47.3		ug/L		95	79 - 121
Ethylene Dibromide	50.0	54.4		ug/L		109	75 - 127
Hexachlorobutadiene	50.0	43.2		ug/L		86	66 - 134
Isopropylbenzene	50.0	47.0		ug/L		94	72 - 131
Methyl tert-butyl ether	50.0	52.3		ug/L		105	71 - 124
Methylene Chloride	50.0	51.3		ug/L		103	74 - 124
m-Xylene & p-Xylene	50.0	46.6		ug/L		93	80 - 121
Naphthalene	50.0	57.3		ug/L		115	61 - 128
n-Butylbenzene	50.0	49.2		ug/L		98	75 - 128
N-Propylbenzene	50.0	48.0		ug/L		96	76 - 126
o-Xylene	50.0	46.7		ug/L		93	78 - 122
sec-Butylbenzene	50.0	48.2		ug/L		96	77 - 126
Styrene	50.0	48.8		ug/L		98	78 - 123
tert-Butylbenzene	50.0	46.4		ug/L		93	78 - 124
Tetrachloroethene	50.0	48.4		ug/L		97	74 - 129
Toluene	50.0	50.8		ug/L		102	80 - 121
trans-1,2-Dichloroethene	50.0	45.9		ug/L		92	75 - 124
trans-1,3-Dichloropropene	50.0	52.5		ug/L		105	73 - 127
Trichloroethene	50.0	48.4		ug/L		97	79 - 123
Trichlorofluoromethane	50.0	43.9		ug/L		88	65 - 141

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

Lab Sample ID: LCS 680-642014/4
Matrix: Water
Analysis Batch: 642014

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	111		ug/L		111	54 - 146
Vinyl chloride	50.0	46.8		ug/L		94	58 - 137
Xylenes, Total	100	93.3		ug/L		93	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*
Dibromofluoromethane (Surr)	*97*		*80 - 119*
Toluene-d8 (Surr)	*101*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*

Lab Sample ID: LCSD 680-642014/5
Matrix: Water
Analysis Batch: 642014

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	46.9		ug/L		94	78 - 124	0	20
1,1,1-Trichloroethane	50.0	47.4		ug/L		95	74 - 131	7	20
1,1,2,2-Tetrachloroethane	50.0	47.2		ug/L		94	71 - 121	10	20
1,1,2-Trichloroethane	50.0	48.6		ug/L		97	80 - 119	14	20
1,1-Dichloroethane	50.0	48.1		ug/L		96	77 - 125	1	20
1,1-Dichloroethene	50.0	48.2		ug/L		96	71 - 131	9	20
1,1-Dichloropropene	50.0	48.4		ug/L		97	79 - 125	8	20
1,2,3-Trichlorobenzene	50.0	51.4		ug/L		103	69 - 129	11	20
1,2,3-Trichloropropane	50.0	47.0		ug/L		94	73 - 122	8	20
1,2,4-Trichlorobenzene	50.0	49.5		ug/L		99	69 - 130	2	20
1,2,4-Trimethylbenzene	50.0	56.1		ug/L		112	76 - 124	5	20
1,2-Dibromo-3-Chloropropane	50.0	44.1		ug/L		88	62 - 128	6	20
1,2-Dichlorobenzene	50.0	48.4		ug/L		97	80 - 119	1	20
1,2-Dichloroethane	50.0	44.2		ug/L		88	73 - 128	7	20
1,2-Dichloroethene, Total	100	95.0		ug/L		95	79 - 121	2	20
1,2-Dichloropropane	50.0	48.4		ug/L		97	78 - 122	5	20
1,3,5-Trimethylbenzene	50.0	51.7		ug/L		103	75 - 124	7	20
1,3-Dichlorobenzene	50.0	49.5		ug/L		99	80 - 119	2	20
1,3-Dichloropropane	50.0	48.7		ug/L		97	80 - 119	12	20
1,4-Dichlorobenzene	50.0	48.3		ug/L		97	79 - 118	0	20
2,2-Dichloropropane	50.0	47.6		ug/L		95	60 - 139	4	20
2-Butanone (MEK)	250	233		ug/L		93	56 - 143	11	20
2-Chlorotoluene	50.0	49.6		ug/L		99	79 - 122	4	20
2-Hexanone	250	202	Q	ug/L		81	57 - 139	21	20
4-Chlorotoluene	50.0	49.1		ug/L		98	78 - 122	3	20
4-Isopropyltoluene	50.0	54.2		ug/L		108	77 - 127	7	20
4-Methyl-2-pentanone (MIBK)	250	207	Q	ug/L		83	67 - 130	22	20
Acetone	250	219		ug/L		88	39 - 160	20	20
Benzene	50.0	50.0		ug/L		100	79 - 120	1	20
Bromobenzene	50.0	48.3		ug/L		97	80 - 120	3	20
Bromoform	50.0	44.7		ug/L		89	66 - 130	8	20
Bromomethane	50.0	56.1	Q	ug/L		112	53 - 141	33	20
Carbon disulfide	50.0	51.0		ug/L		102	64 - 133	8	20

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

Lab Sample ID: LCSD 680-642014/5
Matrix: Water
Analysis Batch: 642014

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	45.7		ug/L		91	72 - 136	5	20
Chlorobenzene	50.0	50.5		ug/L		101	82 - 118	4	20
Chlorobromomethane	50.0	47.8		ug/L		96	78 - 123	5	20
Chlorodibromomethane	50.0	44.9		ug/L		90	74 - 126	12	20
Chloroethane	50.0	70.8	Q	ug/L		142	60 - 138	55	20
Chloroform	50.0	47.2		ug/L		94	79 - 124	2	20
Chloromethane	50.0	47.0		ug/L		94	50 - 139	3	20
cis-1,2-Dichloroethene	50.0	46.7		ug/L		93	78 - 123	0	20
cis-1,3-Dichloropropene	50.0	47.9		ug/L		96	75 - 124	7	20
Dibromomethane	50.0	45.0		ug/L		90	79 - 123	11	20
Dichlorobromomethane	50.0	45.0		ug/L		90	79 - 125	5	20
Dichlorodifluoromethane	50.0	48.5		ug/L		97	32 - 152	4	20
Ethylbenzene	50.0	51.1		ug/L		102	79 - 121	8	20
Ethylene Dibromide	50.0	46.9		ug/L		94	75 - 127	15	20
Hexachlorobutadiene	50.0	48.7		ug/L		97	66 - 134	12	20
Isopropylbenzene	50.0	50.9		ug/L		102	72 - 131	8	20
Methyl tert-butyl ether	50.0	46.5		ug/L		93	71 - 124	12	20
Methylene Chloride	50.0	47.2		ug/L		94	74 - 124	8	20
m-Xylene & p-Xylene	50.0	49.7		ug/L		99	80 - 121	7	20
Naphthalene	50.0	60.0		ug/L		120	61 - 128	5	20
n-Butylbenzene	50.0	53.1		ug/L		106	75 - 128	7	20
N-Propylbenzene	50.0	52.7		ug/L		105	76 - 126	9	20
o-Xylene	50.0	49.1		ug/L		98	78 - 122	5	20
sec-Butylbenzene	50.0	53.2		ug/L		106	77 - 126	10	20
Styrene	50.0	49.8		ug/L		100	78 - 123	2	20
tert-Butylbenzene	50.0	50.0		ug/L		100	78 - 124	7	20
Tetrachloroethene	50.0	51.2		ug/L		102	74 - 129	6	20
Toluene	50.0	50.6		ug/L		101	80 - 121	0	20
trans-1,2-Dichloroethene	50.0	48.3		ug/L		97	75 - 124	5	20
trans-1,3-Dichloropropene	50.0	47.1		ug/L		94	73 - 127	11	20
Trichloroethene	50.0	49.4		ug/L		99	79 - 123	2	20
Trichlorofluoromethane	50.0	48.6		ug/L		97	65 - 141	10	20
Vinyl acetate	100	96.9		ug/L		97	54 - 146	14	20
Vinyl chloride	50.0	48.4		ug/L		97	58 - 137	3	20
Xylenes, Total	100	98.8		ug/L		99	79 - 121	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*
Dibromofluoromethane (Surr)	*92*		*80 - 119*
Toluene-d8 (Surr)	*99*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*

Lab Sample ID: MB 680-642258/9
Matrix: Water
Analysis Batch: 642258

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			11/04/20 13:13	1

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

Lab Sample ID: MB 680-642258/9
Matrix: Water
Analysis Batch: 642258

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			11/04/20 13:13	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			11/04/20 13:13	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			11/04/20 13:13	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			11/04/20 13:13	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/04/20 13:13	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			11/04/20 13:13	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/04/20 13:13	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			11/04/20 13:13	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/04/20 13:13	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			11/04/20 13:13	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			11/04/20 13:13	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			11/04/20 13:13	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			11/04/20 13:13	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			11/04/20 13:13	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			11/04/20 13:13	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			11/04/20 13:13	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			11/04/20 13:13	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			11/04/20 13:13	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			11/04/20 13:13	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			11/04/20 13:13	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			11/04/20 13:13	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/04/20 13:13	1
2-Hexanone	2.0	U	10	2.0	ug/L			11/04/20 13:13	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			11/04/20 13:13	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			11/04/20 13:13	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			11/04/20 13:13	1
Acetone	7.0	U	10	7.0	ug/L			11/04/20 13:13	1
Benzene	0.43	U	1.0	0.43	ug/L			11/04/20 13:13	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			11/04/20 13:13	1
Bromoform	0.43	U	1.0	0.43	ug/L			11/04/20 13:13	1
Bromomethane	2.5	U	5.0	2.5	ug/L			11/04/20 13:13	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			11/04/20 13:13	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			11/04/20 13:13	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			11/04/20 13:13	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			11/04/20 13:13	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			11/04/20 13:13	1
Chloroethane	2.5	U	5.0	2.5	ug/L			11/04/20 13:13	1
Chloroform	0.50	U	1.0	0.50	ug/L			11/04/20 13:13	1
Chloromethane	0.40	U	1.0	0.40	ug/L			11/04/20 13:13	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/04/20 13:13	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			11/04/20 13:13	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			11/04/20 13:13	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			11/04/20 13:13	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			11/04/20 13:13	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			11/04/20 13:13	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			11/04/20 13:13	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			11/04/20 13:13	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			11/04/20 13:13	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			11/04/20 13:13	1

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

Lab Sample ID: MB 680-642258/9
Matrix: Water
Analysis Batch: 642258

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	2.5	U	5.0	2.5	ug/L			11/04/20 13:13	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			11/04/20 13:13	1
Naphthalene	2.5	U	5.0	2.5	ug/L			11/04/20 13:13	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			11/04/20 13:13	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			11/04/20 13:13	1
o-Xylene	0.23	U	1.0	0.23	ug/L			11/04/20 13:13	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			11/04/20 13:13	1
Styrene	0.27	U	1.0	0.27	ug/L			11/04/20 13:13	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			11/04/20 13:13	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			11/04/20 13:13	1
Toluene	0.48	U	1.0	0.48	ug/L			11/04/20 13:13	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/04/20 13:13	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			11/04/20 13:13	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/04/20 13:13	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			11/04/20 13:13	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			11/04/20 13:13	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/04/20 13:13	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			11/04/20 13:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*	*J*	*85 - 114*		*11/04/20 13:13*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 119*		*11/04/20 13:13*	*1*
Toluene-d8 (Surr)	*98*		*89 - 112*		*11/04/20 13:13*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*81 - 118*		*11/04/20 13:13*	*1*

Lab Sample ID: LCS 680-642258/4
Matrix: Water
Analysis Batch: 642258

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	47.9		ug/L		96	78 - 124
1,1,1-Trichloroethane	50.0	50.9		ug/L		102	74 - 131
1,1,2,2-Tetrachloroethane	50.0	43.7		ug/L		87	71 - 121
1,1,2-Trichloroethane	50.0	48.0		ug/L		96	80 - 119
1,1-Dichloroethane	50.0	49.8		ug/L		100	77 - 125
1,1-Dichloroethene	50.0	50.7		ug/L		101	71 - 131
1,1-Dichloropropene	50.0	49.9		ug/L		100	79 - 125
1,2,3-Trichlorobenzene	50.0	45.0		ug/L		90	69 - 129
1,2,3-Trichloropropane	50.0	44.5		ug/L		89	73 - 122
1,2,4-Trichlorobenzene	50.0	47.2		ug/L		94	69 - 130
1,2,4-Trimethylbenzene	50.0	46.3		ug/L		93	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	39.7		ug/L		79	62 - 128
1,2-Dichlorobenzene	50.0	46.5		ug/L		93	80 - 119
1,2-Dichloroethane	50.0	49.9		ug/L		100	73 - 128
1,2-Dichloroethene, Total	100	102		ug/L		102	79 - 121
1,2-Dichloropropane	50.0	48.4		ug/L		97	78 - 122
1,3,5-Trimethylbenzene	50.0	46.7		ug/L		93	75 - 124
1,3-Dichlorobenzene	50.0	46.8		ug/L		94	80 - 119

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

Lab Sample ID: LCS 680-642258/4
Matrix: Water
Analysis Batch: 642258

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	47.9		ug/L		96	80 - 119
1,4-Dichlorobenzene	50.0	46.9		ug/L		94	79 - 118
2,2-Dichloropropane	50.0	51.8		ug/L		104	60 - 139
2-Butanone (MEK)	250	207		ug/L		83	56 - 143
2-Chlorotoluene	50.0	48.3		ug/L		97	79 - 122
2-Hexanone	250	196		ug/L		79	57 - 139
4-Chlorotoluene	50.0	49.5		ug/L		99	78 - 122
4-Isopropyltoluene	50.0	51.2		ug/L		102	77 - 127
4-Methyl-2-pentanone (MIBK)	250	196		ug/L		79	67 - 130
Acetone	250	215		ug/L		86	39 - 160
Benzene	50.0	49.6		ug/L		99	79 - 120
Bromobenzene	50.0	47.3		ug/L		95	80 - 120
Bromoform	50.0	45.5		ug/L		91	66 - 130
Bromomethane	50.0	55.2		ug/L		110	53 - 141
Carbon disulfide	50.0	57.8		ug/L		116	64 - 133
Carbon tetrachloride	50.0	50.5		ug/L		101	72 - 136
Chlorobenzene	50.0	47.1		ug/L		94	82 - 118
Chlorobromomethane	50.0	51.6		ug/L		103	78 - 123
Chlorodibromomethane	50.0	48.3		ug/L		97	74 - 126
Chloroethane	50.0	68.3	M	ug/L		137	60 - 138
Chloroform	50.0	49.5		ug/L		99	79 - 124
Chloromethane	50.0	47.3	M	ug/L		95	50 - 139
cis-1,2-Dichloroethene	50.0	50.7		ug/L		101	78 - 123
cis-1,3-Dichloropropene	50.0	49.0		ug/L		98	75 - 124
Dibromomethane	50.0	49.3		ug/L		99	79 - 123
Dichlorobromomethane	50.0	49.0		ug/L		98	79 - 125
Dichlorodifluoromethane	50.0	45.0		ug/L		90	32 - 152
Ethylbenzene	50.0	48.9		ug/L		98	79 - 121
Ethylene Dibromide	50.0	50.0		ug/L		100	75 - 127
Hexachlorobutadiene	50.0	46.7		ug/L		93	66 - 134
Isopropylbenzene	50.0	48.7		ug/L		97	72 - 131
Methyl tert-butyl ether	50.0	46.7		ug/L		93	71 - 124
Methylene Chloride	50.0	54.9		ug/L		110	74 - 124
m-Xylene & p-Xylene	50.0	49.1		ug/L		98	80 - 121
Naphthalene	50.0	41.5		ug/L		83	61 - 128
n-Butylbenzene	50.0	46.0		ug/L		92	75 - 128
N-Propylbenzene	50.0	50.7		ug/L		101	76 - 126
o-Xylene	50.0	49.1		ug/L		98	78 - 122
sec-Butylbenzene	50.0	44.9		ug/L		90	77 - 126
Styrene	50.0	50.7		ug/L		101	78 - 123
tert-Butylbenzene	50.0	50.1		ug/L		100	78 - 124
Tetrachloroethene	50.0	49.9		ug/L		100	74 - 129
Toluene	50.0	49.2		ug/L		98	80 - 121
trans-1,2-Dichloroethene	50.0	51.0		ug/L		102	75 - 124
trans-1,3-Dichloropropene	50.0	49.3		ug/L		99	73 - 127
Trichloroethene	50.0	48.9		ug/L		98	79 - 123
Trichlorofluoromethane	50.0	52.5		ug/L		105	65 - 141
Vinyl acetate	100	93.7		ug/L		94	54 - 146
Vinyl chloride	50.0	48.6		ug/L		97	58 - 137

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

Lab Sample ID: LCS 680-642258/4
Matrix: Water
Analysis Batch: 642258

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	98.2		ug/L		98	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*
Dibromofluoromethane (Surr)	*99*		*80 - 119*
Toluene-d8 (Surr)	*99*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*

Lab Sample ID: LCSD 680-642258/5
Matrix: Water
Analysis Batch: 642258

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	47.7		ug/L		95	78 - 124	0	20
1,1,1-Trichloroethane			50.0	51.5		ug/L		103	74 - 131	1	20
1,1,2,2-Tetrachloroethane			50.0	43.5		ug/L		87	71 - 121	0	20
1,1,2-Trichloroethane			50.0	47.4		ug/L		95	80 - 119	1	20
1,1-Dichloroethane			50.0	50.3		ug/L		101	77 - 125	1	20
1,1-Dichloroethene			50.0	51.7		ug/L		103	71 - 131	2	20
1,1-Dichloropropene			50.0	50.6		ug/L		101	79 - 125	1	20
1,2,3-Trichlorobenzene			50.0	45.5		ug/L		91	69 - 129	1	20
1,2,3-Trichloropropane			50.0	43.5		ug/L		87	73 - 122	2	20
1,2,4-Trichlorobenzene			50.0	49.0		ug/L		98	69 - 130	4	20
1,2,4-Trimethylbenzene			50.0	47.3		ug/L		95	76 - 124	2	20
1,2-Dibromo-3-Chloropropane			50.0	39.2		ug/L		78	62 - 128	1	20
1,2-Dichlorobenzene			50.0	46.3		ug/L		93	80 - 119	1	20
1,2-Dichloroethane			50.0	48.3		ug/L		97	73 - 128	3	20
1,2-Dichloroethene, Total			100	103		ug/L		103	79 - 121	1	20
1,2-Dichloropropane			50.0	49.0		ug/L		98	78 - 122	1	20
1,3,5-Trimethylbenzene			50.0	47.8		ug/L		96	75 - 124	2	20
1,3-Dichlorobenzene			50.0	46.8		ug/L		94	80 - 119	0	20
1,3-Dichloropropane			50.0	47.4		ug/L		95	80 - 119	1	20
1,4-Dichlorobenzene			50.0	46.8		ug/L		94	79 - 118	0	20
2,2-Dichloropropane			50.0	52.2		ug/L		104	60 - 139	1	20
2-Butanone (MEK)			250	203		ug/L		81	56 - 143	2	20
2-Chlorotoluene			50.0	49.2		ug/L		98	79 - 122	2	20
2-Hexanone			250	198		ug/L		79	57 - 139	1	20
4-Chlorotoluene			50.0	50.8		ug/L		102	78 - 122	3	20
4-Isopropyltoluene			50.0	51.4		ug/L		103	77 - 127	0	20
4-Methyl-2-pentanone (MIBK)			250	198		ug/L		79	67 - 130	1	20
Acetone			250	194		ug/L		78	39 - 160	10	20
Benzene			50.0	50.2		ug/L		100	79 - 120	1	20
Bromobenzene			50.0	47.5		ug/L		95	80 - 120	0	20
Bromoform			50.0	45.7		ug/L		91	66 - 130	1	20
Bromomethane			50.0	55.2		ug/L		110	53 - 141	0	20
Carbon disulfide			50.0	58.3		ug/L		117	64 - 133	1	20
Carbon tetrachloride			50.0	50.6		ug/L		101	72 - 136	0	20
Chlorobenzene			50.0	47.6		ug/L		95	82 - 118	1	20

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

Lab Sample ID: LCSD 680-642258/5
Matrix: Water
Analysis Batch: 642258

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	50.5		ug/L		101	78 - 123	2	20
Chlorodibromomethane	50.0	48.2		ug/L		96	74 - 126	0	20
Chloroethane	50.0	68.7		ug/L		137	60 - 138	1	20
Chloroform	50.0	49.7		ug/L		99	79 - 124	0	20
Chloromethane	50.0	48.6	M	ug/L		97	50 - 139	3	20
cis-1,2-Dichloroethene	50.0	50.8		ug/L		102	78 - 123	0	20
cis-1,3-Dichloropropene	50.0	49.2		ug/L		98	75 - 124	1	20
Dibromomethane	50.0	49.6		ug/L		99	79 - 123	1	20
Dichlorobromomethane	50.0	49.8		ug/L		100	79 - 125	2	20
Dichlorodifluoromethane	50.0	44.1		ug/L		88	32 - 152	2	20
Ethylbenzene	50.0	49.6		ug/L		99	79 - 121	1	20
Ethylene Dibromide	50.0	48.9		ug/L		98	75 - 127	2	20
Hexachlorobutadiene	50.0	45.8		ug/L		92	66 - 134	2	20
Isopropylbenzene	50.0	49.2		ug/L		98	72 - 131	1	20
Methyl tert-butyl ether	50.0	47.0		ug/L		94	71 - 124	1	20
Methylene Chloride	50.0	51.7		ug/L		103	74 - 124	6	20
m-Xylene & p-Xylene	50.0	50.2		ug/L		100	80 - 121	2	20
Naphthalene	50.0	42.9		ug/L		86	61 - 128	3	20
n-Butylbenzene	50.0	46.8		ug/L		94	75 - 128	2	20
N-Propylbenzene	50.0	51.9		ug/L		104	76 - 126	2	20
o-Xylene	50.0	50.3		ug/L		101	78 - 122	2	20
sec-Butylbenzene	50.0	45.8		ug/L		92	77 - 126	2	20
Styrene	50.0	51.1		ug/L		102	78 - 123	1	20
tert-Butylbenzene	50.0	50.0		ug/L		100	78 - 124	0	20
Tetrachloroethene	50.0	49.5		ug/L		99	74 - 129	1	20
Toluene	50.0	49.6		ug/L		99	80 - 121	1	20
trans-1,2-Dichloroethene	50.0	52.0		ug/L		104	75 - 124	2	20
trans-1,3-Dichloropropene	50.0	49.9		ug/L		100	73 - 127	1	20
Trichloroethene	50.0	50.0		ug/L		100	79 - 123	2	20
Trichlorofluoromethane	50.0	52.8		ug/L		106	65 - 141	1	20
Vinyl acetate	100	94.4		ug/L		94	54 - 146	1	20
Vinyl chloride	50.0	48.6		ug/L		97	58 - 137	0	20
Xylenes, Total	100	101		ug/L		101	79 - 121	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*
Dibromofluoromethane (Surr)	*99*		*80 - 119*
Toluene-d8 (Surr)	*98*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*98*		*81 - 118*

Lab Sample ID: MB 680-642552/8
Matrix: Water
Analysis Batch: 642552

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			11/05/20 18:09	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			11/05/20 18:09	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			11/05/20 18:09	1

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

Lab Sample ID: MB 680-642552/8
Matrix: Water
Analysis Batch: 642552

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			11/05/20 18:09	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			11/05/20 18:09	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/05/20 18:09	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			11/05/20 18:09	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/05/20 18:09	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			11/05/20 18:09	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/05/20 18:09	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			11/05/20 18:09	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			11/05/20 18:09	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			11/05/20 18:09	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			11/05/20 18:09	1
1,2-Dichloroethene, Total	0.787	J	2.0	0.74	ug/L			11/05/20 18:09	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			11/05/20 18:09	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			11/05/20 18:09	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			11/05/20 18:09	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			11/05/20 18:09	1
1,4-Dichlorobenzene	0.46	U M	1.0	0.46	ug/L			11/05/20 18:09	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			11/05/20 18:09	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			11/05/20 18:09	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/05/20 18:09	1
2-Hexanone	2.0	U	10	2.0	ug/L			11/05/20 18:09	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			11/05/20 18:09	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			11/05/20 18:09	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			11/05/20 18:09	1
Acetone	7.0	U	10	7.0	ug/L			11/05/20 18:09	1
Benzene	0.43	U M	1.0	0.43	ug/L			11/05/20 18:09	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			11/05/20 18:09	1
Bromoform	0.43	U	1.0	0.43	ug/L			11/05/20 18:09	1
Bromomethane	2.5	U	5.0	2.5	ug/L			11/05/20 18:09	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			11/05/20 18:09	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			11/05/20 18:09	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			11/05/20 18:09	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			11/05/20 18:09	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			11/05/20 18:09	1
Chloroethane	2.5	U	5.0	2.5	ug/L			11/05/20 18:09	1
Chloroform	0.50	U	1.0	0.50	ug/L			11/05/20 18:09	1
Chloromethane	0.40	U	1.0	0.40	ug/L			11/05/20 18:09	1
cis-1,2-Dichloroethene	0.787	J	1.0	0.41	ug/L			11/05/20 18:09	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			11/05/20 18:09	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			11/05/20 18:09	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			11/05/20 18:09	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			11/05/20 18:09	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			11/05/20 18:09	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			11/05/20 18:09	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			11/05/20 18:09	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			11/05/20 18:09	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			11/05/20 18:09	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			11/05/20 18:09	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			11/05/20 18:09	1

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

Lab Sample ID: MB 680-642552/8
Matrix: Water
Analysis Batch: 642552

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	2.5	U	5.0	2.5	ug/L			11/05/20 18:09	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			11/05/20 18:09	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			11/05/20 18:09	1
o-Xylene	0.23	U	1.0	0.23	ug/L			11/05/20 18:09	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			11/05/20 18:09	1
Styrene	0.27	U	1.0	0.27	ug/L			11/05/20 18:09	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			11/05/20 18:09	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			11/05/20 18:09	1
Toluene	0.48	U	1.0	0.48	ug/L			11/05/20 18:09	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/05/20 18:09	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			11/05/20 18:09	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/05/20 18:09	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			11/05/20 18:09	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			11/05/20 18:09	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/05/20 18:09	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			11/05/20 18:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*		*11/05/20 18:09*	*1*
Dibromofluoromethane (Surr)	*89*		*80 - 119*		*11/05/20 18:09*	*1*
Toluene-d8 (Surr)	*92*		*89 - 112*		*11/05/20 18:09*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*11/05/20 18:09*	*1*

Lab Sample ID: LCS 680-642552/3
Matrix: Water
Analysis Batch: 642552

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	46.2		ug/L		92	78 - 124
1,1,1-Trichloroethane	50.0	46.8		ug/L		94	74 - 131
1,1,2,2-Tetrachloroethane	50.0	50.9		ug/L		102	71 - 121
1,1,2-Trichloroethane	50.0	48.4		ug/L		97	80 - 119
1,1-Dichloroethane	50.0	50.2		ug/L		100	77 - 125
1,1-Dichloroethene	50.0	43.7		ug/L		87	71 - 131
1,1-Dichloropropene	50.0	49.3		ug/L		99	79 - 125
1,2,3-Trichlorobenzene	50.0	52.7		ug/L		105	69 - 129
1,2,3-Trichloropropane	50.0	51.4		ug/L		103	73 - 122
1,2,4-Trichlorobenzene	50.0	51.2		ug/L		102	69 - 130
1,2,4-Trimethylbenzene	50.0	48.1		ug/L		96	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	51.7		ug/L		103	62 - 128
1,2-Dichlorobenzene	50.0	48.9		ug/L		98	80 - 119
1,2-Dichloroethane	50.0	51.5		ug/L		103	73 - 128
1,2-Dichloroethene, Total	100	97.2		ug/L		97	79 - 121
1,2-Dichloropropane	50.0	50.1		ug/L		100	78 - 122
1,3,5-Trimethylbenzene	50.0	47.8		ug/L		96	75 - 124
1,3-Dichlorobenzene	50.0	48.8		ug/L		98	80 - 119
1,3-Dichloropropane	50.0	50.6		ug/L		101	80 - 119
1,4-Dichlorobenzene	50.0	48.9		ug/L		98	79 - 118

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

Lab Sample ID: LCS 680-642552/3
Matrix: Water
Analysis Batch: 642552

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	47.1		ug/L		94	60 - 139
2-Butanone (MEK)	250	254		ug/L		102	56 - 143
2-Chlorotoluene	50.0	47.9		ug/L		96	79 - 122
2-Hexanone	250	275		ug/L		110	57 - 139
4-Chlorotoluene	50.0	46.5		ug/L		93	78 - 122
4-Isopropyltoluene	50.0	49.0		ug/L		98	77 - 127
4-Methyl-2-pentanone (MIBK)	250	271		ug/L		109	67 - 130
Acetone	250	281		ug/L		112	39 - 160
Benzene	50.0	46.2		ug/L		92	79 - 120
Bromobenzene	50.0	47.6		ug/L		95	80 - 120
Bromoform	50.0	44.1		ug/L		88	66 - 130
Bromomethane	50.0	44.9		ug/L		90	53 - 141
Carbon disulfide	50.0	46.9		ug/L		94	64 - 133
Carbon tetrachloride	50.0	45.5		ug/L		91	72 - 136
Chlorobenzene	50.0	47.7		ug/L		95	82 - 118
Chlorobromomethane	50.0	49.3		ug/L		99	78 - 123
Chlorodibromomethane	50.0	46.9		ug/L		94	74 - 126
Chloroethane	50.0	45.9		ug/L		92	60 - 138
Chloroform	50.0	47.5		ug/L		95	79 - 124
Chloromethane	50.0	45.7	M	ug/L		91	50 - 139
cis-1,2-Dichloroethene	50.0	50.9		ug/L		102	78 - 123
cis-1,3-Dichloropropene	50.0	48.7		ug/L		97	75 - 124
Dibromomethane	50.0	49.0		ug/L		98	79 - 123
Dichlorobromomethane	50.0	47.1		ug/L		94	79 - 125
Dichlorodifluoromethane	50.0	44.1		ug/L		88	32 - 152
Ethylbenzene	50.0	48.1		ug/L		96	79 - 121
Ethylene Dibromide	50.0	50.2		ug/L		100	75 - 127
Hexachlorobutadiene	50.0	48.7		ug/L		97	66 - 134
Isopropylbenzene	50.0	48.2		ug/L		96	72 - 131
Methyl tert-butyl ether	50.0	49.9		ug/L		100	71 - 124
Methylene Chloride	50.0	47.4		ug/L		95	74 - 124
m-Xylene & p-Xylene	50.0	47.6		ug/L		95	80 - 121
Naphthalene	50.0	54.4		ug/L		109	61 - 128
n-Butylbenzene	50.0	50.6		ug/L		101	75 - 128
N-Propylbenzene	50.0	47.9		ug/L		96	76 - 126
o-Xylene	50.0	47.5		ug/L		95	78 - 122
sec-Butylbenzene	50.0	48.5		ug/L		97	77 - 126
Styrene	50.0	49.0		ug/L		98	78 - 123
tert-Butylbenzene	50.0	48.0		ug/L		96	78 - 124
Tetrachloroethene	50.0	48.4		ug/L		97	74 - 129
Toluene	50.0	48.8		ug/L		98	80 - 121
trans-1,2-Dichloroethene	50.0	46.3		ug/L		93	75 - 124
trans-1,3-Dichloropropene	50.0	48.8		ug/L		98	73 - 127
Trichloroethene	50.0	48.1		ug/L		96	79 - 123
Trichlorofluoromethane	50.0	47.5		ug/L		95	65 - 141
Vinyl acetate	100	106		ug/L		106	54 - 146
Vinyl chloride	50.0	47.2		ug/L		94	58 - 137
Xylenes, Total	100	95.1		ug/L		95	79 - 121

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

Lab Sample ID: LCS 680-642552/3
Matrix: Water
Analysis Batch: 642552

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

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*
Dibromofluoromethane (Surr)	*94*		*80 - 119*
Toluene-d8 (Surr)	*96*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*97*		*81 - 118*

Lab Sample ID: LCSD 680-642552/4
Matrix: Water
Analysis Batch: 642552

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	46.4		ug/L		93	78 - 124	0	20
1,1,1-Trichloroethane			50.0	46.9		ug/L		94	74 - 131	0	20
1,1,2,2-Tetrachloroethane			50.0	50.0		ug/L		100	71 - 121	2	20
1,1,2-Trichloroethane			50.0	48.9		ug/L		98	80 - 119	1	20
1,1-Dichloroethane			50.0	49.7		ug/L		99	77 - 125	1	20
1,1-Dichloroethene			50.0	44.0		ug/L		88	71 - 131	1	20
1,1-Dichloropropene			50.0	49.0		ug/L		98	79 - 125	1	20
1,2,3-Trichlorobenzene			50.0	52.4		ug/L		105	69 - 129	0	20
1,2,3-Trichloropropane			50.0	50.8		ug/L		102	73 - 122	1	20
1,2,4-Trichlorobenzene			50.0	51.5		ug/L		103	69 - 130	1	20
1,2,4-Trimethylbenzene			50.0	47.8		ug/L		96	76 - 124	1	20
1,2-Dibromo-3-Chloropropane			50.0	51.6		ug/L		103	62 - 128	0	20
1,2-Dichlorobenzene			50.0	49.0		ug/L		98	80 - 119	0	20
1,2-Dichloroethane			50.0	51.2		ug/L		102	73 - 128	1	20
1,2-Dichloroethene, Total			100	96.9		ug/L		97	79 - 121	0	20
1,2-Dichloropropane			50.0	50.2		ug/L		100	78 - 122	0	20
1,3,5-Trimethylbenzene			50.0	48.1		ug/L		96	75 - 124	1	20
1,3-Dichlorobenzene			50.0	48.3		ug/L		97	80 - 119	1	20
1,3-Dichloropropane			50.0	50.4		ug/L		101	80 - 119	0	20
1,4-Dichlorobenzene			50.0	48.2		ug/L		96	79 - 118	1	20
2,2-Dichloropropane			50.0	46.7		ug/L		93	60 - 139	1	20
2-Butanone (MEK)			250	254		ug/L		101	56 - 143	0	20
2-Chlorotoluene			50.0	47.7		ug/L		95	79 - 122	0	20
2-Hexanone			250	273		ug/L		109	57 - 139	1	20
4-Chlorotoluene			50.0	46.5		ug/L		93	78 - 122	0	20
4-Isopropyltoluene			50.0	49.3		ug/L		99	77 - 127	1	20
4-Methyl-2-pentanone (MIBK)			250	267		ug/L		107	67 - 130	1	20
Acetone			250	274		ug/L		110	39 - 160	2	20
Benzene			50.0	45.9		ug/L		92	79 - 120	1	20
Bromobenzene			50.0	47.7		ug/L		95	80 - 120	0	20
Bromoform			50.0	43.7		ug/L		87	66 - 130	1	20
Bromomethane			50.0	46.3		ug/L		93	53 - 141	3	20
Carbon disulfide			50.0	46.9		ug/L		94	64 - 133	0	20
Carbon tetrachloride			50.0	45.6		ug/L		91	72 - 136	0	20
Chlorobenzene			50.0	48.0		ug/L		96	82 - 118	1	20
Chlorobromomethane			50.0	48.8		ug/L		98	78 - 123	1	20
Chlorodibromomethane			50.0	47.0		ug/L		94	74 - 126	0	20
Chloroethane			50.0	46.4		ug/L		93	60 - 138	1	20

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

Lab Sample ID: LCSD 680-642552/4
Matrix: Water
Analysis Batch: 642552

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	47.6		ug/L		95	79 - 124	0	20
Chloromethane	50.0	44.9	M	ug/L		90	50 - 139	2	20
cis-1,2-Dichloroethene	50.0	50.4		ug/L		101	78 - 123	1	20
cis-1,3-Dichloropropene	50.0	48.6		ug/L		97	75 - 124	0	20
Dibromomethane	50.0	49.2		ug/L		98	79 - 123	0	20
Dichlorobromomethane	50.0	46.9		ug/L		94	79 - 125	0	20
Dichlorodifluoromethane	50.0	44.2		ug/L		88	32 - 152	0	20
Ethylbenzene	50.0	48.1		ug/L		96	79 - 121	0	20
Ethylene Dibromide	50.0	49.2		ug/L		98	75 - 127	2	20
Hexachlorobutadiene	50.0	49.2		ug/L		98	66 - 134	1	20
Isopropylbenzene	50.0	48.3		ug/L		97	72 - 131	0	20
Methyl tert-butyl ether	50.0	49.5		ug/L		99	71 - 124	1	20
Methylene Chloride	50.0	47.1		ug/L		94	74 - 124	1	20
m-Xylene & p-Xylene	50.0	47.4		ug/L		95	80 - 121	0	20
Naphthalene	50.0	55.1		ug/L		110	61 - 128	1	20
n-Butylbenzene	50.0	50.2		ug/L		100	75 - 128	1	20
N-Propylbenzene	50.0	48.0		ug/L		96	76 - 126	0	20
o-Xylene	50.0	47.7		ug/L		95	78 - 122	1	20
sec-Butylbenzene	50.0	48.6		ug/L		97	77 - 126	0	20
Styrene	50.0	48.5		ug/L		97	78 - 123	1	20
tert-Butylbenzene	50.0	47.6		ug/L		95	78 - 124	1	20
Tetrachloroethene	50.0	47.9		ug/L		96	74 - 129	1	20
Toluene	50.0	48.9		ug/L		98	80 - 121	0	20
trans-1,2-Dichloroethene	50.0	46.4		ug/L		93	75 - 124	0	20
trans-1,3-Dichloropropene	50.0	48.5		ug/L		97	73 - 127	1	20
Trichloroethene	50.0	48.1		ug/L		96	79 - 123	0	20
Trichlorofluoromethane	50.0	47.4		ug/L		95	65 - 141	0	20
Vinyl acetate	100	105		ug/L		105	54 - 146	1	20
Vinyl chloride	50.0	47.4		ug/L		95	58 - 137	1	20
Xylenes, Total	100	95.1		ug/L		95	79 - 121	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*
Dibromofluoromethane (Surr)	*94*		*80 - 119*
Toluene-d8 (Surr)	*96*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*97*		*81 - 118*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-641144/1-A
Matrix: Water
Analysis Batch: 641443

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 641144

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	17	U	50	17	ug/L		10/28/20 11:48	10/29/20 09:22	1
Manganese	1.64	J	10	1.0	ug/L		10/28/20 11:48	10/29/20 09:22	1

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

Lab Sample ID: LCS 680-641144/2-A
Matrix: Water
Analysis Batch: 641443

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 641144

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	5000	5150		ug/L		103	87 - 115
Manganese	400	420		ug/L		105	90 - 114

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-641142/1-A
Matrix: Water
Analysis Batch: 641362

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 641142

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5	U	3.0	1.5	ug/L		10/28/20 11:48	10/29/20 09:00	1

Lab Sample ID: LCS 680-641142/2-A
Matrix: Water
Analysis Batch: 641362

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 641142

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	100	99.9		ug/L		100	84 - 116

QC Association Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190481-1

GC/MS VOA

Analysis Batch: 642014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190481-2	G6M-03-10X-FAL20	Total/NA	Water	8260B	
MB 680-642014/9	Method Blank	Total/NA	Water	8260B	
LCS 680-642014/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-642014/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 642258

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190481-2 - RA	G6M-03-10X-FAL20	Total/NA	Water	8260B	
MB 680-642258/9	Method Blank	Total/NA	Water	8260B	
LCS 680-642258/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-642258/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 642552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190481-3	AOC50-TB7-FAL20	Total/NA	Water	8260B	
MB 680-642552/8	Method Blank	Total/NA	Water	8260B	
LCS 680-642552/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-642552/4	Lab Control Sample Dup	Total/NA	Water	8260B	

Metals

Prep Batch: 641142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190481-2	G6M-03-10X-FAL20	Dissolved	Water	3005A	
MB 680-641142/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-641142/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 641144

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190481-2	G6M-03-10X-FAL20	Dissolved	Water	3005A	
MB 680-641144/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-641144/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 641362

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190481-2	G6M-03-10X-FAL20	Dissolved	Water	6020A	641142
MB 680-641142/1-A	Method Blank	Total Recoverable	Water	6020A	641142
LCS 680-641142/2-A	Lab Control Sample	Total Recoverable	Water	6020A	641142

Analysis Batch: 641443

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190481-2	G6M-03-10X-FAL20	Dissolved	Water	6010C	641144
MB 680-641144/1-A	Method Blank	Total Recoverable	Water	6010C	641144
LCS 680-641144/2-A	Lab Control Sample	Total Recoverable	Water	6010C	641144

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190481-1

Client Sample ID: G6M-03-10X-FAL20

Lab Sample ID: 680-190481-2

Date Collected: 10/22/20 11:40

Matrix: Water

Date Received: 10/23/20 09:40

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	642014	11/03/20 21:32	UI	TAL SAV
	Instrument ID: CMSO2									
Total/NA	Analysis	8260B	RA	1	5 mL	5 mL	642258	11/04/20 17:24	Y1S	TAL SAV
	Instrument ID: CMSU									
Dissolved	Prep	3005A			50 mL	50 mL	641144	10/28/20 11:48	AJR	TAL SAV
Dissolved	Analysis	6010C		1			641443	10/29/20 10:35	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	641142	10/28/20 11:48	AJR	TAL SAV
Dissolved	Analysis	6020A		1			641362	10/29/20 09:46	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: AOC50-TB7-FAL20

Lab Sample ID: 680-190481-3

Date Collected: 10/22/20 00:00

Matrix: Water

Date Received: 10/23/20 09:40

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	642552	11/05/20 21:23	SMP	TAL SAV
	Instrument ID: CMSC									

Laboratory References:

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

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-190481-1
Project/Site: Fort Devens

Laboratory: Eurofins TestAmerica, Savannah

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

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-22-22

Method Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190481-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
6010C	Metals (ICP)	SW846	TAL SAV
6020A	Metals (ICP/MS)	SW846	TAL SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL SAV
5030B	Purge and Trap	SW846	TAL SAV

Protocol References:

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

Laboratory References:

TAL SAV = Eurofins TestAmerica, 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 # 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 2020
Project Number: DEVENS-LTM	Contact:	
WBS Code:	Ship to:	

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 2020

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: A2320B (A)	E353.2 (A)	RSK175 (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW8260B - VOCs	SW9034 (A)	SW9056A - SO4	SW9060A - TOC	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
						46	47	8	9	9	29	7	5	10						
39	G6M-13-03X-FAL20	WG							X	X	X				G6M-13-03X	N1	80.00	90.00		
40	G6M-13-04X-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-13-04X	N1	125.00	135.00		
41	G6M-13-05X-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-13-05X	N1	45.00	55.00		
42	G6M-13-06X-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-13-06X	N1	50.00	60.00		
43	G6M-18-01-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-18-01	N1	116.00	126.00		
44	G6M-18-02-FAL20	WG	10.22.20	1050	DC	X	X	X	X	X	X	X	X	X	G6M-18-02	N1	123.95	133.95		
45	G6M-95-19X-FAL20	WG									X				G6M-95-19X	N1	48.00	58.00		
46	G6M-95-20X-FAL20	WG							X	X	X				G6M-95-20X	N1	18.00	23.00		
47	G6M-97-05B-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-97-05B	N1	130.00	135.00		
48	G6M-97-28X-FAL20	WG							X	X	X				G6M-97-28X	N1	100.00	105.00		
49	MW-3-FAL20	WG							X	X	X				MW-3	MS1	126.00	137.00		
50	MW-3-FAL20	WG							X	X	X				MW-3	N1	126.00	137.00		
51	MW-3-FAL20	WG							X	X	X				MW-3	SD1	126.00	137.00		
52	MW-7-FAL20	WG							X	X	X				MW-7	N1	6.58	135.00		
53	XSA-12-95X-FAL20	WG							X	X	X				XSA-12-95X	N1	120.00	130.00		
54	XSA-12-96X-FAL20	WG				X	X	X	X	X	X	X	X	X	XSA-12-96X	N1	120.00	130.00		
55	XSA-12-97X-FAL20	WG							X	X	X				XSA-12-97X	N1	120.00	130.00		
56	XSA-12-98X-FAL20	WG							X	X	X				XSA-12-98X	N1	60.00	70.00		

Turnaround Time: NA

680-190481-01 Chain of Custody

Relinquished by: Dana Clyp
Date 10-22-20
Time 1500
Received by: [signature] 10/22/20
Copy of AOC50_eCOC

Date 10-23-20
Time 0940
Shipping Date: 2-6/2.9
Received by Laboratory: [signature]
Condition:
10/23/20 17:00

11/10/2020 (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 #

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 2020
Project Number: DEVENS-LTM	Contact:	
WBS Code:	Ship to:	

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

Boston #215

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 2020

						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
1	AOC50-DUP01-FAL20	WG								X	X	X					G6M-95-20X	FD1	18.00	23.00		
2	AOC50-DUP02-FAL20	WG					X	X	X	X	X	X	X	X	X		G6M-07-02X	FD1	22.50	27.50		
3	AOC50-DUP03-FAL20	WG								X	X	X					G6M-04-04X	FD1	94.00	104.00		
4	AOC50-DUP04-FAL20	WG					X	X	X	X	X	X	X	X	X		G6M-13-02X	FD1	115.00	125.00		
5	G6M-02-01X-FAL20	WG								X	X	X					G6M-02-01X	N1	80.00	95.00		
6	G6M-02-04X-FAL20	WG								X	X	X					G6M-02-04X	N1	90.00	105.00		
7	G6M-02-06X-FAL20	WG								X	X	X					G6M-02-06X	N1	55.00	65.00		
8	G6M-02-07X-FAL20	WG								X	X	X					G6M-02-07X	N1	30.00	40.00		
9	G6M-02-08X-FAL20	WG					X	X	X	X	X	X	X	X	X		G6M-02-08X	N1	60.00	70.00		
10	G6M-02-11X-FAL20	WG								X	X	X					G6M-02-11X	N1	125.00	135.00		
11	G6M-02-12X-FAL20	WG								X	X	X					G6M-02-12X	N1	125.00	135.00		
12	G6M-02-13X-FAL20	WG								X	X	X					G6M-02-13X	N1	110.00	120.00		
13	G6M-03-07X-FAL20	WG					X	X	X	X	X	X	X	X	X		G6M-03-07X	N1	80.00	90.00		
14	G6M-03-08X-FAL20	WG								X	X	X					G6M-03-08X	N1	125.00	140.00		
15	G6M-03-10X-FAL20	WG	10-22-20	1140	NB					X	X	X					G6M-03-10X	N1	120.00	135.00		
16	G6M-04-01X-FAL20	WG								X	X	X					G6M-04-01X	N1	82.00	92.00		
17	G6M-04-02X-FAL20	WG					X	X	X	X	X	X	X	X	X		G6M-04-02X	N1	80.00	90.00		
18	G6M-04-03X-FAL20	WG					X	X	X	X	X	X	X	X	X		G6M-04-03X	MS1	85.00	95.00		
19	G6M-04-03X-FAL20	WG					X	X	X	X	X	X	X	X	X		G6M-04-03X	N1	85.00	95.00		

680-190481-02 Chain of Custody

Relinquished by: Diane Clupene
Date 10-22-20
Time 1500
Received by: 10/22/20 15:00
Copy of AOC50_eCOC

Date
Time
Shipping Date: Trip Blank for VOC's
Received by Laboratory: 10/22/20 17:10
Condition:

10-23-2020 0940
2.6/2.9

11/10/2020 (Rev. 1)

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-190481-1

Login Number: 190481
List Number: 1
Creator: Mooken, Darmal

List Source: Eurofins TestAmerica, 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?	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	

eurofins | Environment Testing America



ANALYTICAL REPORT

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

Laboratory Job ID: 680-190506-1
Client Project/Site: Fort Devens - LTM

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

Attn: Nathan R Mullens

Kathryn Smith

Authorized for release by:
11/4/2020 3:49:36 PM

Kathryn Smith, Client Service Manager
(912)250-0275
Kathy.Smith@Eurofinset.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.

Definitions/Glossary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens - LTM

Job ID: 680-190506-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
M	Manual integrated compound.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

Metals

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

Glossary

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

Sample Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens - LTM

Job ID: 680-190506-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
680-190506-1	G6M-03-08X-FAL20	Water	10/22/20 15:45	10/24/20 09:50	
680-190506-2	TB8-FAL20	Water	10/22/20 00:00	10/24/20 09:50	

Job ID: 680-190506-1

Laboratory: Eurofins TestAmerica, Savannah

Narrative

CASE NARRATIVE
Client: Seres Engineering & Services LLC
Project: Fort Devens - LTM

Report Number: 680-190506-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

RECEIPT

The samples were received on 10/24/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.1 C.

VOLATILE ORGANIC COMPOUNDS (GC/MS)

Samples G6M-03-08X-FAL20 (680-190506-1) and TB8-FAL20 (680-190506-2) were analyzed for Volatile Organic Compounds (GC/MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 11/03/2020.

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

METALS (ICP) - DISSOLVED

Sample G6M-03-08X-FAL20 (680-190506-1) was analyzed for Metals (ICP) - Dissolved in accordance with EPA SW-846 Method 6010C. The samples were prepared on 10/28/2020 and analyzed on 10/29/2020.

Manganese was detected in method blank MB 680-641144/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

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

METALS (ICPMS) - DISSOLVED

Sample G6M-03-08X-FAL20 (680-190506-1) was analyzed for Metals (ICPMS) - Dissolved in accordance with EPA SW-846 Method 6020A. The samples were prepared on 10/28/2020 and analyzed on 10/29/2020.

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

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens - LTM

Job ID: 680-190506-1

Client Sample ID: G6M-03-08X-FAL20
Date Collected: 10/22/20 15:45
Date Received: 10/24/20 09:50

Lab Sample ID: 680-190506-1
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			11/03/20 17:05	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			11/03/20 17:05	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			11/03/20 17:05	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			11/03/20 17:05	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			11/03/20 17:05	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/03/20 17:05	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			11/03/20 17:05	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/03/20 17:05	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			11/03/20 17:05	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/03/20 17:05	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			11/03/20 17:05	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			11/03/20 17:05	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			11/03/20 17:05	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			11/03/20 17:05	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			11/03/20 17:05	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			11/03/20 17:05	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			11/03/20 17:05	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			11/03/20 17:05	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			11/03/20 17:05	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			11/03/20 17:05	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			11/03/20 17:05	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			11/03/20 17:05	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/03/20 17:05	1
2-Hexanone	2.0	U	10	2.0	ug/L			11/03/20 17:05	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			11/03/20 17:05	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			11/03/20 17:05	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			11/03/20 17:05	1
Acetone	7.0	U	10	7.0	ug/L			11/03/20 17:05	1
Benzene	0.43	U	1.0	0.43	ug/L			11/03/20 17:05	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			11/03/20 17:05	1
Bromoform	0.43	U	1.0	0.43	ug/L			11/03/20 17:05	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			11/03/20 17:05	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			11/03/20 17:05	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			11/03/20 17:05	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			11/03/20 17:05	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			11/03/20 17:05	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			11/03/20 17:05	1
Chloroethane	2.5	U	5.0	2.5	ug/L			11/03/20 17:05	1
Chloroform	0.50	U	1.0	0.50	ug/L			11/03/20 17:05	1
Chloromethane	0.40	U	1.0	0.40	ug/L			11/03/20 17:05	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/03/20 17:05	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			11/03/20 17:05	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			11/03/20 17:05	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			11/03/20 17:05	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			11/03/20 17:05	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			11/03/20 17:05	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			11/03/20 17:05	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			11/03/20 17:05	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			11/03/20 17:05	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens - LTM

Job ID: 680-190506-1

Client Sample ID: G6M-03-08X-FAL20

Lab Sample ID: 680-190506-1

Date Collected: 10/22/20 15:45

Matrix: Water

Date Received: 10/24/20 09:50

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			11/03/20 17:05	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			11/03/20 17:05	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			11/03/20 17:05	1
Naphthalene	2.5	U	5.0	2.5	ug/L			11/03/20 17:05	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			11/03/20 17:05	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			11/03/20 17:05	1
o-Xylene	0.23	U	1.0	0.23	ug/L			11/03/20 17:05	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			11/03/20 17:05	1
Styrene	0.27	U	1.0	0.27	ug/L			11/03/20 17:05	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			11/03/20 17:05	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			11/03/20 17:05	1
Toluene	0.48	U	1.0	0.48	ug/L			11/03/20 17:05	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/03/20 17:05	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			11/03/20 17:05	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/03/20 17:05	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			11/03/20 17:05	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			11/03/20 17:05	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/03/20 17:05	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			11/03/20 17:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*85 - 114*		*11/03/20 17:05*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 119*		*11/03/20 17:05*	*1*
Toluene-d8 (Surr)	*96*		*89 - 112*		*11/03/20 17:05*	*1*
1,2-Dichloroethane-d4 (Surr)	*97*		*81 - 118*		*11/03/20 17:05*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**1600**		50	17	ug/L		10/28/20 11:48	10/29/20 10:50	1
Manganese	**7800**		10	1.0	ug/L		10/28/20 11:48	10/29/20 10:50	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**87**		3.0	1.5	ug/L		10/28/20 11:48	10/29/20 09:52	1

Client Sample ID: TB8-FAL20

Lab Sample ID: 680-190506-2

Date Collected: 10/22/20 00:00

Matrix: Water

Date Received: 10/24/20 09:50

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			11/03/20 15:32	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			11/03/20 15:32	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			11/03/20 15:32	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			11/03/20 15:32	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			11/03/20 15:32	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/03/20 15:32	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			11/03/20 15:32	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/03/20 15:32	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			11/03/20 15:32	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/03/20 15:32	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens - LTM

Job ID: 680-190506-1

Client Sample ID: TB8-FAL20
Date Collected: 10/22/20 00:00
Date Received: 10/24/20 09:50

Lab Sample ID: 680-190506-2
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			11/03/20 15:32	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			11/03/20 15:32	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			11/03/20 15:32	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			11/03/20 15:32	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			11/03/20 15:32	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			11/03/20 15:32	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			11/03/20 15:32	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			11/03/20 15:32	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			11/03/20 15:32	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			11/03/20 15:32	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			11/03/20 15:32	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			11/03/20 15:32	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/03/20 15:32	1
2-Hexanone	2.0	U	10	2.0	ug/L			11/03/20 15:32	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			11/03/20 15:32	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			11/03/20 15:32	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			11/03/20 15:32	1
Acetone	7.0	U	10	7.0	ug/L			11/03/20 15:32	1
Benzene	0.43	U	1.0	0.43	ug/L			11/03/20 15:32	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			11/03/20 15:32	1
Bromoform	0.43	U	1.0	0.43	ug/L			11/03/20 15:32	1
Bromomethane	2.5	U	5.0	2.5	ug/L			11/03/20 15:32	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			11/03/20 15:32	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			11/03/20 15:32	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			11/03/20 15:32	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			11/03/20 15:32	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			11/03/20 15:32	1
Chloroethane	2.5	U	5.0	2.5	ug/L			11/03/20 15:32	1
Chloroform	0.50	U	1.0	0.50	ug/L			11/03/20 15:32	1
Chloromethane	0.40	U	1.0	0.40	ug/L			11/03/20 15:32	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/03/20 15:32	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			11/03/20 15:32	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			11/03/20 15:32	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			11/03/20 15:32	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			11/03/20 15:32	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			11/03/20 15:32	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			11/03/20 15:32	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			11/03/20 15:32	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			11/03/20 15:32	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			11/03/20 15:32	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			11/03/20 15:32	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			11/03/20 15:32	1
Naphthalene	2.5	U	5.0	2.5	ug/L			11/03/20 15:32	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			11/03/20 15:32	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			11/03/20 15:32	1
o-Xylene	0.23	U	1.0	0.23	ug/L			11/03/20 15:32	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			11/03/20 15:32	1
Styrene	0.27	U	1.0	0.27	ug/L			11/03/20 15:32	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			11/03/20 15:32	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens - LTM

Job ID: 680-190506-1

Client Sample ID: TB8-FAL20
Date Collected: 10/22/20 00:00
Date Received: 10/24/20 09:50

Lab Sample ID: 680-190506-2
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			11/03/20 15:32	1
Toluene	0.48	U	1.0	0.48	ug/L			11/03/20 15:32	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/03/20 15:32	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			11/03/20 15:32	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/03/20 15:32	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			11/03/20 15:32	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			11/03/20 15:32	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/03/20 15:32	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			11/03/20 15:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*		*11/03/20 15:32*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*11/03/20 15:32*	*1*
Toluene-d8 (Surr)	*106*		*89 - 112*		*11/03/20 15:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*81 - 118*		*11/03/20 15:32*	*1*

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens - LTM

Job ID: 680-190506-1

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

Lab Sample ID: MB 680-642022/8
Matrix: Water
Analysis Batch: 642022

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			11/03/20 15:01	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			11/03/20 15:01	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			11/03/20 15:01	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			11/03/20 15:01	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			11/03/20 15:01	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/03/20 15:01	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			11/03/20 15:01	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/03/20 15:01	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			11/03/20 15:01	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/03/20 15:01	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			11/03/20 15:01	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			11/03/20 15:01	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			11/03/20 15:01	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			11/03/20 15:01	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			11/03/20 15:01	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			11/03/20 15:01	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			11/03/20 15:01	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			11/03/20 15:01	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			11/03/20 15:01	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			11/03/20 15:01	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			11/03/20 15:01	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			11/03/20 15:01	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/03/20 15:01	1
2-Hexanone	2.0	U	10	2.0	ug/L			11/03/20 15:01	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			11/03/20 15:01	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			11/03/20 15:01	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			11/03/20 15:01	1
Acetone	7.0	U	10	7.0	ug/L			11/03/20 15:01	1
Benzene	0.43	U	1.0	0.43	ug/L			11/03/20 15:01	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			11/03/20 15:01	1
Bromoform	0.43	U	1.0	0.43	ug/L			11/03/20 15:01	1
Bromomethane	2.5	U	5.0	2.5	ug/L			11/03/20 15:01	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			11/03/20 15:01	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			11/03/20 15:01	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			11/03/20 15:01	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			11/03/20 15:01	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			11/03/20 15:01	1
Chloroethane	2.5	U	5.0	2.5	ug/L			11/03/20 15:01	1
Chloroform	0.50	U	1.0	0.50	ug/L			11/03/20 15:01	1
Chloromethane	0.40	U	1.0	0.40	ug/L			11/03/20 15:01	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/03/20 15:01	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			11/03/20 15:01	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			11/03/20 15:01	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			11/03/20 15:01	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			11/03/20 15:01	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			11/03/20 15:01	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			11/03/20 15:01	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			11/03/20 15:01	1

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

Lab Sample ID: MB 680-642022/8
Matrix: Water
Analysis Batch: 642022

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			11/03/20 15:01	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			11/03/20 15:01	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			11/03/20 15:01	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			11/03/20 15:01	1
Naphthalene	2.5	U	5.0	2.5	ug/L			11/03/20 15:01	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			11/03/20 15:01	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			11/03/20 15:01	1
o-Xylene	0.23	U	1.0	0.23	ug/L			11/03/20 15:01	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			11/03/20 15:01	1
Styrene	0.27	U	1.0	0.27	ug/L			11/03/20 15:01	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			11/03/20 15:01	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			11/03/20 15:01	1
Toluene	0.48	U	1.0	0.48	ug/L			11/03/20 15:01	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/03/20 15:01	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			11/03/20 15:01	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/03/20 15:01	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			11/03/20 15:01	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			11/03/20 15:01	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/03/20 15:01	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			11/03/20 15:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*		*11/03/20 15:01*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 119*		*11/03/20 15:01*	*1*
Toluene-d8 (Surr)	*104*		*89 - 112*		*11/03/20 15:01*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*81 - 118*		*11/03/20 15:01*	*1*

Lab Sample ID: LCS 680-642022/3
Matrix: Water
Analysis Batch: 642022

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	55.0		ug/L		110	78 - 124
1,1,1-Trichloroethane	50.0	50.4		ug/L		101	74 - 131
1,1,2,2-Tetrachloroethane	50.0	49.9		ug/L		100	71 - 121
1,1,2-Trichloroethane	50.0	51.8		ug/L		104	80 - 119
1,1-Dichloroethane	50.0	47.3		ug/L		95	77 - 125
1,1-Dichloroethene	50.0	55.6		ug/L		111	71 - 131
1,1-Dichloropropene	50.0	49.8		ug/L		100	79 - 125
1,2,3-Trichlorobenzene	50.0	47.1		ug/L		94	69 - 129
1,2,3-Trichloropropane	50.0	53.7		ug/L		107	73 - 122
1,2,4-Trichlorobenzene	50.0	47.1		ug/L		94	69 - 130
1,2,4-Trimethylbenzene	50.0	50.8		ug/L		102	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	45.3		ug/L		91	62 - 128
1,2-Dichlorobenzene	50.0	48.9		ug/L		98	80 - 119
1,2-Dichloroethane	50.0	48.7		ug/L		97	73 - 128
1,2-Dichloroethene, Total	100	102		ug/L		102	79 - 121
1,2-Dichloropropane	50.0	48.9		ug/L		98	78 - 122

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

Lab Sample ID: LCS 680-642022/3
Matrix: Water
Analysis Batch: 642022

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	50.4		ug/L		101	75 - 124
1,3-Dichlorobenzene	50.0	50.2		ug/L		100	80 - 119
1,3-Dichloropropane	50.0	48.1		ug/L		96	80 - 119
1,4-Dichlorobenzene	50.0	49.8		ug/L		100	79 - 118
2,2-Dichloropropane	50.0	50.9		ug/L		102	60 - 139
2-Butanone (MEK)	250	241		ug/L		97	56 - 143
2-Chlorotoluene	50.0	50.7		ug/L		101	79 - 122
2-Hexanone	250	214		ug/L		85	57 - 139
4-Chlorotoluene	50.0	51.7		ug/L		103	78 - 122
4-Isopropyltoluene	50.0	46.4		ug/L		93	77 - 127
4-Methyl-2-pentanone (MIBK)	250	211		ug/L		84	67 - 130
Acetone	250	217		ug/L		87	39 - 160
Benzene	50.0	50.5		ug/L		101	79 - 120
Bromobenzene	50.0	54.7		ug/L		109	80 - 120
Bromoform	50.0	54.4		ug/L		109	66 - 130
Bromomethane	50.0	42.8		ug/L		86	53 - 141
Carbon disulfide	50.0	53.6		ug/L		107	64 - 133
Carbon tetrachloride	50.0	52.3		ug/L		105	72 - 136
Chlorobenzene	50.0	52.4		ug/L		105	82 - 118
Chlorobromomethane	50.0	50.4		ug/L		101	78 - 123
Chlorodibromomethane	50.0	52.7		ug/L		105	74 - 126
Chloroethane	50.0	49.9		ug/L		100	60 - 138
Chloroform	50.0	49.2		ug/L		98	79 - 124
Chloromethane	50.0	45.5		ug/L		91	50 - 139
cis-1,2-Dichloroethene	50.0	48.2		ug/L		96	78 - 123
cis-1,3-Dichloropropene	50.0	49.4		ug/L		99	75 - 124
Dibromomethane	50.0	48.7		ug/L		97	79 - 123
Dichlorobromomethane	50.0	50.6		ug/L		101	79 - 125
Dichlorodifluoromethane	50.0	59.4		ug/L		119	32 - 152
Ethylbenzene	50.0	50.5		ug/L		101	79 - 121
Ethylene Dibromide	50.0	52.6		ug/L		105	75 - 127
Hexachlorobutadiene	50.0	49.7		ug/L		99	66 - 134
Isopropylbenzene	50.0	51.0		ug/L		102	72 - 131
Methyl tert-butyl ether	50.0	47.2		ug/L		94	71 - 124
Methylene Chloride	50.0	51.2		ug/L		102	74 - 124
m-Xylene & p-Xylene	50.0	51.2		ug/L		102	80 - 121
Naphthalene	50.0	43.2		ug/L		86	61 - 128
n-Butylbenzene	50.0	44.7		ug/L		89	75 - 128
N-Propylbenzene	50.0	51.1		ug/L		102	76 - 126
o-Xylene	50.0	51.8		ug/L		104	78 - 122
sec-Butylbenzene	50.0	51.1		ug/L		102	77 - 126
Styrene	50.0	51.6		ug/L		103	78 - 123
tert-Butylbenzene	50.0	50.6		ug/L		101	78 - 124
Tetrachloroethene	50.0	55.4		ug/L		111	74 - 129
Toluene	50.0	51.3		ug/L		103	80 - 121
trans-1,2-Dichloroethene	50.0	53.8		ug/L		108	75 - 124
trans-1,3-Dichloropropene	50.0	45.0		ug/L		90	73 - 127
Trichloroethene	50.0	53.4		ug/L		107	79 - 123
Trichlorofluoromethane	50.0	52.6		ug/L		105	65 - 141

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

Lab Sample ID: LCS 680-642022/3
Matrix: Water
Analysis Batch: 642022

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	88.0		ug/L		88	54 - 146		
Vinyl chloride			50.0	50.6		ug/L		101	58 - 137		
Xylenes, Total			100	103		ug/L		103	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*90*		*85 - 114*
Dibromofluoromethane (Surr)	*102*		*80 - 119*
Toluene-d8 (Surr)	*106*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*98*		*81 - 118*

Lab Sample ID: LCSD 680-642022/4
Matrix: Water
Analysis Batch: 642022

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	55.6		ug/L		111	78 - 124	1	20
1,1,1-Trichloroethane			50.0	49.2		ug/L		98	74 - 131	2	20
1,1,2,2-Tetrachloroethane			50.0	51.1		ug/L		102	71 - 121	2	20
1,1,2-Trichloroethane			50.0	52.2		ug/L		104	80 - 119	1	20
1,1-Dichloroethane			50.0	46.4		ug/L		93	77 - 125	2	20
1,1-Dichloroethene			50.0	55.1		ug/L		110	71 - 131	1	20
1,1-Dichloropropene			50.0	48.6		ug/L		97	79 - 125	2	20
1,2,3-Trichlorobenzene			50.0	48.5		ug/L		97	69 - 129	3	20
1,2,3-Trichloropropane			50.0	53.7		ug/L		107	73 - 122	0	20
1,2,4-Trichlorobenzene			50.0	48.0		ug/L		96	69 - 130	2	20
1,2,4-Trimethylbenzene			50.0	51.0		ug/L		102	76 - 124	0	20
1,2-Dibromo-3-Chloropropane			50.0	45.3		ug/L		91	62 - 128	0	20
1,2-Dichlorobenzene			50.0	50.2		ug/L		100	80 - 119	3	20
1,2-Dichloroethane			50.0	47.6		ug/L		95	73 - 128	2	20
1,2-Dichloroethene, Total			100	101		ug/L		101	79 - 121	1	20
1,2-Dichloropropane			50.0	47.9		ug/L		96	78 - 122	2	20
1,3,5-Trimethylbenzene			50.0	50.7		ug/L		101	75 - 124	1	20
1,3-Dichlorobenzene			50.0	50.2		ug/L		100	80 - 119	0	20
1,3-Dichloropropane			50.0	48.1		ug/L		96	80 - 119	0	20
1,4-Dichlorobenzene			50.0	50.0		ug/L		100	79 - 118	0	20
2,2-Dichloropropane			50.0	49.5		ug/L		99	60 - 139	3	20
2-Butanone (MEK)			250	239		ug/L		95	56 - 143	1	20
2-Chlorotoluene			50.0	50.9		ug/L		102	79 - 122	0	20
2-Hexanone			250	213		ug/L		85	57 - 139	0	20
4-Chlorotoluene			50.0	51.7		ug/L		103	78 - 122	0	20
4-Isopropyltoluene			50.0	47.0		ug/L		94	77 - 127	1	20
4-Methyl-2-pentanone (MIBK)			250	214		ug/L		85	67 - 130	1	20
Acetone			250	220		ug/L		88	39 - 160	1	20
Benzene			50.0	49.4		ug/L		99	79 - 120	2	20
Bromobenzene			50.0	55.6		ug/L		111	80 - 120	2	20
Bromoform			50.0	55.7		ug/L		111	66 - 130	2	20
Bromomethane			50.0	42.5		ug/L		85	53 - 141	1	20
Carbon disulfide			50.0	52.7		ug/L		105	64 - 133	2	20

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

Lab Sample ID: LCSD 680-642022/4
Matrix: Water
Analysis Batch: 642022

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	51.5		ug/L		103	72 - 136	2	20
Chlorobenzene	50.0	52.9		ug/L		106	82 - 118	1	20
Chlorobromomethane	50.0	49.2		ug/L		98	78 - 123	2	20
Chlorodibromomethane	50.0	52.0		ug/L		104	74 - 126	1	20
Chloroethane	50.0	49.3		ug/L		99	60 - 138	1	20
Chloroform	50.0	48.0		ug/L		96	79 - 124	3	20
Chloromethane	50.0	45.3		ug/L		91	50 - 139	1	20
cis-1,2-Dichloroethene	50.0	47.8		ug/L		96	78 - 123	1	20
cis-1,3-Dichloropropene	50.0	48.1		ug/L		96	75 - 124	3	20
Dibromomethane	50.0	47.2		ug/L		94	79 - 123	3	20
Dichlorobromomethane	50.0	49.3		ug/L		99	79 - 125	3	20
Dichlorodifluoromethane	50.0	57.6		ug/L		115	32 - 152	3	20
Ethylbenzene	50.0	51.7		ug/L		103	79 - 121	2	20
Ethylene Dibromide	50.0	51.7		ug/L		103	75 - 127	2	20
Hexachlorobutadiene	50.0	51.2		ug/L		102	66 - 134	3	20
Isopropylbenzene	50.0	52.2		ug/L		104	72 - 131	2	20
Methyl tert-butyl ether	50.0	47.0		ug/L		94	71 - 124	0	20
Methylene Chloride	50.0	49.6		ug/L		99	74 - 124	3	20
m-Xylene & p-Xylene	50.0	51.7		ug/L		103	80 - 121	1	20
Naphthalene	50.0	44.3		ug/L		89	61 - 128	3	20
n-Butylbenzene	50.0	44.6		ug/L		89	75 - 128	0	20
N-Propylbenzene	50.0	50.6		ug/L		101	76 - 126	1	20
o-Xylene	50.0	52.0		ug/L		104	78 - 122	1	20
sec-Butylbenzene	50.0	51.1		ug/L		102	77 - 126	0	20
Styrene	50.0	52.2		ug/L		104	78 - 123	1	20
tert-Butylbenzene	50.0	51.3		ug/L		103	78 - 124	1	20
Tetrachloroethene	50.0	55.4		ug/L		111	74 - 129	0	20
Toluene	50.0	50.7		ug/L		101	80 - 121	1	20
trans-1,2-Dichloroethene	50.0	52.9		ug/L		106	75 - 124	2	20
trans-1,3-Dichloropropene	50.0	44.5		ug/L		89	73 - 127	1	20
Trichloroethene	50.0	52.3		ug/L		105	79 - 123	2	20
Trichlorofluoromethane	50.0	51.8		ug/L		104	65 - 141	1	20
Vinyl acetate	100	83.6		ug/L		84	54 - 146	5	20
Vinyl chloride	50.0	49.5		ug/L		99	58 - 137	2	20
Xylenes, Total	100	104		ug/L		104	79 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*85 - 114*
Dibromofluoromethane (Surr)	*100*		*80 - 119*
Toluene-d8 (Surr)	*107*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*

Lab Sample ID: MB 680-642028/9
Matrix: Water
Analysis Batch: 642028

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			11/03/20 14:22	1

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

Lab Sample ID: MB 680-642028/9
Matrix: Water
Analysis Batch: 642028

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			11/03/20 14:22	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			11/03/20 14:22	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			11/03/20 14:22	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			11/03/20 14:22	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/03/20 14:22	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			11/03/20 14:22	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/03/20 14:22	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			11/03/20 14:22	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/03/20 14:22	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			11/03/20 14:22	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			11/03/20 14:22	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			11/03/20 14:22	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			11/03/20 14:22	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			11/03/20 14:22	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			11/03/20 14:22	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			11/03/20 14:22	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			11/03/20 14:22	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			11/03/20 14:22	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			11/03/20 14:22	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			11/03/20 14:22	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			11/03/20 14:22	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/03/20 14:22	1
2-Hexanone	2.0	U	10	2.0	ug/L			11/03/20 14:22	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			11/03/20 14:22	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			11/03/20 14:22	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			11/03/20 14:22	1
Acetone	7.0	U	10	7.0	ug/L			11/03/20 14:22	1
Benzene	0.43	U	1.0	0.43	ug/L			11/03/20 14:22	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			11/03/20 14:22	1
Bromoform	0.43	U	1.0	0.43	ug/L			11/03/20 14:22	1
Bromomethane	2.5	U	5.0	2.5	ug/L			11/03/20 14:22	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			11/03/20 14:22	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			11/03/20 14:22	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			11/03/20 14:22	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			11/03/20 14:22	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			11/03/20 14:22	1
Chloroethane	2.5	U	5.0	2.5	ug/L			11/03/20 14:22	1
Chloroform	0.50	U	1.0	0.50	ug/L			11/03/20 14:22	1
Chloromethane	0.40	U	1.0	0.40	ug/L			11/03/20 14:22	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/03/20 14:22	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			11/03/20 14:22	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			11/03/20 14:22	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			11/03/20 14:22	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			11/03/20 14:22	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			11/03/20 14:22	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			11/03/20 14:22	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			11/03/20 14:22	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			11/03/20 14:22	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			11/03/20 14:22	1

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

Lab Sample ID: MB 680-642028/9
Matrix: Water
Analysis Batch: 642028

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	2.5	U	5.0	2.5	ug/L			11/03/20 14:22	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			11/03/20 14:22	1
Naphthalene	2.5	U	5.0	2.5	ug/L			11/03/20 14:22	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			11/03/20 14:22	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			11/03/20 14:22	1
o-Xylene	0.23	U	1.0	0.23	ug/L			11/03/20 14:22	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			11/03/20 14:22	1
Styrene	0.27	U	1.0	0.27	ug/L			11/03/20 14:22	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			11/03/20 14:22	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			11/03/20 14:22	1
Toluene	0.48	U	1.0	0.48	ug/L			11/03/20 14:22	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/03/20 14:22	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			11/03/20 14:22	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/03/20 14:22	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			11/03/20 14:22	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			11/03/20 14:22	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/03/20 14:22	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			11/03/20 14:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*85 - 114*		*11/03/20 14:22*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*11/03/20 14:22*	*1*
Toluene-d8 (Surr)	*97*		*89 - 112*		*11/03/20 14:22*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*		*11/03/20 14:22*	*1*

Lab Sample ID: LCS 680-642028/4
Matrix: Water
Analysis Batch: 642028

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	51.4		ug/L		103	74 - 131
1,1,2,2-Tetrachloroethane	50.0	46.4		ug/L		93	71 - 121
1,1,2-Trichloroethane	50.0	49.7		ug/L		99	80 - 119
1,1-Dichloroethane	50.0	50.7		ug/L		101	77 - 125
1,1-Dichloroethene	50.0	53.0		ug/L		106	71 - 131
1,1-Dichloropropene	50.0	50.8		ug/L		102	79 - 125
1,2,3-Trichlorobenzene	50.0	51.7		ug/L		103	69 - 129
1,2,3-Trichloropropane	50.0	44.8		ug/L		90	73 - 122
1,2,4-Trichlorobenzene	50.0	54.6		ug/L		109	69 - 130
1,2,4-Trimethylbenzene	50.0	50.6		ug/L		101	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	42.5		ug/L		85	62 - 128
1,2-Dichlorobenzene	50.0	50.6		ug/L		101	80 - 119
1,2-Dichloroethane	50.0	51.3		ug/L		103	73 - 128
1,2-Dichloroethene, Total	100	104		ug/L		104	79 - 121
1,2-Dichloropropane	50.0	50.9		ug/L		102	78 - 122
1,3,5-Trimethylbenzene	50.0	50.2		ug/L		100	75 - 124
1,3-Dichlorobenzene	50.0	49.6		ug/L		99	80 - 119

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

Lab Sample ID: LCS 680-642028/4
Matrix: Water
Analysis Batch: 642028

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	49.0		ug/L		98	80 - 119
1,4-Dichlorobenzene	50.0	50.4		ug/L		101	79 - 118
2,2-Dichloropropane	50.0	53.7		ug/L		107	60 - 139
2-Butanone (MEK)	250	209		ug/L		84	56 - 143
2-Chlorotoluene	50.0	50.8		ug/L		102	79 - 122
2-Hexanone	250	219		ug/L		88	57 - 139
4-Chlorotoluene	50.0	52.6		ug/L		105	78 - 122
4-Isopropyltoluene	50.0	55.2		ug/L		110	77 - 127
4-Methyl-2-pentanone (MIBK)	250	216		ug/L		86	67 - 130
Acetone	250	232		ug/L		93	39 - 160
Benzene	50.0	51.0		ug/L		102	79 - 120
Bromobenzene	50.0	50.0		ug/L		100	80 - 120
Bromoform	50.0	47.1		ug/L		94	66 - 130
Bromomethane	50.0	32.5		ug/L		65	53 - 141
Carbon disulfide	50.0	58.8		ug/L		118	64 - 133
Carbon tetrachloride	50.0	50.9		ug/L		102	72 - 136
Chlorobenzene	50.0	48.8		ug/L		98	82 - 118
Chlorobromomethane	50.0	53.9		ug/L		108	78 - 123
Chlorodibromomethane	50.0	49.9		ug/L		100	74 - 126
Chloroethane	50.0	57.6		ug/L		115	60 - 138
Chloroform	50.0	50.9		ug/L		102	79 - 124
Chloromethane	50.0	55.8	M	ug/L		112	50 - 139
cis-1,2-Dichloroethene	50.0	51.7		ug/L		103	78 - 123
cis-1,3-Dichloropropene	50.0	52.2		ug/L		104	75 - 124
Dibromomethane	50.0	52.0		ug/L		104	79 - 123
Dichlorobromomethane	50.0	51.2		ug/L		102	79 - 125
Dichlorodifluoromethane	50.0	53.9		ug/L		108	32 - 152
Ethylbenzene	50.0	49.7		ug/L		99	79 - 121
Ethylene Dibromide	50.0	51.3		ug/L		103	75 - 127
Hexachlorobutadiene	50.0	50.9		ug/L		102	66 - 134
Isopropylbenzene	50.0	49.7		ug/L		99	72 - 131
Methyl tert-butyl ether	50.0	48.7		ug/L		97	71 - 124
Methylene Chloride	50.0	54.7		ug/L		109	74 - 124
m-Xylene & p-Xylene	50.0	50.4		ug/L		101	80 - 121
Naphthalene	50.0	47.1		ug/L		94	61 - 128
n-Butylbenzene	50.0	50.8		ug/L		102	75 - 128
N-Propylbenzene	50.0	53.1		ug/L		106	76 - 126
o-Xylene	50.0	50.5		ug/L		101	78 - 122
sec-Butylbenzene	50.0	48.0		ug/L		96	77 - 126
Styrene	50.0	52.6		ug/L		105	78 - 123
tert-Butylbenzene	50.0	52.9		ug/L		106	78 - 124
Tetrachloroethene	50.0	49.8		ug/L		100	74 - 129
Toluene	50.0	50.8		ug/L		102	80 - 121
trans-1,2-Dichloroethene	50.0	52.6		ug/L		105	75 - 124
trans-1,3-Dichloropropene	50.0	51.6		ug/L		103	73 - 127
Trichloroethene	50.0	50.7		ug/L		101	79 - 123
Trichlorofluoromethane	50.0	52.7		ug/L		105	65 - 141
Vinyl acetate	100	97.5		ug/L		97	54 - 146
Vinyl chloride	50.0	51.6		ug/L		103	58 - 137

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

Lab Sample ID: LCS 680-642028/4
Matrix: Water
Analysis Batch: 642028

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	101		ug/L		101	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*
Dibromofluoromethane (Surr)	*105*		*80 - 119*
Toluene-d8 (Surr)	*101*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*102*		*81 - 118*

Lab Sample ID: LCSD 680-642028/5
Matrix: Water
Analysis Batch: 642028

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	48.5		ug/L		97	78 - 124	2	20
1,1,1-Trichloroethane			50.0	51.8		ug/L		104	74 - 131	1	20
1,1,2,2-Tetrachloroethane			50.0	47.2		ug/L		94	71 - 121	2	20
1,1,2-Trichloroethane			50.0	49.8		ug/L		100	80 - 119	0	20
1,1-Dichloroethane			50.0	52.1		ug/L		104	77 - 125	3	20
1,1-Dichloroethene			50.0	54.5		ug/L		109	71 - 131	3	20
1,1-Dichloropropene			50.0	51.5		ug/L		103	79 - 125	1	20
1,2,3-Trichlorobenzene			50.0	50.7		ug/L		101	69 - 129	2	20
1,2,3-Trichloropropane			50.0	46.1		ug/L		92	73 - 122	3	20
1,2,4-Trichlorobenzene			50.0	53.9		ug/L		108	69 - 130	1	20
1,2,4-Trimethylbenzene			50.0	47.1		ug/L		94	76 - 124	7	20
1,2-Dibromo-3-Chloropropane			50.0	43.5		ug/L		87	62 - 128	2	20
1,2-Dichlorobenzene			50.0	50.4		ug/L		101	80 - 119	0	20
1,2-Dichloroethane			50.0	51.8		ug/L		104	73 - 128	1	20
1,2-Dichloroethene, Total			100	104		ug/L		104	79 - 121	0	20
1,2-Dichloropropane			50.0	51.3		ug/L		103	78 - 122	1	20
1,3,5-Trimethylbenzene			50.0	46.7		ug/L		93	75 - 124	7	20
1,3-Dichlorobenzene			50.0	50.0		ug/L		100	80 - 119	1	20
1,3-Dichloropropane			50.0	50.1		ug/L		100	80 - 119	2	20
1,4-Dichlorobenzene			50.0	49.6		ug/L		99	79 - 118	2	20
2,2-Dichloropropane			50.0	53.6		ug/L		107	60 - 139	0	20
2-Butanone (MEK)			250	213		ug/L		85	56 - 143	2	20
2-Chlorotoluene			50.0	50.4		ug/L		101	79 - 122	1	20
2-Hexanone			250	226		ug/L		90	57 - 139	3	20
4-Chlorotoluene			50.0	51.0		ug/L		102	78 - 122	3	20
4-Isopropyltoluene			50.0	54.9		ug/L		110	77 - 127	0	20
4-Methyl-2-pentanone (MIBK)			250	224		ug/L		90	67 - 130	4	20
Acetone			250	238		ug/L		95	39 - 160	3	20
Benzene			50.0	50.8		ug/L		102	79 - 120	0	20
Bromobenzene			50.0	49.7		ug/L		99	80 - 120	1	20
Bromoform			50.0	47.3		ug/L		95	66 - 130	0	20
Bromomethane			50.0	34.4		ug/L		69	53 - 141	6	20
Carbon disulfide			50.0	61.8		ug/L		124	64 - 133	5	20
Carbon tetrachloride			50.0	50.7		ug/L		101	72 - 136	0	20
Chlorobenzene			50.0	48.6		ug/L		97	82 - 118	1	20

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

Lab Sample ID: LCSD 680-642028/5
Matrix: Water
Analysis Batch: 642028

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	53.4		ug/L		107	78 - 123	1	20
Chlorodibromomethane	50.0	50.1		ug/L		100	74 - 126	0	20
Chloroethane	50.0	57.6		ug/L		115	60 - 138	0	20
Chloroform	50.0	51.3		ug/L		103	79 - 124	1	20
Chloromethane	50.0	56.8	M	ug/L		114	50 - 139	2	20
cis-1,2-Dichloroethene	50.0	51.8		ug/L		104	78 - 123	0	20
cis-1,3-Dichloropropene	50.0	51.9		ug/L		104	75 - 124	1	20
Dibromomethane	50.0	51.8		ug/L		104	79 - 123	1	20
Dichlorobromomethane	50.0	51.6		ug/L		103	79 - 125	1	20
Dichlorodifluoromethane	50.0	50.3		ug/L		101	32 - 152	7	20
Ethylbenzene	50.0	49.7		ug/L		99	79 - 121	0	20
Ethylene Dibromide	50.0	51.3		ug/L		103	75 - 127	0	20
Hexachlorobutadiene	50.0	52.5		ug/L		105	66 - 134	3	20
Isopropylbenzene	50.0	49.7		ug/L		99	72 - 131	0	20
Methyl tert-butyl ether	50.0	49.4		ug/L		99	71 - 124	1	20
Methylene Chloride	50.0	54.3		ug/L		109	74 - 124	1	20
m-Xylene & p-Xylene	50.0	49.8		ug/L		100	80 - 121	1	20
Naphthalene	50.0	47.6		ug/L		95	61 - 128	1	20
n-Butylbenzene	50.0	51.2		ug/L		102	75 - 128	1	20
N-Propylbenzene	50.0	52.4		ug/L		105	76 - 126	1	20
o-Xylene	50.0	50.6		ug/L		101	78 - 122	0	20
sec-Butylbenzene	50.0	47.8		ug/L		96	77 - 126	0	20
Styrene	50.0	52.4		ug/L		105	78 - 123	0	20
tert-Butylbenzene	50.0	51.9		ug/L		104	78 - 124	2	20
Tetrachloroethene	50.0	50.0		ug/L		100	74 - 129	0	20
Toluene	50.0	50.7		ug/L		101	80 - 121	0	20
trans-1,2-Dichloroethene	50.0	52.6		ug/L		105	75 - 124	0	20
trans-1,3-Dichloropropene	50.0	52.4		ug/L		105	73 - 127	2	20
Trichloroethene	50.0	49.9		ug/L		100	79 - 123	2	20
Trichlorofluoromethane	50.0	53.8		ug/L		108	65 - 141	2	20
Vinyl acetate	100	102		ug/L		102	54 - 146	4	20
Vinyl chloride	50.0	52.9		ug/L		106	58 - 137	3	20
Xylenes, Total	100	100		ug/L		100	79 - 121	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*
Dibromofluoromethane (Surr)	*104*		*80 - 119*
Toluene-d8 (Surr)	*101*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*103*		*81 - 118*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-641144/1-A
Matrix: Water
Analysis Batch: 641443

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 641144

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	17	U	50	17	ug/L		10/28/20 11:48	10/29/20 09:22	1
Manganese	1.64	J	10	1.0	ug/L		10/28/20 11:48	10/29/20 09:22	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens - LTM

Job ID: 680-190506-1

Method: 6010C - Metals (ICP)

Lab Sample ID: LCS 680-641144/2-A
Matrix: Water
Analysis Batch: 641443

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 641144

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	5000	5150		ug/L		103	87 - 115
Manganese	400	420		ug/L		105	90 - 114

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-641142/1-A
Matrix: Water
Analysis Batch: 641362

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 641142

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5	U	3.0	1.5	ug/L		10/28/20 11:48	10/29/20 09:00	1

Lab Sample ID: LCS 680-641142/2-A
Matrix: Water
Analysis Batch: 641362

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 641142

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	100	99.9		ug/L		100	84 - 116

QC Association Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens - LTM

Job ID: 680-190506-1

GC/MS VOA

Analysis Batch: 642022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190506-2	TB8-FAL20	Total/NA	Water	8260B	
MB 680-642022/8	Method Blank	Total/NA	Water	8260B	
LCS 680-642022/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-642022/4	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 642028

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190506-1	G6M-03-08X-FAL20	Total/NA	Water	8260B	
MB 680-642028/9	Method Blank	Total/NA	Water	8260B	
LCS 680-642028/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-642028/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Metals

Prep Batch: 641142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190506-1	G6M-03-08X-FAL20	Dissolved	Water	3005A	
MB 680-641142/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-641142/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 641144

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190506-1	G6M-03-08X-FAL20	Dissolved	Water	3005A	
MB 680-641144/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-641144/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 641362

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190506-1	G6M-03-08X-FAL20	Dissolved	Water	6020A	641142
MB 680-641142/1-A	Method Blank	Total Recoverable	Water	6020A	641142
LCS 680-641142/2-A	Lab Control Sample	Total Recoverable	Water	6020A	641142

Analysis Batch: 641443

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190506-1	G6M-03-08X-FAL20	Dissolved	Water	6010C	641144
MB 680-641144/1-A	Method Blank	Total Recoverable	Water	6010C	641144
LCS 680-641144/2-A	Lab Control Sample	Total Recoverable	Water	6010C	641144

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens - LTM

Job ID: 680-190506-1

Client Sample ID: G6M-03-08X-FAL20

Lab Sample ID: 680-190506-1

Date Collected: 10/22/20 15:45

Matrix: Water

Date Received: 10/24/20 09:50

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	642028	11/03/20 17:05	Y1S	TAL SAV
	Instrument ID: CMSU									
Dissolved	Prep	3005A			50 mL	50 mL	641144	10/28/20 11:48	AJR	TAL SAV
Dissolved	Analysis	6010C		1			641443	10/29/20 10:50	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	641142	10/28/20 11:48	AJR	TAL SAV
Dissolved	Analysis	6020A		1			641362	10/29/20 09:52	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: TB8-FAL20

Lab Sample ID: 680-190506-2

Date Collected: 10/22/20 00:00

Matrix: Water

Date Received: 10/24/20 09:50

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	642022	11/03/20 15:32	Y1S	TAL SAV
	Instrument ID: CMSP2									

Laboratory References:

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

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-190506-1
Project/Site: Fort Devens - LTM

Laboratory: Eurofins TestAmerica, Savannah

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

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-22-22

Method Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens - LTM

Job ID: 680-190506-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
6010C	Metals (ICP)	SW846	TAL SAV
6020A	Metals (ICP/MS)	SW846	TAL SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL SAV
5030B	Purge and Trap	SW846	TAL SAV

Protocol References:

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

Laboratory References:

TAL SAV = Eurofins TestAmerica, 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 #

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 2020
Project Number: DEVENS-LTM	Contact:	
WBS Code:	Ship to:	

Comments:
A2320B (A) = Alkalinity
E353.2 (A) = Nitrite Nitrate as N
RSK175 (A) = Dissolved Gases
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9034 (A) = Sulfide

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
5	1x 125mL plastic, Cool < 6degC
7	2x 250mL plastic, ZnAc/NaOH Cool < 6degC
8	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
10	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
29	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC
47	1x 500mL, amber glass, H2SO4, Cool < 6degC

Boston #215

						Analytical Test Method	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 2020						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
1	AOC50-DUP01-FAL20	WG								X	X	X				G6M-95-20X	FD1	18.00	23.00	
2	AOC50-DUP02-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-07-02X	FD1	22.50	27.50	
3	AOC50-DUP03-FAL20	WG								X	X	X				G6M-04-04X	FD1	94.00	104.00	
4	AOC50-DUP04-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-13-02X	FD1	115.00	125.00	
5	G6M-02-01X-FAL20	WG								X	X	X				G6M-02-01X	N1	80.00	95.00	
6	G6M-02-04X-FAL20	WG								X	X	X				G6M-02-04X	N1	90.00	105.00	
7	G6M-02-06X-FAL20	WG								X	X	X				G6M-02-06X	N1	55.00	65.00	
8	G6M-02-07X-FAL20	WG								X	X	X				G6M-02-07X	N1	30.00	40.00	
9	G6M-02-08X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-02-08X	N1	60.00	70.00	
10	G6M-02-11X-FAL20	WG								X	X	X				G6M-02-11X	N1	125.00	135.00	
11	G6M-02-12X-FAL20	WG								X	X	X				G6M-02-12X	N1	125.00	135.00	
12	G6M-02-13X-FAL20	WG								X	X	X				G6M-02-13X	N1	110.00	120.00	
13	G6M-03-07X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-03-07X	N1	80.00	90.00	
14	G6M-03-08X-FAL20	WG	10.22-20	3:45	NB					X	X	X				G6M-03-08X	N1	125.00	140.00	(1545)
15	G6M-03-10X-FAL20	WG								X	X	X				G6M-03-10X	N1	120.00	135.00	
16	G6M-04-01X-FAL20	WG								X	X	X				G6M-04-01X	N1	82.00	92.00	
17	G6M-04-02X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-04-02X	N1	80.00	90.00	
18	G6M-04-03X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-04-03X	MS1	85.00	95.00	
19	G6M-04-03X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-04-03X	N1	85.00	95.00	

680-190506 Chain of Custody

Relinquished by: Diane Clipson
Date 10-23-20
Time 1730
Received by: [signature]
AOC50_sCOC
10/23/20 17:30

Date
Time
Shipping Date:
Received by Laboratory: Trip Blank for VOC's
Condition:
10/23/20 17:00

[signature]
10-24-20 0950
1.8(4°)2 IR

11/4/2020

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-190506-1

Login Number: 190506

List Source: Eurofins TestAmerica, Savannah

List Number: 1

Creator: Banda, Christy S

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

Laboratory Job ID: 680-191150-2
Client Project/Site: Fort Devens

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

Attn: Nathan R Mullens

Kathryn Smith

Authorized for release by:
11/20/2020 5:16:04 PM

Kathryn Smith, Client Service Manager
(912)250-0275
Kathy.Smith@Eurofinset.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
J	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
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)

Glossary (Continued)

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

Job ID: 680-191150-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
680-191150-1	G6M-18-01-FAL20	Water	11/05/20 10:35	11/06/20 09:50	
680-191150-2	AOC50-RB1-FAL20	Water	11/05/20 11:20	11/06/20 09:50	
680-191150-3	G6M-06-01X-FAL20	Water	11/05/20 11:15	11/06/20 09:50	
680-191150-8	AOC50-TB8-FAL20	Water	11/05/20 00:00	11/06/20 09:50	

Job ID: 680-191150-2

Laboratory: Eurofins TestAmerica, Savannah

Narrative

CASE NARRATIVE
Client: Seres Engineering & Services LLC

Project: Fort Devens

Report Number: 680-191150-2

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

RECEIPT
The samples were received on 11/06/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 4.2º C.

VOLATILE ORGANIC COMPOUNDS (GC/MS)
Samples G6M-18-01-FAL20 (680-191150-1), AOC50-RB1-FAL20 (680-191150-2), G6M-06-01X-FAL20 (680-191150-3) and AOC50-TB8-FAL20 (680-191150-8) were analyzed for Volatile Organic Compounds (GC/MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 11/16/2020 and 11/18/2020.

The laboratory control sample (LCS) for analytical batch 680-644134 recovered outside control limits for the following analytes: Styrene. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Internal standard (ISTD) response for the following sample was outside control limits: G6M-06-01X-FAL20 (680-191150-3). The sample(s) was re-extracted and/or re-analyzed and ISTD response was outside control limits.

Surrogate recovery for the following sample was outside control limits: G6M-06-01X-FAL20 (680-191150-3). Re-extraction and/or re-analysis was performed and surrogate recovery was outside control limits.

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

DISSOLVED GASES
Sample G6M-18-01-FAL20 (680-191150-1) was analyzed for dissolved gases in accordance with RSK-175. The samples were analyzed on 11/10/2020.

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

METALS (ICP) - DISSOLVED
Samples G6M-18-01-FAL20 (680-191150-1), AOC50-RB1-FAL20 (680-191150-2) and G6M-06-01X-FAL20 (680-191150-3) were analyzed for Metals (ICP) - Dissolved in accordance with EPA SW-846 Method 6010C. The samples were prepared on 11/08/2020 and analyzed on 11/11/2020.

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

METALS (ICPMS) - DISSOLVED
Samples G6M-18-01-FAL20 (680-191150-1), AOC50-RB1-FAL20 (680-191150-2) and G6M-06-01X-FAL20 (680-191150-3) were analyzed for Metals (ICPMS) - Dissolved in accordance with EPA SW-846 Method 6020A. The samples were prepared on 11/08/2020 and analyzed on 11/09/2020.

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

Job ID: 680-191150-2 (Continued)

Laboratory: Eurofins TestAmerica, Savannah (Continued)

ALKALINITY
Sample G6M-18-01-FAL20 (680-191150-1) was analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 11/16/2020.

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

NITRATE-NITRITE AS NITROGEN
Sample G6M-18-01-FAL20 (680-191150-1) was analyzed for nitrate-nitrite as nitrogen in accordance with EPA Method 353.2. The samples were analyzed on 11/17/2020.

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

SULFIDE
Sample G6M-18-01-FAL20 (680-191150-1) was analyzed for sulfide in accordance with EPA SW846 Method 9034. The samples were analyzed on 11/09/2020.

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

ANIONS BY ION CHROMATOGRAPHY (28 DAY)
Sample G6M-18-01-FAL20 (680-191150-1) was analyzed for Anions by Ion Chromatography (28 Day) in accordance with SW 846 9056A. The samples were analyzed on 11/13/2020.

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

TOTAL ORGANIC CARBON
Sample G6M-18-01-FAL20 (680-191150-1) was analyzed for total organic carbon in accordance with EPA SW-846 Method 9060A. The samples were analyzed on 11/18/2020.

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

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-191150-2

Client Sample ID: G6M-18-01-FAL20
Date Collected: 11/05/20 10:35
Date Received: 11/06/20 09:50

Lab Sample ID: 680-191150-1
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			11/16/20 21:53	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			11/16/20 21:53	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			11/16/20 21:53	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			11/16/20 21:53	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			11/16/20 21:53	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/16/20 21:53	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			11/16/20 21:53	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/16/20 21:53	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			11/16/20 21:53	1
1,2,4-Trichlorobenzene	2.5	U Q	5.0	2.5	ug/L			11/16/20 21:53	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			11/16/20 21:53	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			11/16/20 21:53	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			11/16/20 21:53	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			11/16/20 21:53	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			11/16/20 21:53	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			11/16/20 21:53	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			11/16/20 21:53	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			11/16/20 21:53	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			11/16/20 21:53	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			11/16/20 21:53	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			11/16/20 21:53	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			11/16/20 21:53	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/16/20 21:53	1
2-Hexanone	2.0	U	10	2.0	ug/L			11/16/20 21:53	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			11/16/20 21:53	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			11/16/20 21:53	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			11/16/20 21:53	1
Acetone	7.0	U	10	7.0	ug/L			11/16/20 21:53	1
Benzene	0.43	U	1.0	0.43	ug/L			11/16/20 21:53	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			11/16/20 21:53	1
Bromoform	0.43	U	1.0	0.43	ug/L			11/16/20 21:53	1
Bromomethane	2.5	U	5.0	2.5	ug/L			11/16/20 21:53	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			11/16/20 21:53	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			11/16/20 21:53	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			11/16/20 21:53	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			11/16/20 21:53	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			11/16/20 21:53	1
Chloroethane	2.5	U	5.0	2.5	ug/L			11/16/20 21:53	1
Chloroform	0.50	U	1.0	0.50	ug/L			11/16/20 21:53	1
Chloromethane	0.40	U	1.0	0.40	ug/L			11/16/20 21:53	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/16/20 21:53	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			11/16/20 21:53	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			11/16/20 21:53	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			11/16/20 21:53	1
Dichlorodifluoromethane	0.60	U Q	1.0	0.60	ug/L			11/16/20 21:53	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			11/16/20 21:53	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			11/16/20 21:53	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			11/16/20 21:53	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			11/16/20 21:53	1

Client Sample ID: G6M-18-01-FAL20
Date Collected: 11/05/20 10:35
Date Received: 11/06/20 09:50

Lab Sample ID: 680-191150-1
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			11/16/20 21:53	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			11/16/20 21:53	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			11/16/20 21:53	1
Naphthalene	2.5	U	5.0	2.5	ug/L			11/16/20 21:53	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			11/16/20 21:53	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			11/16/20 21:53	1
o-Xylene	0.23	U	1.0	0.23	ug/L			11/16/20 21:53	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			11/16/20 21:53	1
Styrene	0.27	U Q	1.0	0.27	ug/L			11/16/20 21:53	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			11/16/20 21:53	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			11/16/20 21:53	1
Toluene	0.48	U	1.0	0.48	ug/L			11/16/20 21:53	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/16/20 21:53	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			11/16/20 21:53	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/16/20 21:53	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			11/16/20 21:53	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			11/16/20 21:53	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/16/20 21:53	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			11/16/20 21:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*85 - 114*		*11/16/20 21:53*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*11/16/20 21:53*	*1*
Toluene-d8 (Surr)	*97*		*89 - 112*		*11/16/20 21:53*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*		*11/16/20 21:53*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	0.55	U	1.1	0.55	ug/L			11/10/20 19:00	1
Ethylene	0.50	U	1.0	0.50	ug/L			11/10/20 19:00	1
Methane	**0.40**	**J**	0.58	0.29	ug/L			11/10/20 19:00	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**6.1**		1.0	0.40	mg/L			11/13/20 23:43	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**22**	**J**	50	17	ug/L		11/08/20 11:47	11/11/20 09:13	1
Manganese	**4.7**	**J**	10	1.0	ug/L		11/08/20 11:47	11/11/20 09:13	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5	U	3.0	1.5	ug/L		11/08/20 11:47	11/09/20 18:55	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.51**		0.10	0.019	mg/L			11/17/20 19:24	1
Sulfide	0.81	U	0.81	0.81	mg/L			11/09/20 10:10	1
Total Organic Carbon - Duplicates	**0.65**	**J**	1.0	0.35	mg/L			11/18/20 11:37	1
Alkalinity	**22**		10	3.1	mg/L			11/16/20 19:28	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-191150-2

Client Sample ID: AOC50-RB1-FAL20

Date Collected: 11/05/20 11:20
Date Received: 11/06/20 09:50

Lab Sample ID: 680-191150-2

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			11/16/20 22:18	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			11/16/20 22:18	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			11/16/20 22:18	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			11/16/20 22:18	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			11/16/20 22:18	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/16/20 22:18	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			11/16/20 22:18	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/16/20 22:18	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			11/16/20 22:18	1
1,2,4-Trichlorobenzene	2.5	U Q	5.0	2.5	ug/L			11/16/20 22:18	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			11/16/20 22:18	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			11/16/20 22:18	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			11/16/20 22:18	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			11/16/20 22:18	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			11/16/20 22:18	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			11/16/20 22:18	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			11/16/20 22:18	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			11/16/20 22:18	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			11/16/20 22:18	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			11/16/20 22:18	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			11/16/20 22:18	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			11/16/20 22:18	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/16/20 22:18	1
2-Hexanone	2.0	U	10	2.0	ug/L			11/16/20 22:18	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			11/16/20 22:18	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			11/16/20 22:18	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			11/16/20 22:18	1
Acetone	7.0	U	10	7.0	ug/L			11/16/20 22:18	1
Benzene	0.43	U	1.0	0.43	ug/L			11/16/20 22:18	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			11/16/20 22:18	1
Bromoform	0.43	U	1.0	0.43	ug/L			11/16/20 22:18	1
Bromomethane	2.5	U	5.0	2.5	ug/L			11/16/20 22:18	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			11/16/20 22:18	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			11/16/20 22:18	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			11/16/20 22:18	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			11/16/20 22:18	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			11/16/20 22:18	1
Chloroethane	2.5	U	5.0	2.5	ug/L			11/16/20 22:18	1
Chloroform	0.50	U	1.0	0.50	ug/L			11/16/20 22:18	1
Chloromethane	0.40	U	1.0	0.40	ug/L			11/16/20 22:18	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/16/20 22:18	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			11/16/20 22:18	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			11/16/20 22:18	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			11/16/20 22:18	1
Dichlorodifluoromethane	0.60	U Q	1.0	0.60	ug/L			11/16/20 22:18	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			11/16/20 22:18	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			11/16/20 22:18	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			11/16/20 22:18	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			11/16/20 22:18	1

Client Sample ID: AOC50-RB1-FAL20

Lab Sample ID: 680-191150-2

Date Collected: 11/05/20 11:20

Matrix: Water

Date Received: 11/06/20 09:50

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			11/16/20 22:18	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			11/16/20 22:18	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			11/16/20 22:18	1
Naphthalene	2.5	U	5.0	2.5	ug/L			11/16/20 22:18	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			11/16/20 22:18	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			11/16/20 22:18	1
o-Xylene	0.23	U	1.0	0.23	ug/L			11/16/20 22:18	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			11/16/20 22:18	1
Styrene	0.27	U Q	1.0	0.27	ug/L			11/16/20 22:18	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			11/16/20 22:18	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			11/16/20 22:18	1
Toluene	0.48	U	1.0	0.48	ug/L			11/16/20 22:18	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/16/20 22:18	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			11/16/20 22:18	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/16/20 22:18	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			11/16/20 22:18	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			11/16/20 22:18	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/16/20 22:18	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			11/16/20 22:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*85 - 114*		*11/16/20 22:18*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*11/16/20 22:18*	*1*
Toluene-d8 (Surr)	*99*		*89 - 112*		*11/16/20 22:18*	*1*
1,2-Dichloroethane-d4 (Surr)	*97*		*81 - 118*		*11/16/20 22:18*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**93**		50	17	ug/L		11/08/20 11:47	11/11/20 08:55	1
Manganese	1.0	U	10	1.0	ug/L		11/08/20 11:47	11/11/20 08:55	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5	U	3.0	1.5	ug/L		11/08/20 11:47	11/09/20 18:36	1

Client Sample ID: G6M-06-01X-FAL20

Lab Sample ID: 680-191150-3

Date Collected: 11/05/20 11:15

Matrix: Water

Date Received: 11/06/20 09:50

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U Q	1.0	0.37	ug/L			11/18/20 15:07	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			11/18/20 15:07	1
1,1,2,2-Tetrachloroethane	0.62	U Q	1.0	0.62	ug/L			11/18/20 15:07	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			11/18/20 15:07	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			11/18/20 15:07	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/18/20 15:07	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			11/18/20 15:07	1
1,2,3-Trichlorobenzene	2.5	U Q	5.0	2.5	ug/L			11/18/20 15:07	1
1,2,3-Trichloropropane	0.39	U Q	1.0	0.39	ug/L			11/18/20 15:07	1
1,2,4-Trichlorobenzene	2.5	U Q	5.0	2.5	ug/L			11/18/20 15:07	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-191150-2

Client Sample ID: G6M-06-01X-FAL20
Date Collected: 11/05/20 11:15
Date Received: 11/06/20 09:50

Lab Sample ID: 680-191150-3
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	**1.1**	**Q**	1.0	0.47	ug/L			11/18/20 15:07	1
1,2-Dibromo-3-Chloropropane	1.1	U Q	5.0	1.1	ug/L			11/18/20 15:07	1
1,2-Dichlorobenzene	0.37	U Q	1.0	0.37	ug/L			11/18/20 15:07	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			11/18/20 15:07	1
1,2-Dichloroethene, Total	**9.0**		2.0	0.74	ug/L			11/18/20 15:07	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			11/18/20 15:07	1
1,3,5-Trimethylbenzene	**0.36**	**J Q**	1.0	0.31	ug/L			11/18/20 15:07	1
1,3-Dichlorobenzene	0.43	U Q	1.0	0.43	ug/L			11/18/20 15:07	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			11/18/20 15:07	1
1,4-Dichlorobenzene	0.46	U Q	1.0	0.46	ug/L			11/18/20 15:07	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			11/18/20 15:07	1
2-Butanone (MEK)	**70**		10	3.4	ug/L			11/18/20 15:07	1
2-Chlorotoluene	0.27	U Q	1.0	0.27	ug/L			11/18/20 15:07	1
2-Hexanone	2.0	U	10	2.0	ug/L			11/18/20 15:07	1
4-Chlorotoluene	0.45	U Q	1.0	0.45	ug/L			11/18/20 15:07	1
4-Isopropyltoluene	0.48	U Q	1.0	0.48	ug/L			11/18/20 15:07	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			11/18/20 15:07	1
Acetone	**130**		10	7.0	ug/L			11/18/20 15:07	1
Benzene	0.43	U	1.0	0.43	ug/L			11/18/20 15:07	1
Bromobenzene	0.50	U Q	1.0	0.50	ug/L			11/18/20 15:07	1
Bromoform	0.43	U Q	1.0	0.43	ug/L			11/18/20 15:07	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			11/18/20 15:07	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			11/18/20 15:07	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			11/18/20 15:07	1
Chlorobenzene	0.26	U Q	1.0	0.26	ug/L			11/18/20 15:07	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			11/18/20 15:07	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			11/18/20 15:07	1
Chloroethane	2.5	U	5.0	2.5	ug/L			11/18/20 15:07	1
Chloroform	0.50	U	1.0	0.50	ug/L			11/18/20 15:07	1
Chloromethane	0.40	U	1.0	0.40	ug/L			11/18/20 15:07	1
cis-1,2-Dichloroethene	**9.0**		1.0	0.41	ug/L			11/18/20 15:07	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			11/18/20 15:07	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			11/18/20 15:07	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			11/18/20 15:07	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			11/18/20 15:07	1
Ethylbenzene	**0.49**	**J Q**	1.0	0.33	ug/L			11/18/20 15:07	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			11/18/20 15:07	1
Hexachlorobutadiene	2.5	U Q	5.0	2.5	ug/L			11/18/20 15:07	1
Isopropylbenzene	0.35	U Q	1.0	0.35	ug/L			11/18/20 15:07	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			11/18/20 15:07	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			11/18/20 15:07	1
m-Xylene & p-Xylene	**1.5**	**Q**	1.0	0.35	ug/L			11/18/20 15:07	1
Naphthalene	2.5	U Q	5.0	2.5	ug/L			11/18/20 15:07	1
n-Butylbenzene	**2.8**	**Q**	1.0	0.47	ug/L			11/18/20 15:07	1
N-Propylbenzene	0.38	U Q	1.0	0.38	ug/L			11/18/20 15:07	1
o-Xylene	**0.58**	**J Q**	1.0	0.23	ug/L			11/18/20 15:07	1
sec-Butylbenzene	0.42	U Q	1.0	0.42	ug/L			11/18/20 15:07	1
Styrene	0.27	U Q	1.0	0.27	ug/L			11/18/20 15:07	1
tert-Butylbenzene	0.45	U Q	1.0	0.45	ug/L			11/18/20 15:07	1

Client Sample ID: G6M-06-01X-FAL20

Lab Sample ID: 680-191150-3

Date Collected: 11/05/20 11:15

Matrix: Water

Date Received: 11/06/20 09:50

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**0.95**	**J**	1.0	0.74	ug/L			11/18/20 15:07	1
Toluene	0.48	U	1.0	0.48	ug/L			11/18/20 15:07	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/18/20 15:07	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			11/18/20 15:07	1
Trichloroethene	**1.1**		1.0	0.48	ug/L			11/18/20 15:07	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			11/18/20 15:07	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			11/18/20 15:07	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/18/20 15:07	1
Xylenes, Total	**2.1**		2.0	0.23	ug/L			11/18/20 15:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*168*	*Q J*	*85 - 114*		*11/18/20 15:07*	*1*
Dibromofluoromethane (Surr)	*113*		*80 - 119*		*11/18/20 15:07*	*1*
Toluene-d8 (Surr)	*141*	*Q J*	*89 - 112*		*11/18/20 15:07*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*		*11/18/20 15:07*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**140000**		50	17	ug/L		11/08/20 11:47	11/11/20 08:50	1
Manganese	**2600**		10	1.0	ug/L		11/08/20 11:47	11/11/20 08:50	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**160**		3.0	1.5	ug/L		11/08/20 11:47	11/09/20 18:33	1

Client Sample ID: AOC50-TB8-FAL20

Lab Sample ID: 680-191150-8

Date Collected: 11/05/20 00:00

Matrix: Water

Date Received: 11/06/20 09:50

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			11/16/20 21:27	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			11/16/20 21:27	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			11/16/20 21:27	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			11/16/20 21:27	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			11/16/20 21:27	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/16/20 21:27	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			11/16/20 21:27	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/16/20 21:27	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			11/16/20 21:27	1
1,2,4-Trichlorobenzene	2.5	U Q	5.0	2.5	ug/L			11/16/20 21:27	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			11/16/20 21:27	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			11/16/20 21:27	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			11/16/20 21:27	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			11/16/20 21:27	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			11/16/20 21:27	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			11/16/20 21:27	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			11/16/20 21:27	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			11/16/20 21:27	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			11/16/20 21:27	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			11/16/20 21:27	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-191150-2

Client Sample ID: AOC50-TB8-FAL20
Date Collected: 11/05/20 00:00
Date Received: 11/06/20 09:50

Lab Sample ID: 680-191150-8
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			11/16/20 21:27	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			11/16/20 21:27	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/16/20 21:27	1
2-Hexanone	2.0	U	10	2.0	ug/L			11/16/20 21:27	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			11/16/20 21:27	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			11/16/20 21:27	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			11/16/20 21:27	1
Acetone	7.0	U	10	7.0	ug/L			11/16/20 21:27	1
Benzene	0.43	U	1.0	0.43	ug/L			11/16/20 21:27	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			11/16/20 21:27	1
Bromoform	0.43	U	1.0	0.43	ug/L			11/16/20 21:27	1
Bromomethane	2.5	U	5.0	2.5	ug/L			11/16/20 21:27	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			11/16/20 21:27	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			11/16/20 21:27	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			11/16/20 21:27	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			11/16/20 21:27	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			11/16/20 21:27	1
Chloroethane	2.5	U	5.0	2.5	ug/L			11/16/20 21:27	1
Chloroform	0.50	U	1.0	0.50	ug/L			11/16/20 21:27	1
Chloromethane	0.40	U	1.0	0.40	ug/L			11/16/20 21:27	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/16/20 21:27	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			11/16/20 21:27	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			11/16/20 21:27	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			11/16/20 21:27	1
Dichlorodifluoromethane	0.60	U Q	1.0	0.60	ug/L			11/16/20 21:27	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			11/16/20 21:27	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			11/16/20 21:27	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			11/16/20 21:27	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			11/16/20 21:27	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			11/16/20 21:27	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			11/16/20 21:27	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			11/16/20 21:27	1
Naphthalene	2.5	U	5.0	2.5	ug/L			11/16/20 21:27	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			11/16/20 21:27	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			11/16/20 21:27	1
o-Xylene	0.23	U	1.0	0.23	ug/L			11/16/20 21:27	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			11/16/20 21:27	1
Styrene	0.27	U Q	1.0	0.27	ug/L			11/16/20 21:27	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			11/16/20 21:27	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			11/16/20 21:27	1
Toluene	0.48	U	1.0	0.48	ug/L			11/16/20 21:27	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/16/20 21:27	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			11/16/20 21:27	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/16/20 21:27	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			11/16/20 21:27	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			11/16/20 21:27	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/16/20 21:27	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			11/16/20 21:27	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-191150-2

Client Sample ID: AOC50-TB8-FAL20
Date Collected: 11/05/20 00:00
Date Received: 11/06/20 09:50

Lab Sample ID: 680-191150-8
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		85 - 114		11/16/20 21:27	1
Dibromofluoromethane (Surr)	103		80 - 119		11/16/20 21:27	1
Toluene-d8 (Surr)	98		89 - 112		11/16/20 21:27	1
1,2-Dichloroethane-d4 (Surr)	97		81 - 118		11/16/20 21:27	1

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

Lab Sample ID: MB 680-644134/8
Matrix: Water
Analysis Batch: 644134

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			11/16/20 20:44	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			11/16/20 20:44	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			11/16/20 20:44	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			11/16/20 20:44	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			11/16/20 20:44	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/16/20 20:44	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			11/16/20 20:44	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/16/20 20:44	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			11/16/20 20:44	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/16/20 20:44	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			11/16/20 20:44	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			11/16/20 20:44	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			11/16/20 20:44	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			11/16/20 20:44	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			11/16/20 20:44	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			11/16/20 20:44	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			11/16/20 20:44	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			11/16/20 20:44	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			11/16/20 20:44	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			11/16/20 20:44	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			11/16/20 20:44	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			11/16/20 20:44	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/16/20 20:44	1
2-Hexanone	2.0	U	10	2.0	ug/L			11/16/20 20:44	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			11/16/20 20:44	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			11/16/20 20:44	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			11/16/20 20:44	1
Acetone	7.0	U	10	7.0	ug/L			11/16/20 20:44	1
Benzene	0.43	U	1.0	0.43	ug/L			11/16/20 20:44	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			11/16/20 20:44	1
Bromoform	0.43	U	1.0	0.43	ug/L			11/16/20 20:44	1
Bromomethane	2.5	U	5.0	2.5	ug/L			11/16/20 20:44	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			11/16/20 20:44	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			11/16/20 20:44	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			11/16/20 20:44	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			11/16/20 20:44	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			11/16/20 20:44	1
Chloroethane	2.5	U	5.0	2.5	ug/L			11/16/20 20:44	1
Chloroform	0.50	U	1.0	0.50	ug/L			11/16/20 20:44	1
Chloromethane	0.40	U	1.0	0.40	ug/L			11/16/20 20:44	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/16/20 20:44	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			11/16/20 20:44	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			11/16/20 20:44	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			11/16/20 20:44	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			11/16/20 20:44	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			11/16/20 20:44	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			11/16/20 20:44	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			11/16/20 20:44	1

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

Lab Sample ID: MB 680-644134/8
Matrix: Water
Analysis Batch: 644134

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			11/16/20 20:44	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			11/16/20 20:44	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			11/16/20 20:44	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			11/16/20 20:44	1
Naphthalene	2.5	U M	5.0	2.5	ug/L			11/16/20 20:44	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			11/16/20 20:44	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			11/16/20 20:44	1
o-Xylene	0.23	U	1.0	0.23	ug/L			11/16/20 20:44	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			11/16/20 20:44	1
Styrene	0.27	U	1.0	0.27	ug/L			11/16/20 20:44	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			11/16/20 20:44	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			11/16/20 20:44	1
Toluene	0.48	U	1.0	0.48	ug/L			11/16/20 20:44	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/16/20 20:44	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			11/16/20 20:44	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/16/20 20:44	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			11/16/20 20:44	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			11/16/20 20:44	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/16/20 20:44	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			11/16/20 20:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*85 - 114*		*11/16/20 20:44*	*1*
Dibromofluoromethane (Surr)	*109*		*80 - 119*		*11/16/20 20:44*	*1*
Toluene-d8 (Surr)	*101*		*89 - 112*		*11/16/20 20:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*81 - 118*		*11/16/20 20:44*	*1*

Lab Sample ID: LCS 680-644134/3
Matrix: Water
Analysis Batch: 644134

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	53.0		ug/L		106	78 - 124
1,1,1-Trichloroethane	50.0	55.5		ug/L		111	74 - 131
1,1,2,2-Tetrachloroethane	50.0	54.5		ug/L		109	71 - 121
1,1,2-Trichloroethane	50.0	51.1		ug/L		102	80 - 119
1,1-Dichloroethane	50.0	49.4		ug/L		99	77 - 125
1,1-Dichloroethene	50.0	45.9		ug/L		92	71 - 131
1,1-Dichloropropene	50.0	51.8		ug/L		104	79 - 125
1,2,3-Trichlorobenzene	50.0	47.5		ug/L		95	69 - 129
1,2,3-Trichloropropane	50.0	51.2		ug/L		102	73 - 122
1,2,4-Trichlorobenzene	50.0	46.4		ug/L		93	69 - 130
1,2,4-Trimethylbenzene	50.0	57.2		ug/L		114	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	50.4		ug/L		101	62 - 128
1,2-Dichlorobenzene	50.0	56.8		ug/L		114	80 - 119
1,2-Dichloroethane	50.0	50.9		ug/L		102	73 - 128
1,2-Dichloroethene, Total	100	95.3		ug/L		95	79 - 121
1,2-Dichloropropane	50.0	49.3		ug/L		99	78 - 122

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

Lab Sample ID: LCS 680-644134/3
Matrix: Water
Analysis Batch: 644134

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	57.1		ug/L		114	75 - 124
1,3-Dichlorobenzene	50.0	55.7		ug/L		111	80 - 119
1,3-Dichloropropane	50.0	53.5		ug/L		107	80 - 119
1,4-Dichlorobenzene	50.0	55.6		ug/L		111	79 - 118
2,2-Dichloropropane	50.0	58.1		ug/L		116	60 - 139
2-Butanone (MEK)	250	229		ug/L		92	56 - 143
2-Chlorotoluene	50.0	57.0		ug/L		114	79 - 122
2-Hexanone	250	213		ug/L		85	57 - 139
4-Chlorotoluene	50.0	58.0		ug/L		116	78 - 122
4-Isopropyltoluene	50.0	52.4		ug/L		105	77 - 127
4-Methyl-2-pentanone (MIBK)	250	231		ug/L		92	67 - 130
Acetone	250	203		ug/L		81	39 - 160
Benzene	50.0	51.9		ug/L		104	79 - 120
Bromobenzene	50.0	56.3		ug/L		113	80 - 120
Bromoform	50.0	48.4		ug/L		97	66 - 130
Bromomethane	50.0	37.8		ug/L		76	53 - 141
Carbon disulfide	50.0	47.1		ug/L		94	64 - 133
Carbon tetrachloride	50.0	51.2		ug/L		102	72 - 136
Chlorobenzene	50.0	58.0		ug/L		116	82 - 118
Chlorobromomethane	50.0	42.5		ug/L		85	78 - 123
Chlorodibromomethane	50.0	49.2		ug/L		98	74 - 126
Chloroethane	50.0	46.6		ug/L		93	60 - 138
Chloroform	50.0	53.6		ug/L		107	79 - 124
Chloromethane	50.0	45.6		ug/L		91	50 - 139
cis-1,2-Dichloroethene	50.0	48.9		ug/L		98	78 - 123
cis-1,3-Dichloropropene	50.0	50.5		ug/L		101	75 - 124
Dibromomethane	50.0	50.6		ug/L		101	79 - 123
Dichlorobromomethane	50.0	53.0		ug/L		106	79 - 125
Dichlorodifluoromethane	50.0	65.6		ug/L		131	32 - 152
Ethylbenzene	50.0	55.9		ug/L		112	79 - 121
Ethylene Dibromide	50.0	50.5		ug/L		101	75 - 127
Hexachlorobutadiene	50.0	53.6		ug/L		107	66 - 134
Isopropylbenzene	50.0	59.0		ug/L		118	72 - 131
Methyl tert-butyl ether	50.0	51.4		ug/L		103	71 - 124
Methylene Chloride	50.0	53.2		ug/L		106	74 - 124
m-Xylene & p-Xylene	50.0	53.5		ug/L		107	80 - 121
Naphthalene	50.0	49.0		ug/L		98	61 - 128
n-Butylbenzene	50.0	54.2		ug/L		108	75 - 128
N-Propylbenzene	50.0	52.1		ug/L		104	76 - 126
o-Xylene	50.0	58.8		ug/L		118	78 - 122
sec-Butylbenzene	50.0	58.2		ug/L		116	77 - 126
Styrene	50.0	61.8	Q	ug/L		124	78 - 123
tert-Butylbenzene	50.0	59.5		ug/L		119	78 - 124
Tetrachloroethene	50.0	49.7		ug/L		99	74 - 129
Toluene	50.0	51.6		ug/L		103	80 - 121
trans-1,2-Dichloroethene	50.0	46.5		ug/L		93	75 - 124
trans-1,3-Dichloropropene	50.0	53.5		ug/L		107	73 - 127
Trichloroethene	50.0	52.1		ug/L		104	79 - 123
Trichlorofluoromethane	50.0	54.0		ug/L		108	65 - 141

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

Lab Sample ID: LCS 680-644134/3
Matrix: Water
Analysis Batch: 644134

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	110		ug/L		110	54 - 146
Vinyl chloride	50.0	45.1		ug/L		90	58 - 137
Xylenes, Total	100	112		ug/L		112	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*
Dibromofluoromethane (Surr)	*107*		*80 - 119*
Toluene-d8 (Surr)	*104*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*105*		*81 - 118*

Lab Sample ID: LCSD 680-644134/4
Matrix: Water
Analysis Batch: 644134

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	1	20
1,1,1-Trichloroethane	50.0	54.1		ug/L		108	74 - 131	3	20
1,1,2,2-Tetrachloroethane	50.0	54.9		ug/L		110	71 - 121	1	20
1,1,2-Trichloroethane	50.0	51.3		ug/L		103	80 - 119	0	20
1,1-Dichloroethane	50.0	49.1		ug/L		98	77 - 125	1	20
1,1-Dichloroethene	50.0	46.7		ug/L		93	71 - 131	2	20
1,1-Dichloropropene	50.0	51.2		ug/L		102	79 - 125	1	20
1,2,3-Trichlorobenzene	50.0	48.9		ug/L		98	69 - 129	3	20
1,2,3-Trichloropropane	50.0	50.9		ug/L		102	73 - 122	1	20
1,2,4-Trichlorobenzene	50.0	48.0		ug/L		96	69 - 130	3	20
1,2,4-Trimethylbenzene	50.0	55.7		ug/L		111	76 - 124	3	20
1,2-Dibromo-3-Chloropropane	50.0	52.4		ug/L		105	62 - 128	4	20
1,2-Dichlorobenzene	50.0	57.1		ug/L		114	80 - 119	1	20
1,2-Dichloroethane	50.0	50.6		ug/L		101	73 - 128	0	20
1,2-Dichloroethene, Total	100	94.5		ug/L		95	79 - 121	1	20
1,2-Dichloropropane	50.0	49.3		ug/L		99	78 - 122	0	20
1,3,5-Trimethylbenzene	50.0	56.0		ug/L		112	75 - 124	2	20
1,3-Dichlorobenzene	50.0	56.1		ug/L		112	80 - 119	1	20
1,3-Dichloropropane	50.0	53.4		ug/L		107	80 - 119	0	20
1,4-Dichlorobenzene	50.0	56.1		ug/L		112	79 - 118	1	20
2,2-Dichloropropane	50.0	56.6		ug/L		113	60 - 139	3	20
2-Butanone (MEK)	250	234		ug/L		94	56 - 143	2	20
2-Chlorotoluene	50.0	57.3		ug/L		115	79 - 122	1	20
2-Hexanone	250	215		ug/L		86	57 - 139	1	20
4-Chlorotoluene	50.0	57.2		ug/L		114	78 - 122	1	20
4-Isopropyltoluene	50.0	51.9		ug/L		104	77 - 127	1	20
4-Methyl-2-pentanone (MIBK)	250	231		ug/L		93	67 - 130	0	20
Acetone	250	212		ug/L		85	39 - 160	4	20
Benzene	50.0	51.8		ug/L		104	79 - 120	0	20
Bromobenzene	50.0	56.9		ug/L		114	80 - 120	1	20
Bromoform	50.0	49.7		ug/L		99	66 - 130	3	20
Bromomethane	50.0	42.2		ug/L		84	53 - 141	11	20
Carbon disulfide	50.0	46.0		ug/L		92	64 - 133	2	20

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

Lab Sample ID: LCSD 680-644134/4
Matrix: Water
Analysis Batch: 644134

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	50.6		ug/L		101	72 - 136	1	20
Chlorobenzene	50.0	58.1		ug/L		116	82 - 118	0	20
Chlorobromomethane	50.0	49.0		ug/L		98	78 - 123	14	20
Chlorodibromomethane	50.0	49.4		ug/L		99	74 - 126	1	20
Chloroethane	50.0	45.9		ug/L		92	60 - 138	2	20
Chloroform	50.0	53.3		ug/L		107	79 - 124	1	20
Chloromethane	50.0	44.4		ug/L		89	50 - 139	3	20
cis-1,2-Dichloroethene	50.0	47.6		ug/L		95	78 - 123	3	20
cis-1,3-Dichloropropene	50.0	50.7		ug/L		101	75 - 124	0	20
Dibromomethane	50.0	50.8		ug/L		102	79 - 123	0	20
Dichlorobromomethane	50.0	52.5		ug/L		105	79 - 125	1	20
Dichlorodifluoromethane	50.0	64.1		ug/L		128	32 - 152	2	20
Ethylbenzene	50.0	55.1		ug/L		110	79 - 121	1	20
Ethylene Dibromide	50.0	51.3		ug/L		103	75 - 127	2	20
Hexachlorobutadiene	50.0	53.5		ug/L		107	66 - 134	0	20
Isopropylbenzene	50.0	57.6		ug/L		115	72 - 131	2	20
Methyl tert-butyl ether	50.0	51.6		ug/L		103	71 - 124	0	20
Methylene Chloride	50.0	53.3		ug/L		107	74 - 124	0	20
m-Xylene & p-Xylene	50.0	53.6		ug/L		107	80 - 121	0	20
Naphthalene	50.0	50.7		ug/L		101	61 - 128	3	20
n-Butylbenzene	50.0	53.5		ug/L		107	75 - 128	1	20
N-Propylbenzene	50.0	51.0		ug/L		102	76 - 126	2	20
o-Xylene	50.0	59.6		ug/L		119	78 - 122	1	20
sec-Butylbenzene	50.0	56.2		ug/L		112	77 - 126	4	20
Styrene	50.0	61.0		ug/L		122	78 - 123	1	20
tert-Butylbenzene	50.0	58.1		ug/L		116	78 - 124	2	20
Tetrachloroethene	50.0	50.6		ug/L		101	74 - 129	2	20
Toluene	50.0	51.0		ug/L		102	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	53.3		ug/L		107	73 - 127	0	20
Trichloroethene	50.0	52.0		ug/L		104	79 - 123	0	20
Trichlorofluoromethane	50.0	52.7		ug/L		105	65 - 141	3	20
Vinyl acetate	100	110		ug/L		110	54 - 146	0	20
Vinyl chloride	50.0	43.2		ug/L		86	58 - 137	4	20
Xylenes, Total	100	113		ug/L		113	79 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*
Dibromofluoromethane (Surr)	*107*		*80 - 119*
Toluene-d8 (Surr)	*103*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*106*		*81 - 118*

Lab Sample ID: MB 680-644535/8
Matrix: Water
Analysis Batch: 644535

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			11/18/20 14:11	1

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

Lab Sample ID: MB 680-644535/8
Matrix: Water
Analysis Batch: 644535

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			11/18/20 14:11	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			11/18/20 14:11	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			11/18/20 14:11	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			11/18/20 14:11	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/18/20 14:11	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			11/18/20 14:11	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/18/20 14:11	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			11/18/20 14:11	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			11/18/20 14:11	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			11/18/20 14:11	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			11/18/20 14:11	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			11/18/20 14:11	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			11/18/20 14:11	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			11/18/20 14:11	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			11/18/20 14:11	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			11/18/20 14:11	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			11/18/20 14:11	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			11/18/20 14:11	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			11/18/20 14:11	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			11/18/20 14:11	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			11/18/20 14:11	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			11/18/20 14:11	1
2-Hexanone	2.0	U	10	2.0	ug/L			11/18/20 14:11	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			11/18/20 14:11	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			11/18/20 14:11	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			11/18/20 14:11	1
Acetone	7.0	U	10	7.0	ug/L			11/18/20 14:11	1
Benzene	0.43	U	1.0	0.43	ug/L			11/18/20 14:11	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			11/18/20 14:11	1
Bromoform	0.43	U	1.0	0.43	ug/L			11/18/20 14:11	1
Bromomethane	2.5	U	5.0	2.5	ug/L			11/18/20 14:11	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			11/18/20 14:11	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			11/18/20 14:11	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			11/18/20 14:11	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			11/18/20 14:11	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			11/18/20 14:11	1
Chloroethane	2.5	U	5.0	2.5	ug/L			11/18/20 14:11	1
Chloroform	0.50	U	1.0	0.50	ug/L			11/18/20 14:11	1
Chloromethane	0.40	U	1.0	0.40	ug/L			11/18/20 14:11	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/18/20 14:11	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			11/18/20 14:11	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			11/18/20 14:11	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			11/18/20 14:11	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			11/18/20 14:11	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			11/18/20 14:11	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			11/18/20 14:11	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			11/18/20 14:11	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			11/18/20 14:11	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			11/18/20 14:11	1

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

Lab Sample ID: MB 680-644535/8
Matrix: Water
Analysis Batch: 644535

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	2.5	U	5.0	2.5	ug/L			11/18/20 14:11	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			11/18/20 14:11	1
Naphthalene	2.5	U	5.0	2.5	ug/L			11/18/20 14:11	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			11/18/20 14:11	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			11/18/20 14:11	1
o-Xylene	0.23	U	1.0	0.23	ug/L			11/18/20 14:11	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			11/18/20 14:11	1
Styrene	0.27	U	1.0	0.27	ug/L			11/18/20 14:11	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			11/18/20 14:11	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			11/18/20 14:11	1
Toluene	0.48	U	1.0	0.48	ug/L			11/18/20 14:11	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/18/20 14:11	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			11/18/20 14:11	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/18/20 14:11	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			11/18/20 14:11	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			11/18/20 14:11	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/18/20 14:11	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			11/18/20 14:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*		*11/18/20 14:11*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*11/18/20 14:11*	*1*
Toluene-d8 (Surr)	*104*		*89 - 112*		*11/18/20 14:11*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*		*11/18/20 14:11*	*1*

Lab Sample ID: LCS 680-644535/3
Matrix: Water
Analysis Batch: 644535

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	55.6		ug/L		111	78 - 124
1,1,1-Trichloroethane	50.0	47.1		ug/L		94	74 - 131
1,1,2,2-Tetrachloroethane	50.0	49.3		ug/L		99	71 - 121
1,1,2-Trichloroethane	50.0	50.3		ug/L		101	80 - 119
1,1-Dichloroethane	50.0	46.8		ug/L		94	77 - 125
1,1-Dichloroethene	50.0	50.1		ug/L		100	71 - 131
1,1-Dichloropropene	50.0	50.2		ug/L		100	79 - 125
1,2,3-Trichlorobenzene	50.0	47.1		ug/L		94	69 - 129
1,2,3-Trichloropropane	50.0	51.3		ug/L		103	73 - 122
1,2,4-Trichlorobenzene	50.0	48.3		ug/L		97	69 - 130
1,2,4-Trimethylbenzene	50.0	48.5		ug/L		97	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	48.3		ug/L		97	62 - 128
1,2-Dichlorobenzene	50.0	49.6		ug/L		99	80 - 119
1,2-Dichloroethane	50.0	45.8		ug/L		92	73 - 128
1,2-Dichloroethene, Total	100	94.9		ug/L		95	79 - 121
1,2-Dichloropropane	50.0	48.8		ug/L		98	78 - 122
1,3,5-Trimethylbenzene	50.0	48.6		ug/L		97	75 - 124
1,3-Dichlorobenzene	50.0	50.1		ug/L		100	80 - 119

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

Lab Sample ID: LCS 680-644535/3
Matrix: Water
Analysis Batch: 644535

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	49.5		ug/L		99	80 - 119
1,4-Dichlorobenzene	50.0	49.2		ug/L		98	79 - 118
2,2-Dichloropropane	50.0	49.0		ug/L		98	60 - 139
2-Butanone (MEK)	250	237		ug/L		95	56 - 143
2-Chlorotoluene	50.0	48.9		ug/L		98	79 - 122
2-Hexanone	250	205		ug/L		82	57 - 139
4-Chlorotoluene	50.0	49.9		ug/L		100	78 - 122
4-Isopropyltoluene	50.0	46.7		ug/L		93	77 - 127
4-Methyl-2-pentanone (MIBK)	250	206		ug/L		82	67 - 130
Acetone	250	206		ug/L		83	39 - 160
Benzene	50.0	48.9		ug/L		98	79 - 120
Bromobenzene	50.0	53.9		ug/L		108	80 - 120
Bromoform	50.0	54.6		ug/L		109	66 - 130
Bromomethane	50.0	27.7		ug/L		55	53 - 141
Carbon disulfide	50.0	49.5		ug/L		99	64 - 133
Carbon tetrachloride	50.0	49.5		ug/L		99	72 - 136
Chlorobenzene	50.0	52.7		ug/L		105	82 - 118
Chlorobromomethane	50.0	51.1		ug/L		102	78 - 123
Chlorodibromomethane	50.0	51.4		ug/L		103	74 - 126
Chloroethane	50.0	45.1		ug/L		90	60 - 138
Chloroform	50.0	46.5		ug/L		93	79 - 124
Chloromethane	50.0	43.8		ug/L		88	50 - 139
cis-1,2-Dichloroethene	50.0	45.1		ug/L		90	78 - 123
cis-1,3-Dichloropropene	50.0	50.1		ug/L		100	75 - 124
Dibromomethane	50.0	47.1		ug/L		94	79 - 123
Dichlorobromomethane	50.0	46.9		ug/L		94	79 - 125
Dichlorodifluoromethane	50.0	50.6		ug/L		101	32 - 152
Ethylbenzene	50.0	49.3		ug/L		99	79 - 121
Ethylene Dibromide	50.0	52.0		ug/L		104	75 - 127
Hexachlorobutadiene	50.0	51.7		ug/L		103	66 - 134
Isopropylbenzene	50.0	50.0		ug/L		100	72 - 131
Methyl tert-butyl ether	50.0	46.9		ug/L		94	71 - 124
Methylene Chloride	50.0	48.1		ug/L		96	74 - 124
m-Xylene & p-Xylene	50.0	50.6		ug/L		101	80 - 121
Naphthalene	50.0	45.3		ug/L		91	61 - 128
n-Butylbenzene	50.0	43.1		ug/L		86	75 - 128
N-Propylbenzene	50.0	49.2		ug/L		98	76 - 126
o-Xylene	50.0	50.5		ug/L		101	78 - 122
sec-Butylbenzene	50.0	49.2		ug/L		98	77 - 126
Styrene	50.0	53.1		ug/L		106	78 - 123
tert-Butylbenzene	50.0	50.8		ug/L		102	78 - 124
Tetrachloroethene	50.0	55.1		ug/L		110	74 - 129
Toluene	50.0	50.3		ug/L		101	80 - 121
trans-1,2-Dichloroethene	50.0	49.9		ug/L		100	75 - 124
trans-1,3-Dichloropropene	50.0	48.5		ug/L		97	73 - 127
Trichloroethene	50.0	53.7		ug/L		107	79 - 123
Trichlorofluoromethane	50.0	46.6		ug/L		93	65 - 141
Vinyl acetate	100	94.7		ug/L		95	54 - 146
Vinyl chloride	50.0	47.9		ug/L		96	58 - 137

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

Lab Sample ID: LCS 680-644535/3
Matrix: Water
Analysis Batch: 644535

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	101		ug/L		101	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*
Dibromofluoromethane (Surr)	*99*		*80 - 119*
Toluene-d8 (Surr)	*103*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*91*		*81 - 118*

Lab Sample ID: LCSD 680-644535/4
Matrix: Water
Analysis Batch: 644535

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	55.5		ug/L		111	78 - 124	0	20
1,1,1-Trichloroethane			50.0	45.5		ug/L		91	74 - 131	3	20
1,1,2,2-Tetrachloroethane			50.0	49.0		ug/L		98	71 - 121	1	20
1,1,2-Trichloroethane			50.0	49.6		ug/L		99	80 - 119	1	20
1,1-Dichloroethane			50.0	45.5		ug/L		91	77 - 125	3	20
1,1-Dichloroethene			50.0	48.1		ug/L		96	71 - 131	4	20
1,1-Dichloropropene			50.0	48.8		ug/L		98	79 - 125	3	20
1,2,3-Trichlorobenzene			50.0	46.6		ug/L		93	69 - 129	1	20
1,2,3-Trichloropropane			50.0	53.1		ug/L		106	73 - 122	3	20
1,2,4-Trichlorobenzene			50.0	47.3		ug/L		95	69 - 130	2	20
1,2,4-Trimethylbenzene			50.0	48.8		ug/L		98	76 - 124	1	20
1,2-Dibromo-3-Chloropropane			50.0	47.6		ug/L		95	62 - 128	1	20
1,2-Dichlorobenzene			50.0	48.0		ug/L		96	80 - 119	3	20
1,2-Dichloroethane			50.0	45.1		ug/L		90	73 - 128	2	20
1,2-Dichloroethene, Total			100	92.3		ug/L		92	79 - 121	3	20
1,2-Dichloropropane			50.0	47.5		ug/L		95	78 - 122	3	20
1,3,5-Trimethylbenzene			50.0	48.0		ug/L		96	75 - 124	1	20
1,3-Dichlorobenzene			50.0	48.0		ug/L		96	80 - 119	4	20
1,3-Dichloropropane			50.0	48.8		ug/L		98	80 - 119	1	20
1,4-Dichlorobenzene			50.0	48.1		ug/L		96	79 - 118	2	20
2,2-Dichloropropane			50.0	47.0		ug/L		94	60 - 139	4	20
2-Butanone (MEK)			250	233		ug/L		93	56 - 143	1	20
2-Chlorotoluene			50.0	49.0		ug/L		98	79 - 122	0	20
2-Hexanone			250	203		ug/L		81	57 - 139	1	20
4-Chlorotoluene			50.0	49.2		ug/L		98	78 - 122	2	20
4-Isopropyltoluene			50.0	45.1		ug/L		90	77 - 127	3	20
4-Methyl-2-pentanone (MIBK)			250	206		ug/L		82	67 - 130	0	20
Acetone			250	206		ug/L		82	39 - 160	0	20
Benzene			50.0	47.7		ug/L		95	79 - 120	2	20
Bromobenzene			50.0	54.4		ug/L		109	80 - 120	1	20
Bromoform			50.0	55.2		ug/L		110	66 - 130	1	20
Bromomethane			50.0	29.7		ug/L		59	53 - 141	7	20
Carbon disulfide			50.0	47.6		ug/L		95	64 - 133	4	20
Carbon tetrachloride			50.0	48.3		ug/L		97	72 - 136	2	20
Chlorobenzene			50.0	52.7		ug/L		105	82 - 118	0	20

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

Lab Sample ID: LCSD 680-644535/4
Matrix: Water
Analysis Batch: 644535

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	50.0		ug/L		100	78 - 123	2	20
Chlorodibromomethane			50.0	50.3		ug/L		101	74 - 126	2	20
Chloroethane			50.0	43.3		ug/L		87	60 - 138	4	20
Chloroform			50.0	45.4		ug/L		91	79 - 124	2	20
Chloromethane			50.0	42.3		ug/L		85	50 - 139	3	20
cis-1,2-Dichloroethene			50.0	43.6		ug/L		87	78 - 123	3	20
cis-1,3-Dichloropropene			50.0	49.3		ug/L		99	75 - 124	2	20
Dibromomethane			50.0	46.1		ug/L		92	79 - 123	2	20
Dichlorobromomethane			50.0	46.1		ug/L		92	79 - 125	2	20
Dichlorodifluoromethane			50.0	50.5		ug/L		101	32 - 152	0	20
Ethylbenzene			50.0	48.9		ug/L		98	79 - 121	1	20
Ethylene Dibromide			50.0	51.7		ug/L		103	75 - 127	1	20
Hexachlorobutadiene			50.0	50.3		ug/L		101	66 - 134	3	20
Isopropylbenzene			50.0	50.4		ug/L		101	72 - 131	1	20
Methyl tert-butyl ether			50.0	46.5		ug/L		93	71 - 124	1	20
Methylene Chloride			50.0	47.4		ug/L		95	74 - 124	1	20
m-Xylene & p-Xylene			50.0	50.8		ug/L		102	80 - 121	0	20
Naphthalene			50.0	45.0		ug/L		90	61 - 128	1	20
n-Butylbenzene			50.0	42.0		ug/L		84	75 - 128	3	20
N-Propylbenzene			50.0	48.8		ug/L		98	76 - 126	1	20
o-Xylene			50.0	50.4		ug/L		101	78 - 122	0	20
sec-Butylbenzene			50.0	48.7		ug/L		97	77 - 126	1	20
Styrene			50.0	53.1		ug/L		106	78 - 123	0	20
tert-Butylbenzene			50.0	50.7		ug/L		101	78 - 124	0	20
Tetrachloroethene			50.0	54.2		ug/L		108	74 - 129	2	20
Toluene			50.0	49.7		ug/L		99	80 - 121	1	20
trans-1,2-Dichloroethene			50.0	48.8		ug/L		98	75 - 124	2	20
trans-1,3-Dichloropropene			50.0	46.9		ug/L		94	73 - 127	3	20
Trichloroethene			50.0	52.4		ug/L		105	79 - 123	2	20
Trichlorofluoromethane			50.0	45.4		ug/L		91	65 - 141	3	20
Vinyl acetate			100	93.2		ug/L		93	54 - 146	2	20
Vinyl chloride			50.0	46.2		ug/L		92	58 - 137	4	20
Xylenes, Total			100	101		ug/L		101	79 - 121	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*85 - 114*
Dibromofluoromethane (Surr)	*96*		*80 - 119*
Toluene-d8 (Surr)	*104*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*91*		*81 - 118*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-643326/8
Matrix: Water
Analysis Batch: 643326

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	0.55	U	1.1	0.55	ug/L			11/10/20 16:49	1
Ethylene	0.50	U	1.0	0.50	ug/L			11/10/20 16:49	1

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

Lab Sample ID: MB 680-643326/8
Matrix: Water
Analysis Batch: 643326

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	0.29	U	0.58	0.29	ug/L			11/10/20 16:49	1
Methane (TCD)	39	U	390	39	ug/L			11/10/20 16:49	1

Lab Sample ID: LCS 680-643326/3
Matrix: Water
Analysis Batch: 643326

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	2130		ug/L		111	73 - 125

Lab Sample ID: LCS 680-643326/6
Matrix: Water
Analysis Batch: 643326

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	288	288		ug/L		100	74 - 131
Ethylene	269	259		ug/L		96	72 - 133
Methane	154	149		ug/L		97	73 - 125

Lab Sample ID: LCSD 680-643326/4
Matrix: Water
Analysis Batch: 643326

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	2280		ug/L		118	73 - 125	7	30

Lab Sample ID: LCSD 680-643326/7
Matrix: Water
Analysis Batch: 643326

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	288	282		ug/L		98	74 - 131	2	30
Ethylene	269	252		ug/L		94	72 - 133	2	30
Methane	154	147		ug/L		95	73 - 125	2	30

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-643909/33
Matrix: Water
Analysis Batch: 643909

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.40	U	1.0	0.40	mg/L			11/13/20 22:13	1

Lab Sample ID: LCS 680-643909/34
Matrix: Water
Analysis Batch: 643909

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	10.3		mg/L		103	87 - 112

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

Lab Sample ID: LCSD 680-643909/35
Matrix: Water
Analysis Batch: 643909

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	10.4		mg/L		104	87 - 112	1	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-642976/1-A
Matrix: Water
Analysis Batch: 643527

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 642976

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	17	U	50	17	ug/L		11/08/20 11:47	11/11/20 08:08	1
Manganese	1.0	U	10	1.0	ug/L		11/08/20 11:47	11/11/20 08:08	1

Lab Sample ID: LCS 680-642976/2-A
Matrix: Water
Analysis Batch: 643527

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 642976

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Iron			5000	4940		ug/L		99	87 - 115		
Manganese			400	399		ug/L		100	90 - 114		

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-642975/1-A
Matrix: Water
Analysis Batch: 643244

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 642975

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5	U	3.0	1.5	ug/L		11/08/20 11:47	11/09/20 18:11	1

Lab Sample ID: LCS 680-642975/2-A
Matrix: Water
Analysis Batch: 643244

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 642975

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic			100	90.8		ug/L		91	84 - 116		

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 280-517095/60
Matrix: Water
Analysis Batch: 517095

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.019	U	0.10	0.019	mg/L			11/17/20 18:22	1

Lab Sample ID: LCS 280-517095/59
Matrix: Water
Analysis Batch: 517095

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	4.96		mg/L		99	90 - 110		

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 680-643033/1
Matrix: Water
Analysis Batch: 643033

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	1.0	U	1.0	1.0	mg/L			11/09/20 10:10	1

Lab Sample ID: LCS 680-643033/2
Matrix: Water
Analysis Batch: 643033

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	9.00		mg/L		90	75 - 125

Lab Sample ID: LCSD 680-643033/3
Matrix: Water
Analysis Batch: 643033

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	9.50		mg/L		95	75 - 125	5	30

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 280-517197/34
Matrix: Water
Analysis Batch: 517197

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	0.35	U	1.0	0.35	mg/L			11/18/20 04:29	1

Lab Sample ID: MB 280-517197/4
Matrix: Water
Analysis Batch: 517197

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	0.35	U	1.0	0.35	mg/L			11/17/20 19:56	1

Lab Sample ID: LCS 280-517197/3
Matrix: Water
Analysis Batch: 517197

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 - Duplicates	25.0	22.9		mg/L		92	88 - 112

Lab Sample ID: LCS 280-517197/33
Matrix: Water
Analysis Batch: 517197

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 - Duplicates	25.0	24.4		mg/L		97	88 - 112

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-516966/58
Matrix: Water
Analysis Batch: 516966

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	3.1	U	10	3.1	mg/L			11/16/20 19:13	1

Lab Sample ID: LCS 280-516966/57
Matrix: Water
Analysis Batch: 516966

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Alkalinity			200	207		mg/L		104	89 - 109		

Lab Sample ID: LCSD 280-516966/5
Matrix: Water
Analysis Batch: 516966

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			200	210		mg/L		105	89 - 109	9	10

QC Association Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-191150-2

GC/MS VOA

Analysis Batch: 644134

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-191150-1	G6M-18-01-FAL20	Total/NA	Water	8260B	
680-191150-2	AOC50-RB1-FAL20	Total/NA	Water	8260B	
680-191150-8	AOC50-TB8-FAL20	Total/NA	Water	8260B	
MB 680-644134/8	Method Blank	Total/NA	Water	8260B	
LCS 680-644134/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-644134/4	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 644535

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-191150-3	G6M-06-01X-FAL20	Total/NA	Water	8260B	
MB 680-644535/8	Method Blank	Total/NA	Water	8260B	
LCS 680-644535/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-644535/4	Lab Control Sample Dup	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 643326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-191150-1	G6M-18-01-FAL20	Total/NA	Water	RSK-175	
MB 680-643326/8	Method Blank	Total/NA	Water	RSK-175	
LCS 680-643326/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-643326/6	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-643326/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-643326/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	

HPLC/IC

Analysis Batch: 643909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-191150-1	G6M-18-01-FAL20	Total/NA	Water	9056A	
MB 680-643909/33	Method Blank	Total/NA	Water	9056A	
LCS 680-643909/34	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-643909/35	Lab Control Sample Dup	Total/NA	Water	9056A	

Metals

Prep Batch: 642975

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-191150-1	G6M-18-01-FAL20	Dissolved	Water	3005A	
680-191150-2	AOC50-RB1-FAL20	Dissolved	Water	3005A	
680-191150-3	G6M-06-01X-FAL20	Dissolved	Water	3005A	
MB 680-642975/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-642975/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 642976

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-191150-1	G6M-18-01-FAL20	Dissolved	Water	3005A	
680-191150-2	AOC50-RB1-FAL20	Dissolved	Water	3005A	
680-191150-3	G6M-06-01X-FAL20	Dissolved	Water	3005A	
MB 680-642976/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-642976/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

QC Association Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-191150-2

Metals

Analysis Batch: 643244

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-191150-1	G6M-18-01-FAL20	Dissolved	Water	6020A	642975
680-191150-2	AOC50-RB1-FAL20	Dissolved	Water	6020A	642975
680-191150-3	G6M-06-01X-FAL20	Dissolved	Water	6020A	642975
MB 680-642975/1-A	Method Blank	Total Recoverable	Water	6020A	642975
LCS 680-642975/2-A	Lab Control Sample	Total Recoverable	Water	6020A	642975

Analysis Batch: 643527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-191150-1	G6M-18-01-FAL20	Dissolved	Water	6010C	642976
680-191150-2	AOC50-RB1-FAL20	Dissolved	Water	6010C	642976
680-191150-3	G6M-06-01X-FAL20	Dissolved	Water	6010C	642976
MB 680-642976/1-A	Method Blank	Total Recoverable	Water	6010C	642976
LCS 680-642976/2-A	Lab Control Sample	Total Recoverable	Water	6010C	642976

General Chemistry

Analysis Batch: 516966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-191150-1	G6M-18-01-FAL20	Total/NA	Water	SM 2320B	
MB 280-516966/58	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-516966/57	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 280-516966/5	Lab Control Sample Dup	Total/NA	Water	SM 2320B	

Analysis Batch: 517095

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-191150-1	G6M-18-01-FAL20	Total/NA	Water	353.2	
MB 280-517095/60	Method Blank	Total/NA	Water	353.2	
LCS 280-517095/59	Lab Control Sample	Total/NA	Water	353.2	

Analysis Batch: 517197

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-191150-1	G6M-18-01-FAL20	Total/NA	Water	9060A	
MB 280-517197/34	Method Blank	Total/NA	Water	9060A	
MB 280-517197/4	Method Blank	Total/NA	Water	9060A	
LCS 280-517197/3	Lab Control Sample	Total/NA	Water	9060A	
LCS 280-517197/33	Lab Control Sample	Total/NA	Water	9060A	

Analysis Batch: 643033

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-191150-1	G6M-18-01-FAL20	Total/NA	Water	9034	
MB 680-643033/1	Method Blank	Total/NA	Water	9034	
LCS 680-643033/2	Lab Control Sample	Total/NA	Water	9034	
LCSD 680-643033/3	Lab Control Sample Dup	Total/NA	Water	9034	

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-191150-2

Client Sample ID: G6M-18-01-FAL20

Lab Sample ID: 680-191150-1

Date Collected: 11/05/20 10:35

Matrix: Water

Date Received: 11/06/20 09:50

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	644134	11/16/20 21:53	PEP	TAL SAV
	Instrument ID: CMSAA									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	643326	11/10/20 19:00	DBM	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	643909	11/13/20 23:43	EKB	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	642976	11/08/20 11:47	AJR	TAL SAV
Dissolved	Analysis	6010C		1			643527	11/11/20 09:13	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	642975	11/08/20 11:47	AJR	TAL SAV
Dissolved	Analysis	6020A		1			643244	11/09/20 18:55	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	517095	11/17/20 19:24	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	310 mL	310 mL	643033	11/09/20 10:10	NVF	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1	20 mL	20 mL	517197	11/18/20 11:37	JMB	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			516966	11/16/20 19:28	RAF	TAL DEN
	Instrument ID: WC_AT4									

Client Sample ID: AOC50-RB1-FAL20

Lab Sample ID: 680-191150-2

Date Collected: 11/05/20 11:20

Matrix: Water

Date Received: 11/06/20 09:50

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	644134	11/16/20 22:18	PEP	TAL SAV
	Instrument ID: CMSAA									
Dissolved	Prep	3005A			50 mL	50 mL	642976	11/08/20 11:47	AJR	TAL SAV
Dissolved	Analysis	6010C		1			643527	11/11/20 08:55	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	642975	11/08/20 11:47	AJR	TAL SAV
Dissolved	Analysis	6020A		1			643244	11/09/20 18:36	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-06-01X-FAL20

Lab Sample ID: 680-191150-3

Date Collected: 11/05/20 11:15

Matrix: Water

Date Received: 11/06/20 09:50

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	644535	11/18/20 15:07	P1C	TAL SAV
	Instrument ID: CMSP2									
Dissolved	Prep	3005A			50 mL	50 mL	642976	11/08/20 11:47	AJR	TAL SAV
Dissolved	Analysis	6010C		1			643527	11/11/20 08:50	BCB	TAL SAV
	Instrument ID: ICPE									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-191150-2

Client Sample ID: G6M-06-01X-FAL20

Lab Sample ID: 680-191150-3

Date Collected: 11/05/20 11:15

Matrix: Water

Date Received: 11/06/20 09:50

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	642975	11/08/20 11:47	AJR	TAL SAV
Dissolved	Analysis	6020A		1			643244	11/09/20 18:33	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: AOC50-TB8-FAL20

Lab Sample ID: 680-191150-8

Date Collected: 11/05/20 00:00

Matrix: Water

Date Received: 11/06/20 09:50

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	644134	11/16/20 21:27	PEP	TAL SAV
	Instrument ID: CMSAA									

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-191150-2
Project/Site: Fort Devens

Laboratory: Eurofins TestAmerica, Savannah

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

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-22-22

Laboratory: Eurofins TestAmerica, Denver

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21

Method Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-191150-2

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
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	TAL DEN
9034	Sulfide, Acid Soluble and Insoluble (Titrimetric)	SW846	TAL SAV
9060A	Organic Carbon, Total (TOC)	SW846	TAL DEN
SM 2320B	Alkalinity	SM	TAL DEN
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 TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

TAL SAV = Eurofins TestAmerica, 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 #

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 2020
Project Number: DEVENS-LTM	Contact:	
WBS Code:	Ship to:	

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

680-191150-01 Chain of Custody

ston
: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 2020						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
39	G6M-13-03X-FAL20	WG								X	X	X				G6M-13-03X	N1	80.00	90.00		
40	G6M-13-04X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-13-04X	N1	125.00	135.00		
41	G6M-13-05X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-13-05X	N1	45.00	55.00		
42	G6M-13-06X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-13-06X	N1	50.00	60.00		
43	G6M-18-01-FAL20	WG	11-5-20	1035	DC		X	X	X	X	X	X	X	X	X	G6M-18-01	N1	116.00	126.00		
44	G6M-18-02-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-18-02	N1	123.95	133.95		
45	G6M-95-19X-FAL20	WG										X				G6M-95-19X	N1	48.00	58.00		
46	G6M-95-20X-FAL20	WG								X	X	X				G6M-95-20X	N1	18.00	23.00		
47	G6M-97-05B-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-97-05B	N1	130.00	135.00		
48	G6M-97-28X-FAL20	WG								X	X	X				G6M-97-28X	N1	100.00	105.00		
49	~~MW-3-FAL20~~ RB-AOC50-FAL20	WG	11-5-20	1120	DC					X	X	X				~~MW-3~~	~~MS1~~	~~126.00~~	~~137.00~~		
50	MW-3-FAL20	WG								X	X	X				MW-3	N1	126.00	137.00		
51	MW-3-FAL20	WG								X	X	X				MW-3	SD1	126.00	137.00		
52	MW-7-FAL20	WG								X	X	X				MW-7	N1	6.58	135.00		
53	XSA-12-95X-FAL20	WG								X	X	X				XSA-12-95X	N1	120.00	130.00		
54	XSA-12-96X-FAL20	WG					X	X	X	X	X	X	X	X	X	XSA-12-96X	N1	120.00	130.00		
55	XSA-12-97X-FAL20	WG								X	X	X				XSA-12-97X	N1	120.00	130.00		
56	XSA-12-98X-FAL20	WG								X	X	X				XSA-12-98X	N1	60.00	70.00		

Turnaround Time: NA

Relinquished by: Drake Dupree
Date 11-5-20
Time 1500
Received by: [signature] 11/5/20 1510
Copy of AOC50_eCOC

Date
Time 11/5/20 1710
Shipping Date:
Received by Laboratory: DM 11-6-20 950
Condition:

3.9/9.2

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11/20/2020

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 #

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 2020
Project Number: DEVENS-LTM	Contact:	
WBS Code:	Ship to:	

Comments:
A2320B (A) = Alkalinity
E353.2 (A) = Nitrite Nitrate as N
RSK175 (A) = Dissolved Gases
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9034 (A) = Sulfide

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
5	1x 125mL plastic, Cool < 6degC
7	2x 250mL plastic, ZnAc/NaOH Cool < 6degC
8	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
10	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
29	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC
47	1x 500mL, amber glass, H2SO4; Cool < 6degC

Boston #215

Analytical Test Method

Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020

	Sample ID	Matrix	Date	Time	Samp Init.	A2320B (A) 46	E353.2 (A) 47	RSK175 (A) 8	SW6010C/FLDFLT (B) 9	SW6020A/FLDFLT (B) 9	SW8260B - VOCs 29	SW9034 (A) 7	SW9056A - SO4 5	SW9060A - TOC 10	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
20	G6M-04-03X-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-04-03X	SD1	85.00	95.00		
21	G6M-04-04X-FAL20	WG							X	X	X				G6M-04-04X	N1	94.00	104.00		
22	G6M-04-05X-FAL20	WG									X				G6M-04-05X	N1	100.00	110.00		
23	G6M-04-06X-FAL20	WG							X	X	X				G6M-04-06X	N1	95.00	136.00		
24	G6M-04-07X-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-04-07X	N1	120.00	130.00		
25	G6M-04-09X-FAL20	WG							X	X	X				G6M-04-09X	N1	55.00	65.00		
26	G6M-04-10A-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-04-10A	N1	30.00	40.00		
27	G6M-04-10X-FAL20	WG									X				G6M-04-10X	N1	52.00	62.00		
28	G6M-04-11X-FAL20	WG							X	X	X				G6M-04-11X	N1	35.00	45.00		
29	G6M-04-13X-FAL20	WG									X				G6M-04-13X	N1	30.00	40.00		
30	G6M-04-14X-FAL20	WG							X	X	X				G6M-04-14X	N1	80.00	90.00		
31	G6M-04-15X-FAL20	WG							X	X	X				G6M-04-15X	N1	70.00	80.00		
32	G6M-04-22X-FAL20	WG							X	X	X				G6M-04-22X	N1	74.00	84.00		
33	G6M-04-31X-FAL20	WG							X	X	X				G6M-04-31X	N1	68.00	78.00		
34	G6M-06-01X-FAL20	WG	11-5-20	1115	NB				X	X	X				G6M-06-01X	N1	106.00	126.00		
35	G6M-07-01X-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-07-01X	N1	78.00	89.00		
36	G6M-07-02X-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-07-02X	N1	22.50	27.50		
37	G6M-13-01X-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-13-01X	N1	125.00	135.00		
38	G6M-13-02X-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-13-02X	N1	115.00	125.00		

680-191150-02 Chain of Custody

Relinquished by: Diane Clapsaddle ① Trip Blank AOC50-FAL20
Date 11-5-20
Time 1500
Received by: [signature] 11/5/20 1500
Copy of AOC50_eCOC

Date
Time
Shipping Date:
Received by Laboratory: [signature] 11/5/20 1500
Condition: DM TA 11.6.20 950

Page 36 of 40

11/20/2020

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 #

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2020
Project Number: DEVENS-LTM	Contact:	
WBS Code:	Ship to:	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Boston #215

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2020

	Sample ID	Matrix	Date	Time	Samp Init.	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
						46	9	9	5	3						
1	EPA-PZ-2012-1A-FAL20	WG				X	X	X	X	X	EPA-PZ-2012-1A	N1	23.70	28.70		
2	EPA-PZ-2012-1B-FAL20	WG				X	X	X	X	X	EPA-PZ-2012-1B	N1	73.56	78.56		
3	EPA-PZ-2012-2A-FAL20	WG	11-5-20	1115	CR	X	X	X	X	X	EPA-PZ-2012-2A	N1	18.14	23.14		
4	EPA-PZ-2012-2B-FAL20	WG	11-5-20	1250	CR	X	X	X	X	X	EPA-PZ-2012-2B	N1	73.16	78.16		
5	EPA-PZ-2012-3A-FAL20	WG				X	X	X	X	X	EPA-PZ-2012-3A	N1	19.09	24.09		
6	EPA-PZ-2012-3B-FAL20	WG				X	X	X	X	X	EPA-PZ-2012-3B	N1	68.70	73.70		
7	EPA-PZ-2012-4A-FAL20	WG				X	X	X	X	X	EPA-PZ-2012-4A	N1	19.56	24.56		
8	EPA-PZ-2012-4B-FAL20	WG				X	X	X	X	X	EPA-PZ-2012-4B	N1	79.50	84.50		
9	EPA-PZ-2012-5A-FAL20	WG				X	X	X	X	X	EPA-PZ-2012-5A	N1	17.95	22.95		
10	EPA-PZ-2012-5B-FAL20	WG				X	X	X	X	X	EPA-PZ-2012-5B	N1	68.46	73.46		
11	EPA-PZ-2012-6A-FAL20	WG				X	X	X	X	X	EPA-PZ-2012-6A	N1	24.19	29.19		
12	EPA-PZ-2012-6B-FAL20	WG				X	X	X	X	X	EPA-PZ-2012-6B	N1	74.23	79.23		
13	EPA-PZ-2012-7A-FAL20	WG				X	X	X	X	X	EPA-PZ-2012-7A	N1	23.87	28.87		
14	EPA-PZ-2012-7B-FAL20	WG				X	X	X	X	X	EPA-PZ-2012-7B	N1	58.82	63.82		
15	EW-01-FAL20	WG				X	X	X	X	X	EW-01	N1	60.00	85.00		
16	EW-04-FAL20	WG				X	X	X	X	X	EW-04	N1	70.00	95.00		
17	N5-P1-FAL20	WG				X	X	X	X	X	N5-P1	N1	95.50	97.50		
18	PZ-12-01-FAL20	WG				X	X	X	X	X	PZ-12-01	N1	24.00	34.00		



680-191150-03 Chain of Custody

Relinquished by: Diane Clipgee
Date 11-5-20
Time 1500
Received by: [signature] 15:00 11/5/20
SHL_eCOC

Date
Time
Shipping Date: [signature]
Received by Laboratory: 11/5/20 17:10
Condition:

[signature] TA 11-6-20 950

11/20/2020

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 #

Project Name: Former Fort Devens, Long Term Monitoring	Laboratory: Eurofins Environment Testing TestAmerica, Savannah, GA	Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2020
Project Number: DEVENS-LTM	Contact:	
WBS Code:	Ship to:	

Comments:
A2320B (A) = Alkalinity
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9056A (A) = Cl SO4
SW9060A/FLDFLT (B) = DOC

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
3	1x 250mL, amber glass, H2SO4, pH < 2; Cool < 6degC
5	1x 125mL plastic, Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC

Boston #215

Event: Seres-Arcadis JV, Long Term Monitoring, SHL, Fall 2020

	Sample ID	Matrix	Date	Time	Samp Init.	A2320B (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW9056A (A)	SW9060A/FLDFLT (B)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
					Analytical Test Method	46	9	9	5	3						
19	PZ-12-02-FAL20	WG				X	X	X	X	X	PZ-12-02	N1	24.00	34.00		
20	PZ-12-03-FAL20	WG				X	X	X	X	X	PZ-12-03	N1	24.00	34.00		
21	PZ-12-04-FAL20	WG				X	X	X	X	X	PZ-12-04	N1	24.00	34.00		
22	PZ-12-05-FAL20	WG				X	X	X	X	X	PZ-12-05	N1	26.00	36.00		
23	PZ-12-06-FAL20	WG				X	X	X	X	X	PZ-12-06	N1	25.00	35.00		
24	PZ-12-07-FAL20	WG	11-5-20	1320	DC	X	X	X	X	X	PZ-12-07	N1	20.00	30.00		
25	PZ-12-08-FAL20	WG	11-5-20	1430	DC	X	X	X	X	X	PZ-12-08	N1	22.00	32.00		
26	PZ-12-09-FAL20	WG				X	X	X	X	X	PZ-12-09	MS1	20.00	30.00		
27	PZ-12-09-FAL20	WG				X	X	X	X	X	PZ-12-09	N1	20.00	30.00		
28	PZ-12-09-FAL20	WG				X	X	X	X	X	PZ-12-09	SD1	20.00	30.00		
29	PZ-12-10-FAL20	WG				X	X	X	X	X	PZ-12-10	N1	20.00	30.00		
30	SHL-10-FAL20	WG				X	X	X	X	X	SHL-10	N1	24.00	39.00		
31	SHL-11-FAL20	WG				X	X	X	X	X	SHL-11	N1	12.00	27.00		
32	SHL-12-FAL20	WG				X	X	X	X	X	SHL-12	N1	15.00	30.00		
33	SHL-15-FAL20	WG				X	X	X	X	X	SHL-15	N1	14.00	24.00		
34	SHL-19-FAL20	WG				X	X	X	X	X	SHL-19	N1	20.00	30.00		
35	SHL-20-FAL20	WG				X	X	X	X	X	SHL-20	N1	39.00	49.00		
36	SHL-22-FAL20	WG				X	X	X	X	X	SHL-22	N1	105.00	115.00		

680-191150-04 Chain of Custody

Relinquished by: Diane Chrysne
Date 11-5-20
Time 1500
Received by: [signature] 11/5/20 15:00
SHL_eCOC

Date
Time
Shipping Date: [signature] 11/5/20 17:00
Received by Laboratory: [signature] 11-6-20 950
Condition:

11/20/2020

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-191150-2

Login Number: 191150
List Number: 1
Creator: Sims, Robert D

List Source: Eurofins TestAmerica, Savannah

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Received Trip Blank(s) not listed on COC.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	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	

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-191150-2

Login Number: 191150
List Number: 2
Creator: Pottruff, Reed W

List Source: Eurofins TestAmerica, Denver
List Creation: 11/07/20 01:19 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	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").	N/A	
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 TestAmerica, Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

Laboratory Job ID: 680-191900-1
Client Project/Site: Fort Devens - AOC50

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

Attn: Nathan R Mullens

Kathryn Smith

Authorized for release by:
12/9/2020 4:06:37 PM

Kathryn Smith, Client Service Manager
(912)250-0275
Kathy.Smith@Eurofinset.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.

Definitions/Glossary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens - AOC50

Job ID: 680-191900-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
M	Manual integrated compound.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

Glossary

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

Sample Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens - AOC50

Job ID: 680-191900-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
680-191900-1	AOC50-RB2-FAL20	Water	11/22/20 11:00	11/24/20 09:50	
680-191900-2	XSA-12-97X-FAL20	Water	11/22/20 13:30	11/24/20 09:50	
680-191900-3	AOC50-TB9-FAL20	Water	11/22/20 00:00	11/24/20 09:50	

Job ID: 680-191900-1

Laboratory: Eurofins TestAmerica, Savannah

Narrative

CASE NARRATIVE
Client: Seres Engineering & Services LLC
Project: Fort Devens - AOC50

Report Number: 680-191900-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

RECEIPT

The samples were received on 11/24/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 1.4º C.

VOLATILE ORGANIC COMPOUNDS (GC/MS)

Samples AOC50-RB2-FAL20 (680-191900-1), XSA-12-97X-FAL20 (680-191900-2) and AOC50-TB9-FAL20 (680-191900-3) were analyzed for Volatile Organic Compounds (GC/MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 12/04/2020.

The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 680-647015 recovered outside control limits for the following analytes: 1,1-Dichloropropene, 1,2,3-Trichloropropane, 4-Methyl-2-pentanone (MIBK) and Acetone. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 680-647015 recovered outside control limits for the following analytes: Acetone.

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

METALS (ICP) - DISSOLVED

Samples AOC50-RB2-FAL20 (680-191900-1) and XSA-12-97X-FAL20 (680-191900-2) were analyzed for Metals (ICP) - Dissolved in accordance with EPA SW-846 Method 6010C. The samples were prepared on 11/24/2020 and analyzed on 11/28/2020.

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

METALS (ICPMS) - DISSOLVED

Samples AOC50-RB2-FAL20 (680-191900-1) and XSA-12-97X-FAL20 (680-191900-2) were analyzed for Metals (ICPMS) - Dissolved in accordance with EPA SW-846 Method 6020A. The samples were prepared on 11/24/2020 and analyzed on 11/25/2020.

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

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens - AOC50

Job ID: 680-191900-1

Client Sample ID: AOC50-RB2-FAL20
Date Collected: 11/22/20 11:00
Date Received: 11/24/20 09:50

Lab Sample ID: 680-191900-1
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			12/04/20 15:29	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			12/04/20 15:29	1
1,1,2,2-Tetrachloroethane	0.62	U Q	2.0	0.62	ug/L			12/04/20 15:29	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			12/04/20 15:29	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			12/04/20 15:29	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			12/04/20 15:29	1
1,1-Dichloropropene	0.34	U Q	1.0	0.34	ug/L			12/04/20 15:29	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			12/04/20 15:29	1
1,2,3-Trichloropropane	0.39	U Q	1.0	0.39	ug/L			12/04/20 15:29	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			12/04/20 15:29	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			12/04/20 15:29	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			12/04/20 15:29	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			12/04/20 15:29	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			12/04/20 15:29	1
1,2-Dichloroethene, Total	**0.94**	**J**	2.0	0.74	ug/L			12/04/20 15:29	1
1,2-Dichloropropane	0.67	U	2.0	0.67	ug/L			12/04/20 15:29	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			12/04/20 15:29	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			12/04/20 15:29	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			12/04/20 15:29	1
1,4-Dichlorobenzene	0.46	U M	1.0	0.46	ug/L			12/04/20 15:29	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			12/04/20 15:29	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			12/04/20 15:29	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			12/04/20 15:29	1
2-Hexanone	2.0	U	10	2.0	ug/L			12/04/20 15:29	1
4-Chlorotoluene	0.45	U M	1.0	0.45	ug/L			12/04/20 15:29	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			12/04/20 15:29	1
4-Methyl-2-pentanone (MIBK)	2.1	U Q	10	2.1	ug/L			12/04/20 15:29	1
Acetone	7.0	U M Q	25	7.0	ug/L			12/04/20 15:29	1
Benzene	0.43	U M	1.0	0.43	ug/L			12/04/20 15:29	1
Bromobenzene	0.50	U M	1.0	0.50	ug/L			12/04/20 15:29	1
Bromoform	0.43	U	1.0	0.43	ug/L			12/04/20 15:29	1
Bromomethane	2.5	U M Q	5.0	2.5	ug/L			12/04/20 15:29	1
Carbon disulfide	**0.63**	**J**	2.0	0.43	ug/L			12/04/20 15:29	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			12/04/20 15:29	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			12/04/20 15:29	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			12/04/20 15:29	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			12/04/20 15:29	1
Chloroethane	2.5	U	5.0	2.5	ug/L			12/04/20 15:29	1
Chloroform	0.50	U	1.0	0.50	ug/L			12/04/20 15:29	1
Chloromethane	0.40	U	1.0	0.40	ug/L			12/04/20 15:29	1
cis-1,2-Dichloroethene	**0.67**	**J**	1.0	0.41	ug/L			12/04/20 15:29	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			12/04/20 15:29	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			12/04/20 15:29	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			12/04/20 15:29	1
Dichlorodifluoromethane	0.60	U	2.0	0.60	ug/L			12/04/20 15:29	1
Ethylbenzene	0.33	U M	1.0	0.33	ug/L			12/04/20 15:29	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			12/04/20 15:29	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			12/04/20 15:29	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			12/04/20 15:29	1

Client Sample ID: AOC50-RB2-FAL20

Lab Sample ID: 680-191900-1

Date Collected: 11/22/20 11:00

Matrix: Water

Date Received: 11/24/20 09:50

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			12/04/20 15:29	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			12/04/20 15:29	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			12/04/20 15:29	1
Naphthalene	2.5	U Q	5.0	2.5	ug/L			12/04/20 15:29	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			12/04/20 15:29	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			12/04/20 15:29	1
o-Xylene	0.23	U	1.0	0.23	ug/L			12/04/20 15:29	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			12/04/20 15:29	1
Styrene	0.27	U	1.0	0.27	ug/L			12/04/20 15:29	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			12/04/20 15:29	1
Tetrachloroethene	0.74	U	2.0	0.74	ug/L			12/04/20 15:29	1
Toluene	0.48	U	1.0	0.48	ug/L			12/04/20 15:29	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			12/04/20 15:29	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			12/04/20 15:29	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			12/04/20 15:29	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			12/04/20 15:29	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			12/04/20 15:29	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			12/04/20 15:29	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			12/04/20 15:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*		*12/04/20 15:29*	*1*
Dibromofluoromethane (Surr)	*94*		*80 - 119*		*12/04/20 15:29*	*1*
Toluene-d8 (Surr)	*91*		*89 - 112*		*12/04/20 15:29*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*81 - 118*		*12/04/20 15:29*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	17	U	50	17	ug/L		11/24/20 16:28	11/28/20 12:10	1
Manganese	1.0	U	10	1.0	ug/L		11/24/20 16:28	11/28/20 12:10	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5	U	3.0	1.5	ug/L		11/24/20 16:27	11/25/20 15:54	1

Client Sample ID: XSA-12-97X-FAL20

Lab Sample ID: 680-191900-2

Date Collected: 11/22/20 13:30

Matrix: Water

Date Received: 11/24/20 09:50

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			12/04/20 15:52	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			12/04/20 15:52	1
1,1,2,2-Tetrachloroethane	0.62	U Q	2.0	0.62	ug/L			12/04/20 15:52	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			12/04/20 15:52	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			12/04/20 15:52	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			12/04/20 15:52	1
1,1-Dichloropropene	0.34	U Q	1.0	0.34	ug/L			12/04/20 15:52	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			12/04/20 15:52	1
1,2,3-Trichloropropane	0.39	U Q	1.0	0.39	ug/L			12/04/20 15:52	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			12/04/20 15:52	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens - AOC50

Job ID: 680-191900-1

Client Sample ID: XSA-12-97X-FAL20
Date Collected: 11/22/20 13:30
Date Received: 11/24/20 09:50

Lab Sample ID: 680-191900-2
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			12/04/20 15:52	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			12/04/20 15:52	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			12/04/20 15:52	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			12/04/20 15:52	1
1,2-Dichloroethene, Total	**6.2**		2.0	0.74	ug/L			12/04/20 15:52	1
1,2-Dichloropropane	0.67	U	2.0	0.67	ug/L			12/04/20 15:52	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			12/04/20 15:52	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			12/04/20 15:52	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			12/04/20 15:52	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			12/04/20 15:52	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			12/04/20 15:52	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			12/04/20 15:52	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			12/04/20 15:52	1
2-Hexanone	2.0	U	10	2.0	ug/L			12/04/20 15:52	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			12/04/20 15:52	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			12/04/20 15:52	1
4-Methyl-2-pentanone (MIBK)	2.1	U Q	10	2.1	ug/L			12/04/20 15:52	1
Acetone	7.0	U M Q	25	7.0	ug/L			12/04/20 15:52	1
Benzene	0.43	U M	1.0	0.43	ug/L			12/04/20 15:52	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			12/04/20 15:52	1
Bromoform	0.43	U	1.0	0.43	ug/L			12/04/20 15:52	1
Bromomethane	2.5	U M Q	5.0	2.5	ug/L			12/04/20 15:52	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			12/04/20 15:52	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			12/04/20 15:52	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			12/04/20 15:52	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			12/04/20 15:52	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			12/04/20 15:52	1
Chloroethane	2.5	U	5.0	2.5	ug/L			12/04/20 15:52	1
Chloroform	0.50	U	1.0	0.50	ug/L			12/04/20 15:52	1
Chloromethane	0.40	U	1.0	0.40	ug/L			12/04/20 15:52	1
cis-1,2-Dichloroethene	**6.2**		1.0	0.41	ug/L			12/04/20 15:52	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			12/04/20 15:52	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			12/04/20 15:52	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			12/04/20 15:52	1
Dichlorodifluoromethane	0.60	U	2.0	0.60	ug/L			12/04/20 15:52	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			12/04/20 15:52	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			12/04/20 15:52	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			12/04/20 15:52	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			12/04/20 15:52	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			12/04/20 15:52	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			12/04/20 15:52	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			12/04/20 15:52	1
Naphthalene	2.5	U Q	5.0	2.5	ug/L			12/04/20 15:52	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			12/04/20 15:52	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			12/04/20 15:52	1
o-Xylene	0.23	U	1.0	0.23	ug/L			12/04/20 15:52	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			12/04/20 15:52	1
Styrene	0.27	U	1.0	0.27	ug/L			12/04/20 15:52	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			12/04/20 15:52	1

Client Sample ID: XSA-12-97X-FAL20

Lab Sample ID: 680-191900-2

Date Collected: 11/22/20 13:30

Matrix: Water

Date Received: 11/24/20 09:50

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	0.74	U	2.0	0.74	ug/L			12/04/20 15:52	1
Toluene	0.48	U	1.0	0.48	ug/L			12/04/20 15:52	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			12/04/20 15:52	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			12/04/20 15:52	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			12/04/20 15:52	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			12/04/20 15:52	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			12/04/20 15:52	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			12/04/20 15:52	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			12/04/20 15:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*12/04/20 15:52*	*1*
Dibromofluoromethane (Surr)	*95*		*80 - 119*		*12/04/20 15:52*	*1*
Toluene-d8 (Surr)	*92*		*89 - 112*		*12/04/20 15:52*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*		*12/04/20 15:52*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**2700**		50	17	ug/L		11/24/20 16:28	11/28/20 12:34	1
Manganese	**2700**		10	1.0	ug/L		11/24/20 16:28	11/28/20 12:34	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**51**		3.0	1.5	ug/L		11/24/20 16:27	11/25/20 16:11	1

Client Sample ID: AOC50-TB9-FAL20

Lab Sample ID: 680-191900-3

Date Collected: 11/22/20 00:00

Matrix: Water

Date Received: 11/24/20 09:50

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			12/04/20 15:19	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			12/04/20 15:19	1
1,1,2,2-Tetrachloroethane	0.62	U	2.0	0.62	ug/L			12/04/20 15:19	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			12/04/20 15:19	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			12/04/20 15:19	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			12/04/20 15:19	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			12/04/20 15:19	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			12/04/20 15:19	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			12/04/20 15:19	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			12/04/20 15:19	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			12/04/20 15:19	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			12/04/20 15:19	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			12/04/20 15:19	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			12/04/20 15:19	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			12/04/20 15:19	1
1,2-Dichloropropane	0.67	U	2.0	0.67	ug/L			12/04/20 15:19	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			12/04/20 15:19	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			12/04/20 15:19	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			12/04/20 15:19	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			12/04/20 15:19	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens - AOC50

Job ID: 680-191900-1

Client Sample ID: AOC50-TB9-FAL20
Date Collected: 11/22/20 00:00
Date Received: 11/24/20 09:50

Lab Sample ID: 680-191900-3
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			12/04/20 15:19	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			12/04/20 15:19	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			12/04/20 15:19	1
2-Hexanone	2.0	U	10	2.0	ug/L			12/04/20 15:19	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			12/04/20 15:19	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			12/04/20 15:19	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			12/04/20 15:19	1
Acetone	7.0	U Q	25	7.0	ug/L			12/04/20 15:19	1
Benzene	0.43	U	1.0	0.43	ug/L			12/04/20 15:19	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			12/04/20 15:19	1
Bromoform	0.43	U	1.0	0.43	ug/L			12/04/20 15:19	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			12/04/20 15:19	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			12/04/20 15:19	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			12/04/20 15:19	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			12/04/20 15:19	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			12/04/20 15:19	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			12/04/20 15:19	1
Chloroethane	2.5	U Q	5.0	2.5	ug/L			12/04/20 15:19	1
Chloroform	0.50	U	1.0	0.50	ug/L			12/04/20 15:19	1
Chloromethane	0.40	U	1.0	0.40	ug/L			12/04/20 15:19	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			12/04/20 15:19	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			12/04/20 15:19	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			12/04/20 15:19	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			12/04/20 15:19	1
Dichlorodifluoromethane	0.60	U	2.0	0.60	ug/L			12/04/20 15:19	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			12/04/20 15:19	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			12/04/20 15:19	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			12/04/20 15:19	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			12/04/20 15:19	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			12/04/20 15:19	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			12/04/20 15:19	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			12/04/20 15:19	1
Naphthalene	2.5	U	5.0	2.5	ug/L			12/04/20 15:19	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			12/04/20 15:19	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			12/04/20 15:19	1
o-Xylene	0.23	U	1.0	0.23	ug/L			12/04/20 15:19	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			12/04/20 15:19	1
Styrene	0.27	U	1.0	0.27	ug/L			12/04/20 15:19	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			12/04/20 15:19	1
Tetrachloroethene	0.74	U	2.0	0.74	ug/L			12/04/20 15:19	1
Toluene	0.48	U	1.0	0.48	ug/L			12/04/20 15:19	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			12/04/20 15:19	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			12/04/20 15:19	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			12/04/20 15:19	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			12/04/20 15:19	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			12/04/20 15:19	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			12/04/20 15:19	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			12/04/20 15:19	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens - AOC50

Job ID: 680-191900-1

Client Sample ID: AOC50-TB9-FAL20
Date Collected: 11/22/20 00:00
Date Received: 11/24/20 09:50

Lab Sample ID: 680-191900-3
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		85 - 114		12/04/20 15:19	1
Dibromofluoromethane (Surr)	107		80 - 119		12/04/20 15:19	1
Toluene-d8 (Surr)	103		89 - 112		12/04/20 15:19	1
1,2-Dichloroethane-d4 (Surr)	98		81 - 118		12/04/20 15:19	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens - AOC50

Job ID: 680-191900-1

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

Lab Sample ID: MB 680-647015/8
Matrix: Water
Analysis Batch: 647015

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			12/04/20 14:28	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			12/04/20 14:28	1
1,1,2,2-Tetrachloroethane	0.62	U	2.0	0.62	ug/L			12/04/20 14:28	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			12/04/20 14:28	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			12/04/20 14:28	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			12/04/20 14:28	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			12/04/20 14:28	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			12/04/20 14:28	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			12/04/20 14:28	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			12/04/20 14:28	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			12/04/20 14:28	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			12/04/20 14:28	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			12/04/20 14:28	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			12/04/20 14:28	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			12/04/20 14:28	1
1,2-Dichloropropane	0.67	U	2.0	0.67	ug/L			12/04/20 14:28	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			12/04/20 14:28	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			12/04/20 14:28	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			12/04/20 14:28	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			12/04/20 14:28	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			12/04/20 14:28	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			12/04/20 14:28	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			12/04/20 14:28	1
2-Hexanone	2.0	U	10	2.0	ug/L			12/04/20 14:28	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			12/04/20 14:28	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			12/04/20 14:28	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			12/04/20 14:28	1
Acetone	7.0	U	25	7.0	ug/L			12/04/20 14:28	1
Benzene	0.43	U M	1.0	0.43	ug/L			12/04/20 14:28	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			12/04/20 14:28	1
Bromoform	0.43	U	1.0	0.43	ug/L			12/04/20 14:28	1
Bromomethane	2.5	U M	5.0	2.5	ug/L			12/04/20 14:28	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			12/04/20 14:28	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			12/04/20 14:28	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			12/04/20 14:28	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			12/04/20 14:28	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			12/04/20 14:28	1
Chloroethane	2.5	U	5.0	2.5	ug/L			12/04/20 14:28	1
Chloroform	0.50	U	1.0	0.50	ug/L			12/04/20 14:28	1
Chloromethane	0.40	U	1.0	0.40	ug/L			12/04/20 14:28	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			12/04/20 14:28	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			12/04/20 14:28	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			12/04/20 14:28	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			12/04/20 14:28	1
Dichlorodifluoromethane	0.60	U	2.0	0.60	ug/L			12/04/20 14:28	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			12/04/20 14:28	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			12/04/20 14:28	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			12/04/20 14:28	1

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

Lab Sample ID: MB 680-647015/8
Matrix: Water
Analysis Batch: 647015

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			12/04/20 14:28	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			12/04/20 14:28	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			12/04/20 14:28	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			12/04/20 14:28	1
Naphthalene	2.5	U	5.0	2.5	ug/L			12/04/20 14:28	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			12/04/20 14:28	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			12/04/20 14:28	1
o-Xylene	0.23	U	1.0	0.23	ug/L			12/04/20 14:28	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			12/04/20 14:28	1
Styrene	0.27	U	1.0	0.27	ug/L			12/04/20 14:28	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			12/04/20 14:28	1
Tetrachloroethene	0.74	U	2.0	0.74	ug/L			12/04/20 14:28	1
Toluene	0.48	U	1.0	0.48	ug/L			12/04/20 14:28	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			12/04/20 14:28	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			12/04/20 14:28	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			12/04/20 14:28	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			12/04/20 14:28	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			12/04/20 14:28	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			12/04/20 14:28	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			12/04/20 14:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*12/04/20 14:28*	*1*
Dibromofluoromethane (Surr)	*89*		*80 - 119*		*12/04/20 14:28*	*1*
Toluene-d8 (Surr)	*90*		*89 - 112*		*12/04/20 14:28*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*		*12/04/20 14:28*	*1*

Lab Sample ID: LCS 680-647015/3
Matrix: Water
Analysis Batch: 647015

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	47.1		ug/L		94	78 - 124
1,1,1-Trichloroethane	50.0	46.1		ug/L		92	74 - 131
1,1,2,2-Tetrachloroethane	50.0	62.1	Q	ug/L		124	71 - 121
1,1,2-Trichloroethane	50.0	54.3		ug/L		109	80 - 119
1,1-Dichloroethane	50.0	50.5		ug/L		101	77 - 125
1,1-Dichloroethene	50.0	41.9		ug/L		84	71 - 131
1,1-Dichloropropene	50.0	65.1	M Q	ug/L		130	79 - 125
1,2,3-Trichlorobenzene	50.0	58.5		ug/L		117	69 - 129
1,2,3-Trichloropropane	50.0	63.5	Q	ug/L		127	73 - 122
1,2,4-Trichlorobenzene	50.0	55.6		ug/L		111	69 - 130
1,2,4-Trimethylbenzene	50.0	51.7		ug/L		103	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	60.2		ug/L		120	62 - 128
1,2-Dichlorobenzene	50.0	51.5		ug/L		103	80 - 119
1,2-Dichloroethane	50.0	55.6		ug/L		111	73 - 128
1,2-Dichloroethene, Total	100	95.4		ug/L		95	79 - 121
1,2-Dichloropropane	50.0	51.3		ug/L		103	78 - 122

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

Lab Sample ID: LCS 680-647015/3
Matrix: Water
Analysis Batch: 647015

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	49.7		ug/L		99	75 - 124
1,3-Dichlorobenzene	50.0	49.7		ug/L		99	80 - 119
1,3-Dichloropropane	50.0	56.3		ug/L		113	80 - 119
1,4-Dichlorobenzene	50.0	49.8		ug/L		100	79 - 118
2,2-Dichloropropane	50.0	45.0		ug/L		90	60 - 139
2-Butanone (MEK)	250	326		ug/L		130	56 - 143
2-Chlorotoluene	50.0	49.4		ug/L		99	79 - 122
2-Hexanone	250	346		ug/L		138	57 - 139
4-Chlorotoluene	50.0	47.8		ug/L		96	78 - 122
4-Isopropyltoluene	50.0	49.9		ug/L		100	77 - 127
4-Methyl-2-pentanone (MIBK)	250	353	Q	ug/L		141	67 - 130
Acetone	250	455	Q	ug/L		182	39 - 160
Benzene	50.0	48.4		ug/L		97	79 - 120
Bromobenzene	50.0	48.6		ug/L		97	80 - 120
Bromoform	50.0	46.3		ug/L		93	66 - 130
Bromomethane	50.0	32.2		ug/L		64	53 - 141
Carbon disulfide	50.0	44.7		ug/L		89	64 - 133
Carbon tetrachloride	50.0	44.3	M	ug/L		89	72 - 136
Chlorobenzene	50.0	49.6		ug/L		99	82 - 118
Chlorobromomethane	50.0	55.4		ug/L		111	78 - 123
Chlorodibromomethane	50.0	48.9		ug/L		98	74 - 126
Chloroethane	50.0	47.0		ug/L		94	60 - 138
Chloroform	50.0	48.9		ug/L		98	79 - 124
Chloromethane	50.0	49.0	M	ug/L		98	50 - 139
cis-1,2-Dichloroethene	50.0	49.2		ug/L		98	78 - 123
cis-1,3-Dichloropropene	50.0	50.4		ug/L		101	75 - 124
Dibromomethane	50.0	54.9		ug/L		110	79 - 123
Dichlorobromomethane	50.0	47.0		ug/L		94	79 - 125
Dichlorodifluoromethane	50.0	46.2		ug/L		92	32 - 152
Ethylbenzene	50.0	48.7		ug/L		97	79 - 121
Ethylene Dibromide	50.0	57.7		ug/L		115	75 - 127
Hexachlorobutadiene	50.0	50.5		ug/L		101	66 - 134
Isopropylbenzene	50.0	49.0		ug/L		98	72 - 131
Methyl tert-butyl ether	50.0	55.1		ug/L		110	71 - 124
Methylene Chloride	50.0	49.5		ug/L		99	74 - 124
m-Xylene & p-Xylene	50.0	48.4		ug/L		97	80 - 121
Naphthalene	50.0	65.1	Q	ug/L		130	61 - 128
n-Butylbenzene	50.0	52.4		ug/L		105	75 - 128
N-Propylbenzene	50.0	50.3		ug/L		101	76 - 126
o-Xylene	50.0	48.8		ug/L		98	78 - 122
sec-Butylbenzene	50.0	51.3		ug/L		103	77 - 126
Styrene	50.0	51.3		ug/L		103	78 - 123
tert-Butylbenzene	50.0	49.4		ug/L		99	78 - 124
Tetrachloroethene	50.0	48.8		ug/L		98	74 - 129
Toluene	50.0	52.4		ug/L		105	80 - 121
trans-1,2-Dichloroethene	50.0	46.2		ug/L		92	75 - 124
trans-1,3-Dichloropropene	50.0	53.8		ug/L		108	73 - 127
Trichloroethene	50.0	49.1		ug/L		98	79 - 123
Trichlorofluoromethane	50.0	47.0		ug/L		94	65 - 141

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

Lab Sample ID: LCS 680-647015/3
Matrix: Water
Analysis Batch: 647015

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	139		ug/L		139	54 - 146		
Vinyl chloride			50.0	48.0		ug/L		96	58 - 137		
Xylenes, Total			100	97.2		ug/L		97	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*90*		*85 - 114*
Dibromofluoromethane (Surr)	*93*		*80 - 119*
Toluene-d8 (Surr)	*94*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*101*		*81 - 118*

Lab Sample ID: LCSD 680-647015/4
Matrix: Water
Analysis Batch: 647015

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	48.0		ug/L		96	78 - 124	2	20
1,1,1-Trichloroethane			50.0	48.5		ug/L		97	74 - 131	5	20
1,1,2,2-Tetrachloroethane			50.0	59.4		ug/L		119	71 - 121	4	20
1,1,2-Trichloroethane			50.0	54.2		ug/L		108	80 - 119	0	20
1,1-Dichloroethane			50.0	51.7		ug/L		103	77 - 125	2	20
1,1-Dichloroethene			50.0	45.0		ug/L		90	71 - 131	7	20
1,1-Dichloropropene			50.0	64.6	M Q	ug/L		129	79 - 125	1	20
1,2,3-Trichlorobenzene			50.0	55.0		ug/L		110	69 - 129	6	20
1,2,3-Trichloropropane			50.0	62.1	Q	ug/L		124	73 - 122	2	20
1,2,4-Trichlorobenzene			50.0	52.4		ug/L		105	69 - 130	6	20
1,2,4-Trimethylbenzene			50.0	50.6		ug/L		101	76 - 124	2	20
1,2-Dibromo-3-Chloropropane			50.0	57.0		ug/L		114	62 - 128	6	20
1,2-Dichlorobenzene			50.0	50.5		ug/L		101	80 - 119	2	20
1,2-Dichloroethane			50.0	54.0		ug/L		108	73 - 128	3	20
1,2-Dichloroethene, Total			100	97.0		ug/L		97	79 - 121	2	20
1,2-Dichloropropane			50.0	51.0		ug/L		102	78 - 122	1	20
1,3,5-Trimethylbenzene			50.0	50.7		ug/L		101	75 - 124	2	20
1,3-Dichlorobenzene			50.0	50.1		ug/L		100	80 - 119	1	20
1,3-Dichloropropane			50.0	55.0		ug/L		110	80 - 119	2	20
1,4-Dichlorobenzene			50.0	49.4		ug/L		99	79 - 118	1	20
2,2-Dichloropropane			50.0	46.3		ug/L		93	60 - 139	3	20
2-Butanone (MEK)			250	311		ug/L		125	56 - 143	5	20
2-Chlorotoluene			50.0	50.7		ug/L		101	79 - 122	2	20
2-Hexanone			250	326		ug/L		131	57 - 139	6	20
4-Chlorotoluene			50.0	49.5		ug/L		99	78 - 122	4	20
4-Isopropyltoluene			50.0	51.3		ug/L		103	77 - 127	3	20
4-Methyl-2-pentanone (MIBK)			250	330	Q	ug/L		132	67 - 130	7	20
Acetone			250	344	Q	ug/L		137	39 - 160	28	20
Benzene			50.0	49.1		ug/L		98	79 - 120	1	20
Bromobenzene			50.0	49.6		ug/L		99	80 - 120	2	20
Bromoform			50.0	45.5		ug/L		91	66 - 130	2	20
Bromomethane			50.0	34.3		ug/L		69	53 - 141	6	20
Carbon disulfide			50.0	47.8		ug/L		96	64 - 133	7	20

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

Lab Sample ID: LCSD 680-647015/4
Matrix: Water
Analysis Batch: 647015

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	46.9		ug/L		94	72 - 136	6	20
Chlorobenzene			50.0	50.4		ug/L		101	82 - 118	1	20
Chlorobromomethane			50.0	53.8		ug/L		108	78 - 123	3	20
Chlorodibromomethane			50.0	47.9		ug/L		96	74 - 126	2	20
Chloroethane			50.0	49.0		ug/L		98	60 - 138	4	20
Chloroform			50.0	49.9		ug/L		100	79 - 124	2	20
Chloromethane			50.0	51.9	M	ug/L		104	50 - 139	6	20
cis-1,2-Dichloroethene			50.0	49.6		ug/L		99	78 - 123	1	20
cis-1,3-Dichloropropene			50.0	50.0		ug/L		100	75 - 124	1	20
Dibromomethane			50.0	53.5		ug/L		107	79 - 123	3	20
Dichlorobromomethane			50.0	46.6		ug/L		93	79 - 125	1	20
Dichlorodifluoromethane			50.0	48.6		ug/L		97	32 - 152	5	20
Ethylbenzene			50.0	51.2		ug/L		102	79 - 121	5	20
Ethylene Dibromide			50.0	55.6		ug/L		111	75 - 127	4	20
Hexachlorobutadiene			50.0	51.7		ug/L		103	66 - 134	2	20
Isopropylbenzene			50.0	52.0		ug/L		104	72 - 131	6	20
Methyl tert-butyl ether			50.0	53.4		ug/L		107	71 - 124	3	20
Methylene Chloride			50.0	49.2		ug/L		98	74 - 124	1	20
m-Xylene & p-Xylene			50.0	50.4		ug/L		101	80 - 121	4	20
Naphthalene			50.0	61.0		ug/L		122	61 - 128	6	20
n-Butylbenzene			50.0	53.3		ug/L		107	75 - 128	2	20
N-Propylbenzene			50.0	52.2		ug/L		104	76 - 126	4	20
o-Xylene			50.0	49.7		ug/L		99	78 - 122	2	20
sec-Butylbenzene			50.0	53.3		ug/L		107	77 - 126	4	20
Styrene			50.0	52.8		ug/L		106	78 - 123	3	20
tert-Butylbenzene			50.0	51.9		ug/L		104	78 - 124	5	20
Tetrachloroethene			50.0	49.9		ug/L		100	74 - 129	2	20
Toluene			50.0	51.1		ug/L		102	80 - 121	3	20
trans-1,2-Dichloroethene			50.0	47.4		ug/L		95	75 - 124	3	20
trans-1,3-Dichloropropene			50.0	52.9		ug/L		106	73 - 127	2	20
Trichloroethene			50.0	50.9		ug/L		102	79 - 123	3	20
Trichlorofluoromethane			50.0	50.3		ug/L		101	65 - 141	7	20
Vinyl acetate			100	133		ug/L		133	54 - 146	4	20
Vinyl chloride			50.0	50.5		ug/L		101	58 - 137	5	20
Xylenes, Total			100	100		ug/L		100	79 - 121	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*90*		*85 - 114*
Dibromofluoromethane (Surr)	*95*		*80 - 119*
Toluene-d8 (Surr)	*96*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*101*		*81 - 118*

Lab Sample ID: MB 680-647043/8
Matrix: Water
Analysis Batch: 647043

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			12/04/20 14:13	1

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

Lab Sample ID: MB 680-647043/8
Matrix: Water
Analysis Batch: 647043

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			12/04/20 14:13	1
1,1,2,2-Tetrachloroethane	0.62	U	2.0	0.62	ug/L			12/04/20 14:13	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			12/04/20 14:13	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			12/04/20 14:13	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			12/04/20 14:13	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			12/04/20 14:13	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			12/04/20 14:13	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			12/04/20 14:13	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			12/04/20 14:13	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			12/04/20 14:13	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			12/04/20 14:13	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			12/04/20 14:13	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			12/04/20 14:13	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			12/04/20 14:13	1
1,2-Dichloropropane	0.67	U	2.0	0.67	ug/L			12/04/20 14:13	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			12/04/20 14:13	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			12/04/20 14:13	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			12/04/20 14:13	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			12/04/20 14:13	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			12/04/20 14:13	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			12/04/20 14:13	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			12/04/20 14:13	1
2-Hexanone	2.0	U	10	2.0	ug/L			12/04/20 14:13	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			12/04/20 14:13	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			12/04/20 14:13	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			12/04/20 14:13	1
Acetone	7.0	U	25	7.0	ug/L			12/04/20 14:13	1
Benzene	0.43	U	1.0	0.43	ug/L			12/04/20 14:13	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			12/04/20 14:13	1
Bromoform	0.43	U	1.0	0.43	ug/L			12/04/20 14:13	1
Bromomethane	2.5	U	5.0	2.5	ug/L			12/04/20 14:13	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			12/04/20 14:13	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			12/04/20 14:13	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			12/04/20 14:13	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			12/04/20 14:13	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			12/04/20 14:13	1
Chloroethane	2.5	U	5.0	2.5	ug/L			12/04/20 14:13	1
Chloroform	0.50	U	1.0	0.50	ug/L			12/04/20 14:13	1
Chloromethane	0.40	U	1.0	0.40	ug/L			12/04/20 14:13	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			12/04/20 14:13	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			12/04/20 14:13	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			12/04/20 14:13	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			12/04/20 14:13	1
Dichlorodifluoromethane	0.60	U	2.0	0.60	ug/L			12/04/20 14:13	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			12/04/20 14:13	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			12/04/20 14:13	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			12/04/20 14:13	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			12/04/20 14:13	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			12/04/20 14:13	1

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

Lab Sample ID: MB 680-647043/8
Matrix: Water
Analysis Batch: 647043

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	2.5	U	5.0	2.5	ug/L			12/04/20 14:13	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			12/04/20 14:13	1
Naphthalene	2.5	U	5.0	2.5	ug/L			12/04/20 14:13	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			12/04/20 14:13	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			12/04/20 14:13	1
o-Xylene	0.23	U	1.0	0.23	ug/L			12/04/20 14:13	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			12/04/20 14:13	1
Styrene	0.27	U	1.0	0.27	ug/L			12/04/20 14:13	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			12/04/20 14:13	1
Tetrachloroethene	0.74	U	2.0	0.74	ug/L			12/04/20 14:13	1
Toluene	0.48	U	1.0	0.48	ug/L			12/04/20 14:13	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			12/04/20 14:13	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			12/04/20 14:13	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			12/04/20 14:13	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			12/04/20 14:13	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			12/04/20 14:13	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			12/04/20 14:13	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			12/04/20 14:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*		*12/04/20 14:13*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*12/04/20 14:13*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*12/04/20 14:13*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*		*12/04/20 14:13*	*1*

Lab Sample ID: LCS 680-647043/3
Matrix: Water
Analysis Batch: 647043

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	53.0		ug/L		106	78 - 124
1,1,1-Trichloroethane	50.0	49.1		ug/L		98	74 - 131
1,1,2,2-Tetrachloroethane	50.0	55.5		ug/L		111	71 - 121
1,1,2-Trichloroethane	50.0	58.3		ug/L		117	80 - 119
1,1-Dichloroethane	50.0	50.4		ug/L		101	77 - 125
1,1-Dichloroethene	50.0	49.6		ug/L		99	71 - 131
1,1-Dichloropropene	50.0	49.8		ug/L		100	79 - 125
1,2,3-Trichlorobenzene	50.0	53.2		ug/L		106	69 - 129
1,2,3-Trichloropropane	50.0	56.5		ug/L		113	73 - 122
1,2,4-Trichlorobenzene	50.0	50.3		ug/L		101	69 - 130
1,2,4-Trimethylbenzene	50.0	48.0		ug/L		96	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	59.6		ug/L		119	62 - 128
1,2-Dichlorobenzene	50.0	50.1		ug/L		100	80 - 119
1,2-Dichloroethane	50.0	52.5		ug/L		105	73 - 128
1,2-Dichloroethene, Total	100	100		ug/L		100	79 - 121
1,2-Dichloropropane	50.0	54.2		ug/L		108	78 - 122
1,3,5-Trimethylbenzene	50.0	47.6		ug/L		95	75 - 124
1,3-Dichlorobenzene	50.0	49.2		ug/L		98	80 - 119

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

Lab Sample ID: LCS 680-647043/3
Matrix: Water
Analysis Batch: 647043

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	55.7		ug/L		111	80 - 119
1,4-Dichlorobenzene	50.0	48.3		ug/L		97	79 - 118
2,2-Dichloropropane	50.0	50.4		ug/L		101	60 - 139
2-Butanone (MEK)	250	318		ug/L		127	56 - 143
2-Chlorotoluene	50.0	48.3		ug/L		97	79 - 122
2-Hexanone	250	298		ug/L		119	57 - 139
4-Chlorotoluene	50.0	48.6		ug/L		97	78 - 122
4-Isopropyltoluene	50.0	48.9		ug/L		98	77 - 127
4-Methyl-2-pentanone (MIBK)	250	283		ug/L		113	67 - 130
Acetone	250	309		ug/L		123	39 - 160
Benzene	50.0	51.1		ug/L		102	79 - 120
Bromobenzene	50.0	50.6		ug/L		101	80 - 120
Bromoform	50.0	56.6		ug/L		113	66 - 130
Bromomethane	50.0	60.5		ug/L		121	53 - 141
Carbon disulfide	50.0	49.0		ug/L		98	64 - 133
Carbon tetrachloride	50.0	49.0		ug/L		98	72 - 136
Chlorobenzene	50.0	49.6		ug/L		99	82 - 118
Chlorobromomethane	50.0	52.4		ug/L		105	78 - 123
Chlorodibromomethane	50.0	56.2		ug/L		112	74 - 126
Chloroethane	50.0	60.7		ug/L		121	60 - 138
Chloroform	50.0	50.8		ug/L		102	79 - 124
Chloromethane	50.0	46.3		ug/L		93	50 - 139
cis-1,2-Dichloroethene	50.0	50.2		ug/L		100	78 - 123
cis-1,3-Dichloropropene	50.0	56.5		ug/L		113	75 - 124
Dibromomethane	50.0	53.4		ug/L		107	79 - 123
Dichlorobromomethane	50.0	52.7		ug/L		105	79 - 125
Dichlorodifluoromethane	50.0	49.1		ug/L		98	32 - 152
Ethylbenzene	50.0	49.3		ug/L		99	79 - 121
Ethylene Dibromide	50.0	57.3		ug/L		115	75 - 127
Hexachlorobutadiene	50.0	49.0		ug/L		98	66 - 134
Isopropylbenzene	50.0	48.7		ug/L		97	72 - 131
Methyl tert-butyl ether	50.0	55.3		ug/L		111	71 - 124
Methylene Chloride	50.0	52.5		ug/L		105	74 - 124
m-Xylene & p-Xylene	50.0	49.2		ug/L		98	80 - 121
Naphthalene	50.0	62.4		ug/L		125	61 - 128
n-Butylbenzene	50.0	48.1		ug/L		96	75 - 128
N-Propylbenzene	50.0	47.7		ug/L		95	76 - 126
o-Xylene	50.0	50.2		ug/L		100	78 - 122
sec-Butylbenzene	50.0	46.8		ug/L		94	77 - 126
Styrene	50.0	51.4		ug/L		103	78 - 123
tert-Butylbenzene	50.0	47.0		ug/L		94	78 - 124
Tetrachloroethene	50.0	50.3		ug/L		101	74 - 129
Toluene	50.0	52.1		ug/L		104	80 - 121
trans-1,2-Dichloroethene	50.0	50.1		ug/L		100	75 - 124
trans-1,3-Dichloropropene	50.0	56.0		ug/L		112	73 - 127
Trichloroethene	50.0	51.0		ug/L		102	79 - 123
Trichlorofluoromethane	50.0	50.7		ug/L		101	65 - 141
Vinyl acetate	100	123		ug/L		123	54 - 146
Vinyl chloride	50.0	48.6		ug/L		97	58 - 137

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

Lab Sample ID: LCS 680-647043/3
Matrix: Water
Analysis Batch: 647043

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	99.4		ug/L		99	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*
Dibromofluoromethane (Surr)	*103*		*80 - 119*
Toluene-d8 (Surr)	*100*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*108*		*81 - 118*

Lab Sample ID: LCSD 680-647043/4
Matrix: Water
Analysis Batch: 647043

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	53.3		ug/L		107	78 - 124	0	20
1,1,1-Trichloroethane			50.0	48.6		ug/L		97	74 - 131	1	20
1,1,2,2-Tetrachloroethane			50.0	55.9		ug/L		112	71 - 121	1	20
1,1,2-Trichloroethane			50.0	57.6		ug/L		115	80 - 119	1	20
1,1-Dichloroethane			50.0	49.9		ug/L		100	77 - 125	1	20
1,1-Dichloroethene			50.0	49.4		ug/L		99	71 - 131	0	20
1,1-Dichloropropene			50.0	49.6		ug/L		99	79 - 125	0	20
1,2,3-Trichlorobenzene			50.0	54.6		ug/L		109	69 - 129	3	20
1,2,3-Trichloropropane			50.0	58.0		ug/L		116	73 - 122	3	20
1,2,4-Trichlorobenzene			50.0	51.0		ug/L		102	69 - 130	1	20
1,2,4-Trimethylbenzene			50.0	48.1		ug/L		96	76 - 124	0	20
1,2-Dibromo-3-Chloropropane			50.0	59.0		ug/L		118	62 - 128	1	20
1,2-Dichlorobenzene			50.0	49.8		ug/L		100	80 - 119	1	20
1,2-Dichloroethane			50.0	52.0		ug/L		104	73 - 128	1	20
1,2-Dichloroethene, Total			100	98.9		ug/L		99	79 - 121	1	20
1,2-Dichloropropane			50.0	54.0		ug/L		108	78 - 122	0	20
1,3,5-Trimethylbenzene			50.0	48.7		ug/L		97	75 - 124	2	20
1,3-Dichlorobenzene			50.0	49.6		ug/L		99	80 - 119	1	20
1,3-Dichloropropane			50.0	55.1		ug/L		110	80 - 119	1	20
1,4-Dichlorobenzene			50.0	48.3		ug/L		97	79 - 118	0	20
2,2-Dichloropropane			50.0	49.3		ug/L		99	60 - 139	2	20
2-Butanone (MEK)			250	318		ug/L		127	56 - 143	0	20
2-Chlorotoluene			50.0	49.1		ug/L		98	79 - 122	2	20
2-Hexanone			250	296		ug/L		118	57 - 139	1	20
4-Chlorotoluene			50.0	48.5		ug/L		97	78 - 122	0	20
4-Isopropyltoluene			50.0	48.4		ug/L		97	77 - 127	1	20
4-Methyl-2-pentanone (MIBK)			250	278		ug/L		111	67 - 130	2	20
Acetone			250	305		ug/L		122	39 - 160	1	20
Benzene			50.0	50.3		ug/L		101	79 - 120	1	20
Bromobenzene			50.0	50.8		ug/L		102	80 - 120	0	20
Bromoform			50.0	56.1		ug/L		112	66 - 130	1	20
Bromomethane			50.0	60.1		ug/L		120	53 - 141	1	20
Carbon disulfide			50.0	49.5		ug/L		99	64 - 133	1	20
Carbon tetrachloride			50.0	48.1		ug/L		96	72 - 136	2	20
Chlorobenzene			50.0	50.0		ug/L		100	82 - 118	1	20

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

Lab Sample ID: LCSD 680-647043/4
Matrix: Water
Analysis Batch: 647043

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	51.0		ug/L		102	78 - 123	3	20
Chlorodibromomethane			50.0	54.9		ug/L		110	74 - 126	2	20
Chloroethane			50.0	58.2		ug/L		116	60 - 138	4	20
Chloroform			50.0	50.1		ug/L		100	79 - 124	1	20
Chloromethane			50.0	46.7		ug/L		93	50 - 139	1	20
cis-1,2-Dichloroethene			50.0	49.0		ug/L		98	78 - 123	3	20
cis-1,3-Dichloropropene			50.0	55.3		ug/L		111	75 - 124	2	20
Dibromomethane			50.0	53.2		ug/L		106	79 - 123	0	20
Dichlorobromomethane			50.0	52.0		ug/L		104	79 - 125	1	20
Dichlorodifluoromethane			50.0	51.1		ug/L		102	32 - 152	4	20
Ethylbenzene			50.0	49.5		ug/L		99	79 - 121	0	20
Ethylene Dibromide			50.0	56.8		ug/L		114	75 - 127	1	20
Hexachlorobutadiene			50.0	49.0		ug/L		98	66 - 134	0	20
Isopropylbenzene			50.0	49.0		ug/L		98	72 - 131	1	20
Methyl tert-butyl ether			50.0	55.0		ug/L		110	71 - 124	1	20
Methylene Chloride			50.0	52.8		ug/L		106	74 - 124	0	20
m-Xylene & p-Xylene			50.0	49.8		ug/L		100	80 - 121	1	20
Naphthalene			50.0	63.5		ug/L		127	61 - 128	2	20
n-Butylbenzene			50.0	48.9		ug/L		98	75 - 128	2	20
N-Propylbenzene			50.0	48.5		ug/L		97	76 - 126	2	20
o-Xylene			50.0	50.7		ug/L		101	78 - 122	1	20
sec-Butylbenzene			50.0	46.6		ug/L		93	77 - 126	0	20
Styrene			50.0	51.3		ug/L		103	78 - 123	0	20
tert-Butylbenzene			50.0	47.6		ug/L		95	78 - 124	1	20
Tetrachloroethene			50.0	50.9		ug/L		102	74 - 129	1	20
Toluene			50.0	52.2		ug/L		104	80 - 121	0	20
trans-1,2-Dichloroethene			50.0	50.0		ug/L		100	75 - 124	0	20
trans-1,3-Dichloropropene			50.0	55.6		ug/L		111	73 - 127	1	20
Trichloroethene			50.0	50.7		ug/L		101	79 - 123	0	20
Trichlorofluoromethane			50.0	50.2		ug/L		100	65 - 141	1	20
Vinyl acetate			100	119		ug/L		119	54 - 146	3	20
Vinyl chloride			50.0	49.9		ug/L		100	58 - 137	3	20
Xylenes, Total			100	101		ug/L		101	79 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*85 - 114*
Dibromofluoromethane (Surr)	*101*		*80 - 119*
Toluene-d8 (Surr)	*100*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*105*		*81 - 118*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-645647/1-A
Matrix: Water
Analysis Batch: 646197

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 645647

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	17	U	50	17	ug/L		11/24/20 16:28	11/28/20 12:01	1
Manganese	1.0	U	10	1.0	ug/L		11/24/20 16:28	11/28/20 12:01	1

Method: 6010C - Metals (ICP)

Lab Sample ID: LCS 680-645647/2-A
Matrix: Water
Analysis Batch: 646197

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 645647

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Iron			5000	5220		ug/L		104	87 - 115		
Manganese			400	423		ug/L		106	90 - 114		

Lab Sample ID: 680-191900-1 MS
Matrix: Water
Analysis Batch: 646197

Client Sample ID: AOC50-RB2-FAL20
Prep Type: Dissolved
Prep Batch: 645647

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Iron	17	U	5000	5180		ug/L		104	87 - 115		
Manganese	1.0	U	400	421		ug/L		105	90 - 114		

Lab Sample ID: 680-191900-1 MSD
Matrix: Water
Analysis Batch: 646197

Client Sample ID: AOC50-RB2-FAL20
Prep Type: Dissolved
Prep Batch: 645647

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	17	U	5000	5320		ug/L		106	87 - 115	3	20
Manganese	1.0	U	400	430		ug/L		107	90 - 114	2	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-645646/1-A
Matrix: Water
Analysis Batch: 645906

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 645646

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5	U	3.0	1.5	ug/L		11/24/20 16:27	11/25/20 15:47	1

Lab Sample ID: LCS 680-645646/2-A
Matrix: Water
Analysis Batch: 645906

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 645646

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic			100	99.3		ug/L		99	84 - 116		

Lab Sample ID: 680-191900-1 MS
Matrix: Water
Analysis Batch: 645906

Client Sample ID: AOC50-RB2-FAL20
Prep Type: Dissolved
Prep Batch: 645646

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic	1.5	U	100	99.4		ug/L		99	84 - 116		

Lab Sample ID: 680-191900-1 MSD
Matrix: Water
Analysis Batch: 645906

Client Sample ID: AOC50-RB2-FAL20
Prep Type: Dissolved
Prep Batch: 645646

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	1.5	U	100	99.0		ug/L		99	84 - 116	0	20

GC/MS VOA

Analysis Batch: 647015

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-191900-1	AOC50-RB2-FAL20	Total/NA	Water	8260B	
680-191900-2	XSA-12-97X-FAL20	Total/NA	Water	8260B	
MB 680-647015/8	Method Blank	Total/NA	Water	8260B	
LCS 680-647015/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-647015/4	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 647043

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-191900-3	AOC50-TB9-FAL20	Total/NA	Water	8260B	
MB 680-647043/8	Method Blank	Total/NA	Water	8260B	
LCS 680-647043/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-647043/4	Lab Control Sample Dup	Total/NA	Water	8260B	

Metals

Prep Batch: 645646

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-191900-1	AOC50-RB2-FAL20	Dissolved	Water	3005A	
680-191900-2	XSA-12-97X-FAL20	Dissolved	Water	3005A	
MB 680-645646/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-645646/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-191900-1 MS	AOC50-RB2-FAL20	Dissolved	Water	3005A	
680-191900-1 MSD	AOC50-RB2-FAL20	Dissolved	Water	3005A	

Prep Batch: 645647

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-191900-1	AOC50-RB2-FAL20	Dissolved	Water	3005A	
680-191900-2	XSA-12-97X-FAL20	Dissolved	Water	3005A	
MB 680-645647/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-645647/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-191900-1 MS	AOC50-RB2-FAL20	Dissolved	Water	3005A	
680-191900-1 MSD	AOC50-RB2-FAL20	Dissolved	Water	3005A	

Analysis Batch: 645906

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-191900-1	AOC50-RB2-FAL20	Dissolved	Water	6020A	645646
680-191900-2	XSA-12-97X-FAL20	Dissolved	Water	6020A	645646
MB 680-645646/1-A	Method Blank	Total Recoverable	Water	6020A	645646
LCS 680-645646/2-A	Lab Control Sample	Total Recoverable	Water	6020A	645646
680-191900-1 MS	AOC50-RB2-FAL20	Dissolved	Water	6020A	645646
680-191900-1 MSD	AOC50-RB2-FAL20	Dissolved	Water	6020A	645646

Analysis Batch: 646197

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-191900-1	AOC50-RB2-FAL20	Dissolved	Water	6010C	645647
680-191900-2	XSA-12-97X-FAL20	Dissolved	Water	6010C	645647
MB 680-645647/1-A	Method Blank	Total Recoverable	Water	6010C	645647
LCS 680-645647/2-A	Lab Control Sample	Total Recoverable	Water	6010C	645647
680-191900-1 MS	AOC50-RB2-FAL20	Dissolved	Water	6010C	645647
680-191900-1 MSD	AOC50-RB2-FAL20	Dissolved	Water	6010C	645647

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens - AOC50

Job ID: 680-191900-1

Client Sample ID: AOC50-RB2-FAL20

Lab Sample ID: 680-191900-1

Date Collected: 11/22/20 11:00

Matrix: Water

Date Received: 11/24/20 09:50

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	647015	12/04/20 15:29	Y1S	TAL SAV
	Instrument ID: CMSC									
Dissolved	Prep	3005A			50 mL	50 mL	645647	11/24/20 16:28	BCB	TAL SAV
Dissolved	Analysis	6010C		1			646197	11/28/20 12:10	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	645646	11/24/20 16:27	BCB	TAL SAV
Dissolved	Analysis	6020A		1			645906	11/25/20 15:54	BJB	TAL SAV
	Instrument ID: ICPMSC									

Client Sample ID: XSA-12-97X-FAL20

Lab Sample ID: 680-191900-2

Date Collected: 11/22/20 13:30

Matrix: Water

Date Received: 11/24/20 09:50

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	647015	12/04/20 15:52	Y1S	TAL SAV
	Instrument ID: CMSC									
Dissolved	Prep	3005A			50 mL	50 mL	645647	11/24/20 16:28	BCB	TAL SAV
Dissolved	Analysis	6010C		1			646197	11/28/20 12:34	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	645646	11/24/20 16:27	BCB	TAL SAV
Dissolved	Analysis	6020A		1			645906	11/25/20 16:11	BJB	TAL SAV
	Instrument ID: ICPMSC									

Client Sample ID: AOC50-TB9-FAL20

Lab Sample ID: 680-191900-3

Date Collected: 11/22/20 00:00

Matrix: Water

Date Received: 11/24/20 09:50

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	647043	12/04/20 15:19	Y1S	TAL SAV
	Instrument ID: CMSP2									

Laboratory References:

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

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-191900-1
Project/Site: Fort Devens - AOC50

Laboratory: Eurofins TestAmerica, Savannah

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

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-22-24

Method Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens - AOC50

Job ID: 680-191900-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
6010C	Metals (ICP)	SW846	TAL SAV
6020A	Metals (ICP/MS)	SW846	TAL SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL SAV
5030B	Purge and Trap	SW846	TAL SAV

Protocol References:

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

Laboratory References:

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

Eurofins TestAmerica, Boston Service Center
240 Bear Hill Road
Suite 104
Waltham, MA 02451-1039
phone 781.466.6900 fax 781.466.6901

Boston #215

Chain of Custody Record

eurofins Environment Testing America

ian.mortz@arcadis.com

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact
Your Company Name here: Seres-Arcadis JV
Address
City/State/Zip
(xxx) xxx-xxxx Phone
(xxx) xxx-xxxx FAX
Project Name: Former Fort Devens, Long Term Monitoring
Site: AOC50
P O #

Project Manager: Nathan Mulleus
Email: jennifer.singer@arcadis.com
Tel/Fax: 843-478-0336

Analysis Turnaround Time
☐ CALENDAR DAYS ☐ WORKING DAYS
TAT if different from Below _____
☐ 2 weeks
☑ 1 week
☐ 2 days
☐ 1 day

Site Contact:
Lab Contact:
Date:
Carrier:

COC No:
_____ of _____ COCs
TALS Project #:
Sampler:
For Lab Use Only:
Walk-in Client:
Lab Sampling:
Job / SDG No.:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	SW6010C/FLDFLT(B)	SW6020A/FLDFLT(B)	SW8260B-VOCs	Sample Specific Notes:
AOC50-RB2-FAL20	11/22/20	11:00	G	WG	4	Y	N	✓	✓	✓	6010C = Fe, Mn; 6020A = As
XSA-12-97X-FAL20	11/22/20	13:30	G	WG	4	Y	N	✓	✓	✓	6010C = Fe, Mn; 6020A = As
Trip Blank					2					✓	

680-191900 Chain of Custody

Preservation Used: 1= Ice; 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☑ Unknown

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 & Comments:

1.1 1.4

Custody Seals Intact: ☐ Yes ☐ No
Custody Seal No.:
Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Desmond Bedard	Arcadis	11/23/20 07:30	[signature]	TA	11/23/20 8:45
[signature]	TA 11/23/20	12:00			
			Received in Laboratory by: [signature]	TA	11-24-20 950

Form No. CA-C-WI-002, Rev. 4.35, dated 10/6/2020

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-191900-1

Login Number: 191900

List Source: Eurofins TestAmerica, 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").	True	
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 TestAmerica, Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

Laboratory Job ID: 680-189991-1
Client Project/Site: Fort Devens
Revision: 1

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

Attn: Nathan R Mullens

Kathryn Smith

Authorized for release by:
10/30/2020 11:04:55 AM

Kathryn Smith, Client Service Manager
(912)250-0275
Kathy.Smith@Eurofinset.com

LINKS

Review your project results through TotalAccess

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.

Qualifiers

GC/MS VOA

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

GC VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

HPLC/IC

Qualifier	Qualifier Description
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

General Chemistry

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

Glossary

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

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-189991-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
680-189991-1	G6M-13-05X-FAL20	Water	10/13/20 12:40	10/14/20 09:30	
680-189991-2	G6M-13-06X-FAL20	Water	10/13/20 14:15	10/14/20 09:30	
680-189991-3	G6M-97-05B-FAL20	Water	10/13/20 12:30	10/14/20 09:30	
680-189991-4	AOC50-TB1-FAL20	Water	10/13/20 00:00	10/14/20 09:30	

Job ID: 680-189991-1

Laboratory: Eurofins TestAmerica, Savannah

Narrative

CASE NARRATIVE
Client: Seres Engineering & Services LLC
Project: Fort Devens

Report Number: 680-189991-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

RECEIPT
The samples were received on 10/14/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 3.5 C.

VOLATILE ORGANIC COMPOUNDS (GC/MS)
Samples G6M-13-05X-FAL20 (680-189991-1), G6M-13-06X-FAL20 (680-189991-2), G6M-97-05B-FAL20 (680-189991-3) and AOC50-TB1-FAL20 (680-189991-4) were analyzed for Volatile Organic Compounds (GC/MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 10/25/2020.

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

DISSOLVED GASES
Samples G6M-13-05X-FAL20 (680-189991-1), G6M-13-06X-FAL20 (680-189991-2) and G6M-97-05B-FAL20 (680-189991-3) were analyzed for dissolved gases in accordance with RSK-175. The samples were analyzed on 10/22/2020 and 10/25/2020.

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

METALS (ICP) - DISSOLVED
Samples G6M-13-05X-FAL20 (680-189991-1), G6M-13-06X-FAL20 (680-189991-2) and G6M-97-05B-FAL20 (680-189991-3) were analyzed for Metals (ICP) - Dissolved in accordance with EPA SW-846 Method 6010C. The samples were prepared on 10/15/2020 and analyzed on 10/16/2020.

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

METALS (ICPMS) - DISSOLVED
Samples G6M-13-05X-FAL20 (680-189991-1), G6M-13-06X-FAL20 (680-189991-2) and G6M-97-05B-FAL20 (680-189991-3) were analyzed for Metals (ICPMS) - Dissolved in accordance with EPA SW-846 Method 6020A. The samples were prepared on 10/15/2020 and analyzed on 10/16/2020.

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

ALKALINITY
Samples G6M-13-05X-FAL20 (680-189991-1), G6M-13-06X-FAL20 (680-189991-2) and G6M-97-05B-FAL20 (680-189991-3) were analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 10/23/2020.

Alkalinity was detected in method blank MB 280-514074/31 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

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

Job ID: 680-189991-1 (Continued)

Laboratory: Eurofins TestAmerica, Savannah (Continued)

NITRATE-NITRITE AS NITROGEN

Samples G6M-13-05X-FAL20 (680-189991-1), G6M-13-06X-FAL20 (680-189991-2) and G6M-97-05B-FAL20 (680-189991-3) were analyzed for nitrate-nitrite as nitrogen in accordance with EPA Method 353.2. The samples were analyzed on 10/19/2020.

Nitrate/Nitrite-N was detected in method blank MB 280-513213/60 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

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

SULFIDE

Samples G6M-13-05X-FAL20 (680-189991-1), G6M-13-06X-FAL20 (680-189991-2) and G6M-97-05B-FAL20 (680-189991-3) were analyzed for sulfide in accordance with EPA SW846 Method 9034. The samples were analyzed on 10/16/2020.

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

ANIONS BY ION CHROMATOGRAPHY (28 DAY)

Samples G6M-13-05X-FAL20 (680-189991-1), G6M-13-06X-FAL20 (680-189991-2) and G6M-97-05B-FAL20 (680-189991-3) were analyzed for Anions by Ion Chromatography (28 Day) in accordance with SW 846 9056A. The samples were analyzed on 10/23/2020.

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

TOTAL ORGANIC CARBON

Samples G6M-13-05X-FAL20 (680-189991-1), G6M-13-06X-FAL20 (680-189991-2) and G6M-97-05B-FAL20 (680-189991-3) were analyzed for total organic carbon in accordance with EPA SW-846 Method 9060A. The samples were analyzed on 10/20/2020.

Samples G6M-13-06X-FAL20 (680-189991-2)[3.57X] and G6M-97-05B-FAL20 (680-189991-3)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

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

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-189991-1

Client Sample ID: G6M-13-05X-FAL20

Date Collected: 10/13/20 12:40
Date Received: 10/14/20 09:30

Lab Sample ID: 680-189991-1

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/25/20 14:11	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/25/20 14:11	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/25/20 14:11	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/25/20 14:11	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/25/20 14:11	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/25/20 14:11	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/25/20 14:11	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/25/20 14:11	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/25/20 14:11	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/25/20 14:11	1
1,2,4-Trimethylbenzene	0.47	U M	1.0	0.47	ug/L			10/25/20 14:11	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/25/20 14:11	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/25/20 14:11	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/25/20 14:11	1
1,2-Dichloroethene, Total	**1.8**	**J**	2.0	0.74	ug/L			10/25/20 14:11	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/25/20 14:11	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/25/20 14:11	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/25/20 14:11	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/25/20 14:11	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/25/20 14:11	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/25/20 14:11	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/25/20 14:11	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/25/20 14:11	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/25/20 14:11	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/25/20 14:11	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/25/20 14:11	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/25/20 14:11	1
Acetone	7.0	U	10	7.0	ug/L			10/25/20 14:11	1
Benzene	0.43	U	1.0	0.43	ug/L			10/25/20 14:11	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/25/20 14:11	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/25/20 14:11	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/25/20 14:11	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/25/20 14:11	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/25/20 14:11	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/25/20 14:11	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/25/20 14:11	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/25/20 14:11	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/25/20 14:11	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/25/20 14:11	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/25/20 14:11	1
cis-1,2-Dichloroethene	**1.3**		1.0	0.41	ug/L			10/25/20 14:11	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/25/20 14:11	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/25/20 14:11	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/25/20 14:11	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/25/20 14:11	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/25/20 14:11	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/25/20 14:11	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/25/20 14:11	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/25/20 14:11	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-189991-1

Client Sample ID: G6M-13-05X-FAL20

Date Collected: 10/13/20 12:40
Date Received: 10/14/20 09:30

Lab Sample ID: 680-189991-1

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/25/20 14:11	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/25/20 14:11	1
m-Xylene & p-Xylene	0.35	U M	1.0	0.35	ug/L			10/25/20 14:11	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/25/20 14:11	1
n-Butylbenzene	0.47	U M	1.0	0.47	ug/L			10/25/20 14:11	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/25/20 14:11	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/25/20 14:11	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/25/20 14:11	1
Styrene	0.27	U	1.0	0.27	ug/L			10/25/20 14:11	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/25/20 14:11	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			10/25/20 14:11	1
Toluene	0.48	U	1.0	0.48	ug/L			10/25/20 14:11	1
trans-1,2-Dichloroethene	**0.48**	**J**	1.0	0.37	ug/L			10/25/20 14:11	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/25/20 14:11	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/25/20 14:11	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/25/20 14:11	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/25/20 14:11	1
Vinyl chloride	**1.7**	**M**	1.0	0.50	ug/L			10/25/20 14:11	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/25/20 14:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*10/25/20 14:11*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 119*		*10/25/20 14:11*	*1*
Toluene-d8 (Surr)	*105*		*89 - 112*		*10/25/20 14:11*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*81 - 118*		*10/25/20 14:11*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**21**		1.1	0.55	ug/L			10/22/20 18:22	1
Ethylene	**11**		1.0	0.50	ug/L			10/22/20 18:22	1
Methane	**4.0**		0.58	0.29	ug/L			10/22/20 18:22	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.40	U	1.0	0.40	mg/L			10/23/20 12:12	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**110000**		50	17	ug/L		10/15/20 12:05	10/16/20 23:12	1
Manganese	**15000**		10	1.0	ug/L		10/15/20 12:05	10/16/20 23:12	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**150**		3.0	1.5	ug/L		10/15/20 12:05	10/16/20 16:59	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.12**		0.10	0.019	mg/L			10/19/20 19:37	1
Sulfide	0.81	U	0.81	0.81	mg/L			10/16/20 10:32	1
Total Organic Carbon - Duplicates	**12**		1.0	0.35	mg/L			10/20/20 21:39	1
Alkalinity	**130**		10	3.1	mg/L			10/23/20 18:14	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-189991-1

Client Sample ID: G6M-13-06X-FAL20
Date Collected: 10/13/20 14:15
Date Received: 10/14/20 09:30

Lab Sample ID: 680-189991-2
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/25/20 14:35	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/25/20 14:35	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/25/20 14:35	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/25/20 14:35	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/25/20 14:35	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/25/20 14:35	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/25/20 14:35	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/25/20 14:35	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/25/20 14:35	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/25/20 14:35	1
1,2,4-Trimethylbenzene	**1.0**		1.0	0.47	ug/L			10/25/20 14:35	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/25/20 14:35	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/25/20 14:35	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/25/20 14:35	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			10/25/20 14:35	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/25/20 14:35	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/25/20 14:35	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/25/20 14:35	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/25/20 14:35	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/25/20 14:35	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/25/20 14:35	1
2-Butanone (MEK)	**450**		10	3.4	ug/L			10/25/20 14:35	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/25/20 14:35	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/25/20 14:35	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/25/20 14:35	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/25/20 14:35	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/25/20 14:35	1
Acetone	**70**		10	7.0	ug/L			10/25/20 14:35	1
Benzene	0.43	U	1.0	0.43	ug/L			10/25/20 14:35	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/25/20 14:35	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/25/20 14:35	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/25/20 14:35	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/25/20 14:35	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/25/20 14:35	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/25/20 14:35	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/25/20 14:35	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/25/20 14:35	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/25/20 14:35	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/25/20 14:35	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/25/20 14:35	1
cis-1,2-Dichloroethene	0.41	U M	1.0	0.41	ug/L			10/25/20 14:35	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/25/20 14:35	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/25/20 14:35	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/25/20 14:35	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/25/20 14:35	1
Ethylbenzene	**1.8**		1.0	0.33	ug/L			10/25/20 14:35	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/25/20 14:35	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/25/20 14:35	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/25/20 14:35	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-189991-1

Client Sample ID: G6M-13-06X-FAL20

Date Collected: 10/13/20 14:15
Date Received: 10/14/20 09:30

Lab Sample ID: 680-189991-2

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	**0.35**	**J**	10	0.30	ug/L			10/25/20 14:35	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/25/20 14:35	1
m-Xylene & p-Xylene	**0.54**	**J**	1.0	0.35	ug/L			10/25/20 14:35	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/25/20 14:35	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/25/20 14:35	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/25/20 14:35	1
o-Xylene	**0.33**	**J**	1.0	0.23	ug/L			10/25/20 14:35	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/25/20 14:35	1
Styrene	0.27	U	1.0	0.27	ug/L			10/25/20 14:35	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/25/20 14:35	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			10/25/20 14:35	1
Toluene	**13**		1.0	0.48	ug/L			10/25/20 14:35	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/25/20 14:35	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/25/20 14:35	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/25/20 14:35	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/25/20 14:35	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/25/20 14:35	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/25/20 14:35	1
Xylenes, Total	**0.87**	**J**	2.0	0.23	ug/L			10/25/20 14:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*10/25/20 14:35*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*10/25/20 14:35*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*10/25/20 14:35*	*1*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*		*10/25/20 14:35*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**10**		1.1	0.55	ug/L			10/25/20 16:03	1
Ethylene	**3.0**		1.0	0.50	ug/L			10/25/20 16:03	1
Methane (TCD)	**11000**		390	39	ug/L			10/25/20 16:03	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.40	U	1.0	0.40	mg/L			10/23/20 12:25	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**220000**		50	17	ug/L		10/15/20 12:05	10/16/20 23:16	1
Manganese	**2500**		10	1.0	ug/L		10/15/20 12:05	10/16/20 23:16	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**430**		3.0	1.5	ug/L		10/15/20 12:05	10/16/20 17:02	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.22**		0.10	0.019	mg/L			10/19/20 19:39	1
Sulfide	0.81	U	0.81	0.81	mg/L			10/16/20 10:32	1
Total Organic Carbon - Duplicates	**120**		3.6	1.2	mg/L			10/20/20 21:56	3.57
Alkalinity	**540**		10	3.1	mg/L			10/23/20 18:22	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-189991-1

Client Sample ID: G6M-97-05B-FAL20

Date Collected: 10/13/20 12:30
Date Received: 10/14/20 09:30

Lab Sample ID: 680-189991-3

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/25/20 15:00	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/25/20 15:00	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/25/20 15:00	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/25/20 15:00	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/25/20 15:00	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/25/20 15:00	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/25/20 15:00	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/25/20 15:00	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/25/20 15:00	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/25/20 15:00	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/25/20 15:00	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/25/20 15:00	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/25/20 15:00	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/25/20 15:00	1
1,2-Dichloroethene, Total	**73**		2.0	0.74	ug/L			10/25/20 15:00	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/25/20 15:00	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/25/20 15:00	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/25/20 15:00	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/25/20 15:00	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/25/20 15:00	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/25/20 15:00	1
2-Butanone (MEK)	**140**		10	3.4	ug/L			10/25/20 15:00	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/25/20 15:00	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/25/20 15:00	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/25/20 15:00	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/25/20 15:00	1
4-Methyl-2-pentanone (MIBK)	**6.3**	**J**	10	2.1	ug/L			10/25/20 15:00	1
Acetone	**45**		10	7.0	ug/L			10/25/20 15:00	1
Benzene	**1.4**		1.0	0.43	ug/L			10/25/20 15:00	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/25/20 15:00	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/25/20 15:00	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/25/20 15:00	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/25/20 15:00	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/25/20 15:00	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/25/20 15:00	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/25/20 15:00	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/25/20 15:00	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/25/20 15:00	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/25/20 15:00	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/25/20 15:00	1
cis-1,2-Dichloroethene	**73**		1.0	0.41	ug/L			10/25/20 15:00	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/25/20 15:00	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/25/20 15:00	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/25/20 15:00	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/25/20 15:00	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/25/20 15:00	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/25/20 15:00	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/25/20 15:00	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/25/20 15:00	1

Client Sample ID: G6M-97-05B-FAL20

Date Collected: 10/13/20 12:30
Date Received: 10/14/20 09:30

Lab Sample ID: 680-189991-3

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/25/20 15:00	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/25/20 15:00	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/25/20 15:00	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/25/20 15:00	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/25/20 15:00	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/25/20 15:00	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/25/20 15:00	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/25/20 15:00	1
Styrene	0.27	U	1.0	0.27	ug/L			10/25/20 15:00	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/25/20 15:00	1
Tetrachloroethene	**13**		1.0	0.74	ug/L			10/25/20 15:00	1
Toluene	0.48	U	1.0	0.48	ug/L			10/25/20 15:00	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/25/20 15:00	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/25/20 15:00	1
Trichloroethene	**3.1**		1.0	0.48	ug/L			10/25/20 15:00	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/25/20 15:00	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/25/20 15:00	1
Vinyl chloride	**2.4**		1.0	0.50	ug/L			10/25/20 15:00	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/25/20 15:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*10/25/20 15:00*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 119*		*10/25/20 15:00*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*10/25/20 15:00*	*1*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*		*10/25/20 15:00*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**25**		1.1	0.55	ug/L			10/25/20 16:16	1
Ethylene	**22**		1.0	0.50	ug/L			10/25/20 16:16	1
Methane (TCD)	**10000**		390	39	ug/L			10/25/20 16:16	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.40	U	1.0	0.40	mg/L			10/23/20 11:22	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**61000**		50	17	ug/L		10/15/20 12:05	10/16/20 23:30	1
Manganese	**5800**		10	1.0	ug/L		10/15/20 12:05	10/16/20 23:30	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**130**		3.0	1.5	ug/L		10/15/20 12:05	10/16/20 17:05	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.024**	**J**	0.10	0.019	mg/L			10/19/20 19:41	1
Sulfide	0.81	U	0.81	0.81	mg/L			10/16/20 10:36	1
Total Organic Carbon - Duplicates	**210**		5.0	1.7	mg/L			10/20/20 22:51	5
Alkalinity	**150**		10	3.1	mg/L			10/23/20 18:26	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-189991-1

Client Sample ID: AOC50-TB1-FAL20

Date Collected: 10/13/20 00:00
Date Received: 10/14/20 09:30

Lab Sample ID: 680-189991-4

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/25/20 12:57	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/25/20 12:57	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/25/20 12:57	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/25/20 12:57	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/25/20 12:57	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/25/20 12:57	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/25/20 12:57	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/25/20 12:57	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/25/20 12:57	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/25/20 12:57	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/25/20 12:57	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/25/20 12:57	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/25/20 12:57	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/25/20 12:57	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			10/25/20 12:57	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/25/20 12:57	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/25/20 12:57	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/25/20 12:57	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/25/20 12:57	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/25/20 12:57	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/25/20 12:57	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/25/20 12:57	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/25/20 12:57	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/25/20 12:57	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/25/20 12:57	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/25/20 12:57	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/25/20 12:57	1
Acetone	7.0	U	10	7.0	ug/L			10/25/20 12:57	1
Benzene	0.43	U	1.0	0.43	ug/L			10/25/20 12:57	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/25/20 12:57	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/25/20 12:57	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/25/20 12:57	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/25/20 12:57	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/25/20 12:57	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/25/20 12:57	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/25/20 12:57	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/25/20 12:57	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/25/20 12:57	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/25/20 12:57	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/25/20 12:57	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			10/25/20 12:57	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/25/20 12:57	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/25/20 12:57	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/25/20 12:57	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/25/20 12:57	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/25/20 12:57	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/25/20 12:57	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/25/20 12:57	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/25/20 12:57	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-189991-1

Client Sample ID: AOC50-TB1-FAL20
Date Collected: 10/13/20 00:00
Date Received: 10/14/20 09:30

Lab Sample ID: 680-189991-4
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/25/20 12:57	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/25/20 12:57	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/25/20 12:57	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/25/20 12:57	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/25/20 12:57	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/25/20 12:57	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/25/20 12:57	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/25/20 12:57	1
Styrene	0.27	U	1.0	0.27	ug/L			10/25/20 12:57	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/25/20 12:57	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			10/25/20 12:57	1
Toluene	0.48	U	1.0	0.48	ug/L			10/25/20 12:57	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/25/20 12:57	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/25/20 12:57	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/25/20 12:57	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/25/20 12:57	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/25/20 12:57	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/25/20 12:57	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/25/20 12:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*10/25/20 12:57*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 119*		*10/25/20 12:57*	*1*
Toluene-d8 (Surr)	*104*		*89 - 112*		*10/25/20 12:57*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*81 - 118*		*10/25/20 12:57*	*1*

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

Lab Sample ID: MB 680-640636/8
Matrix: Water
Analysis Batch: 640636

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/25/20 12:23	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/25/20 12:23	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/25/20 12:23	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/25/20 12:23	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/25/20 12:23	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/25/20 12:23	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/25/20 12:23	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/25/20 12:23	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/25/20 12:23	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/25/20 12:23	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/25/20 12:23	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/25/20 12:23	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/25/20 12:23	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/25/20 12:23	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			10/25/20 12:23	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/25/20 12:23	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/25/20 12:23	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/25/20 12:23	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/25/20 12:23	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/25/20 12:23	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/25/20 12:23	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/25/20 12:23	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/25/20 12:23	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/25/20 12:23	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/25/20 12:23	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/25/20 12:23	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/25/20 12:23	1
Acetone	7.0	U	10	7.0	ug/L			10/25/20 12:23	1
Benzene	0.43	U	1.0	0.43	ug/L			10/25/20 12:23	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/25/20 12:23	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/25/20 12:23	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/25/20 12:23	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/25/20 12:23	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/25/20 12:23	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/25/20 12:23	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/25/20 12:23	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/25/20 12:23	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/25/20 12:23	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/25/20 12:23	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/25/20 12:23	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			10/25/20 12:23	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/25/20 12:23	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/25/20 12:23	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/25/20 12:23	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/25/20 12:23	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/25/20 12:23	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/25/20 12:23	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/25/20 12:23	1

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

Lab Sample ID: MB 680-640636/8
Matrix: Water
Analysis Batch: 640636

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/25/20 12:23	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/25/20 12:23	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/25/20 12:23	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/25/20 12:23	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/25/20 12:23	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/25/20 12:23	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/25/20 12:23	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/25/20 12:23	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/25/20 12:23	1
Styrene	0.27	U	1.0	0.27	ug/L			10/25/20 12:23	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/25/20 12:23	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			10/25/20 12:23	1
Toluene	0.48	U	1.0	0.48	ug/L			10/25/20 12:23	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/25/20 12:23	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/25/20 12:23	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/25/20 12:23	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/25/20 12:23	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/25/20 12:23	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/25/20 12:23	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/25/20 12:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*10/25/20 12:23*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 119*		*10/25/20 12:23*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*10/25/20 12:23*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*81 - 118*		*10/25/20 12:23*	*1*

Lab Sample ID: LCS 680-640636/3
Matrix: Water
Analysis Batch: 640636

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	57.6		ug/L		115	78 - 124
1,1,1-Trichloroethane	50.0	49.6		ug/L		99	74 - 131
1,1,2,2-Tetrachloroethane	50.0	53.9		ug/L		108	71 - 121
1,1,2-Trichloroethane	50.0	53.9		ug/L		108	80 - 119
1,1-Dichloroethane	50.0	46.7		ug/L		93	77 - 125
1,1-Dichloroethene	50.0	51.2		ug/L		102	71 - 131
1,1-Dichloropropene	50.0	49.8		ug/L		100	79 - 125
1,2,3-Trichlorobenzene	50.0	47.7		ug/L		95	69 - 129
1,2,3-Trichloropropane	50.0	59.2		ug/L		118	73 - 122
1,2,4-Trichlorobenzene	50.0	47.9		ug/L		96	69 - 130
1,2,4-Trimethylbenzene	50.0	50.7		ug/L		101	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	49.7		ug/L		99	62 - 128
1,2-Dichlorobenzene	50.0	50.4		ug/L		101	80 - 119
1,2-Dichloroethane	50.0	49.0		ug/L		98	73 - 128
1,2-Dichloroethene, Total	100	97.2		ug/L		97	79 - 121
1,2-Dichloropropane	50.0	48.6		ug/L		97	78 - 122

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

Lab Sample ID: LCS 680-640636/3
Matrix: Water
Analysis Batch: 640636

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	50.0		ug/L		100	75 - 124
1,3-Dichlorobenzene	50.0	50.9		ug/L		102	80 - 119
1,3-Dichloropropane	50.0	50.3		ug/L		101	80 - 119
1,4-Dichlorobenzene	50.0	50.7		ug/L		101	79 - 118
2,2-Dichloropropane	50.0	49.0		ug/L		98	60 - 139
2-Butanone (MEK)	250	265		ug/L		106	56 - 143
2-Chlorotoluene	50.0	51.5		ug/L		103	79 - 122
2-Hexanone	250	242		ug/L		97	57 - 139
4-Chlorotoluene	50.0	51.5		ug/L		103	78 - 122
4-Isopropyltoluene	50.0	48.5		ug/L		97	77 - 127
4-Methyl-2-pentanone (MIBK)	250	245		ug/L		98	67 - 130
Acetone	250	237		ug/L		95	39 - 160
Benzene	50.0	50.3		ug/L		101	79 - 120
Bromobenzene	50.0	55.2		ug/L		110	80 - 120
Bromoform	50.0	58.9		ug/L		118	66 - 130
Bromomethane	50.0	40.1		ug/L		80	53 - 141
Carbon disulfide	50.0	49.9		ug/L		100	64 - 133
Carbon tetrachloride	50.0	51.0		ug/L		102	72 - 136
Chlorobenzene	50.0	53.4		ug/L		107	82 - 118
Chlorobromomethane	50.0	50.9		ug/L		102	78 - 123
Chlorodibromomethane	50.0	53.9		ug/L		108	74 - 126
Chloroethane	50.0	41.5		ug/L		83	60 - 138
Chloroform	50.0	48.1		ug/L		96	79 - 124
Chloromethane	50.0	43.5		ug/L		87	50 - 139
cis-1,2-Dichloroethene	50.0	46.4		ug/L		93	78 - 123
cis-1,3-Dichloropropene	50.0	50.3		ug/L		101	75 - 124
Dibromomethane	50.0	49.6		ug/L		99	79 - 123
Dichlorobromomethane	50.0	49.9		ug/L		100	79 - 125
Dichlorodifluoromethane	50.0	52.0		ug/L		104	32 - 152
Ethylbenzene	50.0	51.5		ug/L		103	79 - 121
Ethylene Dibromide	50.0	55.6		ug/L		111	75 - 127
Hexachlorobutadiene	50.0	49.4		ug/L		99	66 - 134
Isopropylbenzene	50.0	51.1		ug/L		102	72 - 131
Methyl tert-butyl ether	50.0	49.3		ug/L		99	71 - 124
Methylene Chloride	50.0	49.6		ug/L		99	74 - 124
m-Xylene & p-Xylene	50.0	51.7		ug/L		103	80 - 121
Naphthalene	50.0	47.8		ug/L		96	61 - 128
n-Butylbenzene	50.0	46.4		ug/L		93	75 - 128
N-Propylbenzene	50.0	50.8		ug/L		102	76 - 126
o-Xylene	50.0	51.2		ug/L		102	78 - 122
sec-Butylbenzene	50.0	50.5		ug/L		101	77 - 126
Styrene	50.0	54.2		ug/L		108	78 - 123
tert-Butylbenzene	50.0	51.1		ug/L		102	78 - 124
Tetrachloroethene	50.0	55.7		ug/L		111	74 - 129
Toluene	50.0	52.5		ug/L		105	80 - 121
trans-1,2-Dichloroethene	50.0	50.7		ug/L		101	75 - 124
trans-1,3-Dichloropropene	50.0	50.1		ug/L		100	73 - 127
Trichloroethene	50.0	52.9		ug/L		106	79 - 123
Trichlorofluoromethane	50.0	49.4		ug/L		99	65 - 141

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

Lab Sample ID: LCS 680-640636/3
Matrix: Water
Analysis Batch: 640636

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	103		ug/L		103	54 - 146
Vinyl chloride	50.0	46.8		ug/L		94	58 - 137
Xylenes, Total	100	103		ug/L		103	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*
Dibromofluoromethane (Surr)	*99*		*80 - 119*
Toluene-d8 (Surr)	*105*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*99*		*81 - 118*

Lab Sample ID: LCSD 680-640636/4
Matrix: Water
Analysis Batch: 640636

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	56.4		ug/L		113	78 - 124	2	20
1,1,1-Trichloroethane	50.0	49.3		ug/L		99	74 - 131	0	20
1,1,2,2-Tetrachloroethane	50.0	52.0		ug/L		104	71 - 121	4	20
1,1,2-Trichloroethane	50.0	53.9		ug/L		108	80 - 119	0	20
1,1-Dichloroethane	50.0	47.2		ug/L		94	77 - 125	1	20
1,1-Dichloroethene	50.0	50.5		ug/L		101	71 - 131	1	20
1,1-Dichloropropene	50.0	50.0		ug/L		100	79 - 125	0	20
1,2,3-Trichlorobenzene	50.0	49.4		ug/L		99	69 - 129	3	20
1,2,3-Trichloropropane	50.0	57.1		ug/L		114	73 - 122	4	20
1,2,4-Trichlorobenzene	50.0	49.0		ug/L		98	69 - 130	2	20
1,2,4-Trimethylbenzene	50.0	50.4		ug/L		101	76 - 124	1	20
1,2-Dibromo-3-Chloropropane	50.0	50.8		ug/L		102	62 - 128	2	20
1,2-Dichlorobenzene	50.0	50.5		ug/L		101	80 - 119	0	20
1,2-Dichloroethane	50.0	50.0		ug/L		100	73 - 128	2	20
1,2-Dichloroethene, Total	100	98.2		ug/L		98	79 - 121	1	20
1,2-Dichloropropane	50.0	48.3		ug/L		97	78 - 122	1	20
1,3,5-Trimethylbenzene	50.0	49.2		ug/L		98	75 - 124	2	20
1,3-Dichlorobenzene	50.0	51.6		ug/L		103	80 - 119	2	20
1,3-Dichloropropane	50.0	51.2		ug/L		102	80 - 119	2	20
1,4-Dichlorobenzene	50.0	50.2		ug/L		100	79 - 118	1	20
2,2-Dichloropropane	50.0	48.8		ug/L		98	60 - 139	0	20
2-Butanone (MEK)	250	267		ug/L		107	56 - 143	1	20
2-Chlorotoluene	50.0	50.0		ug/L		100	79 - 122	3	20
2-Hexanone	250	246		ug/L		98	57 - 139	2	20
4-Chlorotoluene	50.0	50.2		ug/L		100	78 - 122	2	20
4-Isopropyltoluene	50.0	47.9		ug/L		96	77 - 127	1	20
4-Methyl-2-pentanone (MIBK)	250	248		ug/L		99	67 - 130	1	20
Acetone	250	235		ug/L		94	39 - 160	1	20
Benzene	50.0	50.5		ug/L		101	79 - 120	0	20
Bromobenzene	50.0	54.9		ug/L		110	80 - 120	1	20
Bromoform	50.0	58.6		ug/L		117	66 - 130	0	20
Bromomethane	50.0	41.6		ug/L		83	53 - 141	4	20
Carbon disulfide	50.0	49.9		ug/L		100	64 - 133	0	20

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

Lab Sample ID: LCSD 680-640636/4
Matrix: Water
Analysis Batch: 640636

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	50.9		ug/L		102	72 - 136	0	20
Chlorobenzene			50.0	52.4		ug/L		105	82 - 118	2	20
Chlorobromomethane			50.0	50.8		ug/L		102	78 - 123	0	20
Chlorodibromomethane			50.0	53.9		ug/L		108	74 - 126	0	20
Chloroethane			50.0	42.8		ug/L		86	60 - 138	3	20
Chloroform			50.0	48.3		ug/L		97	79 - 124	0	20
Chloromethane			50.0	43.8		ug/L		88	50 - 139	1	20
cis-1,2-Dichloroethene			50.0	46.7		ug/L		93	78 - 123	1	20
cis-1,3-Dichloropropene			50.0	51.3		ug/L		103	75 - 124	2	20
Dibromomethane			50.0	49.7		ug/L		99	79 - 123	0	20
Dichlorobromomethane			50.0	50.7		ug/L		101	79 - 125	2	20
Dichlorodifluoromethane			50.0	51.7		ug/L		103	32 - 152	1	20
Ethylbenzene			50.0	50.8		ug/L		102	79 - 121	2	20
Ethylene Dibromide			50.0	56.0		ug/L		112	75 - 127	1	20
Hexachlorobutadiene			50.0	49.1		ug/L		98	66 - 134	1	20
Isopropylbenzene			50.0	50.6		ug/L		101	72 - 131	1	20
Methyl tert-butyl ether			50.0	49.7		ug/L		99	71 - 124	1	20
Methylene Chloride			50.0	49.3		ug/L		99	74 - 124	1	20
m-Xylene & p-Xylene			50.0	50.8		ug/L		102	80 - 121	2	20
Naphthalene			50.0	48.6		ug/L		97	61 - 128	2	20
n-Butylbenzene			50.0	46.5		ug/L		93	75 - 128	0	20
N-Propylbenzene			50.0	50.0		ug/L		100	76 - 126	2	20
o-Xylene			50.0	50.9		ug/L		102	78 - 122	1	20
sec-Butylbenzene			50.0	49.3		ug/L		99	77 - 126	3	20
Styrene			50.0	53.3		ug/L		107	78 - 123	2	20
tert-Butylbenzene			50.0	49.9		ug/L		100	78 - 124	2	20
Tetrachloroethene			50.0	56.3		ug/L		113	74 - 129	1	20
Toluene			50.0	52.5		ug/L		105	80 - 121	0	20
trans-1,2-Dichloroethene			50.0	51.5		ug/L		103	75 - 124	2	20
trans-1,3-Dichloropropene			50.0	49.9		ug/L		100	73 - 127	0	20
Trichloroethene			50.0	53.0		ug/L		106	79 - 123	0	20
Trichlorofluoromethane			50.0	49.3		ug/L		99	65 - 141	0	20
Vinyl acetate			100	103		ug/L		103	54 - 146	0	20
Vinyl chloride			50.0	46.4		ug/L		93	58 - 137	1	20
Xylenes, Total			100	102		ug/L		102	79 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*
Dibromofluoromethane (Surr)	*101*		*80 - 119*
Toluene-d8 (Surr)	*103*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*99*		*81 - 118*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-640179/8
Matrix: Water
Analysis Batch: 640179

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	0.55	U	1.1	0.55	ug/L			10/22/20 12:56	1
Ethylene	0.50	U	1.0	0.50	ug/L			10/22/20 12:56	1
Methane	0.29	U	0.58	0.29	ug/L			10/22/20 12:56	1
Methane (TCD)	39	U	390	39	ug/L			10/22/20 12:56	1

Lab Sample ID: LCS 680-640179/3
Matrix: Water
Analysis Batch: 640179

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 680-640179/6
Matrix: Water
Analysis Batch: 640179

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	288	258		ug/L		89	74 - 131
Ethylene	269	240		ug/L		89	72 - 133
Methane	154	140		ug/L		91	73 - 125

Lab Sample ID: LCSD 680-640179/4
Matrix: Water
Analysis Batch: 640179

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	1710		ug/L		89	73 - 125	5	30

Lab Sample ID: LCSD 680-640179/7
Matrix: Water
Analysis Batch: 640179

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	288	265		ug/L		92	74 - 131	3	30
Ethylene	269	246		ug/L		91	72 - 133	2	30
Methane	154	145		ug/L		94	73 - 125	3	30

Lab Sample ID: MB 680-640659/8
Matrix: Water
Analysis Batch: 640659

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	0.55	U	1.1	0.55	ug/L			10/25/20 15:43	1
Ethylene	0.50	U	1.0	0.50	ug/L			10/25/20 15:43	1
Methane	0.29	U	0.58	0.29	ug/L			10/25/20 15:43	1
Methane (TCD)	39	U	390	39	ug/L			10/25/20 15:43	1

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

Lab Sample ID: LCS 680-640659/3
Matrix: Water
Analysis Batch: 640659

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	1710		ug/L		89	73 - 125

Lab Sample ID: LCS 680-640659/6
Matrix: Water
Analysis Batch: 640659

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	288	262		ug/L		91	74 - 131
Ethylene	269	236		ug/L		88	72 - 133
Methane	154	141		ug/L		91	73 - 125

Lab Sample ID: LCSD 680-640659/4
Matrix: Water
Analysis Batch: 640659

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	1680		ug/L		88	73 - 125	1	30

Lab Sample ID: LCSD 680-640659/7
Matrix: Water
Analysis Batch: 640659

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	288	260		ug/L		90	74 - 131	1	30
Ethylene	269	242		ug/L		90	72 - 133	2	30
Methane	154	143		ug/L		93	73 - 125	2	30

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-640367/2
Matrix: Water
Analysis Batch: 640367

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.40	U M	1.0	0.40	mg/L			10/23/20 09:15	1

Lab Sample ID: LCS 680-640367/3
Matrix: Water
Analysis Batch: 640367

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 680-640367/4
Matrix: Water
Analysis Batch: 640367

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

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-639122/1-A
Matrix: Water
Analysis Batch: 639463

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 639122

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	17	U	50	17	ug/L		10/15/20 12:05	10/16/20 22:41	1
Manganese	1.0	U	10	1.0	ug/L		10/15/20 12:05	10/16/20 22:41	1

Lab Sample ID: LCS 680-639122/2-A
Matrix: Water
Analysis Batch: 639463

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 639122

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	5000	5090		ug/L		102	87 - 115
Manganese	400	412		ug/L		103	90 - 114

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-639121/1-A
Matrix: Water
Analysis Batch: 639439

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 639121

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5	U	3.0	1.5	ug/L		10/15/20 12:05	10/16/20 15:36	1

Lab Sample ID: LCS 680-639121/2-A
Matrix: Water
Analysis Batch: 639439

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 639121

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	100	105		ug/L		105	84 - 116

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 280-513213/60
Matrix: Water
Analysis Batch: 513213

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.0439	J	0.10	0.019	mg/L			10/19/20 18:38	1

Lab Sample ID: LCS 280-513213/59
Matrix: Water
Analysis Batch: 513213

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	5.10		mg/L		102	90 - 110

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 680-639321/1
Matrix: Water
Analysis Batch: 639321

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	1.0	U	1.0	1.0	mg/L			10/16/20 10:32	1

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: LCS 680-639321/2
Matrix: Water
Analysis Batch: 639321

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	7.56		mg/L		76	75 - 125

Lab Sample ID: LCSD 680-639321/3
Matrix: Water
Analysis Batch: 639321

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	7.64		mg/L		76	75 - 125	1	30

Lab Sample ID: MB 680-639338/1
Matrix: Water
Analysis Batch: 639338

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	1.0	U	1.0	1.0	mg/L			10/16/20 10:36	1

Lab Sample ID: LCS 680-639338/2
Matrix: Water
Analysis Batch: 639338

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	7.74		mg/L		77	75 - 125

Lab Sample ID: LCSD 680-639338/3
Matrix: Water
Analysis Batch: 639338

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	7.92		mg/L		79	75 - 125	2	30

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 280-513472/4
Matrix: Water
Analysis Batch: 513472

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	0.35	U	1.0	0.35	mg/L			10/20/20 19:23	1

Lab Sample ID: LCS 280-513472/3
Matrix: Water
Analysis Batch: 513472

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 - Duplicates	25.0	24.8		mg/L		99	88 - 112

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-514074/31
Matrix: Water
Analysis Batch: 514074

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

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	4.02	J	10	3.1	mg/L			10/23/20 16:29	1

Lab Sample ID: LCS 280-514074/30
Matrix: Water
Analysis Batch: 514074

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Alkalinity			200	201		mg/L		101	89 - 109		

QC Association Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-189991-1

GC/MS VOA

Analysis Batch: 640636

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-189991-1	G6M-13-05X-FAL20	Total/NA	Water	8260B	
680-189991-2	G6M-13-06X-FAL20	Total/NA	Water	8260B	
680-189991-3	G6M-97-05B-FAL20	Total/NA	Water	8260B	
680-189991-4	AOC50-TB1-FAL20	Total/NA	Water	8260B	
MB 680-640636/8	Method Blank	Total/NA	Water	8260B	
LCS 680-640636/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-640636/4	Lab Control Sample Dup	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 640179

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-189991-1	G6M-13-05X-FAL20	Total/NA	Water	RSK-175	
MB 680-640179/8	Method Blank	Total/NA	Water	RSK-175	
LCS 680-640179/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-640179/6	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-640179/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-640179/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	

Analysis Batch: 640659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-189991-2	G6M-13-06X-FAL20	Total/NA	Water	RSK-175	
680-189991-3	G6M-97-05B-FAL20	Total/NA	Water	RSK-175	
MB 680-640659/8	Method Blank	Total/NA	Water	RSK-175	
LCS 680-640659/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-640659/6	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-640659/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-640659/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	

HPLC/IC

Analysis Batch: 640367

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-189991-1	G6M-13-05X-FAL20	Total/NA	Water	9056A	
680-189991-2	G6M-13-06X-FAL20	Total/NA	Water	9056A	
680-189991-3	G6M-97-05B-FAL20	Total/NA	Water	9056A	
MB 680-640367/2	Method Blank	Total/NA	Water	9056A	
LCS 680-640367/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-640367/4	Lab Control Sample Dup	Total/NA	Water	9056A	

Metals

Prep Batch: 639121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-189991-1	G6M-13-05X-FAL20	Dissolved	Water	3005A	
680-189991-2	G6M-13-06X-FAL20	Dissolved	Water	3005A	
680-189991-3	G6M-97-05B-FAL20	Dissolved	Water	3005A	
MB 680-639121/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-639121/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Metals

Prep Batch: 639122

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-189991-1	G6M-13-05X-FAL20	Dissolved	Water	3005A	
680-189991-2	G6M-13-06X-FAL20	Dissolved	Water	3005A	
680-189991-3	G6M-97-05B-FAL20	Dissolved	Water	3005A	
MB 680-639122/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-639122/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 639439

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-189991-1	G6M-13-05X-FAL20	Dissolved	Water	6020A	639121
680-189991-2	G6M-13-06X-FAL20	Dissolved	Water	6020A	639121
680-189991-3	G6M-97-05B-FAL20	Dissolved	Water	6020A	639121
MB 680-639121/1-A	Method Blank	Total Recoverable	Water	6020A	639121
LCS 680-639121/2-A	Lab Control Sample	Total Recoverable	Water	6020A	639121

Analysis Batch: 639463

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-189991-1	G6M-13-05X-FAL20	Dissolved	Water	6010C	639122
680-189991-2	G6M-13-06X-FAL20	Dissolved	Water	6010C	639122
680-189991-3	G6M-97-05B-FAL20	Dissolved	Water	6010C	639122
MB 680-639122/1-A	Method Blank	Total Recoverable	Water	6010C	639122
LCS 680-639122/2-A	Lab Control Sample	Total Recoverable	Water	6010C	639122

General Chemistry

Analysis Batch: 513213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-189991-1	G6M-13-05X-FAL20	Total/NA	Water	353.2	
680-189991-2	G6M-13-06X-FAL20	Total/NA	Water	353.2	
680-189991-3	G6M-97-05B-FAL20	Total/NA	Water	353.2	
MB 280-513213/60	Method Blank	Total/NA	Water	353.2	
LCS 280-513213/59	Lab Control Sample	Total/NA	Water	353.2	

Analysis Batch: 513472

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-189991-1	G6M-13-05X-FAL20	Total/NA	Water	9060A	
680-189991-2	G6M-13-06X-FAL20	Total/NA	Water	9060A	
680-189991-3	G6M-97-05B-FAL20	Total/NA	Water	9060A	
MB 280-513472/4	Method Blank	Total/NA	Water	9060A	
LCS 280-513472/3	Lab Control Sample	Total/NA	Water	9060A	

Analysis Batch: 514074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-189991-1	G6M-13-05X-FAL20	Total/NA	Water	SM 2320B	
680-189991-2	G6M-13-06X-FAL20	Total/NA	Water	SM 2320B	
680-189991-3	G6M-97-05B-FAL20	Total/NA	Water	SM 2320B	
MB 280-514074/31	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-514074/30	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 639321

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-189991-1	G6M-13-05X-FAL20	Total/NA	Water	9034	

General Chemistry (Continued)

Analysis Batch: 639321 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-189991-2	G6M-13-06X-FAL20	Total/NA	Water	9034	
MB 680-639321/1	Method Blank	Total/NA	Water	9034	
LCS 680-639321/2	Lab Control Sample	Total/NA	Water	9034	
LCSD 680-639321/3	Lab Control Sample Dup	Total/NA	Water	9034	

Analysis Batch: 639338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-189991-3	G6M-97-05B-FAL20	Total/NA	Water	9034	
MB 680-639338/1	Method Blank	Total/NA	Water	9034	
LCS 680-639338/2	Lab Control Sample	Total/NA	Water	9034	
LCSD 680-639338/3	Lab Control Sample Dup	Total/NA	Water	9034	

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-189991-1

Client Sample ID: G6M-13-05X-FAL20

Lab Sample ID: 680-189991-1

Date Collected: 10/13/20 12:40

Matrix: Water

Date Received: 10/14/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	640636	10/25/20 14:11	Y1S	TAL SAV
	Instrument ID: CMSP2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	640179	10/22/20 18:22	DBM	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	640367	10/23/20 12:12	UI	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	639122	10/15/20 12:05	AJR	TAL SAV
Dissolved	Analysis	6010C		1			639463	10/16/20 23:12	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	639121	10/15/20 12:05	AJR	TAL SAV
Dissolved	Analysis	6020A		1			639439	10/16/20 16:59	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	513213	10/19/20 19:37	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	310 mL	310 mL	639321	10/16/20 10:32	NVF	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1	20 mL	20 mL	513472	10/20/20 21:39	JMB	TAL DEN
	Instrument ID: WC_SHI2									
Total/NA	Analysis	SM 2320B		1			514074	10/23/20 18:14	RAF	TAL DEN
	Instrument ID: WC-AT3									

Client Sample ID: G6M-13-06X-FAL20

Lab Sample ID: 680-189991-2

Date Collected: 10/13/20 14:15

Matrix: Water

Date Received: 10/14/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	640636	10/25/20 14:35	Y1S	TAL SAV
	Instrument ID: CMSP2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	640659	10/25/20 16:03	DBM	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	640367	10/23/20 12:25	UI	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	639122	10/15/20 12:05	AJR	TAL SAV
Dissolved	Analysis	6010C		1			639463	10/16/20 23:16	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	639121	10/15/20 12:05	AJR	TAL SAV
Dissolved	Analysis	6020A		1			639439	10/16/20 17:02	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	513213	10/19/20 19:39	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	310 mL	310 mL	639321	10/16/20 10:32	NVF	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		3.57	20 mL	20 mL	513472	10/20/20 21:56	JMB	TAL DEN
	Instrument ID: WC_SHI2									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-189991-1

Client Sample ID: G6M-13-06X-FAL20

Lab Sample ID: 680-189991-2

Date Collected: 10/13/20 14:15

Matrix: Water

Date Received: 10/14/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2320B		1			514074	10/23/20 18:22	RAF	TAL DEN

Client Sample ID: G6M-97-05B-FAL20

Lab Sample ID: 680-189991-3

Date Collected: 10/13/20 12:30

Matrix: Water

Date Received: 10/14/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	640636	10/25/20 15:00	Y1S	TAL SAV
	Instrument ID: CMSP2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	640659	10/25/20 16:16	DBM	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	640367	10/23/20 11:22	UI	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	639122	10/15/20 12:05	AJR	TAL SAV
Dissolved	Analysis	6010C		1			639463	10/16/20 23:30	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	639121	10/15/20 12:05	AJR	TAL SAV
Dissolved	Analysis	6020A		1			639439	10/16/20 17:05	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	513213	10/19/20 19:41	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	310 mL	310 mL	639338	10/16/20 10:36	NVF	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		5	20 mL	20 mL	513472	10/20/20 22:51	JMB	TAL DEN
	Instrument ID: WC_SHI2									
Total/NA	Analysis	SM 2320B		1			514074	10/23/20 18:26	RAF	TAL DEN
	Instrument ID: WC-AT3									

Client Sample ID: AOC50-TB1-FAL20

Lab Sample ID: 680-189991-4

Date Collected: 10/13/20 00:00

Matrix: Water

Date Received: 10/14/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	640636	10/25/20 12:57	Y1S	TAL SAV
	Instrument ID: CMSP2									

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-189991-1
Project/Site: Fort Devens

Laboratory: Eurofins TestAmerica, Savannah

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

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-22-22

Laboratory: Eurofins TestAmerica, Denver

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21

Method Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-189991-1

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
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	TAL DEN
9034	Sulfide, Acid Soluble and Insoluble (Titrimetric)	SW846	TAL SAV
9060A	Organic Carbon, Total (TOC)	SW846	TAL DEN
SM 2320B	Alkalinity	SM	TAL DEN
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 TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

TAL SAV = Eurofins TestAmerica, 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 # 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 2020
Project Number: DEVENS-LTM	Contact:	
WBS Code:	Ship to:	

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


680-189991 Chain of Custody

Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020

					Samp Init.	Analytical Test Method	A2320B (A)	E353.2 (A)	RSK175 (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW8260B - VOCs	SW9034 (A)	SW9056A - SO4	SW9060A - TOC			Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
	Sample ID	Matrix	Date	Time			46	47	8	9	9	29	7	5	10		Location ID					
1	AOC50-DUP01-FAL20	WG								X	X	X					G6M-95-20X	FD1	18.00	23.00		
2	AOC50-DUP02-FAL20	WG					X	X	X	X	X	X	X	X	X		G6M-07-02X	FD1	22.50	27.50		
3	AOC50-DUP03-FAL20	WG								X	X	X					G6M-04-04X	FD1	94.00	104.00		
4	AOC50-DUP04-FAL20	WG					X	X	X	X	X	X	X	X	X		G6M-13-02X	FD1	115.00	125.00		
5	G6M-02-01X-FAL20	WG								X	X	X					G6M-02-01X	N1	80.00	95.00		
6	G6M-02-04X-FAL20	WG								X	X	X					G6M-02-04X	N1	90.00	105.00		
7	G6M-02-06X-FAL20	WG								X	X	X					G6M-02-06X	N1	55.00	65.00		
8	G6M-02-07X-FAL20	WG								X	X	X					G6M-02-07X	N1	30.00	40.00		
9	G6M-02-08X-FAL20	WG					X	X	X	X	X	X	X	X	X		G6M-02-08X	N1	60.00	70.00		
10	G6M-02-11X-FAL20	WG								X	X	X					G6M-02-11X	N1	125.00	135.00		
11	G6M-02-12X-FAL20	WG								X	X	X					G6M-02-12X	N1	125.00	135.00		
12	G6M-02-13X-FAL20	WG								X	X	X					G6M-02-13X	N1	110.00	120.00		
13	G6M-03-07X-FAL20	WG					X	X	X	X	X	X	X	X	X		G6M-03-07X	N1	80.00	90.00		
14	G6M-03-08X-FAL20	WG								X	X	X					G6M-03-08X	N1	125.00	140.00		
15	G6M-03-10X-FAL20	WG								X	X	X					G6M-03-10X	N1	120.00	135.00		
16	G6M-04-01X-FAL20	WG								X	X	X					G6M-04-01X	N1	82.00	92.00		
17	G6M-04-02X-FAL20	WG					X	X	X	X	X	X	X	X	X		G6M-04-02X	N1	80.00	90.00		
18	G6M-04-03X-FAL20	WG					X	X	X	X	X	X	X	X	X		G6M-04-03X	MS1	85.00	95.00		
19	G6M-04-03X-FAL20	WG					X	X	X	X	X	X	X	X	X		G6M-04-03X	N1	85.00	95.00		

Relinquished by: [signature] 10-13-17-1510
Date
Time
Received by: [signature] 10-13-17 1800
AOC50_eCOC

Date [signature] 10-14-20 0930
Time
Shipping Date:
Received by Laboratory:
Condition: 3.2(CF)3.5°C

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 # #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 2020
Project Number: DEVENS-LTM	Contact:	
WBS Code:	Ship to:	

Comments:
A2320B (A) = Alkalinity
E353.2 (A) = Nitrite Nitrate as N
RSK175 (A) = Dissolved Gases
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9034 (A) = Sulfide

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
5	1x 125mL plastic, Cool < 6degC
7	2x 250mL plastic, ZnAc/NaOH Cool < 6degC
8	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
10	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
29	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC
47	1x 500mL, amber glass, H2SO4; Cool < 6degC

						Analytical Test Method	A2320B (A)	E353.2 (A)	RSK175 (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW8260B - VOCs	SW9034 (A)	SW9056A - SO4	SW9060A - TOC						
Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020							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
20	G6M-04-03X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-04-03X	SD1	85.00	95.00		
21	G6M-04-04X-FAL20	WG								X	X	X				G6M-04-04X	N1	94.00	104.00		
22	G6M-04-05X-FAL20	WG										X				G6M-04-05X	N1	100.00	110.00		
23	G6M-04-06X-FAL20	WG								X	X	X				G6M-04-06X	N1	95.00	136.00		
24	G6M-04-07X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-04-07X	N1	120.00	130.00		
25	G6M-04-09X-FAL20	WG								X	X	X				G6M-04-09X	N1	55.00	65.00		
26	G6M-04-10A-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-04-10A	N1	30.00	40.00		
27	G6M-04-10X-FAL20	WG										X				G6M-04-10X	N1	52.00	62.00		
28	G6M-04-11X-FAL20	WG								X	X	X				G6M-04-11X	N1	35.00	45.00		
29	G6M-04-13X-FAL20	WG										X				G6M-04-13X	N1	30.00	40.00		
30	G6M-04-14X-FAL20	WG								X	X	X				G6M-04-14X	N1	80.00	90.00		
31	G6M-04-15X-FAL20	WG								X	X	X				G6M-04-15X	N1	70.00	80.00		
32	G6M-04-22X-FAL20	WG								X	X	X				G6M-04-22X	N1	74.00	84.00		
33	G6M-04-31X-FAL20	WG								X	X	X				G6M-04-31X	N1	68.00	78.00		
34	G6M-06-01X-FAL20	WG								X	X	X				G6M-06-01X	N1	106.00	126.00		
35	G6M-07-01X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-07-01X	N1	78.00	89.00		
36	G6M-07-02X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-07-02X	N1	22.50	27.50		
37	G6M-13-01X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-13-01X	N1	125.00	135.00		
38	G6M-13-02X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-13-02X	N1	115.00	125.00		

Relinquished by: Date Time
Received by: 10-13-20 15:10
10-13-20 18
AOC50_eCOC

Shipping Date:
Received by Laboratory: 10-14-20 0930
Condition: 3.2(CF)3.5°C

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 # 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 2020
Project Number: DEVENS-LTM	Contact:	
WBS Code:	Ship to:	

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 2020

	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						
39	G6M-13-03X-FAL20	WG							X	X	X				G6M-13-03X	N1	80.00	90.00		
40	G6M-13-04X-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-13-04X	N1	125.00	135.00		
41	G6M-13-05X-FAL20	WG	10-13-20	1240	DC	X	X	X	X	X	X	X	X	X	G6M-13-05X	N1	45.00	55.00		
42	G6M-13-06X-FAL20	WG	10-13-20	1415	DC	X	X	X	X	X	X	X	X	X	G6M-13-06X	N1	50.00	60.00		
43	G6M-18-01-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-18-01	N1	116.00	126.00		
44	G6M-18-02-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-18-02	N1	123.95	133.95		
45	G6M-95-19X-FAL20	WG									X				G6M-95-19X	N1	48.00	58.00		
46	G6M-95-20X-FAL20	WG							X	X	X				G6M-95-20X	N1	18.00	23.00		
47	G6M-97-05B-FAL20	WG	10-13-20	1230	MS	X	X	X	X	X	X	X	X	X	G6M-97-05B	N1	130.00	135.00		
48	G6M-97-28X-FAL20	WG							X	X	X				G6M-97-28X	N1	100.00	105.00		
49	MW-3-FAL20	WG							X	X	X				MW-3	MS1	126.00	137.00		
50	MW-3-FAL20	WG							X	X	X				MW-3	N1	126.00	137.00		
51	MW-3-FAL20	WG							X	X	X				MW-3	SD1	126.00	137.00		
52	MW-7-FAL20	WG							X	X	X				MW-7	N1	6.58	135.00		
53	XSA-12-95X-FAL20	WG							X	X	X				XSA-12-95X	N1	120.00	130.00		
54	XSA-12-96X-FAL20	WG				X	X	X	X	X	X	X	X	X	XSA-12-96X	N1	120.00	130.00		
55	XSA-12-97X-FAL20	WG							X	X	X				XSA-12-97X	N1	120.00	130.00		
56	XSA-12-98X-FAL20	WG							X	X	X				XSA-12-98X	N1	60.00	70.00		

Turnaround Time: NA

Relinquished by: TRIP Blank ① 8260B
Date 10-13-20
Time 1510
Received by: Diane Chapone
AOC50_eCOC

Date 10-14-20
Time 0930
Shipping Date:
Received by Laboratory: 3.2(c)3.5°c
Condition:

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-189991-1

Login Number: 189991
List Number: 1
Creator: Banda, Christy S

List Source: Eurofins TestAmerica, 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	

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-189991-1

Login Number: 189991
List Number: 2
Creator: O'Hara, Jake F

List Source: Eurofins TestAmerica, Denver
List Creation: 10/15/20 11:37 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").	N/A	
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 TestAmerica, Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

Laboratory Job ID: 680-190098-1
Client Project/Site: Fort Devens

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

Attn: Nathan R Mullens

Authorized for release by:
11/3/2020 9:35:28 AM
John Andros, Project Manager
john.andros@eurofinset.com

Designee for

Kathryn Smith, Client Service Manager
(912)250-0275
Kathy.Smith@Eurofinset.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
B	Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank.
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)

Glossary (Continued)

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

Job ID: 680-190098-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
680-190098-1	AOC50-DUP01-FAL20	Water	10/14/20 09:50	10/15/20 09:40	
680-190098-2	AOC50-DUP02-FAL20	Water	10/14/20 10:55	10/15/20 09:40	
680-190098-3	G6M-02-08X-FAL20	Water	10/13/20 16:10	10/15/20 09:40	
680-190098-4	G6M-02-11X-FAL20	Water	10/14/20 12:30	10/15/20 09:40	
680-190098-6	G6M-04-06X-FAL20	Water	10/14/20 10:25	10/15/20 09:40	
680-190098-7	G6M-04-07X-FAL20	Water	10/14/20 11:50	10/15/20 09:40	
680-190098-8	G6M-04-10A-FAL20	Water	10/14/20 13:00	10/15/20 09:40	
680-190098-9	G6M-04-10X-FAL20	Water	10/14/20 14:10	10/15/20 09:40	
680-190098-10	G6M-07-02X-FAL20	Water	10/14/20 10:55	10/15/20 09:40	
680-190098-11	G6M-13-01X-FAL20	Water	10/13/20 15:06	10/15/20 09:40	
680-190098-12	G6M-95-20X-FAL20	Water	10/14/20 09:50	10/15/20 09:40	

Job ID: 680-190098-1

Laboratory: Eurofins TestAmerica, Savannah

Narrative

CASE NARRATIVE
Client: Seres Engineering & Services LLC
Project: Fort Devens

Report Number: 680-190098-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

RECEIPT

The samples were received on 10/15/2020; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.0º C and 2.6º C.

Receipt Exceptions

The following sample was listed on the Chain of Custody (COC); however, no containers were received: G6M-04-05X-FAL20 (680-190098-5).

VOLATILE ORGANIC COMPOUNDS (GC/MS)

Samples AOC50-DUP01-FAL20 (680-190098-1), AOC50-DUP02-FAL20 (680-190098-2), G6M-02-08X-FAL20 (680-190098-3), G6M-02-11X-FAL20 (680-190098-4), G6M-04-06X-FAL20 (680-190098-6), G6M-04-07X-FAL20 (680-190098-7), G6M-04-10A-FAL20 (680-190098-8), G6M-04-10X-FAL20 (680-190098-9), G6M-07-02X-FAL20 (680-190098-10), G6M-13-01X-FAL20 (680-190098-11) and G6M-95-20X-FAL20 (680-190098-12) were analyzed for Volatile Organic Compounds (GC/MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 10/25/2020 and 10/26/2020.

The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 680-640699 recovered outside control limits for the following analytes: Dichlorodifluoromethane.

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

DISSOLVED GASES

Samples AOC50-DUP02-FAL20 (680-190098-2), G6M-02-08X-FAL20 (680-190098-3), G6M-04-07X-FAL20 (680-190098-7), G6M-04-10A-FAL20 (680-190098-8), G6M-07-02X-FAL20 (680-190098-10) and G6M-13-01X-FAL20 (680-190098-11) were analyzed for dissolved gases in accordance with RSK-175. The samples were analyzed on 10/25/2020.

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

METALS (ICP) - DISSOLVED

Samples AOC50-DUP01-FAL20 (680-190098-1), AOC50-DUP02-FAL20 (680-190098-2), G6M-02-08X-FAL20 (680-190098-3), G6M-02-11X-FAL20 (680-190098-4), G6M-04-06X-FAL20 (680-190098-6), G6M-04-07X-FAL20 (680-190098-7), G6M-04-10A-FAL20 (680-190098-8), G6M-07-02X-FAL20 (680-190098-10), G6M-13-01X-FAL20 (680-190098-11) and G6M-95-20X-FAL20 (680-190098-12) were analyzed for Metals (ICP) - Dissolved in accordance with EPA SW-846 Method 6010C. The samples were prepared on 10/16/2020 and 10/21/2020 and analyzed on 10/19/2020 and 10/23/2020.

Iron was detected in method blank MB 680-639383/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Manganese was detected in method blank MB 680-640123/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

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

Job ID: 680-190098-1 (Continued)

Laboratory: Eurofins TestAmerica, Savannah (Continued)

METALS (ICPMS) - DISSOLVED

Samples AOC50-DUP01-FAL20 (680-190098-1), AOC50-DUP02-FAL20 (680-190098-2), G6M-02-08X-FAL20 (680-190098-3), G6M-02-11X-FAL20 (680-190098-4), G6M-04-06X-FAL20 (680-190098-6), G6M-04-07X-FAL20 (680-190098-7), G6M-04-10A-FAL20 (680-190098-8), G6M-07-02X-FAL20 (680-190098-10), G6M-13-01X-FAL20 (680-190098-11) and G6M-95-20X-FAL20 (680-190098-12) were analyzed for Metals (ICPMS) - Dissolved in accordance with EPA SW-846 Method 6020A. The samples were prepared on 10/16/2020 and 10/21/2020 and analyzed on 10/17/2020 and 10/22/2020.

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

ALKALINITY

Samples AOC50-DUP02-FAL20 (680-190098-2), G6M-02-08X-FAL20 (680-190098-3), G6M-04-07X-FAL20 (680-190098-7), G6M-04-10A-FAL20 (680-190098-8), G6M-07-02X-FAL20 (680-190098-10) and G6M-13-01X-FAL20 (680-190098-11) were analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 10/23/2020 and 10/26/2020.

Alkalinity was detected in method blank MB 280-514074/5 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

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

NITRATE-NITRITE AS NITROGEN

Samples AOC50-DUP02-FAL20 (680-190098-2), G6M-02-08X-FAL20 (680-190098-3), G6M-04-07X-FAL20 (680-190098-7), G6M-04-10A-FAL20 (680-190098-8), G6M-07-02X-FAL20 (680-190098-10) and G6M-13-01X-FAL20 (680-190098-11) were analyzed for nitrate-nitrite as nitrogen in accordance with EPA Method 353.2. The samples were analyzed on 10/22/2020 and 10/26/2020.

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

SULFIDE

Samples AOC50-DUP02-FAL20 (680-190098-2), G6M-02-08X-FAL20 (680-190098-3), G6M-04-07X-FAL20 (680-190098-7), G6M-04-10A-FAL20 (680-190098-8), G6M-07-02X-FAL20 (680-190098-10) and G6M-13-01X-FAL20 (680-190098-11) were analyzed for sulfide in accordance with EPA SW846 Method 9034. The samples were analyzed on 10/16/2020.

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

ANIONS BY ION CHROMATOGRAPHY (28 DAY)

Samples AOC50-DUP02-FAL20 (680-190098-2), G6M-02-08X-FAL20 (680-190098-3), G6M-04-07X-FAL20 (680-190098-7), G6M-04-10A-FAL20 (680-190098-8), G6M-07-02X-FAL20 (680-190098-10) and G6M-13-01X-FAL20 (680-190098-11) were analyzed for Anions by Ion Chromatography (28 Day) in accordance with SW 846 9056A. The samples were analyzed on 10/25/2020.

Samples AOC50-DUP02-FAL20 (680-190098-2)[5X], G6M-02-08X-FAL20 (680-190098-3)[5X], G6M-04-10A-FAL20 (680-190098-8)[5X] and G6M-07-02X-FAL20 (680-190098-10)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL ORGANIC CARBON

Samples AOC50-DUP02-FAL20 (680-190098-2), G6M-02-08X-FAL20 (680-190098-3), G6M-04-07X-FAL20 (680-190098-7), G6M-04-10A-FAL20 (680-190098-8), G6M-07-02X-FAL20 (680-190098-10) and G6M-13-01X-FAL20 (680-190098-11) were analyzed for total organic carbon in accordance with EPA SW-846 Method 9060A. The samples were analyzed on 10/30/2020 and 10/31/2020.

Samples AOC50-DUP02-FAL20 (680-190098-2)[5X], G6M-02-08X-FAL20 (680-190098-3)[5X] and G6M-07-02X-FAL20 (680-190098-10)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190098-1

Client Sample ID: AOC50-DUP01-FAL20

Date Collected: 10/14/20 09:50
Date Received: 10/15/20 09:40

Lab Sample ID: 680-190098-1

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/26/20 19:15	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/26/20 19:15	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/26/20 19:15	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/26/20 19:15	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/26/20 19:15	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/26/20 19:15	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/26/20 19:15	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/26/20 19:15	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/26/20 19:15	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/26/20 19:15	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/26/20 19:15	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/26/20 19:15	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/26/20 19:15	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/26/20 19:15	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			10/26/20 19:15	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/26/20 19:15	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/26/20 19:15	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/26/20 19:15	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/26/20 19:15	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/26/20 19:15	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/26/20 19:15	1
2-Butanone (MEK)	**11**		10	3.4	ug/L			10/26/20 19:15	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/26/20 19:15	1
2-Hexanone	**15**		10	2.0	ug/L			10/26/20 19:15	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/26/20 19:15	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/26/20 19:15	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/26/20 19:15	1
Acetone	**10**		10	7.0	ug/L			10/26/20 19:15	1
Benzene	0.43	U	1.0	0.43	ug/L			10/26/20 19:15	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/26/20 19:15	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/26/20 19:15	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			10/26/20 19:15	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/26/20 19:15	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/26/20 19:15	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/26/20 19:15	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/26/20 19:15	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/26/20 19:15	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/26/20 19:15	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/26/20 19:15	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/26/20 19:15	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			10/26/20 19:15	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/26/20 19:15	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/26/20 19:15	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/26/20 19:15	1
Dichlorodifluoromethane	0.60	U Q	1.0	0.60	ug/L			10/26/20 19:15	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/26/20 19:15	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/26/20 19:15	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/26/20 19:15	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/26/20 19:15	1

Client Sample ID: AOC50-DUP01-FAL20

Lab Sample ID: 680-190098-1

Date Collected: 10/14/20 09:50

Matrix: Water

Date Received: 10/15/20 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/26/20 19:15	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/26/20 19:15	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/26/20 19:15	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/26/20 19:15	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/26/20 19:15	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/26/20 19:15	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/26/20 19:15	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/26/20 19:15	1
Styrene	0.27	U	1.0	0.27	ug/L			10/26/20 19:15	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/26/20 19:15	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			10/26/20 19:15	1
Toluene	0.48	U	1.0	0.48	ug/L			10/26/20 19:15	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/26/20 19:15	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/26/20 19:15	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/26/20 19:15	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/26/20 19:15	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/26/20 19:15	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/26/20 19:15	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/26/20 19:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*		*10/26/20 19:15*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 119*		*10/26/20 19:15*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*10/26/20 19:15*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*		*10/26/20 19:15*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**53000**		50	17	ug/L		10/16/20 13:37	10/19/20 17:47	1
Manganese	**2200**		10	1.0	ug/L		10/16/20 13:37	10/19/20 17:47	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**91**		3.0	1.5	ug/L		10/16/20 13:37	10/17/20 10:50	1

Client Sample ID: AOC50-DUP02-FAL20

Lab Sample ID: 680-190098-2

Date Collected: 10/14/20 10:55

Matrix: Water

Date Received: 10/15/20 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/26/20 19:40	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/26/20 19:40	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/26/20 19:40	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/26/20 19:40	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/26/20 19:40	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/26/20 19:40	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/26/20 19:40	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/26/20 19:40	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/26/20 19:40	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/26/20 19:40	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190098-1

Client Sample ID: AOC50-DUP02-FAL20
Date Collected: 10/14/20 10:55
Date Received: 10/15/20 09:40

Lab Sample ID: 680-190098-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	**0.60**	**J**	1.0	0.47	ug/L			10/26/20 19:40	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/26/20 19:40	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/26/20 19:40	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/26/20 19:40	1
1,2-Dichloroethene, Total	**41**		2.0	0.74	ug/L			10/26/20 19:40	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/26/20 19:40	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/26/20 19:40	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/26/20 19:40	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/26/20 19:40	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/26/20 19:40	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/26/20 19:40	1
2-Butanone (MEK)	**43**		10	3.4	ug/L			10/26/20 19:40	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/26/20 19:40	1
2-Hexanone	**11**		10	2.0	ug/L			10/26/20 19:40	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/26/20 19:40	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/26/20 19:40	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/26/20 19:40	1
Acetone	**90**		10	7.0	ug/L			10/26/20 19:40	1
Benzene	0.43	U	1.0	0.43	ug/L			10/26/20 19:40	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/26/20 19:40	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/26/20 19:40	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			10/26/20 19:40	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/26/20 19:40	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/26/20 19:40	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/26/20 19:40	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/26/20 19:40	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/26/20 19:40	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/26/20 19:40	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/26/20 19:40	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/26/20 19:40	1
cis-1,2-Dichloroethene	**41**		1.0	0.41	ug/L			10/26/20 19:40	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/26/20 19:40	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/26/20 19:40	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/26/20 19:40	1
Dichlorodifluoromethane	0.60	U Q	1.0	0.60	ug/L			10/26/20 19:40	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/26/20 19:40	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/26/20 19:40	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/26/20 19:40	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/26/20 19:40	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/26/20 19:40	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/26/20 19:40	1
m-Xylene & p-Xylene	**0.59**	**J**	1.0	0.35	ug/L			10/26/20 19:40	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/26/20 19:40	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/26/20 19:40	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/26/20 19:40	1
o-Xylene	**0.37**	**J**	1.0	0.23	ug/L			10/26/20 19:40	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/26/20 19:40	1
Styrene	0.27	U	1.0	0.27	ug/L			10/26/20 19:40	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/26/20 19:40	1

Client Sample ID: AOC50-DUP02-FAL20

Lab Sample ID: 680-190098-2

Date Collected: 10/14/20 10:55

Matrix: Water

Date Received: 10/15/20 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**1.2**		1.0	0.74	ug/L			10/26/20 19:40	1
Toluene	**0.65**	**J**	1.0	0.48	ug/L			10/26/20 19:40	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/26/20 19:40	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/26/20 19:40	1
Trichloroethene	0.48	U M	1.0	0.48	ug/L			10/26/20 19:40	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/26/20 19:40	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/26/20 19:40	1
Vinyl chloride	**1.6**	**M**	1.0	0.50	ug/L			10/26/20 19:40	1
Xylenes, Total	**0.96**	**J**	2.0	0.23	ug/L			10/26/20 19:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*10/26/20 19:40*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 119*		*10/26/20 19:40*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*10/26/20 19:40*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*		*10/26/20 19:40*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**1.2**		1.1	0.55	ug/L			10/25/20 22:33	1
Ethylene	**1.9**		1.0	0.50	ug/L			10/25/20 22:33	1
Methane (TCD)	**6600**		390	39	ug/L			10/25/20 22:33	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	2.0	U	5.0	2.0	mg/L			10/25/20 06:53	5

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**220000**		50	17	ug/L		10/16/20 13:37	10/19/20 18:21	1
Manganese	**4500**		10	1.0	ug/L		10/16/20 13:37	10/19/20 18:21	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**45**		3.0	1.5	ug/L		10/16/20 13:37	10/17/20 11:08	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.21**		0.10	0.019	mg/L			10/22/20 21:18	1
Sulfide	0.81	U	0.81	0.81	mg/L			10/16/20 10:32	1
Total Organic Carbon - Duplicates	**230**		5.0	1.7	mg/L			10/30/20 00:52	5
Alkalinity	**200**		10	3.1	mg/L			10/26/20 20:00	1

Client Sample ID: G6M-02-08X-FAL20

Lab Sample ID: 680-190098-3

Date Collected: 10/13/20 16:10

Matrix: Water

Date Received: 10/15/20 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/25/20 16:38	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/25/20 16:38	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/25/20 16:38	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190098-1

Client Sample ID: G6M-02-08X-FAL20
Date Collected: 10/13/20 16:10
Date Received: 10/15/20 09:40

Lab Sample ID: 680-190098-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/25/20 16:38	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/25/20 16:38	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/25/20 16:38	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/25/20 16:38	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/25/20 16:38	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/25/20 16:38	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/25/20 16:38	1
1,2,4-Trimethylbenzene	**3.5**		1.0	0.47	ug/L			10/25/20 16:38	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/25/20 16:38	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/25/20 16:38	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/25/20 16:38	1
1,2-Dichloroethene, Total	**3.5**		2.0	0.74	ug/L			10/25/20 16:38	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/25/20 16:38	1
1,3,5-Trimethylbenzene	**1.1**		1.0	0.31	ug/L			10/25/20 16:38	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/25/20 16:38	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/25/20 16:38	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/25/20 16:38	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/25/20 16:38	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/25/20 16:38	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/25/20 16:38	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/25/20 16:38	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/25/20 16:38	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/25/20 16:38	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/25/20 16:38	1
Acetone	**8.2**	**J**	10	7.0	ug/L			10/25/20 16:38	1
Benzene	0.43	U	1.0	0.43	ug/L			10/25/20 16:38	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/25/20 16:38	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/25/20 16:38	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/25/20 16:38	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/25/20 16:38	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/25/20 16:38	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/25/20 16:38	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/25/20 16:38	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/25/20 16:38	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/25/20 16:38	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/25/20 16:38	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/25/20 16:38	1
cis-1,2-Dichloroethene	**3.5**		1.0	0.41	ug/L			10/25/20 16:38	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/25/20 16:38	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/25/20 16:38	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/25/20 16:38	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/25/20 16:38	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/25/20 16:38	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/25/20 16:38	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/25/20 16:38	1
Isopropylbenzene	0.35	U M	1.0	0.35	ug/L			10/25/20 16:38	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/25/20 16:38	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/25/20 16:38	1
m-Xylene & p-Xylene	0.35	U M	1.0	0.35	ug/L			10/25/20 16:38	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190098-1

Client Sample ID: G6M-02-08X-FAL20

Date Collected: 10/13/20 16:10
Date Received: 10/15/20 09:40

Lab Sample ID: 680-190098-3

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	2.5	U	5.0	2.5	ug/L			10/25/20 16:38	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/25/20 16:38	1
N-Propylbenzene	**0.72**	**J**	1.0	0.38	ug/L			10/25/20 16:38	1
o-Xylene	**0.30**	**J**	1.0	0.23	ug/L			10/25/20 16:38	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/25/20 16:38	1
Styrene	0.27	U	1.0	0.27	ug/L			10/25/20 16:38	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/25/20 16:38	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			10/25/20 16:38	1
Toluene	**120**		1.0	0.48	ug/L			10/25/20 16:38	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/25/20 16:38	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/25/20 16:38	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/25/20 16:38	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/25/20 16:38	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/25/20 16:38	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/25/20 16:38	1
Xylenes, Total	**0.30**	**J**	2.0	0.23	ug/L			10/25/20 16:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*10/25/20 16:38*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 119*		*10/25/20 16:38*	*1*
Toluene-d8 (Surr)	*98*		*89 - 112*		*10/25/20 16:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*81 - 118*		*10/25/20 16:38*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	0.55	U	1.1	0.55	ug/L			10/25/20 22:46	1
Ethylene	**0.76**	**J**	1.0	0.50	ug/L			10/25/20 22:46	1
Methane (TCD)	**12000**		390	39	ug/L			10/25/20 22:46	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	2.0	U	5.0	2.0	mg/L			10/25/20 07:05	5

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**78000**		50	17	ug/L		10/16/20 13:37	10/19/20 18:16	1
Manganese	**420**		10	1.0	ug/L		10/16/20 13:37	10/19/20 18:16	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**390**		3.0	1.5	ug/L		10/16/20 13:37	10/17/20 11:05	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.12**		0.10	0.019	mg/L			10/22/20 21:20	1
Sulfide	0.81	U	0.81	0.81	mg/L			10/16/20 10:32	1
Total Organic Carbon - Duplicates	**37**	**B**	5.0	1.7	mg/L			10/30/20 03:20	5
Alkalinity	**95**		10	3.1	mg/L			10/23/20 16:03	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190098-1

Client Sample ID: G6M-02-11X-FAL20
Date Collected: 10/14/20 12:30
Date Received: 10/15/20 09:40

Lab Sample ID: 680-190098-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/26/20 20:04	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/26/20 20:04	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/26/20 20:04	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/26/20 20:04	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/26/20 20:04	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/26/20 20:04	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/26/20 20:04	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/26/20 20:04	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/26/20 20:04	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/26/20 20:04	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/26/20 20:04	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/26/20 20:04	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/26/20 20:04	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/26/20 20:04	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			10/26/20 20:04	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/26/20 20:04	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/26/20 20:04	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/26/20 20:04	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/26/20 20:04	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/26/20 20:04	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/26/20 20:04	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/26/20 20:04	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/26/20 20:04	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/26/20 20:04	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/26/20 20:04	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/26/20 20:04	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/26/20 20:04	1
Acetone	7.0	U	10	7.0	ug/L			10/26/20 20:04	1
Benzene	0.43	U	1.0	0.43	ug/L			10/26/20 20:04	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/26/20 20:04	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/26/20 20:04	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			10/26/20 20:04	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/26/20 20:04	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/26/20 20:04	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/26/20 20:04	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/26/20 20:04	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/26/20 20:04	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/26/20 20:04	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/26/20 20:04	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/26/20 20:04	1
cis-1,2-Dichloroethene	**0.47**	**J**	1.0	0.41	ug/L			10/26/20 20:04	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/26/20 20:04	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/26/20 20:04	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/26/20 20:04	1
Dichlorodifluoromethane	0.60	U Q	1.0	0.60	ug/L			10/26/20 20:04	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/26/20 20:04	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/26/20 20:04	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/26/20 20:04	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/26/20 20:04	1

Client Sample ID: G6M-02-11X-FAL20

Lab Sample ID: 680-190098-4

Date Collected: 10/14/20 12:30

Matrix: Water

Date Received: 10/15/20 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/26/20 20:04	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/26/20 20:04	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/26/20 20:04	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/26/20 20:04	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/26/20 20:04	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/26/20 20:04	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/26/20 20:04	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/26/20 20:04	1
Styrene	0.27	U	1.0	0.27	ug/L			10/26/20 20:04	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/26/20 20:04	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			10/26/20 20:04	1
Toluene	0.48	U	1.0	0.48	ug/L			10/26/20 20:04	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/26/20 20:04	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/26/20 20:04	1
Trichloroethene	**0.49**	**J M**	1.0	0.48	ug/L			10/26/20 20:04	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/26/20 20:04	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/26/20 20:04	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/26/20 20:04	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/26/20 20:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*10/26/20 20:04*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*10/26/20 20:04*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*10/26/20 20:04*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*81 - 118*		*10/26/20 20:04*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**37000**		50	17	ug/L		10/21/20 17:27	10/23/20 02:01	1
Manganese	**10000**		10	1.0	ug/L		10/21/20 17:27	10/23/20 02:01	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**450**		3.0	1.5	ug/L		10/21/20 17:24	10/22/20 18:20	1

Client Sample ID: G6M-04-06X-FAL20

Lab Sample ID: 680-190098-6

Date Collected: 10/14/20 10:25

Matrix: Water

Date Received: 10/15/20 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/26/20 20:29	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/26/20 20:29	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/26/20 20:29	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/26/20 20:29	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/26/20 20:29	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/26/20 20:29	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/26/20 20:29	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/26/20 20:29	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/26/20 20:29	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/26/20 20:29	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190098-1

Client Sample ID: G6M-04-06X-FAL20
Date Collected: 10/14/20 10:25
Date Received: 10/15/20 09:40

Lab Sample ID: 680-190098-6
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/26/20 20:29	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/26/20 20:29	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/26/20 20:29	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/26/20 20:29	1
1,2-Dichloroethene, Total	**0.94**	**J**	2.0	0.74	ug/L			10/26/20 20:29	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/26/20 20:29	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/26/20 20:29	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/26/20 20:29	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/26/20 20:29	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/26/20 20:29	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/26/20 20:29	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/26/20 20:29	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/26/20 20:29	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/26/20 20:29	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/26/20 20:29	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/26/20 20:29	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/26/20 20:29	1
Acetone	7.0	U	10	7.0	ug/L			10/26/20 20:29	1
Benzene	0.43	U	1.0	0.43	ug/L			10/26/20 20:29	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/26/20 20:29	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/26/20 20:29	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			10/26/20 20:29	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/26/20 20:29	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/26/20 20:29	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/26/20 20:29	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/26/20 20:29	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/26/20 20:29	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/26/20 20:29	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/26/20 20:29	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/26/20 20:29	1
cis-1,2-Dichloroethene	**0.94**	**J**	1.0	0.41	ug/L			10/26/20 20:29	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/26/20 20:29	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/26/20 20:29	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/26/20 20:29	1
Dichlorodifluoromethane	0.60	U Q	1.0	0.60	ug/L			10/26/20 20:29	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/26/20 20:29	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/26/20 20:29	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/26/20 20:29	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/26/20 20:29	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/26/20 20:29	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/26/20 20:29	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/26/20 20:29	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/26/20 20:29	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/26/20 20:29	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/26/20 20:29	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/26/20 20:29	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/26/20 20:29	1
Styrene	0.27	U	1.0	0.27	ug/L			10/26/20 20:29	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/26/20 20:29	1

Client Sample ID: G6M-04-06X-FAL20

Lab Sample ID: 680-190098-6

Date Collected: 10/14/20 10:25
Date Received: 10/15/20 09:40

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**1.7**		1.0	0.74	ug/L			10/26/20 20:29	1
Toluene	0.48	U	1.0	0.48	ug/L			10/26/20 20:29	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/26/20 20:29	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/26/20 20:29	1
Trichloroethene	**2.1**		1.0	0.48	ug/L			10/26/20 20:29	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/26/20 20:29	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/26/20 20:29	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/26/20 20:29	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/26/20 20:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*10/26/20 20:29*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 119*		*10/26/20 20:29*	*1*
Toluene-d8 (Surr)	*101*		*89 - 112*		*10/26/20 20:29*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*81 - 118*		*10/26/20 20:29*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**86**		50	17	ug/L		10/16/20 13:37	10/19/20 18:39	1
Manganese	**140**		10	1.0	ug/L		10/16/20 13:37	10/19/20 18:39	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5	U	3.0	1.5	ug/L		10/16/20 13:37	10/17/20 11:20	1

Client Sample ID: G6M-04-07X-FAL20

Lab Sample ID: 680-190098-7

Date Collected: 10/14/20 11:50
Date Received: 10/15/20 09:40

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/26/20 20:53	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/26/20 20:53	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/26/20 20:53	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/26/20 20:53	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/26/20 20:53	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/26/20 20:53	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/26/20 20:53	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/26/20 20:53	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/26/20 20:53	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/26/20 20:53	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/26/20 20:53	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/26/20 20:53	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/26/20 20:53	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/26/20 20:53	1
1,2-Dichloroethene, Total	**76**		2.0	0.74	ug/L			10/26/20 20:53	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/26/20 20:53	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/26/20 20:53	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/26/20 20:53	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/26/20 20:53	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/26/20 20:53	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190098-1

Client Sample ID: G6M-04-07X-FAL20
Date Collected: 10/14/20 11:50
Date Received: 10/15/20 09:40

Lab Sample ID: 680-190098-7
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/26/20 20:53	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/26/20 20:53	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/26/20 20:53	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/26/20 20:53	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/26/20 20:53	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/26/20 20:53	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/26/20 20:53	1
Acetone	7.0	U	10	7.0	ug/L			10/26/20 20:53	1
Benzene	0.43	U	1.0	0.43	ug/L			10/26/20 20:53	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/26/20 20:53	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/26/20 20:53	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			10/26/20 20:53	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/26/20 20:53	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/26/20 20:53	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/26/20 20:53	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/26/20 20:53	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/26/20 20:53	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/26/20 20:53	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/26/20 20:53	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/26/20 20:53	1
cis-1,2-Dichloroethene	**76**		1.0	0.41	ug/L			10/26/20 20:53	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/26/20 20:53	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/26/20 20:53	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/26/20 20:53	1
Dichlorodifluoromethane	0.60	U Q	1.0	0.60	ug/L			10/26/20 20:53	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/26/20 20:53	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/26/20 20:53	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/26/20 20:53	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/26/20 20:53	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/26/20 20:53	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/26/20 20:53	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/26/20 20:53	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/26/20 20:53	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/26/20 20:53	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/26/20 20:53	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/26/20 20:53	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/26/20 20:53	1
Styrene	0.27	U	1.0	0.27	ug/L			10/26/20 20:53	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/26/20 20:53	1
Tetrachloroethene	**9.1**		1.0	0.74	ug/L			10/26/20 20:53	1
Toluene	0.48	U	1.0	0.48	ug/L			10/26/20 20:53	1
trans-1,2-Dichloroethene	**0.58**	**J**	1.0	0.37	ug/L			10/26/20 20:53	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/26/20 20:53	1
Trichloroethene	**37**		1.0	0.48	ug/L			10/26/20 20:53	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/26/20 20:53	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/26/20 20:53	1
Vinyl chloride	**11**		1.0	0.50	ug/L			10/26/20 20:53	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/26/20 20:53	1

Client Sample ID: G6M-04-07X-FAL20

Lab Sample ID: 680-190098-7

Date Collected: 10/14/20 11:50

Matrix: Water

Date Received: 10/15/20 09:40

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*		*10/26/20 20:53*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 119*		*10/26/20 20:53*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*10/26/20 20:53*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*81 - 118*		*10/26/20 20:53*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	0.55	U	1.1	0.55	ug/L			10/25/20 22:59	1
Ethylene	**0.54**	**J**	1.0	0.50	ug/L			10/25/20 22:59	1
Methane (TCD)	**540**		390	39	ug/L			10/25/20 22:59	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**9.9**		1.0	0.40	mg/L			10/25/20 08:23	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**1000**		50	17	ug/L		10/16/20 13:37	10/19/20 17:52	1
Manganese	**3800**		10	1.0	ug/L		10/16/20 13:37	10/19/20 17:52	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**7.6**		3.0	1.5	ug/L		10/16/20 13:37	10/17/20 10:53	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.019	U	0.10	0.019	mg/L			10/26/20 19:27	1
Sulfide	0.81	U	0.81	0.81	mg/L			10/16/20 10:32	1
Total Organic Carbon - Duplicates	**1.1**		1.0	0.35	mg/L			10/31/20 08:27	1
Alkalinity	**230**		10	3.1	mg/L			10/26/20 20:06	1

Client Sample ID: G6M-04-10A-FAL20

Lab Sample ID: 680-190098-8

Date Collected: 10/14/20 13:00

Matrix: Water

Date Received: 10/15/20 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/26/20 21:18	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/26/20 21:18	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/26/20 21:18	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/26/20 21:18	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/26/20 21:18	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/26/20 21:18	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/26/20 21:18	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/26/20 21:18	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/26/20 21:18	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/26/20 21:18	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/26/20 21:18	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/26/20 21:18	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/26/20 21:18	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/26/20 21:18	1
1,2-Dichloroethene, Total	**120**		2.0	0.74	ug/L			10/26/20 21:18	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190098-1

Client Sample ID: G6M-04-10A-FAL20
Date Collected: 10/14/20 13:00
Date Received: 10/15/20 09:40

Lab Sample ID: 680-190098-8
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/26/20 21:18	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/26/20 21:18	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/26/20 21:18	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/26/20 21:18	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/26/20 21:18	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/26/20 21:18	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/26/20 21:18	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/26/20 21:18	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/26/20 21:18	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/26/20 21:18	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/26/20 21:18	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/26/20 21:18	1
Acetone	7.0	U	10	7.0	ug/L			10/26/20 21:18	1
Benzene	0.43	U	1.0	0.43	ug/L			10/26/20 21:18	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/26/20 21:18	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/26/20 21:18	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			10/26/20 21:18	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/26/20 21:18	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/26/20 21:18	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/26/20 21:18	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/26/20 21:18	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/26/20 21:18	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/26/20 21:18	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/26/20 21:18	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/26/20 21:18	1
cis-1,2-Dichloroethene	**120**		1.0	0.41	ug/L			10/26/20 21:18	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/26/20 21:18	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/26/20 21:18	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/26/20 21:18	1
Dichlorodifluoromethane	0.60	U Q	1.0	0.60	ug/L			10/26/20 21:18	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/26/20 21:18	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/26/20 21:18	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/26/20 21:18	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/26/20 21:18	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/26/20 21:18	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/26/20 21:18	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/26/20 21:18	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/26/20 21:18	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/26/20 21:18	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/26/20 21:18	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/26/20 21:18	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/26/20 21:18	1
Styrene	0.27	U	1.0	0.27	ug/L			10/26/20 21:18	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/26/20 21:18	1
Tetrachloroethene	**35**		1.0	0.74	ug/L			10/26/20 21:18	1
Toluene	0.48	U M	1.0	0.48	ug/L			10/26/20 21:18	1
trans-1,2-Dichloroethene	**0.65**	**J**	1.0	0.37	ug/L			10/26/20 21:18	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/26/20 21:18	1
Trichloroethene	**49**		1.0	0.48	ug/L			10/26/20 21:18	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190098-1

Client Sample ID: G6M-04-10A-FAL20

Lab Sample ID: 680-190098-8

Date Collected: 10/14/20 13:00

Matrix: Water

Date Received: 10/15/20 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/26/20 21:18	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/26/20 21:18	1
Vinyl chloride	**26**		1.0	0.50	ug/L			10/26/20 21:18	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/26/20 21:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*10/26/20 21:18*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 119*		*10/26/20 21:18*	*1*
Toluene-d8 (Surr)	*99*		*89 - 112*		*10/26/20 21:18*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*81 - 118*		*10/26/20 21:18*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**1.2**		1.1	0.55	ug/L			10/25/20 23:12	1
Ethylene	**25**		1.0	0.50	ug/L			10/25/20 23:12	1
Methane (TCD)	**10000**		390	39	ug/L			10/25/20 23:12	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**6.2**		5.0	2.0	mg/L			10/25/20 07:18	5

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**96000**		50	17	ug/L		10/16/20 13:37	10/19/20 18:12	1
Manganese	**3000**		10	1.0	ug/L		10/16/20 13:37	10/19/20 18:12	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**230**		3.0	1.5	ug/L		10/16/20 13:37	10/17/20 10:56	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.087**	**J**	0.10	0.019	mg/L			10/26/20 19:29	1
Sulfide	0.81	U	0.81	0.81	mg/L			10/16/20 10:32	1
Total Organic Carbon - Duplicates	**22**	**B**	1.0	0.35	mg/L			10/30/20 03:35	1
Alkalinity	**210**		10	3.1	mg/L			10/26/20 20:11	1

Client Sample ID: G6M-04-10X-FAL20

Lab Sample ID: 680-190098-9

Date Collected: 10/14/20 14:10

Matrix: Water

Date Received: 10/15/20 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/26/20 21:42	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/26/20 21:42	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/26/20 21:42	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/26/20 21:42	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/26/20 21:42	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/26/20 21:42	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/26/20 21:42	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/26/20 21:42	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190098-1

Client Sample ID: G6M-04-10X-FAL20
Date Collected: 10/14/20 14:10
Date Received: 10/15/20 09:40

Lab Sample ID: 680-190098-9
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/26/20 21:42	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/26/20 21:42	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/26/20 21:42	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/26/20 21:42	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/26/20 21:42	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/26/20 21:42	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			10/26/20 21:42	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/26/20 21:42	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/26/20 21:42	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/26/20 21:42	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/26/20 21:42	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/26/20 21:42	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/26/20 21:42	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/26/20 21:42	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/26/20 21:42	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/26/20 21:42	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/26/20 21:42	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/26/20 21:42	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/26/20 21:42	1
Acetone	7.0	U	10	7.0	ug/L			10/26/20 21:42	1
Benzene	0.43	U	1.0	0.43	ug/L			10/26/20 21:42	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/26/20 21:42	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/26/20 21:42	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			10/26/20 21:42	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/26/20 21:42	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/26/20 21:42	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/26/20 21:42	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/26/20 21:42	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/26/20 21:42	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/26/20 21:42	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/26/20 21:42	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/26/20 21:42	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			10/26/20 21:42	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/26/20 21:42	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/26/20 21:42	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/26/20 21:42	1
Dichlorodifluoromethane	0.60	U Q	1.0	0.60	ug/L			10/26/20 21:42	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/26/20 21:42	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/26/20 21:42	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/26/20 21:42	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/26/20 21:42	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/26/20 21:42	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/26/20 21:42	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/26/20 21:42	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/26/20 21:42	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/26/20 21:42	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/26/20 21:42	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/26/20 21:42	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/26/20 21:42	1

Client Sample ID: G6M-04-10X-FAL20

Lab Sample ID: 680-190098-9

Date Collected: 10/14/20 14:10

Matrix: Water

Date Received: 10/15/20 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	0.27	U	1.0	0.27	ug/L			10/26/20 21:42	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/26/20 21:42	1
Tetrachloroethene	**1.1**		1.0	0.74	ug/L			10/26/20 21:42	1
Toluene	0.48	U	1.0	0.48	ug/L			10/26/20 21:42	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/26/20 21:42	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/26/20 21:42	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/26/20 21:42	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/26/20 21:42	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/26/20 21:42	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/26/20 21:42	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/26/20 21:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*		*10/26/20 21:42*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 119*		*10/26/20 21:42*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*10/26/20 21:42*	*1*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*		*10/26/20 21:42*	*1*

Client Sample ID: G6M-07-02X-FAL20

Lab Sample ID: 680-190098-10

Date Collected: 10/14/20 10:55

Matrix: Water

Date Received: 10/15/20 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/26/20 22:07	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/26/20 22:07	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/26/20 22:07	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/26/20 22:07	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/26/20 22:07	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/26/20 22:07	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/26/20 22:07	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/26/20 22:07	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/26/20 22:07	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/26/20 22:07	1
1,2,4-Trimethylbenzene	**0.52**	**J**	1.0	0.47	ug/L			10/26/20 22:07	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/26/20 22:07	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/26/20 22:07	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/26/20 22:07	1
1,2-Dichloroethene, Total	**40**		2.0	0.74	ug/L			10/26/20 22:07	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/26/20 22:07	1
1,3,5-Trimethylbenzene	0.31	U M	1.0	0.31	ug/L			10/26/20 22:07	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/26/20 22:07	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/26/20 22:07	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/26/20 22:07	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/26/20 22:07	1
2-Butanone (MEK)	**41**		10	3.4	ug/L			10/26/20 22:07	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/26/20 22:07	1
2-Hexanone	**10**		10	2.0	ug/L			10/26/20 22:07	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/26/20 22:07	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/26/20 22:07	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190098-1

Client Sample ID: G6M-07-02X-FAL20
Date Collected: 10/14/20 10:55
Date Received: 10/15/20 09:40

Lab Sample ID: 680-190098-10
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/26/20 22:07	1
Acetone	**91**		10	7.0	ug/L			10/26/20 22:07	1
Benzene	0.43	U	1.0	0.43	ug/L			10/26/20 22:07	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/26/20 22:07	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/26/20 22:07	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			10/26/20 22:07	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/26/20 22:07	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/26/20 22:07	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/26/20 22:07	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/26/20 22:07	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/26/20 22:07	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/26/20 22:07	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/26/20 22:07	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/26/20 22:07	1
cis-1,2-Dichloroethene	**40**		1.0	0.41	ug/L			10/26/20 22:07	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/26/20 22:07	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/26/20 22:07	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/26/20 22:07	1
Dichlorodifluoromethane	0.60	U Q	1.0	0.60	ug/L			10/26/20 22:07	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/26/20 22:07	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/26/20 22:07	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/26/20 22:07	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/26/20 22:07	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/26/20 22:07	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/26/20 22:07	1
m-Xylene & p-Xylene	**0.60**	**J**	1.0	0.35	ug/L			10/26/20 22:07	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/26/20 22:07	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/26/20 22:07	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/26/20 22:07	1
o-Xylene	**0.34**	**J**	1.0	0.23	ug/L			10/26/20 22:07	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/26/20 22:07	1
Styrene	0.27	U	1.0	0.27	ug/L			10/26/20 22:07	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/26/20 22:07	1
Tetrachloroethene	**1.1**		1.0	0.74	ug/L			10/26/20 22:07	1
Toluene	**0.61**	**J**	1.0	0.48	ug/L			10/26/20 22:07	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/26/20 22:07	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/26/20 22:07	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/26/20 22:07	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/26/20 22:07	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/26/20 22:07	1
Vinyl chloride	**1.7**		1.0	0.50	ug/L			10/26/20 22:07	1
Xylenes, Total	**0.94**	**J**	2.0	0.23	ug/L			10/26/20 22:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*		*10/26/20 22:07*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 119*		*10/26/20 22:07*	*1*
Toluene-d8 (Surr)	*103*		*89 - 112*		*10/26/20 22:07*	*1*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*		*10/26/20 22:07*	*1*

Client Sample ID: G6M-07-02X-FAL20

Lab Sample ID: 680-190098-10

Date Collected: 10/14/20 10:55

Matrix: Water

Date Received: 10/15/20 09:40

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**1.3**		1.1	0.55	ug/L			10/25/20 23:25	1
Ethylene	**2.0**		1.0	0.50	ug/L			10/25/20 23:25	1
Methane (TCD)	**6600**		390	39	ug/L			10/25/20 23:25	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	2.0	U	5.0	2.0	mg/L			10/25/20 07:31	5

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**220000**		50	17	ug/L		10/16/20 13:37	10/19/20 18:34	1
Manganese	**4500**		10	1.0	ug/L		10/16/20 13:37	10/19/20 18:34	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**42**		3.0	1.5	ug/L		10/16/20 13:37	10/17/20 11:17	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.17**		0.10	0.019	mg/L			10/26/20 19:31	1
Sulfide	0.81	U	0.81	0.81	mg/L			10/16/20 10:32	1
Total Organic Carbon - Duplicates	**230**	**B**	5.0	1.7	mg/L			10/30/20 03:58	5
Alkalinity	**190**		10	3.1	mg/L			10/26/20 20:15	1

Client Sample ID: G6M-13-01X-FAL20

Lab Sample ID: 680-190098-11

Date Collected: 10/13/20 15:06

Matrix: Water

Date Received: 10/15/20 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/25/20 17:03	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/25/20 17:03	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/25/20 17:03	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/25/20 17:03	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/25/20 17:03	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/25/20 17:03	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/25/20 17:03	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/25/20 17:03	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/25/20 17:03	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/25/20 17:03	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/25/20 17:03	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/25/20 17:03	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/25/20 17:03	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/25/20 17:03	1
1,2-Dichloroethene, Total	**2.2**		2.0	0.74	ug/L			10/25/20 17:03	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/25/20 17:03	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/25/20 17:03	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/25/20 17:03	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/25/20 17:03	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/25/20 17:03	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/25/20 17:03	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190098-1

Client Sample ID: G6M-13-01X-FAL20
Date Collected: 10/13/20 15:06
Date Received: 10/15/20 09:40

Lab Sample ID: 680-190098-11
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/25/20 17:03	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/25/20 17:03	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/25/20 17:03	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/25/20 17:03	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/25/20 17:03	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/25/20 17:03	1
Acetone	7.0	U	10	7.0	ug/L			10/25/20 17:03	1
Benzene	0.43	U	1.0	0.43	ug/L			10/25/20 17:03	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/25/20 17:03	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/25/20 17:03	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/25/20 17:03	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/25/20 17:03	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/25/20 17:03	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/25/20 17:03	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/25/20 17:03	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/25/20 17:03	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/25/20 17:03	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/25/20 17:03	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/25/20 17:03	1
cis-1,2-Dichloroethene	**2.2**		1.0	0.41	ug/L			10/25/20 17:03	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/25/20 17:03	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/25/20 17:03	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/25/20 17:03	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/25/20 17:03	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/25/20 17:03	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/25/20 17:03	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/25/20 17:03	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/25/20 17:03	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/25/20 17:03	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/25/20 17:03	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/25/20 17:03	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/25/20 17:03	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/25/20 17:03	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/25/20 17:03	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/25/20 17:03	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/25/20 17:03	1
Styrene	0.27	U	1.0	0.27	ug/L			10/25/20 17:03	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/25/20 17:03	1
Tetrachloroethene	**2.0**		1.0	0.74	ug/L			10/25/20 17:03	1
Toluene	0.48	U	1.0	0.48	ug/L			10/25/20 17:03	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/25/20 17:03	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/25/20 17:03	1
Trichloroethene	**1.6**		1.0	0.48	ug/L			10/25/20 17:03	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/25/20 17:03	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/25/20 17:03	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/25/20 17:03	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/25/20 17:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*		*10/25/20 17:03*	*1*

Client Sample ID: G6M-13-01X-FAL20

Lab Sample ID: 680-190098-11

Date Collected: 10/13/20 15:06

Matrix: Water

Date Received: 10/15/20 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*10/25/20 17:03*	*1*
Toluene-d8 (Surr)	*97*		*89 - 112*		*10/25/20 17:03*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*81 - 118*		*10/25/20 17:03*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	0.55	U	1.1	0.55	ug/L			10/25/20 23:38	1
Ethylene	0.50	U	1.0	0.50	ug/L			10/25/20 23:38	1
Methane (TCD)	**3100**		390	39	ug/L			10/25/20 23:38	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**15**		1.0	0.40	mg/L			10/25/20 08:36	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**180**		50	17	ug/L		10/16/20 13:37	10/19/20 18:30	1
Manganese	**2600**		10	1.0	ug/L		10/16/20 13:37	10/19/20 18:30	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**1.8**	**J**	3.0	1.5	ug/L		10/16/20 13:37	10/17/20 11:14	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.019	U	0.10	0.019	mg/L			10/26/20 19:33	1
Sulfide	0.83	U	0.83	0.83	mg/L			10/16/20 10:32	1
Total Organic Carbon - Duplicates	**3.8**		1.0	0.35	mg/L			10/31/20 08:42	1
Alkalinity	**45**		10	3.1	mg/L			10/23/20 16:08	1

Client Sample ID: G6M-95-20X-FAL20

Lab Sample ID: 680-190098-12

Date Collected: 10/14/20 09:50

Matrix: Water

Date Received: 10/15/20 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/26/20 22:31	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/26/20 22:31	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/26/20 22:31	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/26/20 22:31	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/26/20 22:31	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/26/20 22:31	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/26/20 22:31	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/26/20 22:31	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/26/20 22:31	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/26/20 22:31	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/26/20 22:31	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/26/20 22:31	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/26/20 22:31	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/26/20 22:31	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			10/26/20 22:31	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190098-1

Client Sample ID: G6M-95-20X-FAL20
Date Collected: 10/14/20 09:50
Date Received: 10/15/20 09:40

Lab Sample ID: 680-190098-12
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/26/20 22:31	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/26/20 22:31	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/26/20 22:31	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/26/20 22:31	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/26/20 22:31	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/26/20 22:31	1
2-Butanone (MEK)	**12**		10	3.4	ug/L			10/26/20 22:31	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/26/20 22:31	1
2-Hexanone	**14**		10	2.0	ug/L			10/26/20 22:31	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/26/20 22:31	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/26/20 22:31	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/26/20 22:31	1
Acetone	**12**		10	7.0	ug/L			10/26/20 22:31	1
Benzene	0.43	U	1.0	0.43	ug/L			10/26/20 22:31	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/26/20 22:31	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/26/20 22:31	1
Bromomethane	2.5	U Q	5.0	2.5	ug/L			10/26/20 22:31	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/26/20 22:31	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/26/20 22:31	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/26/20 22:31	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/26/20 22:31	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/26/20 22:31	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/26/20 22:31	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/26/20 22:31	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/26/20 22:31	1
cis-1,2-Dichloroethene	**0.41**	**J**	1.0	0.41	ug/L			10/26/20 22:31	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/26/20 22:31	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/26/20 22:31	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/26/20 22:31	1
Dichlorodifluoromethane	0.60	U Q	1.0	0.60	ug/L			10/26/20 22:31	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/26/20 22:31	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/26/20 22:31	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/26/20 22:31	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/26/20 22:31	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/26/20 22:31	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/26/20 22:31	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/26/20 22:31	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/26/20 22:31	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/26/20 22:31	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/26/20 22:31	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/26/20 22:31	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/26/20 22:31	1
Styrene	0.27	U	1.0	0.27	ug/L			10/26/20 22:31	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/26/20 22:31	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			10/26/20 22:31	1
Toluene	0.48	U	1.0	0.48	ug/L			10/26/20 22:31	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/26/20 22:31	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/26/20 22:31	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/26/20 22:31	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190098-1

Client Sample ID: G6M-95-20X-FAL20

Date Collected: 10/14/20 09:50
Date Received: 10/15/20 09:40

Lab Sample ID: 680-190098-12

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/26/20 22:31	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/26/20 22:31	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/26/20 22:31	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/26/20 22:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*10/26/20 22:31*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 119*		*10/26/20 22:31*	*1*
Toluene-d8 (Surr)	*101*		*89 - 112*		*10/26/20 22:31*	*1*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*		*10/26/20 22:31*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**54000**		50	17	ug/L		10/16/20 13:37	10/19/20 18:25	1
Manganese	**2200**		10	1.0	ug/L		10/16/20 13:37	10/19/20 18:25	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**87**		3.0	1.5	ug/L		10/16/20 13:37	10/17/20 11:11	1

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190098-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-640636/8
Matrix: Water
Analysis Batch: 640636

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/25/20 12:23	1
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/25/20 12:23	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/25/20 12:23	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/25/20 12:23	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/25/20 12:23	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/25/20 12:23	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/25/20 12:23	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/25/20 12:23	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/25/20 12:23	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/25/20 12:23	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/25/20 12:23	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/25/20 12:23	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/25/20 12:23	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/25/20 12:23	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			10/25/20 12:23	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/25/20 12:23	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/25/20 12:23	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/25/20 12:23	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/25/20 12:23	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/25/20 12:23	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/25/20 12:23	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/25/20 12:23	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/25/20 12:23	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/25/20 12:23	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/25/20 12:23	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/25/20 12:23	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/25/20 12:23	1
Acetone	7.0	U	10	7.0	ug/L			10/25/20 12:23	1
Benzene	0.43	U	1.0	0.43	ug/L			10/25/20 12:23	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/25/20 12:23	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/25/20 12:23	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/25/20 12:23	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/25/20 12:23	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/25/20 12:23	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/25/20 12:23	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/25/20 12:23	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/25/20 12:23	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/25/20 12:23	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/25/20 12:23	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/25/20 12:23	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			10/25/20 12:23	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/25/20 12:23	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/25/20 12:23	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/25/20 12:23	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/25/20 12:23	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/25/20 12:23	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/25/20 12:23	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/25/20 12:23	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-640636/8
Matrix: Water
Analysis Batch: 640636

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/25/20 12:23	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/25/20 12:23	1
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/25/20 12:23	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/25/20 12:23	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/25/20 12:23	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/25/20 12:23	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/25/20 12:23	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/25/20 12:23	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/25/20 12:23	1
Styrene	0.27	U	1.0	0.27	ug/L			10/25/20 12:23	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/25/20 12:23	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			10/25/20 12:23	1
Toluene	0.48	U	1.0	0.48	ug/L			10/25/20 12:23	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/25/20 12:23	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/25/20 12:23	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/25/20 12:23	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/25/20 12:23	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/25/20 12:23	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/25/20 12:23	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/25/20 12:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*10/25/20 12:23*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 119*		*10/25/20 12:23*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*10/25/20 12:23*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*81 - 118*		*10/25/20 12:23*	*1*

Lab Sample ID: LCS 680-640636/3
Matrix: Water
Analysis Batch: 640636

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	57.6		ug/L		115	78 - 124
1,1,1-Trichloroethane	50.0	49.6		ug/L		99	74 - 131
1,1,2,2-Tetrachloroethane	50.0	53.9		ug/L		108	71 - 121
1,1,2-Trichloroethane	50.0	53.9		ug/L		108	80 - 119
1,1-Dichloroethane	50.0	46.7		ug/L		93	77 - 125
1,1-Dichloroethene	50.0	51.2		ug/L		102	71 - 131
1,1-Dichloropropene	50.0	49.8		ug/L		100	79 - 125
1,2,3-Trichlorobenzene	50.0	47.7		ug/L		95	69 - 129
1,2,3-Trichloropropane	50.0	59.2		ug/L		118	73 - 122
1,2,4-Trichlorobenzene	50.0	47.9		ug/L		96	69 - 130
1,2,4-Trimethylbenzene	50.0	50.7		ug/L		101	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	49.7		ug/L		99	62 - 128
1,2-Dichlorobenzene	50.0	50.4		ug/L		101	80 - 119
1,2-Dichloroethane	50.0	49.0		ug/L		98	73 - 128
1,2-Dichloroethene, Total	100	97.2		ug/L		97	79 - 121
1,2-Dichloropropane	50.0	48.6		ug/L		97	78 - 122

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-640636/3
Matrix: Water
Analysis Batch: 640636

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	50.0		ug/L		100	75 - 124
1,3-Dichlorobenzene	50.0	50.9		ug/L		102	80 - 119
1,3-Dichloropropane	50.0	50.3		ug/L		101	80 - 119
1,4-Dichlorobenzene	50.0	50.7		ug/L		101	79 - 118
2,2-Dichloropropane	50.0	49.0		ug/L		98	60 - 139
2-Butanone (MEK)	250	265		ug/L		106	56 - 143
2-Chlorotoluene	50.0	51.5		ug/L		103	79 - 122
2-Hexanone	250	242		ug/L		97	57 - 139
4-Chlorotoluene	50.0	51.5		ug/L		103	78 - 122
4-Isopropyltoluene	50.0	48.5		ug/L		97	77 - 127
4-Methyl-2-pentanone (MIBK)	250	245		ug/L		98	67 - 130
Acetone	250	237		ug/L		95	39 - 160
Benzene	50.0	50.3		ug/L		101	79 - 120
Bromobenzene	50.0	55.2		ug/L		110	80 - 120
Bromoform	50.0	58.9		ug/L		118	66 - 130
Bromomethane	50.0	40.1		ug/L		80	53 - 141
Carbon disulfide	50.0	49.9		ug/L		100	64 - 133
Carbon tetrachloride	50.0	51.0		ug/L		102	72 - 136
Chlorobenzene	50.0	53.4		ug/L		107	82 - 118
Chlorobromomethane	50.0	50.9		ug/L		102	78 - 123
Chlorodibromomethane	50.0	53.9		ug/L		108	74 - 126
Chloroethane	50.0	41.5		ug/L		83	60 - 138
Chloroform	50.0	48.1		ug/L		96	79 - 124
Chloromethane	50.0	43.5		ug/L		87	50 - 139
cis-1,2-Dichloroethene	50.0	46.4		ug/L		93	78 - 123
cis-1,3-Dichloropropene	50.0	50.3		ug/L		101	75 - 124
Dibromomethane	50.0	49.6		ug/L		99	79 - 123
Dichlorobromomethane	50.0	49.9		ug/L		100	79 - 125
Dichlorodifluoromethane	50.0	52.0		ug/L		104	32 - 152
Ethylbenzene	50.0	51.5		ug/L		103	79 - 121
Ethylene Dibromide	50.0	55.6		ug/L		111	75 - 127
Hexachlorobutadiene	50.0	49.4		ug/L		99	66 - 134
Isopropylbenzene	50.0	51.1		ug/L		102	72 - 131
Methyl tert-butyl ether	50.0	49.3		ug/L		99	71 - 124
Methylene Chloride	50.0	49.6		ug/L		99	74 - 124
m-Xylene & p-Xylene	50.0	51.7		ug/L		103	80 - 121
Naphthalene	50.0	47.8		ug/L		96	61 - 128
n-Butylbenzene	50.0	46.4		ug/L		93	75 - 128
N-Propylbenzene	50.0	50.8		ug/L		102	76 - 126
o-Xylene	50.0	51.2		ug/L		102	78 - 122
sec-Butylbenzene	50.0	50.5		ug/L		101	77 - 126
Styrene	50.0	54.2		ug/L		108	78 - 123
tert-Butylbenzene	50.0	51.1		ug/L		102	78 - 124
Tetrachloroethene	50.0	55.7		ug/L		111	74 - 129
Toluene	50.0	52.5		ug/L		105	80 - 121
trans-1,2-Dichloroethene	50.0	50.7		ug/L		101	75 - 124
trans-1,3-Dichloropropene	50.0	50.1		ug/L		100	73 - 127
Trichloroethene	50.0	52.9		ug/L		106	79 - 123
Trichlorofluoromethane	50.0	49.4		ug/L		99	65 - 141

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-640636/3
Matrix: Water
Analysis Batch: 640636

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	103		ug/L		103	54 - 146
Vinyl chloride	50.0	46.8		ug/L		94	58 - 137
Xylenes, Total	100	103		ug/L		103	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*
Dibromofluoromethane (Surr)	*99*		*80 - 119*
Toluene-d8 (Surr)	*105*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*99*		*81 - 118*

Lab Sample ID: LCSD 680-640636/4
Matrix: Water
Analysis Batch: 640636

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	56.4		ug/L		113	78 - 124	2	20
1,1,1-Trichloroethane	50.0	49.3		ug/L		99	74 - 131	0	20
1,1,2,2-Tetrachloroethane	50.0	52.0		ug/L		104	71 - 121	4	20
1,1,2-Trichloroethane	50.0	53.9		ug/L		108	80 - 119	0	20
1,1-Dichloroethane	50.0	47.2		ug/L		94	77 - 125	1	20
1,1-Dichloroethene	50.0	50.5		ug/L		101	71 - 131	1	20
1,1-Dichloropropene	50.0	50.0		ug/L		100	79 - 125	0	20
1,2,3-Trichlorobenzene	50.0	49.4		ug/L		99	69 - 129	3	20
1,2,3-Trichloropropane	50.0	57.1		ug/L		114	73 - 122	4	20
1,2,4-Trichlorobenzene	50.0	49.0		ug/L		98	69 - 130	2	20
1,2,4-Trimethylbenzene	50.0	50.4		ug/L		101	76 - 124	1	20
1,2-Dibromo-3-Chloropropane	50.0	50.8		ug/L		102	62 - 128	2	20
1,2-Dichlorobenzene	50.0	50.5		ug/L		101	80 - 119	0	20
1,2-Dichloroethane	50.0	50.0		ug/L		100	73 - 128	2	20
1,2-Dichloroethene, Total	100	98.2		ug/L		98	79 - 121	1	20
1,2-Dichloropropane	50.0	48.3		ug/L		97	78 - 122	1	20
1,3,5-Trimethylbenzene	50.0	49.2		ug/L		98	75 - 124	2	20
1,3-Dichlorobenzene	50.0	51.6		ug/L		103	80 - 119	2	20
1,3-Dichloropropane	50.0	51.2		ug/L		102	80 - 119	2	20
1,4-Dichlorobenzene	50.0	50.2		ug/L		100	79 - 118	1	20
2,2-Dichloropropane	50.0	48.8		ug/L		98	60 - 139	0	20
2-Butanone (MEK)	250	267		ug/L		107	56 - 143	1	20
2-Chlorotoluene	50.0	50.0		ug/L		100	79 - 122	3	20
2-Hexanone	250	246		ug/L		98	57 - 139	2	20
4-Chlorotoluene	50.0	50.2		ug/L		100	78 - 122	2	20
4-Isopropyltoluene	50.0	47.9		ug/L		96	77 - 127	1	20
4-Methyl-2-pentanone (MIBK)	250	248		ug/L		99	67 - 130	1	20
Acetone	250	235		ug/L		94	39 - 160	1	20
Benzene	50.0	50.5		ug/L		101	79 - 120	0	20
Bromobenzene	50.0	54.9		ug/L		110	80 - 120	1	20
Bromoform	50.0	58.6		ug/L		117	66 - 130	0	20
Bromomethane	50.0	41.6		ug/L		83	53 - 141	4	20
Carbon disulfide	50.0	49.9		ug/L		100	64 - 133	0	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-640636/4
Matrix: Water
Analysis Batch: 640636

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	50.9		ug/L		102	72 - 136	0	20
Chlorobenzene			50.0	52.4		ug/L		105	82 - 118	2	20
Chlorobromomethane			50.0	50.8		ug/L		102	78 - 123	0	20
Chlorodibromomethane			50.0	53.9		ug/L		108	74 - 126	0	20
Chloroethane			50.0	42.8		ug/L		86	60 - 138	3	20
Chloroform			50.0	48.3		ug/L		97	79 - 124	0	20
Chloromethane			50.0	43.8		ug/L		88	50 - 139	1	20
cis-1,2-Dichloroethene			50.0	46.7		ug/L		93	78 - 123	1	20
cis-1,3-Dichloropropene			50.0	51.3		ug/L		103	75 - 124	2	20
Dibromomethane			50.0	49.7		ug/L		99	79 - 123	0	20
Dichlorobromomethane			50.0	50.7		ug/L		101	79 - 125	2	20
Dichlorodifluoromethane			50.0	51.7		ug/L		103	32 - 152	1	20
Ethylbenzene			50.0	50.8		ug/L		102	79 - 121	2	20
Ethylene Dibromide			50.0	56.0		ug/L		112	75 - 127	1	20
Hexachlorobutadiene			50.0	49.1		ug/L		98	66 - 134	1	20
Isopropylbenzene			50.0	50.6		ug/L		101	72 - 131	1	20
Methyl tert-butyl ether			50.0	49.7		ug/L		99	71 - 124	1	20
Methylene Chloride			50.0	49.3		ug/L		99	74 - 124	1	20
m-Xylene & p-Xylene			50.0	50.8		ug/L		102	80 - 121	2	20
Naphthalene			50.0	48.6		ug/L		97	61 - 128	2	20
n-Butylbenzene			50.0	46.5		ug/L		93	75 - 128	0	20
N-Propylbenzene			50.0	50.0		ug/L		100	76 - 126	2	20
o-Xylene			50.0	50.9		ug/L		102	78 - 122	1	20
sec-Butylbenzene			50.0	49.3		ug/L		99	77 - 126	3	20
Styrene			50.0	53.3		ug/L		107	78 - 123	2	20
tert-Butylbenzene			50.0	49.9		ug/L		100	78 - 124	2	20
Tetrachloroethene			50.0	56.3		ug/L		113	74 - 129	1	20
Toluene			50.0	52.5		ug/L		105	80 - 121	0	20
trans-1,2-Dichloroethene			50.0	51.5		ug/L		103	75 - 124	2	20
trans-1,3-Dichloropropene			50.0	49.9		ug/L		100	73 - 127	0	20
Trichloroethene			50.0	53.0		ug/L		106	79 - 123	0	20
Trichlorofluoromethane			50.0	49.3		ug/L		99	65 - 141	0	20
Vinyl acetate			100	103		ug/L		103	54 - 146	0	20
Vinyl chloride			50.0	46.4		ug/L		93	58 - 137	1	20
Xylenes, Total			100	102		ug/L		102	79 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*
Dibromofluoromethane (Surr)	*101*		*80 - 119*
Toluene-d8 (Surr)	*103*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*99*		*81 - 118*

Lab Sample ID: MB 680-640699/8
Matrix: Water
Analysis Batch: 640699

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			10/26/20 13:59	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-640699/8
Matrix: Water
Analysis Batch: 640699

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.37	U	1.0	0.37	ug/L			10/26/20 13:59	1
1,1,2,2-Tetrachloroethane	0.62	U	1.0	0.62	ug/L			10/26/20 13:59	1
1,1,2-Trichloroethane	0.33	U	1.0	0.33	ug/L			10/26/20 13:59	1
1,1-Dichloroethane	0.38	U	1.0	0.38	ug/L			10/26/20 13:59	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			10/26/20 13:59	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			10/26/20 13:59	1
1,2,3-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/26/20 13:59	1
1,2,3-Trichloropropane	0.39	U	1.0	0.39	ug/L			10/26/20 13:59	1
1,2,4-Trichlorobenzene	2.5	U	5.0	2.5	ug/L			10/26/20 13:59	1
1,2,4-Trimethylbenzene	0.47	U	1.0	0.47	ug/L			10/26/20 13:59	1
1,2-Dibromo-3-Chloropropane	1.1	U	5.0	1.1	ug/L			10/26/20 13:59	1
1,2-Dichlorobenzene	0.37	U	1.0	0.37	ug/L			10/26/20 13:59	1
1,2-Dichloroethane	0.50	U M	1.0	0.50	ug/L			10/26/20 13:59	1
1,2-Dichloroethene, Total	0.74	U	2.0	0.74	ug/L			10/26/20 13:59	1
1,2-Dichloropropane	0.67	U	1.0	0.67	ug/L			10/26/20 13:59	1
1,3,5-Trimethylbenzene	0.31	U	1.0	0.31	ug/L			10/26/20 13:59	1
1,3-Dichlorobenzene	0.43	U	1.0	0.43	ug/L			10/26/20 13:59	1
1,3-Dichloropropane	0.34	U	1.0	0.34	ug/L			10/26/20 13:59	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			10/26/20 13:59	1
2,2-Dichloropropane	0.37	U	1.0	0.37	ug/L			10/26/20 13:59	1
2-Butanone (MEK)	3.4	U	10	3.4	ug/L			10/26/20 13:59	1
2-Chlorotoluene	0.27	U	1.0	0.27	ug/L			10/26/20 13:59	1
2-Hexanone	2.0	U	10	2.0	ug/L			10/26/20 13:59	1
4-Chlorotoluene	0.45	U	1.0	0.45	ug/L			10/26/20 13:59	1
4-Isopropyltoluene	0.48	U	1.0	0.48	ug/L			10/26/20 13:59	1
4-Methyl-2-pentanone (MIBK)	2.1	U	10	2.1	ug/L			10/26/20 13:59	1
Acetone	7.0	U	10	7.0	ug/L			10/26/20 13:59	1
Benzene	0.43	U	1.0	0.43	ug/L			10/26/20 13:59	1
Bromobenzene	0.50	U	1.0	0.50	ug/L			10/26/20 13:59	1
Bromoform	0.43	U	1.0	0.43	ug/L			10/26/20 13:59	1
Bromomethane	2.5	U	5.0	2.5	ug/L			10/26/20 13:59	1
Carbon disulfide	0.43	U	2.0	0.43	ug/L			10/26/20 13:59	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			10/26/20 13:59	1
Chlorobenzene	0.26	U	1.0	0.26	ug/L			10/26/20 13:59	1
Chlorobromomethane	0.45	U	1.0	0.45	ug/L			10/26/20 13:59	1
Chlorodibromomethane	0.32	U	1.0	0.32	ug/L			10/26/20 13:59	1
Chloroethane	2.5	U	5.0	2.5	ug/L			10/26/20 13:59	1
Chloroform	0.50	U	1.0	0.50	ug/L			10/26/20 13:59	1
Chloromethane	0.40	U	1.0	0.40	ug/L			10/26/20 13:59	1
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			10/26/20 13:59	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	ug/L			10/26/20 13:59	1
Dibromomethane	0.35	U	1.0	0.35	ug/L			10/26/20 13:59	1
Dichlorobromomethane	0.44	U	1.0	0.44	ug/L			10/26/20 13:59	1
Dichlorodifluoromethane	0.60	U	1.0	0.60	ug/L			10/26/20 13:59	1
Ethylbenzene	0.33	U	1.0	0.33	ug/L			10/26/20 13:59	1
Ethylene Dibromide	0.44	U	1.0	0.44	ug/L			10/26/20 13:59	1
Hexachlorobutadiene	2.5	U	5.0	2.5	ug/L			10/26/20 13:59	1
Isopropylbenzene	0.35	U	1.0	0.35	ug/L			10/26/20 13:59	1
Methyl tert-butyl ether	0.30	U	10	0.30	ug/L			10/26/20 13:59	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-640699/8
Matrix: Water
Analysis Batch: 640699

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	2.5	U	5.0	2.5	ug/L			10/26/20 13:59	1
m-Xylene & p-Xylene	0.35	U	1.0	0.35	ug/L			10/26/20 13:59	1
Naphthalene	2.5	U	5.0	2.5	ug/L			10/26/20 13:59	1
n-Butylbenzene	0.47	U	1.0	0.47	ug/L			10/26/20 13:59	1
N-Propylbenzene	0.38	U	1.0	0.38	ug/L			10/26/20 13:59	1
o-Xylene	0.23	U	1.0	0.23	ug/L			10/26/20 13:59	1
sec-Butylbenzene	0.42	U	1.0	0.42	ug/L			10/26/20 13:59	1
Styrene	0.27	U	1.0	0.27	ug/L			10/26/20 13:59	1
tert-Butylbenzene	0.45	U	1.0	0.45	ug/L			10/26/20 13:59	1
Tetrachloroethene	0.74	U	1.0	0.74	ug/L			10/26/20 13:59	1
Toluene	0.48	U	1.0	0.48	ug/L			10/26/20 13:59	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			10/26/20 13:59	1
trans-1,3-Dichloropropene	0.42	U	1.0	0.42	ug/L			10/26/20 13:59	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			10/26/20 13:59	1
Trichlorofluoromethane	0.42	U	1.0	0.42	ug/L			10/26/20 13:59	1
Vinyl acetate	0.81	U	2.0	0.81	ug/L			10/26/20 13:59	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			10/26/20 13:59	1
Xylenes, Total	0.23	U	2.0	0.23	ug/L			10/26/20 13:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*10/26/20 13:59*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 119*		*10/26/20 13:59*	*1*
Toluene-d8 (Surr)	*103*		*89 - 112*		*10/26/20 13:59*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*81 - 118*		*10/26/20 13:59*	*1*

Lab Sample ID: LCS 680-640699/3
Matrix: Water
Analysis Batch: 640699

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	54.7		ug/L		109	78 - 124
1,1,1-Trichloroethane	50.0	48.0		ug/L		96	74 - 131
1,1,2,2-Tetrachloroethane	50.0	51.2		ug/L		102	71 - 121
1,1,2-Trichloroethane	50.0	53.7		ug/L		107	80 - 119
1,1-Dichloroethane	50.0	46.5		ug/L		93	77 - 125
1,1-Dichloroethene	50.0	49.8		ug/L		100	71 - 131
1,1-Dichloropropene	50.0	48.4		ug/L		97	79 - 125
1,2,3-Trichlorobenzene	50.0	47.1		ug/L		94	69 - 129
1,2,3-Trichloropropane	50.0	55.0		ug/L		110	73 - 122
1,2,4-Trichlorobenzene	50.0	47.3		ug/L		95	69 - 130
1,2,4-Trimethylbenzene	50.0	48.1		ug/L		96	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	49.8		ug/L		100	62 - 128
1,2-Dichlorobenzene	50.0	49.5		ug/L		99	80 - 119
1,2-Dichloroethane	50.0	48.9		ug/L		98	73 - 128
1,2-Dichloroethene, Total	100	94.9		ug/L		95	79 - 121
1,2-Dichloropropane	50.0	48.0		ug/L		96	78 - 122
1,3,5-Trimethylbenzene	50.0	47.9		ug/L		96	75 - 124
1,3-Dichlorobenzene	50.0	50.4		ug/L		101	80 - 119

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-640699/3
Matrix: Water
Analysis Batch: 640699

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	50.5		ug/L		101	80 - 119
1,4-Dichlorobenzene	50.0	49.9		ug/L		100	79 - 118
2,2-Dichloropropane	50.0	47.8		ug/L		96	60 - 139
2-Butanone (MEK)	250	245		ug/L		98	56 - 143
2-Chlorotoluene	50.0	48.6		ug/L		97	79 - 122
2-Hexanone	250	234		ug/L		94	57 - 139
4-Chlorotoluene	50.0	49.1		ug/L		98	78 - 122
4-Isopropyltoluene	50.0	46.6		ug/L		93	77 - 127
4-Methyl-2-pentanone (MIBK)	250	233		ug/L		93	67 - 130
Acetone	250	219		ug/L		88	39 - 160
Benzene	50.0	49.0		ug/L		98	79 - 120
Bromobenzene	50.0	53.0		ug/L		106	80 - 120
Bromoform	50.0	55.4		ug/L		111	66 - 130
Bromomethane	50.0	35.4		ug/L		71	53 - 141
Carbon disulfide	50.0	47.5		ug/L		95	64 - 133
Carbon tetrachloride	50.0	48.5		ug/L		97	72 - 136
Chlorobenzene	50.0	51.1		ug/L		102	82 - 118
Chlorobromomethane	50.0	51.0		ug/L		102	78 - 123
Chlorodibromomethane	50.0	53.7		ug/L		107	74 - 126
Chloroethane	50.0	40.8		ug/L		82	60 - 138
Chloroform	50.0	47.8		ug/L		96	79 - 124
Chloromethane	50.0	41.3		ug/L		83	50 - 139
cis-1,2-Dichloroethene	50.0	45.6		ug/L		91	78 - 123
cis-1,3-Dichloropropene	50.0	50.3		ug/L		101	75 - 124
Dibromomethane	50.0	49.0		ug/L		98	79 - 123
Dichlorobromomethane	50.0	48.7		ug/L		97	79 - 125
Dichlorodifluoromethane	50.0	48.0		ug/L		96	32 - 152
Ethylbenzene	50.0	48.6		ug/L		97	79 - 121
Ethylene Dibromide	50.0	54.0		ug/L		108	75 - 127
Hexachlorobutadiene	50.0	48.2		ug/L		96	66 - 134
Isopropylbenzene	50.0	48.9		ug/L		98	72 - 131
Methyl tert-butyl ether	50.0	48.2		ug/L		96	71 - 124
Methylene Chloride	50.0	48.4		ug/L		97	74 - 124
m-Xylene & p-Xylene	50.0	49.1		ug/L		98	80 - 121
Naphthalene	50.0	46.4		ug/L		93	61 - 128
n-Butylbenzene	50.0	45.7		ug/L		91	75 - 128
N-Propylbenzene	50.0	48.4		ug/L		97	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	52.0		ug/L		104	78 - 123
tert-Butylbenzene	50.0	48.1		ug/L		96	78 - 124
Tetrachloroethene	50.0	54.0		ug/L		108	74 - 129
Toluene	50.0	50.7		ug/L		101	80 - 121
trans-1,2-Dichloroethene	50.0	49.2		ug/L		98	75 - 124
trans-1,3-Dichloropropene	50.0	48.9		ug/L		98	73 - 127
Trichloroethene	50.0	51.2		ug/L		102	79 - 123
Trichlorofluoromethane	50.0	47.7		ug/L		95	65 - 141
Vinyl acetate	100	101		ug/L		101	54 - 146
Vinyl chloride	50.0	43.8		ug/L		88	58 - 137

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-640699/3
Matrix: Water
Analysis Batch: 640699

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	98.7		ug/L		99	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*
Dibromofluoromethane (Surr)	*100*		*80 - 119*
Toluene-d8 (Surr)	*101*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*98*		*81 - 118*

Lab Sample ID: LCSD 680-640699/4
Matrix: Water
Analysis Batch: 640699

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	56.3		ug/L		113	78 - 124	3	20
1,1,1-Trichloroethane			50.0	47.2		ug/L		94	74 - 131	2	20
1,1,2,2-Tetrachloroethane			50.0	51.7		ug/L		103	71 - 121	1	20
1,1,2-Trichloroethane			50.0	55.5		ug/L		111	80 - 119	3	20
1,1-Dichloroethane			50.0	46.8		ug/L		94	77 - 125	1	20
1,1-Dichloroethene			50.0	46.3		ug/L		93	71 - 131	7	20
1,1-Dichloropropene			50.0	46.9		ug/L		94	79 - 125	3	20
1,2,3-Trichlorobenzene			50.0	47.1		ug/L		94	69 - 129	0	20
1,2,3-Trichloropropane			50.0	55.6		ug/L		111	73 - 122	1	20
1,2,4-Trichlorobenzene			50.0	47.5		ug/L		95	69 - 130	0	20
1,2,4-Trimethylbenzene			50.0	49.3		ug/L		99	76 - 124	2	20
1,2-Dibromo-3-Chloropropane			50.0	48.5		ug/L		97	62 - 128	3	20
1,2-Dichlorobenzene			50.0	49.7		ug/L		99	80 - 119	1	20
1,2-Dichloroethane			50.0	50.6		ug/L		101	73 - 128	3	20
1,2-Dichloroethene, Total			100	96.0		ug/L		96	79 - 121	1	20
1,2-Dichloropropane			50.0	49.0		ug/L		98	78 - 122	2	20
1,3,5-Trimethylbenzene			50.0	48.3		ug/L		97	75 - 124	1	20
1,3-Dichlorobenzene			50.0	49.7		ug/L		99	80 - 119	1	20
1,3-Dichloropropane			50.0	51.9		ug/L		104	80 - 119	3	20
1,4-Dichlorobenzene			50.0	49.3		ug/L		99	79 - 118	1	20
2,2-Dichloropropane			50.0	46.6		ug/L		93	60 - 139	3	20
2-Butanone (MEK)			250	261		ug/L		105	56 - 143	6	20
2-Chlorotoluene			50.0	49.0		ug/L		98	79 - 122	1	20
2-Hexanone			250	240		ug/L		96	57 - 139	3	20
4-Chlorotoluene			50.0	49.2		ug/L		98	78 - 122	0	20
4-Isopropyltoluene			50.0	45.5		ug/L		91	77 - 127	3	20
4-Methyl-2-pentanone (MIBK)			250	244		ug/L		97	67 - 130	4	20
Acetone			250	237		ug/L		95	39 - 160	8	20
Benzene			50.0	49.3		ug/L		99	79 - 120	1	20
Bromobenzene			50.0	54.3		ug/L		109	80 - 120	3	20
Bromoform			50.0	56.6		ug/L		113	66 - 130	2	20
Bromomethane			50.0	38.5		ug/L		77	53 - 141	8	20
Carbon disulfide			50.0	45.8		ug/L		92	64 - 133	4	20
Carbon tetrachloride			50.0	46.8		ug/L		94	72 - 136	4	20
Chlorobenzene			50.0	51.5		ug/L		103	82 - 118	1	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-640699/4
Matrix: Water
Analysis Batch: 640699

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	52.8		ug/L		106	78 - 123	3	20
Chlorodibromomethane			50.0	55.3		ug/L		111	74 - 126	3	20
Chloroethane			50.0	39.4		ug/L		79	60 - 138	3	20
Chloroform			50.0	48.8		ug/L		98	79 - 124	2	20
Chloromethane			50.0	38.3		ug/L		77	50 - 139	7	20
cis-1,2-Dichloroethene			50.0	46.3		ug/L		93	78 - 123	2	20
cis-1,3-Dichloropropene			50.0	51.7		ug/L		103	75 - 124	3	20
Dibromomethane			50.0	50.5		ug/L		101	79 - 123	3	20
Dichlorobromomethane			50.0	50.7		ug/L		101	79 - 125	4	20
Dichlorodifluoromethane			50.0	36.1	Q	ug/L		72	32 - 152	28	20
Ethylbenzene			50.0	48.6		ug/L		97	79 - 121	0	20
Ethylene Dibromide			50.0	56.1		ug/L		112	75 - 127	4	20
Hexachlorobutadiene			50.0	46.7		ug/L		93	66 - 134	3	20
Isopropylbenzene			50.0	48.1		ug/L		96	72 - 131	1	20
Methyl tert-butyl ether			50.0	50.4		ug/L		101	71 - 124	5	20
Methylene Chloride			50.0	49.7		ug/L		99	74 - 124	3	20
m-Xylene & p-Xylene			50.0	49.8		ug/L		100	80 - 121	1	20
Naphthalene			50.0	46.8		ug/L		94	61 - 128	1	20
n-Butylbenzene			50.0	43.7		ug/L		87	75 - 128	5	20
N-Propylbenzene			50.0	48.2		ug/L		96	76 - 126	0	20
o-Xylene			50.0	49.3		ug/L		99	78 - 122	1	20
sec-Butylbenzene			50.0	47.2		ug/L		94	77 - 126	1	20
Styrene			50.0	52.4		ug/L		105	78 - 123	1	20
tert-Butylbenzene			50.0	47.7		ug/L		95	78 - 124	1	20
Tetrachloroethene			50.0	53.1		ug/L		106	74 - 129	2	20
Toluene			50.0	52.3		ug/L		105	80 - 121	3	20
trans-1,2-Dichloroethene			50.0	49.7		ug/L		99	75 - 124	1	20
trans-1,3-Dichloropropene			50.0	50.6		ug/L		101	73 - 127	3	20
Trichloroethene			50.0	51.5		ug/L		103	79 - 123	1	20
Trichlorofluoromethane			50.0	41.3		ug/L		83	65 - 141	14	20
Vinyl acetate			100	103		ug/L		103	54 - 146	3	20
Vinyl chloride			50.0	39.7		ug/L		79	58 - 137	10	20
Xylenes, Total			100	99.1		ug/L		99	79 - 121	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*
Dibromofluoromethane (Surr)	*103*		*80 - 119*
Toluene-d8 (Surr)	*100*		*89 - 112*
1,2-Dichloroethane-d4 (Surr)	*101*		*81 - 118*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-640667/38
Matrix: Water
Analysis Batch: 640667

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	0.55	U	1.1	0.55	ug/L			10/25/20 22:20	1
Ethylene	0.50	U	1.0	0.50	ug/L			10/25/20 22:20	1

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: MB 680-640667/38
Matrix: Water
Analysis Batch: 640667

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	0.29	U	0.58	0.29	ug/L			10/25/20 22:20	1
Methane (TCD)	39	U	390	39	ug/L			10/25/20 22:20	1

Lab Sample ID: LCS 680-640667/34
Matrix: Water
Analysis Batch: 640667

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	1720		ug/L		90	73 - 125

Lab Sample ID: LCS 680-640667/36
Matrix: Water
Analysis Batch: 640667

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	288	250		ug/L		87	74 - 131
Ethylene	269	231		ug/L		86	72 - 133
Methane	154	137		ug/L		89	73 - 125

Lab Sample ID: LCSD 680-640667/35
Matrix: Water
Analysis Batch: 640667

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	1730		ug/L		90	73 - 125	0	30

Lab Sample ID: LCSD 680-640667/37
Matrix: Water
Analysis Batch: 640667

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	288	255		ug/L		88	74 - 131	2	30
Ethylene	269	232		ug/L		86	72 - 133	0	30
Methane	154	138		ug/L		90	73 - 125	1	30

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-640606/2
Matrix: Water
Analysis Batch: 640606

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.40	U	1.0	0.40	mg/L			10/24/20 16:51	1

Lab Sample ID: LCS 680-640606/3
Matrix: Water
Analysis Batch: 640606

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	10.8		mg/L		108	87 - 112

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 680-640606/4
Matrix: Water
Analysis Batch: 640606

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	10.8		mg/L		108	87 - 112	0	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-639383/1-A
Matrix: Water
Analysis Batch: 639758

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 639383

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	21.6	J	50	17	ug/L		10/16/20 13:37	10/19/20 17:16	1
Manganese	1.0	U	10	1.0	ug/L		10/16/20 13:37	10/19/20 17:16	1

Lab Sample ID: LCS 680-639383/2-A
Matrix: Water
Analysis Batch: 639758

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 639383

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Iron			5000	4920		ug/L		98	87 - 115		
Manganese			400	400		ug/L		100	90 - 114		

Lab Sample ID: MB 680-640123/1-A
Matrix: Water
Analysis Batch: 640430

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 640123

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	17	U	50	17	ug/L		10/21/20 17:27	10/23/20 01:00	1
Manganese	1.07	J	10	1.0	ug/L		10/21/20 17:27	10/23/20 01:00	1

Lab Sample ID: LCS 680-640123/2-A
Matrix: Water
Analysis Batch: 640430

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 640123

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Iron			5000	4750		ug/L		95	87 - 115		
Manganese			400	387		ug/L		97	90 - 114		

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-639381/1-A
Matrix: Water
Analysis Batch: 639465

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 639381

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5	U	3.0	1.5	ug/L		10/16/20 13:37	10/17/20 09:52	1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 680-639381/2-A
Matrix: Water
Analysis Batch: 639465

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 639381

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	100	116		ug/L		116	84 - 116

Lab Sample ID: MB 680-640122/1-A
Matrix: Water
Analysis Batch: 640364

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 640122

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5	U	3.0	1.5	ug/L		10/21/20 17:24	10/22/20 17:37	1

Lab Sample ID: LCS 680-640122/2-A
Matrix: Water
Analysis Batch: 640364

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 640122

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	100	103		ug/L		103	84 - 116

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 280-513779/104
Matrix: Water
Analysis Batch: 513779

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.019	U	0.10	0.019	mg/L			10/22/20 20:32	1

Lab Sample ID: LCS 280-513779/103
Matrix: Water
Analysis Batch: 513779

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	4.91		mg/L		98	90 - 110

Lab Sample ID: MB 280-514188/61
Matrix: Water
Analysis Batch: 514188

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.019	U	0.10	0.019	mg/L			10/26/20 18:27	1

Lab Sample ID: LCS 280-514188/60
Matrix: Water
Analysis Batch: 514188

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	5.06		mg/L		101	90 - 110

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 680-639321/1
Matrix: Water
Analysis Batch: 639321

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	1.0	U	1.0	1.0	mg/L			10/16/20 10:32	1

Lab Sample ID: LCS 680-639321/2
Matrix: Water
Analysis Batch: 639321

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	7.56		mg/L		76	75 - 125

Lab Sample ID: LCSD 680-639321/3
Matrix: Water
Analysis Batch: 639321

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	7.64		mg/L		76	75 - 125	1	30

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 280-514811/35
Matrix: Water
Analysis Batch: 514811

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	1.19		1.0	0.35	mg/L			10/30/20 01:22	1

Lab Sample ID: MB 280-514811/4
Matrix: Water
Analysis Batch: 514811

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	0.35	U	1.0	0.35	mg/L			10/29/20 16:32	1

Lab Sample ID: LCS 280-514811/3
Matrix: Water
Analysis Batch: 514811

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 - Duplicates	25.0	25.3		mg/L		101	88 - 112

Lab Sample ID: LCS 280-514811/34
Matrix: Water
Analysis Batch: 514811

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 - Duplicates	25.0	25.9		mg/L		103	88 - 112

Method: 9060A - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: MB 280-514926/35
Matrix: Water
Analysis Batch: 514926

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	0.35	U	1.0	0.35	mg/L			10/31/20 05:41	1

Lab Sample ID: LCS 280-514926/34
Matrix: Water
Analysis Batch: 514926

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 - Duplicates	25.0	26.6		mg/L		106	88 - 112

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-514074/5
Matrix: Water
Analysis Batch: 514074

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	3.80	J	10	3.1	mg/L			10/23/20 13:59	1

Lab Sample ID: LCS 280-514074/4
Matrix: Water
Analysis Batch: 514074

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	200	203		mg/L		101	89 - 109

Lab Sample ID: MB 280-514211/32
Matrix: Water
Analysis Batch: 514211

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	3.1	U	10	3.1	mg/L			10/26/20 18:41	1

Lab Sample ID: LCS 280-514211/31
Matrix: Water
Analysis Batch: 514211

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	200	208		mg/L		104	89 - 109

QC Association Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190098-1

GC/MS VOA

Analysis Batch: 640636

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190098-3	G6M-02-08X-FAL20	Total/NA	Water	8260B	
680-190098-11	G6M-13-01X-FAL20	Total/NA	Water	8260B	
MB 680-640636/8	Method Blank	Total/NA	Water	8260B	
LCS 680-640636/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-640636/4	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 640699

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190098-1	AOC50-DUP01-FAL20	Total/NA	Water	8260B	
680-190098-2	AOC50-DUP02-FAL20	Total/NA	Water	8260B	
680-190098-4	G6M-02-11X-FAL20	Total/NA	Water	8260B	
680-190098-6	G6M-04-06X-FAL20	Total/NA	Water	8260B	
680-190098-7	G6M-04-07X-FAL20	Total/NA	Water	8260B	
680-190098-8	G6M-04-10A-FAL20	Total/NA	Water	8260B	
680-190098-9	G6M-04-10X-FAL20	Total/NA	Water	8260B	
680-190098-10	G6M-07-02X-FAL20	Total/NA	Water	8260B	
680-190098-12	G6M-95-20X-FAL20	Total/NA	Water	8260B	
MB 680-640699/8	Method Blank	Total/NA	Water	8260B	
LCS 680-640699/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-640699/4	Lab Control Sample Dup	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 640667

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190098-2	AOC50-DUP02-FAL20	Total/NA	Water	RSK-175	
680-190098-3	G6M-02-08X-FAL20	Total/NA	Water	RSK-175	
680-190098-7	G6M-04-07X-FAL20	Total/NA	Water	RSK-175	
680-190098-8	G6M-04-10A-FAL20	Total/NA	Water	RSK-175	
680-190098-10	G6M-07-02X-FAL20	Total/NA	Water	RSK-175	
680-190098-11	G6M-13-01X-FAL20	Total/NA	Water	RSK-175	
MB 680-640667/38	Method Blank	Total/NA	Water	RSK-175	
LCS 680-640667/34	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-640667/36	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-640667/35	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-640667/37	Lab Control Sample Dup	Total/NA	Water	RSK-175	

HPLC/IC

Analysis Batch: 640606

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190098-2	AOC50-DUP02-FAL20	Total/NA	Water	9056A	
680-190098-3	G6M-02-08X-FAL20	Total/NA	Water	9056A	
680-190098-7	G6M-04-07X-FAL20	Total/NA	Water	9056A	
680-190098-8	G6M-04-10A-FAL20	Total/NA	Water	9056A	
680-190098-10	G6M-07-02X-FAL20	Total/NA	Water	9056A	
680-190098-11	G6M-13-01X-FAL20	Total/NA	Water	9056A	
MB 680-640606/2	Method Blank	Total/NA	Water	9056A	
LCS 680-640606/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-640606/4	Lab Control Sample Dup	Total/NA	Water	9056A	

Metals

Prep Batch: 639381

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190098-1	AOC50-DUP01-FAL20	Dissolved	Water	3005A	
680-190098-2	AOC50-DUP02-FAL20	Dissolved	Water	3005A	
680-190098-3	G6M-02-08X-FAL20	Dissolved	Water	3005A	
680-190098-6	G6M-04-06X-FAL20	Dissolved	Water	3005A	
680-190098-7	G6M-04-07X-FAL20	Dissolved	Water	3005A	
680-190098-8	G6M-04-10A-FAL20	Dissolved	Water	3005A	
680-190098-10	G6M-07-02X-FAL20	Dissolved	Water	3005A	
680-190098-11	G6M-13-01X-FAL20	Dissolved	Water	3005A	
680-190098-12	G6M-95-20X-FAL20	Dissolved	Water	3005A	
MB 680-639381/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-639381/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 639383

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190098-1	AOC50-DUP01-FAL20	Dissolved	Water	3005A	
680-190098-2	AOC50-DUP02-FAL20	Dissolved	Water	3005A	
680-190098-3	G6M-02-08X-FAL20	Dissolved	Water	3005A	
680-190098-6	G6M-04-06X-FAL20	Dissolved	Water	3005A	
680-190098-7	G6M-04-07X-FAL20	Dissolved	Water	3005A	
680-190098-8	G6M-04-10A-FAL20	Dissolved	Water	3005A	
680-190098-10	G6M-07-02X-FAL20	Dissolved	Water	3005A	
680-190098-11	G6M-13-01X-FAL20	Dissolved	Water	3005A	
680-190098-12	G6M-95-20X-FAL20	Dissolved	Water	3005A	
MB 680-639383/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-639383/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 639465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190098-1	AOC50-DUP01-FAL20	Dissolved	Water	6020A	639381
680-190098-2	AOC50-DUP02-FAL20	Dissolved	Water	6020A	639381
680-190098-3	G6M-02-08X-FAL20	Dissolved	Water	6020A	639381
680-190098-6	G6M-04-06X-FAL20	Dissolved	Water	6020A	639381
680-190098-7	G6M-04-07X-FAL20	Dissolved	Water	6020A	639381
680-190098-8	G6M-04-10A-FAL20	Dissolved	Water	6020A	639381
680-190098-10	G6M-07-02X-FAL20	Dissolved	Water	6020A	639381
680-190098-11	G6M-13-01X-FAL20	Dissolved	Water	6020A	639381
680-190098-12	G6M-95-20X-FAL20	Dissolved	Water	6020A	639381
MB 680-639381/1-A	Method Blank	Total Recoverable	Water	6020A	639381
LCS 680-639381/2-A	Lab Control Sample	Total Recoverable	Water	6020A	639381

Analysis Batch: 639758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190098-1	AOC50-DUP01-FAL20	Dissolved	Water	6010C	639383
680-190098-2	AOC50-DUP02-FAL20	Dissolved	Water	6010C	639383
680-190098-3	G6M-02-08X-FAL20	Dissolved	Water	6010C	639383
680-190098-6	G6M-04-06X-FAL20	Dissolved	Water	6010C	639383
680-190098-7	G6M-04-07X-FAL20	Dissolved	Water	6010C	639383
680-190098-8	G6M-04-10A-FAL20	Dissolved	Water	6010C	639383
680-190098-10	G6M-07-02X-FAL20	Dissolved	Water	6010C	639383
680-190098-11	G6M-13-01X-FAL20	Dissolved	Water	6010C	639383
680-190098-12	G6M-95-20X-FAL20	Dissolved	Water	6010C	639383

Metals (Continued)

Analysis Batch: 639758 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-639383/1-A	Method Blank	Total Recoverable	Water	6010C	639383
LCS 680-639383/2-A	Lab Control Sample	Total Recoverable	Water	6010C	639383

Prep Batch: 640122

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190098-4	G6M-02-11X-FAL20	Dissolved	Water	3005A	
MB 680-640122/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-640122/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 640123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190098-4	G6M-02-11X-FAL20	Dissolved	Water	3005A	
MB 680-640123/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-640123/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 640364

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190098-4	G6M-02-11X-FAL20	Dissolved	Water	6020A	640122
MB 680-640122/1-A	Method Blank	Total Recoverable	Water	6020A	640122
LCS 680-640122/2-A	Lab Control Sample	Total Recoverable	Water	6020A	640122

Analysis Batch: 640430

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190098-4	G6M-02-11X-FAL20	Dissolved	Water	6010C	640123
MB 680-640123/1-A	Method Blank	Total Recoverable	Water	6010C	640123
LCS 680-640123/2-A	Lab Control Sample	Total Recoverable	Water	6010C	640123

General Chemistry

Analysis Batch: 513779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190098-2	AOC50-DUP02-FAL20	Total/NA	Water	353.2	
680-190098-3	G6M-02-08X-FAL20	Total/NA	Water	353.2	
MB 280-513779/104	Method Blank	Total/NA	Water	353.2	
LCS 280-513779/103	Lab Control Sample	Total/NA	Water	353.2	

Analysis Batch: 514074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190098-3	G6M-02-08X-FAL20	Total/NA	Water	SM 2320B	
680-190098-11	G6M-13-01X-FAL20	Total/NA	Water	SM 2320B	
MB 280-514074/5	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-514074/4	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 514188

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190098-7	G6M-04-07X-FAL20	Total/NA	Water	353.2	
680-190098-8	G6M-04-10A-FAL20	Total/NA	Water	353.2	
680-190098-10	G6M-07-02X-FAL20	Total/NA	Water	353.2	
680-190098-11	G6M-13-01X-FAL20	Total/NA	Water	353.2	
MB 280-514188/61	Method Blank	Total/NA	Water	353.2	
LCS 280-514188/60	Lab Control Sample	Total/NA	Water	353.2	

General Chemistry

Analysis Batch: 514211

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190098-2	AOC50-DUP02-FAL20	Total/NA	Water	SM 2320B	
680-190098-7	G6M-04-07X-FAL20	Total/NA	Water	SM 2320B	
680-190098-8	G6M-04-10A-FAL20	Total/NA	Water	SM 2320B	
680-190098-10	G6M-07-02X-FAL20	Total/NA	Water	SM 2320B	
MB 280-514211/32	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-514211/31	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 514811

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190098-2	AOC50-DUP02-FAL20	Total/NA	Water	9060A	
680-190098-3	G6M-02-08X-FAL20	Total/NA	Water	9060A	
680-190098-8	G6M-04-10A-FAL20	Total/NA	Water	9060A	
680-190098-10	G6M-07-02X-FAL20	Total/NA	Water	9060A	
MB 280-514811/35	Method Blank	Total/NA	Water	9060A	
MB 280-514811/4	Method Blank	Total/NA	Water	9060A	
LCS 280-514811/3	Lab Control Sample	Total/NA	Water	9060A	
LCS 280-514811/34	Lab Control Sample	Total/NA	Water	9060A	

Analysis Batch: 514926

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190098-7	G6M-04-07X-FAL20	Total/NA	Water	9060A	
680-190098-11	G6M-13-01X-FAL20	Total/NA	Water	9060A	
MB 280-514926/35	Method Blank	Total/NA	Water	9060A	
LCS 280-514926/34	Lab Control Sample	Total/NA	Water	9060A	

Analysis Batch: 639321

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190098-2	AOC50-DUP02-FAL20	Total/NA	Water	9034	
680-190098-3	G6M-02-08X-FAL20	Total/NA	Water	9034	
680-190098-7	G6M-04-07X-FAL20	Total/NA	Water	9034	
680-190098-8	G6M-04-10A-FAL20	Total/NA	Water	9034	
680-190098-10	G6M-07-02X-FAL20	Total/NA	Water	9034	
680-190098-11	G6M-13-01X-FAL20	Total/NA	Water	9034	
MB 680-639321/1	Method Blank	Total/NA	Water	9034	
LCS 680-639321/2	Lab Control Sample	Total/NA	Water	9034	
LCSD 680-639321/3	Lab Control Sample Dup	Total/NA	Water	9034	

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190098-1

Client Sample ID: AOC50-DUP01-FAL20

Lab Sample ID: 680-190098-1

Date Collected: 10/14/20 09:50

Matrix: Water

Date Received: 10/15/20 09:40

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	640699	10/26/20 19:15	Y1S	TAL SAV
	Instrument ID: CMSP2									
Dissolved	Prep	3005A			50 mL	50 mL	639383	10/16/20 13:37	AJR	TAL SAV
Dissolved	Analysis	6010C		1			639758	10/19/20 17:47	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	639381	10/16/20 13:37	AJR	TAL SAV
Dissolved	Analysis	6020A		1			639465	10/17/20 10:50	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: AOC50-DUP02-FAL20

Lab Sample ID: 680-190098-2

Date Collected: 10/14/20 10:55

Matrix: Water

Date Received: 10/15/20 09:40

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	640699	10/26/20 19:40	Y1S	TAL SAV
	Instrument ID: CMSP2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	640667	10/25/20 22:33	DBM	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		5	5 mL	5 mL	640606	10/25/20 06:53	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	639383	10/16/20 13:37	AJR	TAL SAV
Dissolved	Analysis	6010C		1			639758	10/19/20 18:21	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	639381	10/16/20 13:37	AJR	TAL SAV
Dissolved	Analysis	6020A		1			639465	10/17/20 11:08	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	513779	10/22/20 21:18	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	310 mL	310 mL	639321	10/16/20 10:32	NVF	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		5	20 mL	20 mL	514811	10/30/20 00:52	JMB	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			514211	10/26/20 20:00	RAF	TAL DEN
	Instrument ID: WC-AT3									

Client Sample ID: G6M-02-08X-FAL20

Lab Sample ID: 680-190098-3

Date Collected: 10/13/20 16:10

Matrix: Water

Date Received: 10/15/20 09:40

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	640636	10/25/20 16:38	Y1S	TAL SAV
	Instrument ID: CMSP2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	640667	10/25/20 22:46	DBM	TAL SAV
	Instrument ID: CVGU									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190098-1

Client Sample ID: G6M-02-08X-FAL20

Lab Sample ID: 680-190098-3
Date Collected: 10/13/20 16:10
Matrix: Water
Date Received: 10/15/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	5 mL	5 mL	640606	10/25/20 07:05	UI	TAL SAV
Dissolved	Prep	3005A			50 mL	50 mL	639383	10/16/20 13:37	AJR	TAL SAV
Dissolved	Analysis	6010C		1			639758	10/19/20 18:16	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	639381	10/16/20 13:37	AJR	TAL SAV
Dissolved	Analysis	6020A		1			639465	10/17/20 11:05	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	513779	10/22/20 21:20	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	310 mL	310 mL	639321	10/16/20 10:32	NVF	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		5	20 mL	20 mL	514811	10/30/20 03:20	JMB	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			514074	10/23/20 16:03	RAF	TAL DEN
	Instrument ID: WC-AT3									

Client Sample ID: G6M-02-11X-FAL20

Lab Sample ID: 680-190098-4
Date Collected: 10/14/20 12:30
Matrix: Water
Date Received: 10/15/20 09:40

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	640699	10/26/20 20:04	Y1S	TAL SAV
	Instrument ID: CMSP2									
Dissolved	Prep	3005A			50 mL	50 mL	640123	10/21/20 17:27	BCB	TAL SAV
Dissolved	Analysis	6010C		1			640430	10/23/20 02:01	BWR	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	640122	10/21/20 17:24	BCB	TAL SAV
Dissolved	Analysis	6020A		1			640364	10/22/20 18:20	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-04-06X-FAL20

Lab Sample ID: 680-190098-6
Date Collected: 10/14/20 10:25
Matrix: Water
Date Received: 10/15/20 09:40

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	640699	10/26/20 20:29	Y1S	TAL SAV
	Instrument ID: CMSP2									
Dissolved	Prep	3005A			50 mL	50 mL	639383	10/16/20 13:37	AJR	TAL SAV
Dissolved	Analysis	6010C		1			639758	10/19/20 18:39	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	639381	10/16/20 13:37	AJR	TAL SAV
Dissolved	Analysis	6020A		1			639465	10/17/20 11:20	BJB	TAL SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190098-1

Client Sample ID: G6M-04-07X-FAL20

Lab Sample ID: 680-190098-7

Date Collected: 10/14/20 11:50
Date Received: 10/15/20 09:40

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	640699	10/26/20 20:53	Y1S	TAL SAV
	Instrument ID: CMSP2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	640667	10/25/20 22:59	DBM	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	640606	10/25/20 08:23	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	639383	10/16/20 13:37	AJR	TAL SAV
Dissolved	Analysis	6010C		1			639758	10/19/20 17:52	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	639381	10/16/20 13:37	AJR	TAL SAV
Dissolved	Analysis	6020A		1			639465	10/17/20 10:53	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	514188	10/26/20 19:27	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	310 mL	310 mL	639321	10/16/20 10:32	NVF	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1	20 mL	20 mL	514926	10/31/20 08:27	JMB	TAL DEN
	Instrument ID: WC_SHI2									
Total/NA	Analysis	SM 2320B		1			514211	10/26/20 20:06	RAF	TAL DEN
	Instrument ID: WC-AT3									

Client Sample ID: G6M-04-10A-FAL20

Lab Sample ID: 680-190098-8

Date Collected: 10/14/20 13:00
Date Received: 10/15/20 09:40

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	640699	10/26/20 21:18	Y1S	TAL SAV
	Instrument ID: CMSP2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	640667	10/25/20 23:12	DBM	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		5	5 mL	5 mL	640606	10/25/20 07:18	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	639383	10/16/20 13:37	AJR	TAL SAV
Dissolved	Analysis	6010C		1			639758	10/19/20 18:12	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	639381	10/16/20 13:37	AJR	TAL SAV
Dissolved	Analysis	6020A		1			639465	10/17/20 10:56	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	514188	10/26/20 19:29	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	310 mL	310 mL	639321	10/16/20 10:32	NVF	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1	20 mL	20 mL	514811	10/30/20 03:35	JMB	TAL DEN
	Instrument ID: WC_SHI3									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190098-1

Client Sample ID: G6M-04-10A-FAL20

Lab Sample ID: 680-190098-8
Date Collected: 10/14/20 13:00
Matrix: Water
Date Received: 10/15/20 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2320B		1			514211	10/26/20 20:11	RAF	TAL DEN

Client Sample ID: G6M-04-10X-FAL20

Lab Sample ID: 680-190098-9
Date Collected: 10/14/20 14:10
Matrix: Water
Date Received: 10/15/20 09:40

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	640699	10/26/20 21:42	Y1S	TAL SAV
	Instrument ID: CMSP2									

Client Sample ID: G6M-07-02X-FAL20

Lab Sample ID: 680-190098-10
Date Collected: 10/14/20 10:55
Matrix: Water
Date Received: 10/15/20 09:40

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	640699	10/26/20 22:07	Y1S	TAL SAV
	Instrument ID: CMSP2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	640667	10/25/20 23:25	DBM	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		5	5 mL	5 mL	640606	10/25/20 07:31	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	639383	10/16/20 13:37	AJR	TAL SAV
Dissolved	Analysis	6010C		1			639758	10/19/20 18:34	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	639381	10/16/20 13:37	AJR	TAL SAV
Dissolved	Analysis	6020A		1			639465	10/17/20 11:17	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	514188	10/26/20 19:31	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	310 mL	310 mL	639321	10/16/20 10:32	NVF	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		5	20 mL	20 mL	514811	10/30/20 03:58	JMB	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			514211	10/26/20 20:15	RAF	TAL DEN
	Instrument ID: WC-AT3									

Client Sample ID: G6M-13-01X-FAL20

Lab Sample ID: 680-190098-11
Date Collected: 10/13/20 15:06
Matrix: Water
Date Received: 10/15/20 09:40

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	640636	10/25/20 17:03	Y1S	TAL SAV
	Instrument ID: CMSP2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	640667	10/25/20 23:38	DBM	TAL SAV
	Instrument ID: CVGU									

Lab Chronicle

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190098-1

Client Sample ID: G6M-13-01X-FAL20

Lab Sample ID: 680-190098-11

Date Collected: 10/13/20 15:06

Matrix: Water

Date Received: 10/15/20 09:40

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	640606	10/25/20 08:36	UI	TAL SAV
Dissolved	Prep	3005A			50 mL	50 mL	639383	10/16/20 13:37	AJR	TAL SAV
Dissolved	Analysis	6010C		1			639758	10/19/20 18:30	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	639381	10/16/20 13:37	AJR	TAL SAV
Dissolved	Analysis	6020A		1			639465	10/17/20 11:14	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	514188	10/26/20 19:33	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	300 mL	300 mL	639321	10/16/20 10:32	NVF	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1	20 mL	20 mL	514926	10/31/20 08:42	JMB	TAL DEN
	Instrument ID: WC_SHI2									
Total/NA	Analysis	SM 2320B		1			514074	10/23/20 16:08	RAF	TAL DEN
	Instrument ID: WC-AT3									

Client Sample ID: G6M-95-20X-FAL20

Lab Sample ID: 680-190098-12

Date Collected: 10/14/20 09:50

Matrix: Water

Date Received: 10/15/20 09:40

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	640699	10/26/20 22:31	Y1S	TAL SAV
	Instrument ID: CMSP2									
Dissolved	Prep	3005A			50 mL	50 mL	639383	10/16/20 13:37	AJR	TAL SAV
Dissolved	Analysis	6010C		1			639758	10/19/20 18:25	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	639381	10/16/20 13:37	AJR	TAL SAV
Dissolved	Analysis	6020A		1			639465	10/17/20 11:11	BJB	TAL SAV
	Instrument ID: ICPMSD									

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

TAL SAV = Eurofins TestAmerica, Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Accreditation/Certification Summary

Client: Seres Engineering & Services LLC
Job ID: 680-190098-1
Project/Site: Fort Devens

Laboratory: Eurofins TestAmerica, Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-22-22

Laboratory: Eurofins TestAmerica, Denver

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-21

Method Summary

Client: Seres Engineering & Services LLC
Project/Site: Fort Devens

Job ID: 680-190098-1

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
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	TAL DEN
9034	Sulfide, Acid Soluble and Insoluble (Titrimetric)	SW846	TAL SAV
9060A	Organic Carbon, Total (TOC)	SW846	TAL DEN
SM 2320B	Alkalinity	SM	TAL DEN
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 TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

TAL SAV = Eurofins TestAmerica, 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

Boston COC # #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 2020
Project Number: DEVENS-LTM	Contact:	
WBS Code:	Ship to:	

Comments:
A2320B (A) = Alkalinity
E353.2 (A) = Nitrite Nitrate as N
RSK175 (A) = Dissolved Gases
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9034 (A) = Sulfide

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
5	1x 125mL, plastic, Cool < 6degC
7	2x 250mL, plastic, ZnAc/NaOH Cool < 6degC
8	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
10	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
29	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC
47	1x 500mL, amber glass, H2SO4; Cool < 6degC

						Analytical Test Method	A2320B (A)	E353.2 (A)	RSK175 (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW8260B - VOCs	SW9034 (A)	SW9056A - SO4	SW9060A - TOC					
	Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020						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-FAL20	WG	10-14-20	950	DC					X	X	X				G6M-95-20X	FD1	18.00	23.00		
2	AOC50-DUP02-FAL20	WG	10-14-20	1055	DC	X	X	X	X	X	X	X	X	X	X	G6M-07-02X	FD1	22.50	27.50		
3	AOC50-DUP03-FAL20	WG							X	X	X					G6M-04-04X	FD1	94.00	104.00		
4	AOC50-DUP04-FAL20	WG				X	X	X	X	X	X	X	X	X	X	G6M-13-02X	FD1	115.00	125.00		
5	G6M-02-01X-FAL20	WG							X	X	X					G6M-02-01X	N1	80.00	95.00		
6	G6M-02-04X-FAL20	WG							X	X	X					G6M-02-04X	N1	90.00	105.00		
7	G6M-02-06X-FAL20	WG							X	X	X					G6M-02-06X	N1	55.00	65.00		
8	G6M-02-07X-FAL20	WG							X	X	X					G6M-02-07X	N1	30.00	40.00		
9	G6M-02-08X-FAL20	WG	10-13-20	1610	DC	X	X	X	X	X	X	X	X	X	X	G6M-02-08X	N1	60.00	70.00		
10	G6M-02-11X-FAL20	WG	10-14-20	1230	CP				X	X	X					G6M-02-11X	N1	125.00	135.00		
11	G6M-02-12X-FAL20	WG							X	X	X					G6M-02-12X	N1	125.00	135.00		
12	G6M-02-13X-FAL20	WG							X	X	X					G6M-02-13X	N1	110.00	120.00		
13	G6M-03-07X-FAL20	WG				X	X	X	X	X	X	X	X	X	X	G6M-03-07X	N1	80.00	90.00		
14	G6M-03-08X-FAL20	WG							X	X	X					G6M-03-08X	N1	125.00	140.00		
15	G6M-03-10X-FAL20	WG							X	X	X					G6M-03-10X	N1	120.00	135.00		
16	G6M-04-01X-FAL20	WG							X	X	X					G6M-04-01X	N1	82.00	92.00		
17	G6M-04-02X-FAL20	WG				X	X	X	X	X	X	X	X	X	X	G6M-04-02X	N1	80.00	90.00		
18	G6M-04-03X-FAL20	WG				X	X	X	X	X	X	X	X	X	X	G6M-04-03X	MS1	85.00	95.00		
19	G6M-04-03X-FAL20	WG				X	X	X	X	X	X	X	X	X	X	G6M-04-03X	N1	85.00	95.00		

680-190098-01 Chain of Custody

Relinquished by: Diane Depsey
Date 10-14-20
Time
Received by: AOC50_sCOC
10-14-20 1510

Date
Time
Shipping Date: 10-14-20
Received by Laboratory: 1500
Condition: 10-15-20

1.7/2.0
2.3/2.6

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 # 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 2020
Project Number: DEVENS-LTM	Contact:	
WBS Code:	Ship to:	

Comments:
A2320B (A) = Alkalinity
E353.2 (A) = Nitrite Nitrate as N
RSK175 (A) = Dissolved Gases
SW6010C/FLDFLT (B) = Fe Mn
SW6020A/FLDFLT (B) = As
SW9034 (A) = Sulfide

Equipment:

Code	Matrix
WG	Ground Water

Code	Container/Preservative
5	1x 125mL plastic, Cool < 6degC
7	2x 250mL plastic, ZnAc/NaOH Cool < 6degC
8	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
9	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
10	1x 250mL, plastic, HNO3, pH < 2; Cool < 6degC
29	3x 40mL glass VOA Vials, HCl, pH < 2; Cool < 6degC
46	1x 250mL, plastic, Cool < 6degC
47	1x 500mL, amber glass, H2SO4; Cool < 6degC

						Analytical Test Method	A2320B (A)	E353.2 (A)	RSK175 (A)	SW6010C/FLDFLT (B)	SW6020A/FLDFLT (B)	SW8260B - VOCs	SW9034 (A)	SW9056A - SO4	SW9060A - TOC					
	Event: Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020						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
20	G6M-04-03X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-04-03X	SD1	85.00	95.00	
21	G6M-04-04X-FAL20	WG								X	X	X				G6M-04-04X	N1	94.00	104.00	
22	G6M-04-05X-FAL20	WG	10-14-20	1401	NB							X				G6M-04-05X	N1	100.00	110.00	
23	G6M-04-06X-FAL20	WG	10-14-20	1025	NB					X	X	X				G6M-04-06X	N1	95.00	136.00	
24	G6M-04-07X-FAL20	WG	10-14-20	1150	NB		X	X	X	X	X	X	X	X	X	G6M-04-07X	N1	120.00	130.00	
25	G6M-04-09X-FAL20	WG								X	X	X				G6M-04-09X	N1	55.00	65.00	
26	G6M-04-10A-FAL20	WG	10-14-20	1300	DC		X	X	X	X	X	X	X	X	X	G6M-04-10A	N1	30.00	40.00	
27	G6M-04-10X-FAL20	WG	10-14-20	1410	DC							X				G6M-04-10X	N1	52.00	62.00	
28	G6M-04-11X-FAL20	WG								X	X	X				G6M-04-11X	N1	35.00	45.00	
29	G6M-04-13X-FAL20	WG										X				G6M-04-13X	N1	30.00	40.00	
30	G6M-04-14X-FAL20	WG								X	X	X				G6M-04-14X	N1	80.00	90.00	
31	G6M-04-15X-FAL20	WG								X	X	X				G6M-04-15X	N1	70.00	80.00	
32	G6M-04-22X-FAL20	WG								X	X	X				G6M-04-22X	N1	74.00	84.00	
33	G6M-04-31X-FAL20	WG								X	X	X				G6M-04-31X	N1	68.00	78.00	
34	G6M-06-01X-FAL20	WG								X	X	X				G6M-06-01X	N1	106.00	126.00	
35	G6M-07-01X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-07-01X	N1	78.00	89.00	
36	G6M-07-02X-FAL20	WG	10-14-20	1055	DC		X	X	X	X	X	X	X	X	X	G6M-07-02X	N1	22.50	27.50	
37	G6M-13-01X-FAL20	WG	10-13-20	1530	NB		X	X	X	X	X	X	X	X	X	G6M-13-01X	N1	125.00	135.00	
38	G6M-13-02X-FAL20	WG					X	X	X	X	X	X	X	X	X	G6M-13-02X	N1	115.00	125.00	

680-190098-02 Chain of Custody

Relinquished by:
Date
Time
Received by: 10-14-20
AOC50_eCOC

Date
Time
Shipping Date: 10-14-20
Received by Laboratory:
Condition:

10-15-20 1:7/20

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 #

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 2020
Project Number: DEVENS-LTM	Contact:	
WBS Code:	Ship to:	

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 2020

	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
						46	47	8	9	9	29	7	5	10					
39	G6M-13-03X-FAL20	WG							X	X	X				G6M-13-03X	N1	80.00	90.00	
40	G6M-13-04X-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-13-04X	N1	125.00	135.00	
41	G6M-13-05X-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-13-05X	N1	45.00	55.00	
42	G6M-13-06X-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-13-06X	N1	50.00	60.00	
43	G6M-18-01-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-18-01	N1	116.00	126.00	
44	G6M-18-02-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-18-02	N1	123.95	133.95	
45	G6M-95-19X-FAL20	WG									X				G6M-95-19X	N1	48.00	58.00	
46	G6M-95-20X-FAL20	WG	10-14-20	950	DC				X	X	X				G6M-95-20X	N1	18.00	23.00	
47	G6M-97-05B-FAL20	WG				X	X	X	X	X	X	X	X	X	G6M-97-05B	N1	130.00	135.00	
48	G6M-97-28X-FAL20	WG							X	X	X				G6M-97-28X	N1	100.00	105.00	
49	MW-3-FAL20	WG							X	X	X				MW-3	MS1	126.00	137.00	
50	MW-3-FAL20	WG							X	X	X				MW-3	N1	126.00	137.00	
51	MW-3-FAL20	WG							X	X	X				MW-3	SD1	126.00	137.00	
52	MW-7-FAL20	WG							X	X	X				MW-7	N1	6.58	135.00	
53	XSA-12-95X-FAL20	WG							X	X	X				XSA-12-95X	N1	120.00	130.00	
54	XSA-12-96X-FAL20	WG				X	X	X	X	X	X	X	X	X	XSA-12-96X	N1	120.00	130.00	
55	XSA-12-97X-FAL20	WG							X	X	X				XSA-12-97X	N1	120.00	130.00	
56	XSA-12-98X-FAL20	WG							X	X	X				XSA-12-98X	N1	60.00	70.00	

Turnaround Time: NA

680-190098-03 Chain of Custody

Relinquished by:
Date
Time
Received by: [signature] 10-14-20
AOC50_eCOC 1510

Date
Time
Shipping Date: [signature] 10-14-20
Received by Laboratory: [signature] 1.7/20
Condition: [signature] 10-15-20 2.3/2.6

Eurofins TestAmerica, 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: Smith, Kathryn E	Carrier Tracking No(s):	COC No: 680-629474.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Kathy.Smith@Eurofinset.com	State of Origin: Massachusetts	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): Dept. of Defense ELAP - A2LA; DoD - ANAB		Job #: 680-190098-1
Address: 4955 Yarrow Street,	Due Date Requested: 10/27/2020			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: Fort Devens	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)	2320B/ Alkalinity	353.2_Pres	9060A/ (MOD) Waters - TOC Duplicates	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
AOC50-DUP02-FAL20 (680-190098-2)	10/14/20	10:55 Eastern		Water			X	X	X	3	
G6M-02-08X-FAL20 (680-190098-3)	10/13/20	16:10 Eastern		Water			X	X	X	3	
G6M-04-07X-FAL20 (680-190098-7)	10/14/20	11:50 Eastern		Water			X	X	X	3	
G6M-04-10A-FAL20 (680-190098-8)	10/14/20	13:00 Eastern		Water			X	X	X	3	
G6M-07-02X-FAL20 (680-190098-10)	10/14/20	10:55 Eastern		Water			X	X	X	3	
G6M-13-01X-FAL20 (680-190098-11)	10/13/20	15:06 Eastern		Water			X	X	X	3	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica 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 TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

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:

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	10-15-2020/1744			10/16/20 0950	ETA-DEN
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: 2.2°C CF-0.3 IR11 SH

Ver: 01/16/2019

11/3/2020

Login Sample Receipt Checklist

Client: Seres Engineering & Services LLC

Job Number: 680-190098-1

Login Number: 190098
List Number: 1
Creator: Sims, Robert D

List Source: Eurofins TestAmerica, Savannah

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	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: 680-190098-1

Login Number: 190098
List Number: 2
Creator: O'Hara, Jake F

List Source: Eurofins TestAmerica, Denver
List Creation: 10/16/20 09:04 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").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Appendix C

Data Validation Reports

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

March 16, 2021

SUBJECT: Fort Devens, Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on June 10, 2020. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #48284:

SDG #	**Fraction**
680-183803-1, 680-183899-2	Volatiles, Metals, Wet Chemistry, 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:

- Former Fort Devens Army Installation – BRAC Legacy Sites, Devens, MA; October 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

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

128 pages-ADV 2 WEEK TAT Attachment 1

Stage 2B

LDC #48284 (Arcadis-Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(3) DATE DUE	VOA (8260B)		(3)Diss Metals (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	680-183803-1	06/10/20	06/24/20	13	0	12	0	12	0	12	0	12	0	12	0	12	0	12	0																		
Total	J/PG			13	0	12	0	12	0	12	0	12	0	12	0	12	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	97

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

L:\Arcadis\Fort Devens\48284ST_A.wpd

Data Validation Report for 6801838031

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, AOC 50, Spring 2020
SDG:	6801838031
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
Data Review Contractor:	Laboratory Data Consultants, Inc.
Data Review Level:	2B
Primary Data Reviewer:	Kevin Kha, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	June 25, 2020

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	E353.2	RSK175	SW6010C - Dissolved	SW6020A - Dissolved	SW8260B	SW9034	SW9056A	SW9060A
AOC50-DUP01-SPR20	680-183803-1	Water	Field Duplicate/FD	X	X	X	X	X	X	X	X	X
G6M-04-02X-SPR20	680-183803-2	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-04-03X-SPR20	680-183803-3	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-04-07X-SPR20	680-183803-4	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-04-10A-SPR20	680-183803-5	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-07-02X-SPR20	680-183803-6	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-13-01X-SPR20	680-183803-7	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-13-02X-SPR20	680-183803-8	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-13-04X-SPR20	680-183803-9	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-13-05X-SPR20	680-183803-10	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-97-05B-SPR20	680-183803-11	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
Trip Blank1-051220	680-183803-13	Water	Trip Blank/TB						X			
XSA-12-96X-SPR20	680-183803-12	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 and were reported under sample delivery group (SDG) 6801838031. 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
- Extracted Internal Standard
- 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 22 results (2.17%) out of the 1016 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. 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.
SW9060A	No additional comments; see Checklist for detail.



June 25, 2020

Reviewed by Kevin Kha, 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 a minimum of 10% of the reported sample results and method quality control data between the two deliverables.



Reviewed by Pei Geng, Senior Scientist, Laboratory Data Consultants, Inc.

March 16, 2021

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
CCB 280-495500/37 (CB)/ CCB 280-495500/37	Nitrate-Nitrite (as N)	0.03000	< 0.019	< 0.1	mg/l	U/None	B2	
CCB 280-495500/53 (CB)/ CCB 280-495500/53	Nitrate-Nitrite (as N)	0.02980	< 0.019	< 0.1	mg/l	U/None	B2	
CCB 280-495500/69 (CB)/ CCB 280-495500/69	Nitrate-Nitrite (as N)	0.02990	< 0.019	< 0.1	mg/l	U/None	B2	
CCB 280-495500/84 (CB)/ CCB 280-495500/84	Nitrate-Nitrite (as N)	0.02970	< 0.019	< 0.1	mg/l	U/None	B2	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Calibration Blank for E353.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP01-SPR20	FD	Nitrate-Nitrite (as N)	0.140	0.140	0.140 U		mg/l	B2
G6M-04-02X-SPR20	N	Nitrate-Nitrite (as N)	0.100	0.0320 J	0.0500 UJ		mg/l	B2/L/M
G6M-04-03X-SPR20	N	Nitrate-Nitrite (as N)	0.100	0.0360 J	0.100 U		mg/l	B2/L
G6M-04-07X-SPR20	N	Nitrate-Nitrite (as N)	0.100	0.0320 J	0.100 U		mg/l	B2/L
G6M-04-10A-SPR20	N	Nitrate-Nitrite (as N)	0.100	0.0490 J	0.100 U		mg/l	B2/L
G6M-07-02X-SPR20	N	Nitrate-Nitrite (as N)	0.130	0.130	0.130 U		mg/l	B2
G6M-13-01X-SPR20	N	Nitrate-Nitrite (as N)	0.100	0.0370 J	0.100 U		mg/l	B2/L
G6M-13-02X-SPR20	N	Nitrate-Nitrite (as N)	0.100	0.0480 J	0.100 U		mg/l	B2/L
G6M-13-04X-SPR20	N	Nitrate-Nitrite (as N)	0.100	0.0320 J	0.100 U		mg/l	B2/L
G6M-13-05X-SPR20	N	Nitrate-Nitrite (as N)	0.100	0.0630 J	0.100 UJ		mg/l	B2/L/M
G6M-97-05B-SPR20	N	Nitrate-Nitrite (as N)	0.100	0.0320 J	0.100 U		mg/l	B2/L
XSA-12-96X-SPR20	N	Nitrate-Nitrite (as N)	0.100	0.0320 J	0.100 U		mg/l	B2/L

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (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
MB 280-495500/22 (LB)/ MB 280-495500/22	Nitrate-Nitrite (as N)	0.02430	< 0.019	< 0.1	mg/l	U/None	L	
MB 280-495500/60 (LB)/ MB 280-495500/60	Nitrate-Nitrite (as N)	0.02090	< 0.019	< 0.1	mg/l	U/None	L	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Lab Blank for E353.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-02X-SPR20	N	Nitrate-Nitrite (as N)	0.100	0.0320 J	0.0500 UJ		mg/l	B2/L/M
G6M-04-03X-SPR20	N	Nitrate-Nitrite (as N)	0.100	0.0360 J	0.100 U		mg/l	B2/L
G6M-04-07X-SPR20	N	Nitrate-Nitrite (as N)	0.100	0.0320 J	0.100 U		mg/l	B2/L
G6M-04-10A-SPR20	N	Nitrate-Nitrite (as N)	0.100	0.0490 J	0.100 U		mg/l	B2/L
G6M-13-01X-SPR20	N	Nitrate-Nitrite (as N)	0.100	0.0370 J	0.100 U		mg/l	B2/L
G6M-13-02X-SPR20	N	Nitrate-Nitrite (as N)	0.100	0.0480 J	0.100 U		mg/l	B2/L
G6M-13-04X-SPR20	N	Nitrate-Nitrite (as N)	0.100	0.0320 J	0.100 U		mg/l	B2/L
G6M-13-05X-SPR20	N	Nitrate-Nitrite (as N)	0.100	0.0630 J	0.100 UJ		mg/l	B2/L/M
G6M-97-05B-SPR20	N	Nitrate-Nitrite (as N)	0.100	0.0320 J	0.100 U		mg/l	B2/L
XSA-12-96X-SPR20	N	Nitrate-Nitrite (as N)	0.100	0.0320 J	0.100 U		mg/l	B2/L

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (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, 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-04-02X-SPR20 (MS)/ 680-183803-2	Nitrate-Nitrite (as N)	73.49	90 - 110	10 - 110	percent	J/UJ	M	
G6M-04-02X-SPR20 (SD)/ 680-183803-2	Nitrate-Nitrite (as N)	73.49	90 - 110	10 - 110	percent	J/UJ	M	
G6M-13-05X-SPR20 (SD)/ 680-183803-10	Nitrate-Nitrite (as N)	71.98	90 - 110	10 - 110	percent	J/UJ	M	
G6M-13-05X-SPR20 (MS)/ 680-183803-10	Nitrate-Nitrite (as N)	72.73	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-04-02X-SPR20	N	Nitrate-Nitrite (as N)	0.100	0.0320 J	0.0500 UJ		mg/l	B2/L/M
G6M-13-05X-SPR20	N	Nitrate-Nitrite (as N)	0.100	0.0630 J	0.100 UJ		mg/l	B2/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 SW6010C, Dissolved, Calibration Blank

The purpose of calibration blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in calibration blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
CCB 680-619169/177 (CB)/ CCB 680-619169/177	Iron	42.00	< 17	< 50	ug/l	U/None	B2	
CCB 680-619169/189 (CB)/ CCB 680-619169/189	Iron	36.50	< 17	< 50	ug/l	U/None	B2	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW6010C, Dissolved, Lab Blank

The purpose of laboratory blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in laboratory blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
MB 680-619056/1-A (LB)/ MB 680-619056/1-A	Manganese	1.410	< 1	< 10	ug/l	U/None	L	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

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
CCV 680-619653/3 (CV)/ CCV 680-619653/3	Bromomethane	131.6	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-619653/3 (CV)/ CCV 680-619653/3	Chloromethane	139.8	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-619653/3 (CV)/ CCV 680-619653/3	Vinyl acetate	140.0	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-619664/3 (CV)/ CCV 680-619664/3	Chloroethane	130.8	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-619664/3 (CV)/ CCV 680-619664/3	Bromomethane	316.0	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-619818/5 (CV)/ CCV 680-619818/5	Chloromethane	142.2	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-619818/5 (CV)/ CCV 680-619818/5	Vinyl acetate	144.0	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-619818/5 (CV)/ CCV 680-619818/5	Bromomethane	153.0	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-619864/3 (CV)/ CCV 680-619864/3	2-Hexanone	120.4	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-619864/3 (CV)/ CCV 680-619864/3	Bromomethane	124.6	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-619864/3 (CV)/ CCV 680-619864/3	Chloromethane	128.6	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-619876/3 (CV)/ CCV 680-619876/3	Chloroethane	122.6	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-619876/3 (CV)/ CCV 680-619876/3	Bromomethane	310.0	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-620023/2 (CV)/ CCV 680-620023/2	Bromomethane	376.0	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-620023/2 (CV)/ CCV 680-620023/2	2-Hexanone	75.60	80 - 120	80 - 120	percent	J/UJ	V2	
CCVC 680-619664/30 (CV)/ CCVC 680-619664/30	Bromomethane	334.0	80 - 120	80 - 120	percent	J/None	V2	
CCVC 680-619876/31 (CV)/ CCVC 680-619876/31	Bromomethane	286.0	80 - 120	80 - 120	percent	J/None	V2	
CCVC 680-620023/30 (CV)/ CCVC 680-620023/30	Bromomethane	446.0	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 SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP01-SPR20	FD	Chloroethane	5.00	2.60 J Q	2.60 J		ug/l	V2/TR
XSA-12-96X-SPR20	N	Chloroethane	5.00	5.70	5.70 J		ug/l	V2

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260B, Initial 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
ICV 680-616435/15 (IV)	Hexachlorobutadiene	121.8	80 - 120	80 - 120	percent	J/None	V1	
ICV 680-616435/15 (IV)	1,2,3-Trichlorobenzene	122.5	80 - 120	80 - 120	percent	J/None	V1	
ICV 680-616435/15 (IV)	Bromomethane	163.7	80 - 120	80 - 120	percent	J/None	V1	
ICV 680-616435/15 (IV)	Vinyl acetate	78.40	80 - 120	80 - 120	percent	J/UJ	V1	

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 Initial Calibration Verification for SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP01-SPR20	FD	Vinyl acetate	2.00	2.00 U	2.00 UJ		ug/l	V1
G6M-04-02X-SPR20	N	Vinyl acetate	2.00	2.00 U M	2.00 UJ		ug/l	V1

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260B, 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
MB 680-619664/10 (LB)/ MB 680-619664/10	n-Butylbenzene	0.6310	< 0.47	< 1	ug/l	U/None	L	
MB 680-619876/9 (LB)/ MB 680-619876/9	Trichloroethene (TCE)	0.8470	< 0.48	< 1	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.

No results associated with this QC element required qualification.

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
LCS 680-619664/4 (BS)/ LCS 680-619664/4	Bromomethane	356.0	53 - 141	10 - 141	percent	J/None	C	
LCS 680-619818/6 (BS)/ LCS 680-619818/6	Chloromethane	145.4	50 - 139	10 - 139	percent	J/None	C	
LCS 680-619818/6 (BS)/ LCS 680-619818/6	Bromomethane	162.2	53 - 141	10 - 141	percent	J/None	C	
LCS 680-619876/4 (BS)/ LCS 680-619876/4	Bromomethane	322.0	53 - 141	10 - 141	percent	J/None	C	
LCS 680-620023/3 (BS)/ LCS 680-620023/3	Bromomethane	438.0	53 - 141	10 - 141	percent	J/None	C	
LCSD 680-619653/5 (BD)/ LCSD 680-619653/5	Bromomethane	150.4	53 - 141	10 - 141	percent	J/None	C	
LCSD 680-619664/5 (BD)/ LCSD 680-619664/5	Bromomethane	368.0	53 - 141	10 - 141	percent	J/None	C	
LCSD 680-619876/5 (BD)/ LCSD 680-619876/5	Bromomethane	318.0	53 - 141	10 - 141	percent	J/None	C	
LCSD 680-620023/4 (BD)/ LCSD 680-620023/4	Bromomethane	462.0	53 - 141	10 - 141	percent	J/None	C	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

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
LCSD 680-619818/31 (BD)/ LCSD 680-619818/31	2,2-Dichloropropane	25.34	< 20	< 20	rpd	J/None	Z	
LCSD 680-619818/31 (BD)/ LCSD 680-619818/31	Vinyl acetate	25.60	< 20	< 20	rpd	J/None	Z	
LCSD 680-619818/31 (BD)/ LCSD 680-619818/31	Bromomethane	69.21	< 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, Surrogate

Method performance for individual samples is demonstrated through spiking activities. All samples are spiked with surrogate compounds prior to sample preparation. The sample itself may produce effects due to such factors as interferences and high concentrations of analytes. Summary forms were evaluated and compared to electronic data deliverables. Surrogate results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
G6M-04-02X-SPR20 (N)/ 680-183803-2	Toluene-d8	116.5	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-04-02X-SPR20	N	1,2-Dichloroethene	10.0	290	290 J	+	ug/l	I
G6M-04-02X-SPR20	N	cis-1,2-Dichloroethene	5.00	290	290 J	+	ug/l	I

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (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-04-02X-SPR20 (N)/ 680-183803-2		14.36	< 14	< 28	days	J/UJ	H1	Test Exceeds UWL
G6M-04-03X-SPR20 (N)/ 680-183803-3		14.22	< 14	< 28	days	J/UJ	H1	Test Exceeds UWL
G6M-13-05X-SPR20 (N)/ 680-183803-10		14.19	< 14	< 28	days	J/UJ	H1	Test Exceeds UWL
TRIP BLANK1-051220 (TB)/ 680-183803-13		14.70	< 14	< 28	days	J/UJ	H1	Test Exceeds UWL
XSA-12-96X-SPR20 (N)/ 680-183803-12		14.17	< 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-13-05X-SPR20	N	Trichloroethene (TCE)	1.00	1.30 H	1.30 J		ug/l	H1
Trip Blank1-051220	TB	Trichloroethene (TCE)	1.00	1.00 U H	1.00 UJ		ug/l	H1
XSA-12-96X-SPR20	N	Trichloroethene (TCE)	1.00	20.0 B	20.0 J		ug/l	H1

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (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, 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-97-05B-SPR20 (N)/ 680-183803-11		7.060	< 7	< 14	days	J/UJ	H1	Test Exceeds UWL

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW9060A, 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
CCV 280-496241/39 (CV)/ CCV 280-496241/39	Total Organic Carbon	112.4	90 - 110	70 - 110	percent	J/None	V2	
CCV 280-496241/51 (CV)/ CCV 280-496241/51	Total Organic Carbon	112.8	90 - 110	70 - 110	percent	J/None	V2	
CCV 280-496241/63 (CV)/ CCV 280-496241/63	Total Organic Carbon	110.8	90 - 110	70 - 110	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 SW9060A

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP01-SPR20	FD	Total Organic Carbon	6.00	290 Q	290 J		mg/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.

Table of All Qualified Results

Test Method: E353.2	**Extraction Method: NONE**							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP01-SPR20	FD	Nitrate-Nitrite (as N)	0.140	0.140	0.140 U		mg/l	B2
G6M-04-02X-SPR20	N	Nitrate-Nitrite (as N)	0.100	0.0320 J	0.0500 UJ		mg/l	B2/L/M
G6M-04-03X-SPR20	N	Nitrate-Nitrite (as N)	0.100	0.0360 J	0.100 U		mg/l	B2/L
G6M-04-07X-SPR20	N	Nitrate-Nitrite (as N)	0.100	0.0320 J	0.100 U		mg/l	B2/L
G6M-04-10A-SPR20	N	Nitrate-Nitrite (as N)	0.100	0.0490 J	0.100 U		mg/l	B2/L
G6M-07-02X-SPR20	N	Nitrate-Nitrite (as N)	0.130	0.130	0.130 U		mg/l	B2
G6M-13-01X-SPR20	N	Nitrate-Nitrite (as N)	0.100	0.0370 J	0.100 U		mg/l	B2/L
G6M-13-02X-SPR20	N	Nitrate-Nitrite (as N)	0.100	0.0480 J	0.100 U		mg/l	B2/L
G6M-13-04X-SPR20	N	Nitrate-Nitrite (as N)	0.100	0.0320 J	0.100 U		mg/l	B2/L
G6M-13-05X-SPR20	N	Nitrate-Nitrite (as N)	0.100	0.0630 J	0.100 UJ		mg/l	B2/L/M
G6M-97-05B-SPR20	N	Nitrate-Nitrite (as N)	0.100	0.0320 J	0.100 U		mg/l	B2/L
XSA-12-96X-SPR20	N	Nitrate-Nitrite (as N)	0.100	0.0320 J	0.100 U		mg/l	B2/L

Test Method: SW8260B	**Extraction Method: SW5030B**							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP01-SPR20	FD	Vinyl acetate	2.00	2.00 U	2.00 UJ		ug/l	V1
AOC50-DUP01-SPR20	FD	Chloroethane	5.00	2.60 J Q	2.60 J		ug/l	V2/TR
G6M-04-02X-SPR20	N	Vinyl acetate	2.00	2.00 U M	2.00 UJ		ug/l	V1
G6M-04-02X-SPR20	N	1,2-Dichloroethene	10.0	290	290 J	+	ug/l	I
G6M-04-02X-SPR20	N	cis-1,2-Dichloroethene	5.00	290	290 J	+	ug/l	I
G6M-13-05X-SPR20	N	Trichloroethene (TCE)	1.00	1.30 H	1.30 J		ug/l	H1
Trip Blank1-051220	TB	Trichloroethene (TCE)	1.00	1.00 U H	1.00 UJ		ug/l	H1
XSA-12-96X-SPR20	N	Trichloroethene (TCE)	1.00	20.0 B	20.0 J		ug/l	H1
XSA-12-96X-SPR20	N	Chloroethane	5.00	5.70	5.70 J		ug/l	V2

Test Method: SW9060A	**Extraction Method: NONE**							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP01-SPR20	FD	Total Organic Carbon	6.00	290 Q	290 J		mg/l	V2

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Table of Results with Modified Qualifiers

Modified Qualifiers for test method RSK175

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
AOC50-DUP01-SPR20	FD	Methane	390	14000	14000 J	14000	
G6M-04-02X-SPR20	N	Methane	390	18000	18000 J	18000	
G6M-04-03X-SPR20	N	Methane	390	11000	11000 J	11000	
G6M-04-07X-SPR20	N	Methane	0.580	360	360 J	360	
G6M-04-10A-SPR20	N	Methane	390	14000	14000 J	14000	
G6M-07-02X-SPR20	N	Methane	390	14000	14000 J	14000	
G6M-13-01X-SPR20	N	Methane	390	8000	8000 J	8000	
G6M-13-02X-SPR20	N	Methane	390	16000	16000 J	16000	
G6M-13-04X-SPR20	N	Methane	390	21000	21000 J	21000	
G6M-13-05X-SPR20	N	Methane	390	19000	19000 J	19000	
G6M-97-05B-SPR20	N	Methane	390	13000	13000 J	13000	
XSA-12-96X-SPR20	N	Methane	390	780	780 J	780	

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
AOC50-DUP01-SPR20	FD	Trichloroethene (TCE)	1.00	0.730 J	1.00 U	0.730 J	TR
AOC50-DUP01-SPR20	FD	Vinyl acetate	2.00	2.00 U	2.00 U	2.00 UJ	V1
G6M-04-02X-SPR20	N	1,2-Dichloroethene	10.0	290	290 J	290 J	I
G6M-04-02X-SPR20	N	cis-1,2-Dichloroethene	5.00	290	290 J	290 J	I
G6M-04-02X-SPR20	N	Trichloroethene (TCE)	1.00	2.30	1.00 U	2.30	
G6M-04-02X-SPR20	N	Vinyl acetate	2.00	2.00 U M	2.00 U	2.00 UJ	V1
G6M-04-03X-SPR20	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	1,1,2-Trichloroethane	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-04-03X-SPR20	N	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-04-03X-SPR20	N	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-04-03X-SPR20	N	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ	2.00 U	
G6M-04-03X-SPR20	N	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	1,2-Dichloroethene	2.00	10.0	10.0 J	10.0	
G6M-04-03X-SPR20	N	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-04-03X-SPR20	N	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-04-03X-SPR20	N	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-04-03X-SPR20	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-04-03X-SPR20	N	2-Hexanone	10.0	5.00 U	5.00 UJ	5.00 U	
G6M-04-03X-SPR20	N	4-Chlorotoluene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ	5.00 U	
G6M-04-03X-SPR20	N	Acetone	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-04-03X-SPR20	N	Benzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	Bromobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	Bromochloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	Bromodichloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	Bromoform	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-04-03X-SPR20	N	Carbon disulfide	2.00	2.00 U	2.00 UJ	2.00 U	
G6M-04-03X-SPR20	N	Carbon tetrachloride	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-04-03X-SPR20	N	Chlorobenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-04-03X-SPR20	N	Chloroethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-04-03X-SPR20	N	Chloroform	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	Chloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	cis-1,2-Dichloroethene	1.00	10.0	10.0 J	10.0	
G6M-04-03X-SPR20	N	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	Dibromochloromethane	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-04-03X-SPR20	N	Dibromomethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	Ethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-04-03X-SPR20	N	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-04-03X-SPR20	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	m,p-Xylene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ	0.500 U	
G6M-04-03X-SPR20	N	Methylene chloride	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-04-03X-SPR20	N	Naphthalene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-04-03X-SPR20	N	n-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	n-Propylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	o-Xylene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-04-03X-SPR20	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	sec-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	Styrene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-04-03X-SPR20	N	tert-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-04-03X-SPR20	N	Tetrachloroethene (PCE)	1.00	6.90	6.90 J	6.90	
G6M-04-03X-SPR20	N	Toluene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	trans-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	Trichloroethene (TCE)	1.00	4.50	1.00 UJ	4.50	
G6M-04-03X-SPR20	N	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-SPR20	N	Vinyl acetate	2.00	2.00 U	2.00 UJ	2.00 U	
G6M-04-03X-SPR20	N	Vinyl chloride	1.00	3.50	3.50 J	3.50	
G6M-04-03X-SPR20	N	Xylenes, Total	2.00	0.500 U	0.500 UJ	0.500 U	
G6M-04-10A-SPR20	N	2-Butanone (MEK)	10.0	12.0	12.0 J	12.0	
G6M-04-10A-SPR20	N	2-Hexanone	10.0	2.40 J	2.40 J	2.40 J	TR
G6M-04-10A-SPR20	N	Acetone	10.0	11.0	11.0 J	11.0	
G6M-07-02X-SPR20	N	2-Butanone (MEK)	10.0	60.0	60.0 J	60.0	
G6M-07-02X-SPR20	N	2-Hexanone	10.0	4.10 J	4.10 J	4.10 J	TR
G6M-07-02X-SPR20	N	Acetone	10.0	14.0	14.0 J	14.0	
G6M-07-02X-SPR20	N	Trichloroethene (TCE)	1.00	0.720 J	1.00 U	0.720 J	TR
G6M-13-01X-SPR20	N	Acetone	10.0	7.00 J	7.00 J	7.00 J	TR
G6M-13-01X-SPR20	N	Trichloroethene (TCE)	1.00	0.690 J	1.00 U	0.690 J	TR
G6M-13-02X-SPR20	N	Acetone	10.0	51.0	51.0 J	51.0	
G6M-13-04X-SPR20	N	2,2-Dichloropropane	1.00	1.00 U Q	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	1,1,2-Trichloroethane	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-13-05X-SPR20	N	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-13-05X-SPR20	N	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-13-05X-SPR20	N	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ	2.00 U	
G6M-13-05X-SPR20	N	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	1,2-Dichloroethene	2.00	9.30	9.30 J	9.30	
G6M-13-05X-SPR20	N	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	1,3,5-Trimethylbenzene	1.00	0.500 U M	0.500 UJ	0.500 U	
G6M-13-05X-SPR20	N	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-13-05X-SPR20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	2-Butanone (MEK)	10.0	56.0	56.0 J	56.0	
G6M-13-05X-SPR20	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-13-05X-SPR20	N	2-Hexanone	10.0	5.00 U	5.00 UJ	5.00 U	
G6M-13-05X-SPR20	N	4-Chlorotoluene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ	5.00 U	
G6M-13-05X-SPR20	N	Acetone	10.0	28.0	28.0 J	28.0	
G6M-13-05X-SPR20	N	Benzene	1.00	1.00 U M	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	Bromobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	Bromochloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	Bromodichloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	Bromoform	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	Bromomethane	5.00	5.00 U Q	5.00 UJ	5.00 U	
G6M-13-05X-SPR20	N	Carbon disulfide	2.00	2.00 U	2.00 UJ	2.00 U	
G6M-13-05X-SPR20	N	Carbon tetrachloride	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-13-05X-SPR20	N	Chlorobenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-13-05X-SPR20	N	Chloroethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-13-05X-SPR20	N	Chloroform	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	Chloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	cis-1,2-Dichloroethene	1.00	8.40	8.40 J	8.40	
G6M-13-05X-SPR20	N	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	Dibromochloromethane	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-13-05X-SPR20	N	Dibromomethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	Ethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-13-05X-SPR20	N	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-13-05X-SPR20	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	m,p-Xylene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ	0.500 U	
G6M-13-05X-SPR20	N	Methylene chloride	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-13-05X-SPR20	N	Naphthalene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-13-05X-SPR20	N	n-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	n-Propylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	o-Xylene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-13-05X-SPR20	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	sec-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	Styrene	1.00	0.500 U M	0.500 UJ	0.500 U	
G6M-13-05X-SPR20	N	tert-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	Tetrachloroethene (PCE)	1.00	1.00 U	1.00 UJ	1.00 U	

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-13-05X-SPR20	N	Toluene	1.00	0.480 J	0.480 J	0.480 J	TR
G6M-13-05X-SPR20	N	trans-1,2-Dichloroethene	1.00	0.880 J	0.880 J	0.880 J	TR
G6M-13-05X-SPR20	N	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	Trichloroethene (TCE)	1.00	1.30 H	1.30	1.30 J	H1
G6M-13-05X-SPR20	N	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-05X-SPR20	N	Vinyl acetate	2.00	2.00 U	2.00 UJ	2.00 U	
G6M-13-05X-SPR20	N	Vinyl chloride	1.00	10.0	10.0 J	10.0	
G6M-13-05X-SPR20	N	Xylenes, Total	2.00	0.500 U	0.500 UJ	0.500 U	
G6M-97-05B-SPR20	N	1,2-Dichloroethene	2.00	77.0	77.0 J	77.0	
G6M-97-05B-SPR20	N	2,2-Dichloropropane	1.00	1.00 U Q	1.00 UJ	1.00 U	
G6M-97-05B-SPR20	N	2-Butanone (MEK)	10.0	95.0	95.0 J	95.0	
G6M-97-05B-SPR20	N	4-Methyl-2-pentanone (MIBK)	10.0	16.0	16.0 J	16.0	
G6M-97-05B-SPR20	N	Acetone	10.0	31.0	31.0 J	31.0	
G6M-97-05B-SPR20	N	cis-1,2-Dichloroethene	1.00	77.0	77.0 J	77.0	
G6M-97-05B-SPR20	N	Tetrachloroethene (PCE)	1.00	6.40	6.40 J	6.40	
G6M-97-05B-SPR20	N	Trichloroethene (TCE)	1.00	0.970 J	1.00 U	0.970 J	TR
G6M-97-05B-SPR20	N	Vinyl chloride	1.00	0.560 J	0.560 J	0.560 J	TR
Trip Blank1-051220	TB	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	1,1,2-Trichloroethane	1.00	0.500 U	0.500 UJ	0.500 U	
Trip Blank1-051220	TB	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
Trip Blank1-051220	TB	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
Trip Blank1-051220	TB	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ	2.00 U	
Trip Blank1-051220	TB	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	1,2-Dichloroethene	2.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
Trip Blank1-051220	TB	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ	10.0 U	

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
Trip Blank1-051220	TB	2-Chlorotoluene	1.00	0.500 U	0.500 UJ	0.500 U	
Trip Blank1-051220	TB	2-Hexanone	10.0	5.00 U	5.00 UJ	5.00 U	
Trip Blank1-051220	TB	4-Chlorotoluene	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ	5.00 U	
Trip Blank1-051220	TB	Acetone	10.0	10.0 U	10.0 UJ	10.0 U	
Trip Blank1-051220	TB	Benzene	1.00	1.00 U M	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	Bromobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	Bromochloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	Bromodichloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	Bromoform	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	Bromomethane	5.00	5.00 U Q	5.00 UJ	5.00 U	
Trip Blank1-051220	TB	Carbon disulfide	2.00	2.00 U	2.00 UJ	2.00 U	
Trip Blank1-051220	TB	Carbon tetrachloride	1.00	0.500 U	0.500 UJ	0.500 U	
Trip Blank1-051220	TB	Chlorobenzene	1.00	0.500 U	0.500 UJ	0.500 U	
Trip Blank1-051220	TB	Chloroethane	5.00	5.00 U	5.00 UJ	5.00 U	
Trip Blank1-051220	TB	Chloroform	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	Chloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	cis-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	Dibromochloromethane	1.00	0.500 U	0.500 UJ	0.500 U	
Trip Blank1-051220	TB	Dibromomethane	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	Ethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
Trip Blank1-051220	TB	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ	5.00 U	
Trip Blank1-051220	TB	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	m,p-Xylene	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ	0.500 U	
Trip Blank1-051220	TB	Methylene chloride	5.00	5.00 U	5.00 UJ	5.00 U	
Trip Blank1-051220	TB	Naphthalene	5.00	5.00 U	5.00 UJ	5.00 U	
Trip Blank1-051220	TB	n-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	n-Propylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	o-Xylene	1.00	0.500 U	0.500 UJ	0.500 U	
Trip Blank1-051220	TB	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	sec-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	Styrene	1.00	0.500 U	0.500 UJ	0.500 U	
Trip Blank1-051220	TB	tert-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	Tetrachloroethene (PCE)	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	Toluene	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	trans-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
Trip Blank1-051220	TB	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	Trichloroethene (TCE)	1.00	1.00 U H	1.00 U	1.00 UJ	H1
Trip Blank1-051220	TB	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	Vinyl acetate	2.00	2.00 U	2.00 UJ	2.00 U	
Trip Blank1-051220	TB	Vinyl chloride	1.00	1.00 U	1.00 UJ	1.00 U	
Trip Blank1-051220	TB	Xylenes, Total	2.00	0.500 U	0.500 UJ	0.500 U	
XSA-12-96X-SPR20	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	1,1,2-Trichloroethane	1.00	0.500 U	0.500 UJ	0.500 U	
XSA-12-96X-SPR20	N	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	1,1-Dichloroethene	1.00	0.880 J	0.880 J	0.880 J	TR
XSA-12-96X-SPR20	N	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
XSA-12-96X-SPR20	N	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
XSA-12-96X-SPR20	N	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ	2.00 U	
XSA-12-96X-SPR20	N	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	1,2-Dichloroethene	2.00	32.0	32.0 J	32.0	
XSA-12-96X-SPR20	N	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
XSA-12-96X-SPR20	N	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ	10.0 U	
XSA-12-96X-SPR20	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ	0.500 U	
XSA-12-96X-SPR20	N	2-Hexanone	10.0	5.00 U	5.00 UJ	5.00 U	
XSA-12-96X-SPR20	N	4-Chlorotoluene	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ	5.00 U	
XSA-12-96X-SPR20	N	Acetone	10.0	10.0 U	10.0 UJ	10.0 U	
XSA-12-96X-SPR20	N	Benzene	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	Bromobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	Bromochloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	Bromodichloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	Bromoform	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	Bromomethane	5.00	5.00 U Q	5.00 UJ	5.00 U	

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
XSA-12-96X-SPR20	N	Carbon disulfide	2.00	2.00 U	2.00 UJ	2.00 U	
XSA-12-96X-SPR20	N	Carbon tetrachloride	1.00	0.500 U	0.500 UJ	0.500 U	
XSA-12-96X-SPR20	N	Chlorobenzene	1.00	0.500 U	0.500 UJ	0.500 U	
XSA-12-96X-SPR20	N	Chloroethane	5.00	5.70	5.70 J	5.70 J	V2
XSA-12-96X-SPR20	N	Chloroform	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	Chloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	cis-1,2-Dichloroethene	1.00	25.0	25.0 J	25.0	
XSA-12-96X-SPR20	N	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	Dibromochloromethane	1.00	0.500 U	0.500 UJ	0.500 U	
XSA-12-96X-SPR20	N	Dibromomethane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	Ethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
XSA-12-96X-SPR20	N	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ	5.00 U	
XSA-12-96X-SPR20	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	m,p-Xylene	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ	0.500 U	
XSA-12-96X-SPR20	N	Methylene chloride	5.00	5.00 U	5.00 UJ	5.00 U	
XSA-12-96X-SPR20	N	Naphthalene	5.00	5.00 U	5.00 UJ	5.00 U	
XSA-12-96X-SPR20	N	n-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	n-Propylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	o-Xylene	1.00	0.500 U	0.500 UJ	0.500 U	
XSA-12-96X-SPR20	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	sec-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	Styrene	1.00	0.500 U	0.500 UJ	0.500 U	
XSA-12-96X-SPR20	N	tert-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	Tetrachloroethene (PCE)	1.00	4.20	4.20 J	4.20	
XSA-12-96X-SPR20	N	Toluene	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	trans-1,2-Dichloroethene	1.00	7.00	7.00 J	7.00	
XSA-12-96X-SPR20	N	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-SPR20	N	Vinyl acetate	2.00	2.00 U	2.00 UJ	2.00 U	
XSA-12-96X-SPR20	N	Vinyl chloride	1.00	21.0	21.0 J	21.0	
XSA-12-96X-SPR20	N	Xylenes, Total	2.00	0.500 U	0.500 UJ	0.500 U	

Modified Qualifiers for test method SW9034

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-97-05B-SPR20	N	Sulfide	0.810	0.810 U	0.810 UJ	0.810 U	

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Reason Code Definitions

Code	Definition
B2	CCB
C	LCS Recovery
H1	Test Hold Time
I	Surrogate recovery outside project limits.
L	Lab Blank
M	MS Recovery
T	Trip Blank
TR	Trace Level Detect
V1	ICV
V2	CCV
Z	LCS RPD

Flag Code and Definitions

Flag	Definition
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.
J	Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
B	Blank contamination: The analyte was found in an associated blank above one half the RL, as well as in the sample.
UB	The analyte was also detected in an associated laboratory or field blank at a concentration comparable to the concentration in the sample. The reported result has been requalified as not detected.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team (which should include a project chemist), but exclusion of the data is recommended.

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 CCVs 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?		•		A field blank was not submitted for 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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 rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?		•		Due to method blank and calibration blank contamination, 12 results were qualified as non-detected (U) at the LOQ. Samples AOC50-DUP01-SPR20 and G6M-07-02X-SPR20 have elevated LOQs due to blank contamination.
Were field blanks (EBs or FBs) submitted with these samples?		•		A field blank was not submitted for 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?		•		Due to low MS/MSD recoveries, two results were qualified as estimated (J) with a low bias.
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 rejected during the verification process?		•		All data is acceptable as reported or as qualified during data validation.

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 CCVs 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?		•		A field blank was not submitted for this method.
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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 rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?		•		Manganese and Iron were detected in the method blanks and calibration blanks. The associated sample results were either non-detected or significantly greater than the contamination in the blanks, therefore no data were qualified.
Were field blanks (EBs or FBs) submitted with these samples?		•		A field blank was not submitted for 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?			•	Only a LCS was performed.
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 rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?		•		A field blank was not submitted for 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?			•	Only a LCS was performed.
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 rejected during the verification process?		•		All data is acceptable as reported.

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?		•		Due to reanalysis outside of the holding time, three trichloroethene results were qualified as estimated (J/UJ).
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?		•		Due to ICV %D, two vinyl acetate results were qualified as estimated (J). Several recoveries were outside the control limits. See report for more details.
Were CCVs run at the required frequency and within acceptance criteria?		•		Due to CCV %D, two chloroethane results were qualified as estimated (J). Several recoveries were outside the control limits. See report for more details.
Were surrogate recoveries within project acceptance limits?		•		Due to surrogate %R, sample G6M-04-02X-SPR20 was qualified as detected estimated (J) with a high bias.
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?		•		Although several recoveries were above the control limit, the associated sample results were not detected, therefore no data were qualified.
Was the LCS/LCSD RPD within project acceptance limits?		•		Although several RPDs were above the control limit, the associated sample results were not detected, therefore no data were qualified.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed due to insufficient sample volume.
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 rejected during the verification process?		•		All data is acceptable as reported or as qualified during data validation.

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?	•			ADR flagged one sample as outside of hold, however the sample was analyzed on the last day of the hold time, therefore no data were qualified.
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 CCVs 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?		•		A field blank was not submitted for 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 rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?		•		A field blank was not submitted for 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 rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs run at the required frequency and within acceptance criteria?		•		Due to CCV %R, one result was qualified as estimated (J).
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?	•			
Were field blanks (EBs or FBs) submitted with these samples?		•		A field blank was not submitted for 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?			•	Only a LCS was performed.
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 rejected during the verification process?		•		All data is acceptable as reported or as qualified during data validation.

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Spring 2020
Field Duplicates for SDG: 6801838031

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-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Alkalinity, Total (as CaCO3)	250	250	10.0	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-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Nitrate-Nitrite (as N)	ND	ND	0.130	NA	30	NA	OK

Location	Analysis
G6M-07-02X	RSK175

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Ethane	3.60	3.40	1.10	5.71	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Ethene	4.40	4.60	1.00	4.44	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Methane	14000	14000	390	0.00	30	OK	NA

Location	Analysis
G6M-07-02X	SW6010C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Iron (FLDFLT)	250000	250000	50.0	0.00	30	OK	NA
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Manganese (FLDFLT)	4900	4600	10.0	6.32	30	OK	NA

FD = Field Duplicate
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RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG

Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Spring 2020
Field Duplicates for SDG: 6801838031

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-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Arsenic (FLDFLT)	43.0	56.0	3.00	26.3	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-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	1,1,1,2-Tetrachloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	1,1,1-Trichloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	1,1,2,2-Tetrachloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	1,1,2-Trichloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	1,1-Dichloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	1,1-Dichloroethene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	1,1-Dichloropropene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	1,2,3-Trichlorobenzene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	1,2,3-Trichloropropane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	1,2,4-Trichlorobenzene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	1,2,4-Trimethylbenzene	1.20	1.20	1.00	0.00	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	1,2-Dibromo-3-chloropropane	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	1,2-Dibromoethane (EDB)	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	1,2-Dichlorobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	1,2-Dichloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	1,2-Dichloroethene	110	110	2.00	0.00	30	OK	NA
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	1,2-Dichloropropane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	1,3,5-Trimethylbenzene	ND	0.320	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	1,3-Dichlorobenzene	ND	ND	1.00	NA	30	NA	OK

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Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Spring 2020
Field Duplicates for SDG: 6801838031

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-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	1,3-Dichloropropane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	1,4-Dichlorobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	2,2-Dichloropropane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	2-Butanone (MEK)	60.0	62.0	10.0	3.28	30	OK	NA
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	2-Chlorotoluene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	2-Hexanone	4.10	4.80	10.0	15.7	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	4-Chlorotoluene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	4-Methyl-2-pentanone (MIBK)	ND	ND	10.0	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Acetone	14.0	9.70	10.0	36.3	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Benzene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Bromobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Bromochloromethane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Bromodichloromethane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Bromoform	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Bromomethane	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Carbon disulfide	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Carbon tetrachloride	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Chlorobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Chloroethane	ND	2.60	5.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Chloroform	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Chloromethane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	cis-1,2-Dichloroethene	110	110	1.00	0.00	30	OK	NA
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	cis-1,3-Dichloropropene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Dibromochloromethane	ND	ND	1.00	NA	30	NA	OK

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RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG

Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Spring 2020
Field Duplicates for SDG: 6801838031

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-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Dibromomethane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Dichlorodifluoromethane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Ethylbenzene	ND	0.350	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Hexachlorobutadiene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Isopropylbenzene (Cumene)	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	m,p-Xylene	0.820	0.920	1.00	11.5	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Methyl tert-butyl ether (MTBE)	ND	ND	10.0	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Methylene chloride	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	n-Butylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	n-Propylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Naphthalene	6.60	2.90	5.00	77.9	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	o-Xylene	0.490	0.530	1.00	7.84	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	p-Cymene (p-Isopropyltoluene)	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	sec-Butylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Styrene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	tert-Butylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Tetrachloroethene (PCE)	2.40	2.90	1.00	18.9	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Toluene	0.640	0.670	1.00	4.58	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	trans-1,2-Dichloroethene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	trans-1,3-Dichloropropene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Trichloroethene (TCE)	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Trichlorofluoromethane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Vinyl acetate	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Vinyl chloride	3.60	3.60	1.00	0.00	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 2020
Field Duplicates for SDG: 6801838031

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-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Xylenes, Total	1.30	1.50	2.00	14.3	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-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Sulfide	1.90	1.90	0.810	0.00	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-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Sulfate	ND	ND	5.00	NA	30	NA	OK

Location	Analysis
G6M-07-02X	SW9060A

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-SPR20 / AOC50-DUP01-SPR20	680-183803-6 / 680-183803-1	Total Organic Carbon	290	290	6.00	0.00	30	OK	NA

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

March 16, 2021

SUBJECT: Fort Devens, Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on June 10, 2020. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #48284:

SDG #	**Fraction**
680-183803-1, 680-183899-2	Volatiles, Metals, Wet Chemistry, 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:

- Former Fort Devens Army Installation – BRAC Legacy Sites, Devens, MA; October 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

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

128 pages-ADV 2 WEEK TAT Attachment 1

Stage 2B

LDC #48284 (Arcadis-Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(3) DATE DUE	VOA (8260B)		(3)Diss Metals (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
B	680-183899-2	06/10/20	06/24/20	3	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0																		
Total	J/PG			3	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

L:\Arcadis\Fort Devens\48284ST_B.wpd

Data Validation Report for 6801838992

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, AOC 50, Spring 2020
SDG:	6801838992
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
Data Review Contractor:	Laboratory Data Consultants, Inc.
Data Review Level:	2B
Primary Data Reviewer:	Kevin Kha, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	June 23, 2020

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	E353.2	RSK175	SW6010C - Dissolved	SW6020A - Dissolved	SW8260B	SW9034	SW9056A	SW9060A
AOC50-TB02-SPR20	680-183899-7	Water	Trip Blank/TB						X			
G6M-03-07X-SPR20	680-183899-5	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-07-01X-SPR20	680-183899-6	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 and were reported under sample delivery group (SDG) 6801838992. 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
- Extracted Internal Standard
- Interference Check Sample A
- Interference Check Sample A - Negative
- Interference Check Sample AB
- Lab Blank
- Lab Replicate RPD
- 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 5 results (2.21%) out of the 226 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. 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.
SW9060A	No additional comments; see Checklist for detail.



June 23, 2020

Reviewed by Kevin Kha, 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 a minimum of 10% of the reported sample results and method quality control data between the two deliverables.



Reviewed by Pei Geng, Senior Scientist, Laboratory Data Consultants, Inc.

March 16, 2021

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

Quality Control Outliers for test method SW6010C, Dissolved, Calibration Blank

The purpose of calibration blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in calibration blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
CCB 680-619358/130 (CB)/ CCB 680-619358/130	Manganese	2.080	< 1	< 10	ug/l	U/None	B2	
CCB 680-619358/130 (CB)/ CCB 680-619358/130	Iron	29.10	< 17	< 50	ug/l	U/None	B2	
CCB 680-619358/142 (CB)/ CCB 680-619358/142	Manganese	1.380	< 1	< 10	ug/l	U/None	B2	
CCB 680-619358/154 (CB)/ CCB 680-619358/154	Manganese	1.270	< 1	< 10	ug/l	U/None	B2	
CCB 680-619358/166 (CB)/ CCB 680-619358/166	Manganese	1.300	< 1	< 10	ug/l	U/None	B2	
CCB 680-619358/166 (CB)/ CCB 680-619358/166	Iron	40.00	< 17	< 50	ug/l	U/None	B2	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Calibration Blank for SW6010C, Dissolved

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-07-01X-SPR20	N	Iron	93.0	93.0	93.0 U		ug/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 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
CCV 680-619316/3 (CV)/ CCV 680-619316/3	Chloroethane	127.2	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-619316/3 (CV)/ CCV 680-619316/3	Bromomethane	394.0	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-619494/4 (CV)/ CCV 680-619494/4	Chloroethane	130.0	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-619494/4 (CV)/ CCV 680-619494/4	Bromomethane	384.0	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-619494/4 (CV)/ CCV 680-619494/4	Dichlorodifluoromethane	77.10	80 - 120	80 - 120	percent	J/UJ	V2	
CCVC 680-619316/31 (CV)/ CCVC 680-619316/31	Chloroethane	129.2	80 - 120	80 - 120	percent	J/None	V2	
CCVC 680-619316/31 (CV)/ CCVC 680-619316/31	Bromomethane	322.0	80 - 120	80 - 120	percent	J/None	V2	
CCVC 680-619494/31 (CV)/ CCVC 680-619494/31	Chloroethane	133.2	80 - 120	80 - 120	percent	J/None	V2	
CCVC 680-619494/31 (CV)/ CCVC 680-619494/31	Bromomethane	250.0	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 SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-03-07X-SPR20	N	Dichlorodifluoromethane	50.0	50.0 U	50.0 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 SW8260B, Initial 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
ICV 680-616435/15 (IV)	Hexachlorobutadiene	121.8	80 - 120	80 - 120	percent	J/None	V1	
ICV 680-616435/15 (IV)	1,2,3-Trichlorobenzene	122.5	80 - 120	80 - 120	percent	J/None	V1	
ICV 680-616435/15 (IV)	Vinyl acetate	70.30	80 - 120	80 - 120	percent	J/UJ	V1	
ICV 680-61643515 (IV)	Bromomethane	163.7	80 - 120	80 - 120	percent	J/None	V1	

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 Initial Calibration Verification for SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-TB02-SPR20	TB	Vinyl acetate	2.00	2.00 U	2.00 UJ		ug/l	V1
G6M-03-07X-SPR20	N	Vinyl acetate	100	100 U	100 UJ		ug/l	V1
G6M-07-01X-SPR20	N	Vinyl acetate	2.00	2.00 U	2.00 UJ		ug/l	V1

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260B, 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
MB 680-619316/10 (LB)/ MB 680-619316/10	n-Butylbenzene	0.5050	< 0.47	< 1	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.

No results associated with this QC element required qualification.

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
LCS 680-619316/4 (BS)/ LCS 680-619316/4	Bromomethane	406.0	53 - 141	10 - 141	percent	J/None	C	
LCS 680-619494/5 (BS)/ LCS 680-619494/5	Bromomethane	388.0	53 - 141	10 - 141	percent	J/None	C	
LCSD 680-619316/5 (BD)/ LCSD 680-619316/5	Bromomethane	412.0	53 - 141	10 - 141	percent	J/None	C	
LCSD 680-619494/6 (BD)/ LCSD 680-619494/6	Bromomethane	390.0	53 - 141	10 - 141	percent	J/None	C	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW9034, Test Hold Time

Hold times are ascertained based on project requirements. Holding times were determined by comparing the chain of custody records with the dates of analysis found in the electronic data deliverable and laboratory summary forms. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
G6M-03-07X-SPR20 (N)/ 680-183899-5		7.250	< 7	< 14	days	J/UJ	H1	Test Exceeds UWL
G6M-07-01X-SPR20 (N)/ 680-183899-6		7.120	< 7	< 14	days	J/UJ	H1	Test Exceeds UWL

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Table of All Qualified Results

Test Method: SW6010C	**Extraction Method: Dissolved**							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-07-01X-SPR20	N	Iron	93.0	93.0	93.0 U		ug/l	B2

Test Method: SW8260B	**Extraction Method: SW5030B**							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-TB02-SPR20	TB	Vinyl acetate	2.00	2.00 U	2.00 UJ		ug/l	V1
G6M-03-07X-SPR20	N	Vinyl acetate	100	100 U	100 UJ		ug/l	V1
G6M-03-07X-SPR20	N	Dichlorodifluoromethane	50.0	50.0 U	50.0 UJ		ug/l	V2
G6M-07-01X-SPR20	N	Vinyl acetate	2.00	2.00 U	2.00 UJ		ug/l	V1

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Table of Results with Modified Qualifiers

Modified Qualifiers for test method RSK175

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-03-07X-SPR20	N	Methane	390	11000	11000 J	11000	
G6M-07-01X-SPR20	N	Methane	0.580	1.40	1.40 J	1.40	

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
AOC50-TB02-SPR20	TB	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB02-SPR20	TB	Vinyl acetate	2.00	2.00 U	2.00 U	2.00 UJ	V1
G6M-03-07X-SPR20	N	Vinyl acetate	100	100 U	100 U	100 UJ	V1
G6M-07-01X-SPR20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-07-01X-SPR20	N	Vinyl acetate	2.00	2.00 U	2.00 U	2.00 UJ	V1

Modified Qualifiers for test method SW9034

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-03-07X-SPR20	N	Sulfide	0.960	0.960 U	0.960 UJ	0.960 U	
G6M-07-01X-SPR20	N	Sulfide	0.830	0.830 U	0.830 UJ	0.830 U	

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Reason Code Definitions

Code	Definition
B2	CCB
C	LCS Recovery
H1	Test Hold Time
L	Lab Blank
TR	Trace Level Detect
V1	ICV
V2	CCV

Flag Code and Definitions

Flag	Definition
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.
J	Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
B	Blank contamination: The analyte was found in an associated blank above one half the RL, as well as in the sample.
UB	The analyte was also detected in an associated laboratory or field blank at a concentration comparable to the concentration in the sample. The reported result has been requalified as not detected.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team (which should include a project chemist), but exclusion of the data is recommended.

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 CCVs 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?		•		No field blank was submitted for 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?			•	A field duplicate was not collected for this data set.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?		•		No field blank was submitted for 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD was not performed.
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?			•	A field duplicate was not collected for this data set.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs run at the required frequency and within acceptance criteria?	•			
Were surrogate recoveries within project acceptance limits?			•	Surrogates are not required for this method.
Was a method blank prepared and analyzed with each batch?	•			
Were field blanks (EBs or FBs) submitted with these samples?		•		No field blank was submitted for this method.
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?		•		MS/MSD was not performed.
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?			•	A field duplicate was not collected for this data set.
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 rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?		•		Iron and manganese were detected in the calibration blanks. One iron result was qualified as non-detected (U) due to calibration blank contamination. See quality control outlier report for details.
Were field blanks (EBs or FBs) submitted with these samples?		•		No field blank was submitted for 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD was not performed.
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?			•	A field duplicate was not collected for this data set.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported or as qualified during data validation.

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 CCVs 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?		•		No field blank was submitted for 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?			•	A field duplicate was not collected for this data set.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

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?	•			
Were the required minimum levels of calibration standards used in the initial calibration?	•			
Was either analysis of an ICV performed after each ICAL or a second source standard prior to sample analysis?	•			
Were all reported analytes for the ICV within the required criteria?		•		Several analytes were outside the ICV QC limits. Please see the Quality Control Outlier reports for more details.
Were CCVs run at the required frequency and within acceptance criteria?		•		Several analytes were outside the CCV QC limits. Please see the Quality Control Outlier reports for more details.
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?		•		Recoveries for bromomethane were above QC limits. No data were qualified since the associated sample results were non-detected.
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?		•		A field duplicate was not collected for this data set.
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 rejected during the verification process?		•		All data is acceptable as reported or as qualified during data validation.

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?	•			ADR flagged two samples as analyzed outside of hold time, however the samples were analyzed on the 7th day of the hold time window, therefore no qualification was necessary.
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 CCVs 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?		•		No field blank was submitted for 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?		•		MS/MSD not performed.
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?		•		A field duplicate was not collected for this data set.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?		•		No field blank was submitted for 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?		•		MS/MSD not performed.
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?			•	A field duplicate was not collected for this data set.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

Data Validation Report for 6801838992

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 CCVs 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?		•		A field blank was not submitted for 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?		•		A field duplicate was not collected for this data set.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

February 19, 2021

SUBJECT: Fort Devens, Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. This SDG was received on . Attachment 1 is a summary of the samples that were reviewed for each analysis.October 28, 2020

LDC Project #49520:

SDG #	Fraction
680-189991-1	Volatiles, Dissolved Metals, Wet Chemistry, 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:

- Former Fort Devens Army Installation – BRAC Legacy Sites, Devens, MA; October 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

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

43 pages-ADV

Attachment 1

Stage 2B EQUIS EDD

LDC #49520 (Arcadis-Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(3) DATE DUE	VOA (8260B)		(3)Diss Metals (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	680-189991-1	10/28/20	11/18/20	4	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0																		
Total	T/PG			4	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

L:\Arcadis\Fort Devens\49520ST.wpd

Data Validation Report for 6801899911

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020
SDG:	6801899911
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
Data Review Contractor:	Laboratory Data Consultants, Inc.
Data Review Level:	2B
Primary Data Reviewer:	Kevin Kha, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	E353.2	RSK175	SW6010C - Dissolved	SW6020A - Dissolved	SW8260B	SW9034	SW9056A	SW9060A
AOC50-TB1-FAL20	680-189991-4	Water	Trip Blank/TB						X			
G6M-13-05X-FAL20	680-189991-1	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-13-06X-FAL20	680-189991-2	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-97-05B-FAL20	680-189991-3	Water	Field Sample/N	X	X	X	X	X	X	X	X	X

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page at 2B data validation level. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020 and the additional guidance documents incorporated by reference to the extent possible. Where definitive guidance is not provided, results have been evaluated in a conservative manner using professional judgment.

Sample collection was managed and directed by Seres-Arcadis JV; analyses were performed by Eurofins Environment Testing TestAmerica, Arvada, CO and were reported under sample delivery group (SDG) 6801899911. 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
- Extracted Internal Standard
- 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 7 results (2.30%) out of the 305 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. 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
SW9056A	No additional comments; see Checklist for detail.
SW9060A	No additional comments; see Checklist for detail.
E353.2	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
RSK175	No additional comments; see Checklist for detail.
A2320B	No additional comments; see Checklist for detail.
SW9034	No additional comments; see Checklist for detail.
SW6010C	No additional comments; see Checklist for detail.
SW8260B	No additional comments; see Checklist for detail.



November 17, 2020

Reviewed by Kevin Kha, 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 a minimum of 10% of the reported sample results and method quality control data between the two deliverables.



March 16, 2021

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 A2320B, 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
CCB28051407429 (CB)/ CCB28051407429	Alkalinity, Total (as CaCO3)	4.210	< 3.1	< 10	mg/l	U/None	B2	
CCB28051407443 (CB)/ CCB28051407443	Alkalinity, Total (as CaCO3)	3.360	< 3.1	< 10	mg/l	U/None	B2	
CCB28051407454 (CB)/ CCB28051407454	Alkalinity, Total (as CaCO3)	3.810	< 3.1	< 10	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.

No results associated with this QC element required qualification.

Quality Control Outliers for test method A2320B, 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
MB28051407431 (LB)/ MB28051407431	Alkalinity, Total (as CaCO3)	4.020	< 3.1	< 10	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.

No results associated with this QC element required qualification.

Quality Control Outliers for test method E353.2, Lab Blank

The purpose of laboratory blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in laboratory blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
MB28051321360 (LB)/ MB28051321360	Nitrate-Nitrite (as N)	0.04390	< 0.019	< 0.1	mg/l	U/None	L	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Lab Blank for E353.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-13-05X-FAL20	N	Nitrate-Nitrite (as N)	0.120	0.120	0.120 U		mg/l	L
G6M-13-06X-FAL20	N	Nitrate-Nitrite (as N)	0.220	0.220	0.220 U		mg/l	L
G6M-97-05B-FAL20	N	Nitrate-Nitrite (as N)	0.100	0.0240 J	0.100 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
LCSD6806401794 (BD)/ LCSD6806401794	Methane	169.7	< 30	< 30	rpd	J/None	Z	
LCSD6806401797 (BD)/ LCSD6806401797	Methane	170.2	< 30	< 30	rpd	J/None	Z	
LCSD6806406594 (BD)/ LCSD6806406594	Methane	169.0	< 30	< 30	rpd	J/None	Z	
LCSD6806406597 (BD)/ LCSD6806406597	Methane	169.1	< 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.

No results associated with this QC element required qualification.

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
CCVC68064063629 (CV)/ CCVC68064063629	Bromomethane	50.80	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6806406362 (CV)/ CCVIS6806406362	Bromomethane	75.60	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-TB1-FAL20	TB	Bromomethane	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-13-05X-FAL20	N	Bromomethane	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-13-06X-FAL20	N	Bromomethane	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-97-05B-FAL20	N	Bromomethane	5.00	5.00 U	5.00 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.

Table of All Qualified Results

Test Method: E353.2	Extraction Method: NONE							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-13-05X-FAL20	N	Nitrate-Nitrite (as N)	0.120	0.120	0.120 U		mg/l	L
G6M-13-06X-FAL20	N	Nitrate-Nitrite (as N)	0.220	0.220	0.220 U		mg/l	L
G6M-97-05B-FAL20	N	Nitrate-Nitrite (as N)	0.100	0.0240 J	0.100 U		mg/l	L

Test Method: SW8260B	Extraction Method: SW5030B							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-TB1-FAL20	TB	Bromomethane	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-13-05X-FAL20	N	Bromomethane	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-13-06X-FAL20	N	Bromomethane	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-97-05B-FAL20	N	Bromomethane	5.00	5.00 U	5.00 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.

Table of Results with Modified Qualifiers

Modified Qualifiers for test method E353.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-13-05X-FAL20	N	Nitrate-Nitrite (as N)	0.120	0.120	0.120 J	0.120 U	L
G6M-13-06X-FAL20	N	Nitrate-Nitrite (as N)	0.220	0.220	0.220	0.220 U	L

Modified Qualifiers for test method RSK175

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-13-05X-FAL20	N	Methane	0.580	4.00	4.00 J	4.00	
G6M-13-06X-FAL20	N	Methane	390	11000	11000 J	11000	
G6M-97-05B-FAL20	N	Methane	390	10000	10000 J	10000	

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
L	Lab Blank
TR	Trace Level Detect
V2	CCV
Z	LCS RPD

Flag Code and Definitions

Flag	Definition
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.
J	Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
B	Blank contamination: The analyte was found in an associated blank above one half the RL, as well as in the sample.
UB	The analyte was also detected in an associated laboratory or field blank at a concentration comparable to the concentration in the sample. The reported result has been requalified as not detected.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team (which should include a project chemist), but exclusion of the data is recommended.

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 CCVs 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?		•		Alkalinity was detected in the method and calibration blanks. The associated sample results were significantly greater than the concentrations found in the blanks, therefore no data were qualified.
Were target analytes reported in the field blank(s) less than MDL?			•	A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

Data Validation Report for 6801899911

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 CCVs 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?		•		Due to method blank contamination, 3 nitrate-nitrite as N results were qualified as non-detected (U).
Were target analytes reported in the field blank(s) less than MDL?			•	A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported or as qualified during data validation.

Data Validation Report for 6801899911

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 CCVs run at the required frequency and within acceptance criteria?	•			
Were surrogate recoveries within project acceptance limits?			•	Surrogates not required by the 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?			•	A field blank was not 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?	•			Although ADR flagged Methane LCS/LCSD RPD as outside control limits, the RPD was recalculated between Methane and Methane (TCD) which are not comparable. No data were qualified.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
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 rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?		•		A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?		•		A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not perfoemd
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

Data Validation Report for 6801899911

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?	•			
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 CCVs run at the required frequency and within acceptance criteria?		•		Due to CCV %R/%D, 4 bromomethane results were qualified as non-detected estimated (UJ).
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?		•		A field blank was not submitted with these samples.
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
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 rejected during the verification process?		•		All data is acceptable as reported or as qualified during data validation.

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 CCVs 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?			•	A field blank was not 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?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

Data Validation Report for 6801899911

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 CCVs 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?		•		A field blank was not 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?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

Data Validation Report for 6801899911

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 CCVs 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?		•		A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

February 19, 2021

SUBJECT: Fort Devens, Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. This SDG was received on November 5, 2020. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #49592:

SDG #	Fraction
680-190204-1	Volatiles, Dissolved Metals, Wet Chemistry, 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:

- Former Fort Devens Army Installation – BRAC Legacy Sites, Devens, MA; October 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

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

65 pages-ADV

Attachment 1

Stage 2B EQUIS EDD

LDC #49592 (Arcadis-Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(3) DATE DUE	VOA (8260B)		(3)Diss Metals (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	W	S
A	680-190204-1	11/05/20	11/30/20	11	0	10	0	3	0	3	0	3	0	3	0	3	0	3	0																			

Data Validation Report for 6801902041

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020
SDG:	6801902041
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
Data Review Contractor:	Laboratory Data Consultants, Inc.
Data Review Level:	2B
Primary Data Reviewer:	Kevin Kha, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	November 30, 2020

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	E353.2	RSK175	SW6010C - Dissolved	SW6020A - Dissolved	SW8260B	SW9034	SW9056A	SW9060A
G6M-02-04X-FAL20	680-190204-6	Water	Field Sample/N				X	X	X			
G6M-02-06X-FAL20	680-190204-7	Water	Field Sample/N				X	X	X			
G6M-02-07X-FAL20	680-190204-8	Water	Field Sample/N				X	X	X			
G6M-02-13X-FAL20	680-190204-9	Water	Field Sample/N				X	X	X			
G6M-04-03X-FAL20	680-190204-10	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-04-11X-FAL20	680-190204-11	Water	Field Sample/N				X	X	X			
G6M-13-03X-FAL20	680-190204-1	Water	Field Sample/N				X	X	X			
G6M-13-04X-FAL20	680-190204-2	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-95-19X-FAL20	680-190204-3	Water	Field Sample/N						X			
XSA-12-96X-FAL20	680-190204-4	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
XSA-12-98X-FAL20	680-190204-5	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 and were reported under sample delivery group (SDG) 6801902041. 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
- Extracted Internal Standard
- Interference Check Sample A
- Interference Check Sample A - Negative
- Interference Check Sample AB
- Lab Blank
- LCS Recovery
- LCS RPD
- MS Recovery
- MS RPD
- Prep Hold Time
- Surrogate
- Test Hold Time

Results of the ADR process were subsequently reviewed and updated as applicable by the data review chemists identified on the signature page. Quality control elements that were not included in the electronic deliverable were reviewed manually and findings are documented within this report. Summaries of findings and associated qualified results are documented throughout this report.

A total of 95 results (11.85%) out of the 802 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. 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.
SW6020A	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.
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.
SW8260B	No additional comments; see Checklist for detail.



November 30, 2020

Reviewed by Kevin Kha, 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 a minimum of 10% of the reported sample results and method quality control data between the two deliverables.



March 16, 2021

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 A2320B, 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
CCB28051421130 (CB)/ CCB28051421130	Alkalinity, Total (as CaCO3)	3.650	< 3.1	< 10	mg/l	U/None	B2	
CCB28051421156 (CB)/ CCB28051421156	Alkalinity, Total (as CaCO3)	4.290	< 3.1	< 10	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.

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-02-13X-FAL20 (MS)/ 680-190204-9	Manganese	-275.0	90 - 114	10 - 125	percent	J/X	M	Spike amount Insignificant
G6M-02-13X-FAL20 (SD)/ 680-190204-9	Manganese	-400.0	90 - 114	10 - 125	percent	J/X	M	Spike amount Insignificant
G6M-02-13X-FAL20 (SD)/ 680-190204-9	Iron	74.00	87 - 115	10 - 125	percent	J/UJ	M	
G6M-02-13X-FAL20 (MS)/ 680-190204-9	Iron	82.00	87 - 115	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-02-13X-FAL20	N	Iron	50.0	12000 J	12000 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
CCVIS6806412773 (CV)/ CCVIS6806412773	Bromomethane	79.80	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6806412773 (CV)/ CCVIS6806412773	Naphthalene	79.80	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-02-04X-FAL20	N	Bromomethane	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-02-04X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
XSA-12-96X-FAL20	N	Bromomethane	5.00	5.00 U	5.00 UJ		ug/l	V2
XSA-12-96X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 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, Initial 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
ICj2615 (IV)	Chloromethane	127.6	80 - 120	80 - 120	percent	J/None	V1	

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, 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-02-07X-FAL20 (N)/ 680-190204-8	Toluene-d8	88.19	89 - 112	10 - 112	percent	J/UJ	I	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Surrogate for SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-02-07X-FAL20	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,1,2-Trichloroethane	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,2-Dichloroethene	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ		ug/l	I
G6M-02-07X-FAL20	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-02-07X-FAL20	N	2-Hexanone	10.0	5.00 U	5.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	4-Chlorotoluene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Acetone	10.0	10.0 U	10.0 UJ		ug/l	I
G6M-02-07X-FAL20	N	Benzene	1.00	1.00 U M	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Bromobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Bromochloromethane	1.00	1.00 U	1.00 UJ		ug/l	I

Qualified Results associated with the Surrogate for SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-02-07X-FAL20	N	Bromodichloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Bromomethane	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Carbon disulfide	2.00	2.00 U	2.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Carbon tetrachloride	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-02-07X-FAL20	N	Chlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-02-07X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Chloroform	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Chloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	cis-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Dibromochloromethane	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-02-07X-FAL20	N	Dibromomethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Ethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-02-07X-FAL20	N	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	m,p-Xylene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ		ug/l	I
G6M-02-07X-FAL20	N	Methylene chloride	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	n-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	n-Propylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	o-Xylene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-02-07X-FAL20	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	sec-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Styrene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-02-07X-FAL20	N	tert-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Tetrachloroethene (PCE)	1.00	3.80	3.80 J	-	ug/l	I
G6M-02-07X-FAL20	N	Toluene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	trans-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Trichloroethene (TCE)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Vinyl acetate	2.00	2.00 U	2.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Vinyl chloride	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Xylenes, Total	2.00	0.500 U	0.500 UJ		ug/l	I

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (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: SW6010C	Extraction Method: Dissolved							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-02-13X-FAL20	N	Iron	50.0	12000 J	12000 J	-	ug/l	M

Test Method: SW8260B	Extraction Method: SW5030B							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-02-04X-FAL20	N	Bromomethane	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-02-04X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-02-07X-FAL20	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,1,2-Trichloroethane	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,2-Dichloroethene	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ		ug/l	I
G6M-02-07X-FAL20	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-02-07X-FAL20	N	2-Hexanone	10.0	5.00 U	5.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	4-Chlorotoluene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Acetone	10.0	10.0 U	10.0 UJ		ug/l	I
G6M-02-07X-FAL20	N	Benzene	1.00	1.00 U M	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Bromobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Bromochloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Bromodichloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Bromomethane	5.00	5.00 U	5.00 UJ		ug/l	I

Table of All Qualified Results

Test Method: SW8260B	Extraction Method: SW5030B							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-02-07X-FAL20	N	Carbon disulfide	2.00	2.00 U	2.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Carbon tetrachloride	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-02-07X-FAL20	N	Chlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-02-07X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Chloroform	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Chloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	cis-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Dibromochloromethane	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-02-07X-FAL20	N	Dibromomethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Ethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-02-07X-FAL20	N	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	m,p-Xylene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ		ug/l	I
G6M-02-07X-FAL20	N	Methylene chloride	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	n-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	n-Propylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	o-Xylene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-02-07X-FAL20	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	sec-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Styrene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-02-07X-FAL20	N	tert-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Tetrachloroethene (PCE)	1.00	3.80	3.80 J	-	ug/l	I
G6M-02-07X-FAL20	N	Toluene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	trans-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Trichloroethene (TCE)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Vinyl acetate	2.00	2.00 U	2.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Vinyl chloride	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-02-07X-FAL20	N	Xylenes, Total	2.00	0.500 U	0.500 UJ		ug/l	I
XSA-12-96X-FAL20	N	Bromomethane	5.00	5.00 U	5.00 UJ		ug/l	V2
XSA-12-96X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 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.

Table of Results with Modified Qualifiers

Modified Qualifiers for test method RSK175

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-04-03X-FAL20	N	Methane	390	22000	22000 J	22000	
G6M-13-04X-FAL20	N	Methane	390	25000	25000 J	25000	
XSA-12-96X-FAL20	N	Methane	390	1800	1800 J	1800	

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-02-04X-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-02-04X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-04X-FAL20	N	Vinyl acetate	2.00	2.00 U	2.00 UJ	2.00 U	
G6M-02-06X-FAL20	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	1,1,2-Trichloroethane	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-02-06X-FAL20	N	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-02-06X-FAL20	N	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-02-06X-FAL20	N	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ	2.00 U	
G6M-02-06X-FAL20	N	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	1,2-Dichloroethene	2.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-02-06X-FAL20	N	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-06X-FAL20	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-02-06X-FAL20	N	2-Hexanone	10.0	5.00 U	5.00 UJ	5.00 U	
G6M-02-06X-FAL20	N	4-Chlorotoluene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ	5.00 U	
G6M-02-06X-FAL20	N	Acetone	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-06X-FAL20	N	Benzene	1.00	1.00 U M	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	Bromobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	Bromochloromethane	1.00	1.00 U	1.00 UJ	1.00 U	

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-02-06X-FAL20	N	Bromodichloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	Bromoform	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-02-06X-FAL20	N	Carbon disulfide	2.00	2.00 U	2.00 UJ	2.00 U	
G6M-02-06X-FAL20	N	Carbon tetrachloride	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-02-06X-FAL20	N	Chlorobenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-02-06X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-02-06X-FAL20	N	Chloroform	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	Chloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	cis-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	Dibromochloromethane	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-02-06X-FAL20	N	Dibromomethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	Ethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-02-06X-FAL20	N	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-02-06X-FAL20	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	m,p-Xylene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ	0.500 U	
G6M-02-06X-FAL20	N	Methylene chloride	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-02-06X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-02-06X-FAL20	N	n-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	n-Propylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	o-Xylene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-02-06X-FAL20	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	sec-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	Styrene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-02-06X-FAL20	N	tert-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	Tetrachloroethene (PCE)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	Toluene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	trans-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	Trichloroethene (TCE)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	Vinyl acetate	2.00	2.00 U	2.00 UJ	2.00 U	
G6M-02-06X-FAL20	N	Vinyl chloride	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X-FAL20	N	Xylenes, Total	2.00	0.500 U	0.500 UJ	0.500 U	
G6M-02-07X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 UJ	I
G6M-02-07X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ	1.00 UJ	I
G6M-02-13X-FAL20	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-02-13X-FAL20	N	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	1,1,2-Trichloroethane	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-02-13X-FAL20	N	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-02-13X-FAL20	N	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-02-13X-FAL20	N	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ	2.00 U	
G6M-02-13X-FAL20	N	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	1,2-Dichloroethene	2.00	1.10 J	1.10 J	1.10 J	TR
G6M-02-13X-FAL20	N	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-02-13X-FAL20	N	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-13X-FAL20	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-02-13X-FAL20	N	2-Hexanone	10.0	5.00 U	5.00 UJ	5.00 U	
G6M-02-13X-FAL20	N	4-Chlorotoluene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	4-Methyl-2-pentanone (MIBK)	10.0	15.0	15.0 J	15.0	
G6M-02-13X-FAL20	N	Acetone	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-13X-FAL20	N	Benzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	Bromobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	Bromochloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	Bromodichloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	Bromoform	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-02-13X-FAL20	N	Carbon disulfide	2.00	2.00 U	2.00 UJ	2.00 U	
G6M-02-13X-FAL20	N	Carbon tetrachloride	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-02-13X-FAL20	N	Chlorobenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-02-13X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-02-13X-FAL20	N	Chloroform	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	Chloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	cis-1,2-Dichloroethene	1.00	0.900 J	0.900 J	0.900 J	TR

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-02-13X-FAL20	N	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	Dibromochloromethane	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-02-13X-FAL20	N	Dibromomethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	Ethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-02-13X-FAL20	N	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-02-13X-FAL20	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	m,p-Xylene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ	0.500 U	
G6M-02-13X-FAL20	N	Methylene chloride	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-02-13X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-02-13X-FAL20	N	n-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	n-Propylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	o-Xylene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-02-13X-FAL20	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	sec-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	Styrene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-02-13X-FAL20	N	tert-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	Tetrachloroethene (PCE)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	Toluene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	trans-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	Trichloroethene (TCE)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X-FAL20	N	Vinyl acetate	2.00	2.00 U	2.00 UJ	2.00 U	
G6M-02-13X-FAL20	N	Vinyl chloride	1.00	0.960 J	0.960 J	0.960 J	TR
G6M-02-13X-FAL20	N	Xylenes, Total	2.00	0.500 U	0.500 UJ	0.500 U	
G6M-04-03X-FAL20	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	1,1,2-Trichloroethane	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-04-03X-FAL20	N	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-04-03X-FAL20	N	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-04-03X-FAL20	N	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ	2.00 U	

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-04-03X-FAL20	N	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	1,2-Dichloroethene	2.00	0.940 J	0.940 J	0.940 J	TR
G6M-04-03X-FAL20	N	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-04-03X-FAL20	N	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-04-03X-FAL20	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-04-03X-FAL20	N	2-Hexanone	10.0	5.00 U	5.00 UJ	5.00 U	
G6M-04-03X-FAL20	N	4-Chlorotoluene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ	5.00 U	
G6M-04-03X-FAL20	N	Acetone	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-04-03X-FAL20	N	Benzene	1.00	1.00 U M	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	Bromobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	Bromochloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	Bromodichloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	Bromoform	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-04-03X-FAL20	N	Carbon disulfide	2.00	2.00 U	2.00 UJ	2.00 U	
G6M-04-03X-FAL20	N	Carbon tetrachloride	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-04-03X-FAL20	N	Chlorobenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-04-03X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-04-03X-FAL20	N	Chloroform	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	Chloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	cis-1,2-Dichloroethene	1.00	0.700 J	0.700 J	0.700 J	TR
G6M-04-03X-FAL20	N	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	Dibromochloromethane	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-04-03X-FAL20	N	Dibromomethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	Ethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-04-03X-FAL20	N	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-04-03X-FAL20	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	m,p-Xylene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ	0.500 U	
G6M-04-03X-FAL20	N	Methylene chloride	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-04-03X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ	5.00 U	

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-04-03X-FAL20	N	n-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	n-Propylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	o-Xylene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-04-03X-FAL20	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	sec-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	Styrene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-04-03X-FAL20	N	tert-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	Tetrachloroethene (PCE)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	Toluene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	trans-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	Trichloroethene (TCE)	1.00	0.800 J	0.800 J	0.800 J	TR
G6M-04-03X-FAL20	N	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	Vinyl acetate	2.00	2.00 U	2.00 UJ	2.00 U	
G6M-04-03X-FAL20	N	Vinyl chloride	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-03X-FAL20	N	Xylenes, Total	2.00	0.500 U	0.500 UJ	0.500 U	
G6M-04-11X-FAL20	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	1,1,2-Trichloroethane	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-04-11X-FAL20	N	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-04-11X-FAL20	N	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-04-11X-FAL20	N	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ	2.00 U	
G6M-04-11X-FAL20	N	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	1,2-Dichloroethene	2.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-04-11X-FAL20	N	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-04-11X-FAL20	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ	0.500 U	

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-04-11X-FAL20	N	2-Hexanone	10.0	5.00 U	5.00 UJ	5.00 U	
G6M-04-11X-FAL20	N	4-Chlorotoluene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ	5.00 U	
G6M-04-11X-FAL20	N	Acetone	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-04-11X-FAL20	N	Benzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	Bromobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	Bromochloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	Bromodichloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	Bromoform	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-04-11X-FAL20	N	Carbon disulfide	2.00	2.00 U	2.00 UJ	2.00 U	
G6M-04-11X-FAL20	N	Carbon tetrachloride	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-04-11X-FAL20	N	Chlorobenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-04-11X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-04-11X-FAL20	N	Chloroform	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	Chloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	cis-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	Dibromochloromethane	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-04-11X-FAL20	N	Dibromomethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	Ethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-04-11X-FAL20	N	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-04-11X-FAL20	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	m,p-Xylene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ	0.500 U	
G6M-04-11X-FAL20	N	Methylene chloride	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-04-11X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-04-11X-FAL20	N	n-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	n-Propylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	o-Xylene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-04-11X-FAL20	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	sec-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	Styrene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-04-11X-FAL20	N	tert-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	Tetrachloroethene (PCE)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	Toluene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	trans-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-04-11X-FAL20	N	Trichloroethene (TCE)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	Vinyl acetate	2.00	2.00 U	2.00 UJ	2.00 U	
G6M-04-11X-FAL20	N	Vinyl chloride	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X-FAL20	N	Xylenes, Total	2.00	0.500 U	0.500 UJ	0.500 U	
G6M-13-03X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-03X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	1,1,2-Trichloroethane	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-13-04X-FAL20	N	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-13-04X-FAL20	N	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-13-04X-FAL20	N	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ	2.00 U	
G6M-13-04X-FAL20	N	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	1,2-Dichloroethene	2.00	1.30 J	1.30 J	1.30 J	TR
G6M-13-04X-FAL20	N	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-13-04X-FAL20	N	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-13-04X-FAL20	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-13-04X-FAL20	N	2-Hexanone	10.0	5.00 U	5.00 UJ	5.00 U	
G6M-13-04X-FAL20	N	4-Chlorotoluene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ	5.00 U	
G6M-13-04X-FAL20	N	Acetone	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-13-04X-FAL20	N	Benzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	Bromobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	Bromochloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	Bromodichloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	Bromoform	1.00	1.00 U	1.00 UJ	1.00 U	

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-13-04X-FAL20	N	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-13-04X-FAL20	N	Carbon disulfide	2.00	2.00 U	2.00 UJ	2.00 U	
G6M-13-04X-FAL20	N	Carbon tetrachloride	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-13-04X-FAL20	N	Chlorobenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-13-04X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-13-04X-FAL20	N	Chloroform	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	Chloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	cis-1,2-Dichloroethene	1.00	1.20	1.20 J	1.20	
G6M-13-04X-FAL20	N	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	Dibromochloromethane	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-13-04X-FAL20	N	Dibromomethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	Ethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-13-04X-FAL20	N	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-13-04X-FAL20	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	m,p-Xylene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ	0.500 U	
G6M-13-04X-FAL20	N	Methylene chloride	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-13-04X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-13-04X-FAL20	N	n-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	n-Propylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	o-Xylene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-13-04X-FAL20	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	sec-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	Styrene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-13-04X-FAL20	N	tert-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	Tetrachloroethene (PCE)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	Toluene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	trans-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	Trichloroethene (TCE)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-04X-FAL20	N	Vinyl acetate	2.00	2.00 U	2.00 UJ	2.00 U	
G6M-13-04X-FAL20	N	Vinyl chloride	1.00	1.30	1.30 J	1.30	
G6M-13-04X-FAL20	N	Xylenes, Total	2.00	0.500 U	0.500 UJ	0.500 U	
G6M-95-19X-FAL20	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	1,1,2-Trichloroethane	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-95-19X-FAL20	N	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-95-19X-FAL20	N	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-95-19X-FAL20	N	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-95-19X-FAL20	N	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ	2.00 U	
G6M-95-19X-FAL20	N	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	1,2-Dichloroethene	2.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-95-19X-FAL20	N	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-95-19X-FAL20	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-95-19X-FAL20	N	2-Hexanone	10.0	5.00 U	5.00 UJ	5.00 U	
G6M-95-19X-FAL20	N	4-Chlorotoluene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ	5.00 U	
G6M-95-19X-FAL20	N	Acetone	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-95-19X-FAL20	N	Benzene	1.00	1.00 U M	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	Bromobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	Bromochloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	Bromodichloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	Bromoform	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-95-19X-FAL20	N	Carbon disulfide	2.00	2.00 U	2.00 UJ	2.00 U	
G6M-95-19X-FAL20	N	Carbon tetrachloride	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-95-19X-FAL20	N	Chlorobenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-95-19X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-95-19X-FAL20	N	Chloroform	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	Chloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	cis-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	Dibromochloromethane	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-95-19X-FAL20	N	Dibromomethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-95-19X-FAL20	N	Ethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-95-19X-FAL20	N	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-95-19X-FAL20	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	m,p-Xylene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ	0.500 U	
G6M-95-19X-FAL20	N	Methylene chloride	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-95-19X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-95-19X-FAL20	N	n-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	n-Propylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	o-Xylene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-95-19X-FAL20	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	sec-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	Styrene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-95-19X-FAL20	N	tert-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	Tetrachloroethene (PCE)	1.00	1.40	1.40 J	1.40	
G6M-95-19X-FAL20	N	Toluene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	trans-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	Trichloroethene (TCE)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	Vinyl acetate	2.00	2.00 U	2.00 UJ	2.00 U	
G6M-95-19X-FAL20	N	Vinyl chloride	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X-FAL20	N	Xylenes, Total	2.00	0.500 U	0.500 UJ	0.500 U	
XSA-12-96X-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
XSA-12-96X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-96X-FAL20	N	Vinyl acetate	2.00	2.00 U	2.00 UJ	2.00 U	
XSA-12-98X-FAL20	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	1,1,2-Trichloroethane	1.00	0.500 U	0.500 UJ	0.500 U	
XSA-12-98X-FAL20	N	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
XSA-12-98X-FAL20	N	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
XSA-12-98X-FAL20	N	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ	2.00 U	
XSA-12-98X-FAL20	N	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ	1.00 U	

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
XSA-12-98X-FAL20	N	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	1,2-Dichloroethene	2.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
XSA-12-98X-FAL20	N	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ	10.0 U	
XSA-12-98X-FAL20	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ	0.500 U	
XSA-12-98X-FAL20	N	2-Hexanone	10.0	5.00 U	5.00 UJ	5.00 U	
XSA-12-98X-FAL20	N	4-Chlorotoluene	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ	5.00 U	
XSA-12-98X-FAL20	N	Acetone	10.0	10.0 U	10.0 UJ	10.0 U	
XSA-12-98X-FAL20	N	Benzene	1.00	1.00 U M	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	Bromobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	Bromochloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	Bromodichloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	Bromoform	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
XSA-12-98X-FAL20	N	Carbon disulfide	2.00	2.00 U	2.00 UJ	2.00 U	
XSA-12-98X-FAL20	N	Carbon tetrachloride	1.00	0.500 U	0.500 UJ	0.500 U	
XSA-12-98X-FAL20	N	Chlorobenzene	1.00	0.500 U	0.500 UJ	0.500 U	
XSA-12-98X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ	5.00 U	
XSA-12-98X-FAL20	N	Chloroform	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	Chloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	cis-1,2-Dichloroethene	1.00	0.610 J	0.610 J	0.610 J	TR
XSA-12-98X-FAL20	N	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	Dibromochloromethane	1.00	0.500 U	0.500 UJ	0.500 U	
XSA-12-98X-FAL20	N	Dibromomethane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	Ethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
XSA-12-98X-FAL20	N	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ	5.00 U	
XSA-12-98X-FAL20	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	m,p-Xylene	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ	0.500 U	
XSA-12-98X-FAL20	N	Methylene chloride	5.00	5.00 U	5.00 UJ	5.00 U	
XSA-12-98X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ	5.00 U	
XSA-12-98X-FAL20	N	n-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260B							
FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
XSA-12-98X-FAL20	N	n-Propylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	o-Xylene	1.00	0.500 U	0.500 UJ	0.500 U	
XSA-12-98X-FAL20	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	sec-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	Styrene	1.00	0.500 U	0.500 UJ	0.500 U	
XSA-12-98X-FAL20	N	tert-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	Tetrachloroethene (PCE)	1.00	4.10	4.10 J	4.10	
XSA-12-98X-FAL20	N	Toluene	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	trans-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	Trichloroethene (TCE)	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	Vinyl acetate	2.00	2.00 U	2.00 UJ	2.00 U	
XSA-12-98X-FAL20	N	Vinyl chloride	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X-FAL20	N	Xylenes, Total	2.00	0.500 U	0.500 UJ	0.500 U	

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
I	Surrogate recovery outside project limits.
M	MS Recovery
TR	Trace Level Detect
V1	ICV
V2	CCV

Flag Code and Definitions

Flag	Definition
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.
J	Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
B	Blank contamination: The analyte was found in an associated blank above one half the RL, as well as in the sample.
UB	The analyte was also detected in an associated laboratory or field blank at a concentration comparable to the concentration in the sample. The reported result has been requalified as not detected.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team (which should include a project chemist), but exclusion of the data is recommended.

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 CCVs 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?		•		Alkalinity was detected in the method and calibration blanks. The associated sample results were significantly greater than the concentrations found in the blanks, therefore no data were qualified.
Were field blanks (EBs or FBs) submitted with these samples?		•		A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?			•	A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs run at the required frequency and within acceptance criteria?	•			
Were surrogate recoveries within project acceptance limits?			•	Surrogates not required by the method.
Was a method blank prepared and analyzed with each batch?	•			
Were field blanks (EBs or FBs) submitted with these samples?		•		A field blank was not submitted with these samples.
Were target analytes reported in the field blank(s) less than MDL?			•	A field blank was not 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?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
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 rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?			•	A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?		•		Due to MS/MSD %R below control limits, 1 iron result was qualified as estimated (J) with a low bias (-). Manganese recovery was outside the control limits, however no data were qualified since sample concentrations were significantly greater (>4x) than the spike amount.
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported or as qualified during data validation.

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 CCVs 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?			•	A field blank was not 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?			•	Only a LCS was performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

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?	•			
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?		•		Chloromethane %R was above the criteria, however the associated sample results were non-detect so no sample qualification was necessary.
Were CCVs run at the required frequency and within acceptance criteria?		•		Due to CCV %R below the criteria, 2 bromomethane and 2 naphthalene results were qualified as non-detected estimated (UJ).
Were surrogate recoveries within project acceptance limits?		•		Due to low surrogate recovery, VOC results in sample G6M-02-07X-FAL20 were qualified as detected estimated (J) with low bias (-) or as non-detected estimated (UJ).
Was a method blank prepared and analyzed with each batch?	•			
Were field blanks (EBs or FBs) submitted with these samples?		•		A field blank was not submitted with these samples.
Were target analytes reported in the field blank(s) less than MDL?			•	A field blank was not 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?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
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 rejected during the verification process?		•		All data is acceptable as reported or as qualified during data validation.

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 CCVs 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?			•	A field blank was not 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?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?		•		A field blank was not 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?		•		MS/MSD not performed.
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?		•		A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

Data Validation Report for 6801902041

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 CCVs 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?		•		A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

February 19, 2021

SUBJECT: Fort Devens, Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. This SDG was received on November 6, 2020. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #49610:

SDG #	Fraction
680-190259-1	Volatiles, Dissolved Metals, Wet Chemistry, 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:

- Former Fort Devens Army Installation – BRAC Legacy Sites, Devens, MA; October 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

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

54 pages-ADV

Attachment 1

Stage 2B EQUIS EDD

LDC #49610 (Arcadis-Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(3) DATE DUE	VOA (8260B)		(3)Diss Metals (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	680-190259-1	11/06/20	12/01/20	5	0	4	0	3	0	3	0	3	0	3	0	3	0	3	0																		
Total	T/PG			5	0	4	0	3	0	3	0	3	0	3	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

L:\Arcadis\Fort Devens\49610ST.wpd

Data Validation Report for 6801902591

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020
SDG:	6801902591
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
Data Review Contractor:	Laboratory Data Consultants, Inc.
Data Review Level:	2B
Primary Data Reviewer:	Kevin Kha, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	November 30, 2020

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	E353.2	RSK175	SW6010C - Dissolved	SW6020A - Dissolved	SW8260B	SW9034	SW9056A	SW9060A
AOC50-DUP04-FAL20	680-190259-1	Water	Field Duplicate/FD	X	X	X	X	X	X	X	X	X
AOC50-TB3-FAL20	680-190259-5	Water	Trip Blank/TB						X			
G6M-04-14X-FAL20	680-190259-2	Water	Field Sample/N				X	X	X			
G6M-07-01X-FAL20	680-190259-3	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-13-02X-FAL20	680-190259-4	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 and were reported under sample delivery group (SDG) 6801902591. 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
- Extracted Internal Standard
- 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 142 results (37.77%) out of the 376 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected or deemed a serious deficiency. 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
SW9056A	No additional comments; see Checklist for detail.
SW9060A	No additional comments; see Checklist for detail.
E353.2	No additional comments; see Checklist for detail.
SW9034	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
A2320B	No additional comments; see Checklist for detail.
SW6010C	No additional comments; see Checklist for detail.
RSK175	No additional comments; see Checklist for detail.
SW8260B	No additional comments; see Checklist for detail.



November 30, 2020

Reviewed by Kevin Kha, 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 a minimum of 10% of the reported sample results and method quality control data between the two deliverables.



March 16, 2021

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 A2320B, 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
CCB28051438918 (CB)/ CCB28051438918	Alkalinity, Total (as CaCO3)	4.120	< 3.1	< 10	mg/l	U/None	B2	
CCB28051438930 (CB)/ CCB28051438930	Alkalinity, Total (as CaCO3)	3.330	< 3.1	< 10	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.

No results associated with this QC element required qualification.

Quality Control Outliers for test method A2320B, 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
MB2805143896 (LB)/ MB2805143896	Alkalinity, Total (as CaCO3)	4.000	< 3.1	< 10	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.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW6010C, Dissolved, Calibration Blank

The purpose of calibration blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in calibration blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
CCB68064064272 (CB)/ CCB68064064272	Iron	18.00	< 17	< 50	ug/l	U/None	B2	
CCB68064064296 (CB)/ CCB68064064296	Iron	17.20	< 17	< 50	ug/l	U/None	B2	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Calibration Blank for SW6010C, Dissolved

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-14X-FAL20	N	Iron	50.0	33.0 J	50.0 U		ug/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 SW6010C, Dissolved, Lab Blank

The purpose of laboratory blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in laboratory blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
MB6806411441A (LB)/ MB6806411441A	Manganese	1.640	< 1	< 10	ug/l	U/None	L	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

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
CCVC68064160929 (CV)/ CCVC68064160929	Bromomethane	47.80	50 - 150	50 - 150	percent	J/UJ	V2	
CCVIS6806413263 (CV)/ CCVIS6806413263	Bromomethane	65.60	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6806413263 (CV)/ CCVIS6806413263	Dichlorodifluoromethane	76.80	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6806413342 (CV)/ CCVIS6806413342	Naphthalene	79.40	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-DUP04-FAL20	FD	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-04-14X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-07-01X-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2/I
G6M-07-01X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ		ug/l	V2/I
G6M-13-02X-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2/I
G6M-13-02X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ		ug/l	V2/I

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (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, Field Duplicate RPD

Field duplicate analyses are performed in order to assess sample collection/laboratory precision for each sample matrix. Summary forms were evaluated and compared to electronic data deliverables. Field duplicate results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
G6M-13-02X-FAL20 (N)/ 680-190259-1	Acetone	11.00	< 10	< 10	ug/l	J/None	D3	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW8260B, Initial 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
ICJ2615 (IV)	Chloromethane	127.6	80 - 120	80 - 120	percent	J/None	V1	

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, 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
LCSD6806413344 (BD)/ LCSD6806413344	Chloroethane	26.93	< 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, 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-07-01X-FAL20 (N)/ 680-190259-3	Toluene-d8	88.56	89 - 112	10 - 112	percent	J/UJ	I	
G6M-13-02X-FAL20 (N)/ 680-190259-4	Toluene-d8	87.42	89 - 112	10 - 112	percent	J/UJ	I	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Surrogate for SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-07-01X-FAL20	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,1,2-Trichloroethane	1.00	0.500 U M	0.500 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,2-Dichloroethene	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ		ug/l	I
G6M-07-01X-FAL20	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-07-01X-FAL20	N	2-Hexanone	10.0	5.00 U	5.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	4-Chlorotoluene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Acetone	10.0	10.0 U	10.0 UJ		ug/l	I
G6M-07-01X-FAL20	N	Benzene	1.00	1.00 U M	1.00 UJ		ug/l	I

Qualified Results associated with the Surrogate for SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-07-01X-FAL20	N	Bromobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Bromochloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Bromodichloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2/I
G6M-07-01X-FAL20	N	Carbon disulfide	2.00	2.00 U	2.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Carbon tetrachloride	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-07-01X-FAL20	N	Chlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-07-01X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Chloroform	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Chloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	cis-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Dibromochloromethane	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-07-01X-FAL20	N	Dibromomethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ		ug/l	V2/I
G6M-07-01X-FAL20	N	Ethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-07-01X-FAL20	N	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	m,p-Xylene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ		ug/l	I
G6M-07-01X-FAL20	N	Methylene chloride	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	n-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	n-Propylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	o-Xylene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-07-01X-FAL20	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	sec-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Styrene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-07-01X-FAL20	N	tert-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Tetrachloroethene (PCE)	1.00	32.0	32.0 J	-	ug/l	I
G6M-07-01X-FAL20	N	Toluene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	trans-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Trichloroethene (TCE)	1.00	0.710 J	0.710 J	-	ug/l	I/TR
G6M-07-01X-FAL20	N	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Vinyl acetate	2.00	2.00 U	2.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Vinyl chloride	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Xylenes, Total	2.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I

Qualified Results associated with the Surrogate for SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-13-02X-FAL20	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,1,2-Trichloroethane	1.00	0.500 U M	0.500 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,2-Dichloroethene	2.00	9.70	9.70 J	-	ug/l	I
G6M-13-02X-FAL20	N	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ		ug/l	I
G6M-13-02X-FAL20	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X-FAL20	N	2-Hexanone	10.0	5.00 U	5.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	4-Chlorotoluene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Acetone	10.0	10.0 U M	10.0 UJ		ug/l	I
G6M-13-02X-FAL20	N	Benzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Bromobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Bromochloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Bromodichloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2/I
G6M-13-02X-FAL20	N	Carbon disulfide	2.00	0.460 J	0.460 J	-	ug/l	I/TR
G6M-13-02X-FAL20	N	Carbon tetrachloride	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X-FAL20	N	Chlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Chloroform	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Chloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	cis-1,2-Dichloroethene	1.00	8.90	8.90 J	-	ug/l	I
G6M-13-02X-FAL20	N	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Dibromochloromethane	1.00	0.500 U	0.500 UJ		ug/l	I

Qualified Results associated with the Surrogate for SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-13-02X-FAL20	N	Dibromomethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ		ug/l	V2/I
G6M-13-02X-FAL20	N	Ethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X-FAL20	N	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	m,p-Xylene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X-FAL20	N	Methylene chloride	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	n-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	n-Propylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	o-Xylene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X-FAL20	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	sec-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Styrene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X-FAL20	N	tert-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Tetrachloroethene (PCE)	1.00	14.0	14.0 J	-	ug/l	I
G6M-13-02X-FAL20	N	Toluene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	trans-1,2-Dichloroethene	1.00	0.740 J	0.740 J	-	ug/l	I/TR
G6M-13-02X-FAL20	N	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Trichloroethene (TCE)	1.00	8.40	8.40 J	-	ug/l	I
G6M-13-02X-FAL20	N	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Vinyl acetate	2.00	2.00 U	2.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Vinyl chloride	1.00	3.80	3.80 J	-	ug/l	I
G6M-13-02X-FAL20	N	Xylenes, Total	2.00	0.500 U	0.500 UJ		ug/l	I

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (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, Trip Blank

The purpose of trip blanks is to determine the existence and magnitude of cross-contamination problems resulting from the shipping of samples. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in trip blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
AOC50-TB3-FAL20 (TB)/ 680-190259-5	2-Butanone (MEK)	16.00	< 3.4	< 10	ug/l	U/None	T	
AOC50-TB3-FAL20 (TB)/ 680-190259-5	Acetone	9.800	< 7	< 10	ug/l	U/None	T	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Trip Blank for SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP04-FAL20	FD	Acetone	11.0	11.0	11.0 U		ug/l	T

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: SW6010C	Extraction Method: Dissolved							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-14X-FAL20	N	Iron	50.0	33.0 J	50.0 U		ug/l	B2

Test Method: SW8260B	Extraction Method: SW5030B							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP04-FAL20	FD	Acetone	11.0	11.0	11.0 U		ug/l	T
AOC50-DUP04-FAL20	FD	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-04-14X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-07-01X-FAL20	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,1,2-Trichloroethane	1.00	0.500 U M	0.500 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,2-Dichloroethene	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ		ug/l	I
G6M-07-01X-FAL20	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-07-01X-FAL20	N	2-Hexanone	10.0	5.00 U	5.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	4-Chlorotoluene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Acetone	10.0	10.0 U	10.0 UJ		ug/l	I
G6M-07-01X-FAL20	N	Benzene	1.00	1.00 U M	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Bromobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Bromochloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Bromodichloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	I

Table of All Qualified Results

Test Method: SW8260B	Extraction Method: SW5030B							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-07-01X-FAL20	N	Carbon disulfide	2.00	2.00 U	2.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Carbon tetrachloride	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-07-01X-FAL20	N	Chlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-07-01X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Chloroform	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Chloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	cis-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Dibromochloromethane	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-07-01X-FAL20	N	Dibromomethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Ethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-07-01X-FAL20	N	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	m,p-Xylene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ		ug/l	I
G6M-07-01X-FAL20	N	Methylene chloride	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	n-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	n-Propylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	o-Xylene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-07-01X-FAL20	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	sec-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Styrene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-07-01X-FAL20	N	tert-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Tetrachloroethene (PCE)	1.00	32.0	32.0 J	-	ug/l	I
G6M-07-01X-FAL20	N	Toluene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	trans-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Trichloroethene (TCE)	1.00	0.710 J	0.710 J	-	ug/l	I/TR
G6M-07-01X-FAL20	N	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Vinyl acetate	2.00	2.00 U	2.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Vinyl chloride	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-07-01X-FAL20	N	Xylenes, Total	2.00	0.500 U	0.500 UJ		ug/l	I
G6M-07-01X-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2/I
G6M-07-01X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ		ug/l	V2/I
G6M-13-02X-FAL20	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,1,2-Trichloroethane	1.00	0.500 U M	0.500 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I

Table of All Qualified Results

Test Method: SW8260B	Extraction Method: SW5030B							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-13-02X-FAL20	N	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,2-Dichloroethene	2.00	9.70	9.70 J	-	ug/l	I
G6M-13-02X-FAL20	N	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ		ug/l	I
G6M-13-02X-FAL20	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X-FAL20	N	2-Hexanone	10.0	5.00 U	5.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	4-Chlorotoluene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Acetone	10.0	10.0 U M	10.0 UJ		ug/l	I
G6M-13-02X-FAL20	N	Benzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Bromobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Bromochloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Bromodichloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Carbon disulfide	2.00	0.460 J	0.460 J	-	ug/l	I/TR
G6M-13-02X-FAL20	N	Carbon tetrachloride	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X-FAL20	N	Chlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Chloroform	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Chloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	cis-1,2-Dichloroethene	1.00	8.90	8.90 J	-	ug/l	I
G6M-13-02X-FAL20	N	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Dibromochloromethane	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X-FAL20	N	Dibromomethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Ethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X-FAL20	N	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ		ug/l	I

Table of All Qualified Results

Test Method: SW8260B	Extraction Method: SW5030B							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-13-02X-FAL20	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	m,p-Xylene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X-FAL20	N	Methylene chloride	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	n-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	n-Propylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	o-Xylene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X-FAL20	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	sec-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Styrene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X-FAL20	N	tert-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Tetrachloroethene (PCE)	1.00	14.0	14.0 J	-	ug/l	I
G6M-13-02X-FAL20	N	Toluene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	trans-1,2-Dichloroethene	1.00	0.740 J	0.740 J	-	ug/l	I/TR
G6M-13-02X-FAL20	N	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Trichloroethene (TCE)	1.00	8.40	8.40 J	-	ug/l	I
G6M-13-02X-FAL20	N	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Vinyl acetate	2.00	2.00 U	2.00 UJ		ug/l	I
G6M-13-02X-FAL20	N	Vinyl chloride	1.00	3.80	3.80 J	-	ug/l	I
G6M-13-02X-FAL20	N	Xylenes, Total	2.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2/I
G6M-13-02X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ		ug/l	V2/I

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (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	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
AOC50-DUP04-FAL20	FD	Ethene	1.00	1.40	1.40 J	1.40	
AOC50-DUP04-FAL20	FD	Methane	390	19000	19000 J	19000	
G6M-07-01X-FAL20	N	Methane	0.580	34.0	34.0 J	34.0	
G6M-13-02X-FAL20	N	Ethene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-02X-FAL20	N	Methane	390	18000	18000 J	18000	

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
AOC50-DUP04-FAL20	FD	Acetone	11.0	11.0	11.0 J	11.0 U	T
AOC50-DUP04-FAL20	FD	Vinyl chloride	1.00	4.90	4.90 J	4.90	
AOC50-TB3-FAL20	TB	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
AOC50-TB3-FAL20	TB	Acetone	10.0	9.80 J	9.80 J	9.80 J	TR
AOC50-TB3-FAL20	TB	Bromomethane	5.00	5.00 U Q	5.00 UJ	5.00 UJ	V5
AOC50-TB3-FAL20	TB	Chloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB3-FAL20	TB	Naphthalene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-07-01X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 UJ	I
G6M-07-01X-FAL20	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ	10.0 UJ	I
G6M-13-02X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 UJ	I
G6M-13-02X-FAL20	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ	10.0 UJ	I
G6M-13-02X-FAL20	N	Vinyl chloride	1.00	3.80	3.80 J	3.80 J	I

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (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
D3	Field Duplicate RPD
I	Surrogate recovery outside project limits.
L	Lab Blank
T	Trip Blank
TR	Trace Level Detect
V1	ICV
V2	CCV
V5	Ending Continuing Calibration Verification
Z	LCS RPD

Flag Code and Definitions

Flag	Definition
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.
J	Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
B	Blank contamination: The analyte was found in an associated blank above one half the RL, as well as in the sample.
UB	The analyte was also detected in an associated laboratory or field blank at a concentration comparable to the concentration in the sample. The reported result has been requalified as not detected.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team (which should include a project chemist), but exclusion of the data is recommended.

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 CCVs 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?		•		Alkalinity was detected in the method and calibration blanks. The associated sample results were significantly greater than the concentrations found in the blanks, therefore no data were qualified.
Were target analytes reported in the field blank(s) less than MDL?			•	A field blank was not 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?		•		MS/MSD not performed.
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 rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?			•	A field blank was not 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?		•		MS/MSD not performed.
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 rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs run at the required frequency and within acceptance criteria?	•			
Were surrogate recoveries within project acceptance limits?			•	Surrogates not required by the method.
Was a method blank prepared and analyzed with each batch?	•			
Were field blanks (EBs or FBs) submitted with these samples?		•		A field blank was not submitted with these samples.
Were target analytes reported in the field blank(s) less than MDL?			•	A field blank was not 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?		•		MS/MSD not performed.
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?	•			Although ADR flagged Ethene difference outside criteria, QAPP states a difference criteria limit of ±2X LOQ, therefore no data were qualified.
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 rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?		•		Due to calibration blank contamination, 1 iron result was qualified as non-detect (U). Although the method blank had detected for manganese, the associated results were either non-detected or significantly greater than the concentrations found in the blank, therefore no data were qualified due to method blank contamination.
Were field blanks (EBs or FBs) submitted with these samples?		•		A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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 rejected during the verification process?		•		All data is acceptable as reported or as qualified during data validation.

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 CCVs 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?		•		A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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 rejected during the verification process?		•		All data is acceptable as reported.

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?	•			
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?		•		Although chloromethane %R was above the criteria, the associated sample results were non-detect so no sample qualification was necessary.
Were CCVs run at the required frequency and within acceptance criteria?		•		Due to CCV %R below the criteria, several results were qualified as non-detected estimated (UJ).
Were surrogate recoveries within project acceptance limits?		•		Due to low surrogate recovery, VOC results in samples G6M-07-01X-FAL20 and G6M-13-02X-FAL20 were qualified as detected estimated (J) with low bias (-) or as non-detected estimated (UJ).
Was a method blank prepared and analyzed with each batch?	•			
Were field blanks (EBs or FBs) submitted with these samples?	•			A trip blank (TB) was submitted with these samples.
Were target analytes reported in the field blank(s) less than MDL?		•		2-Butanone and Acetone were detected in the trip blank. Due to trip blank contamination, 1 acetone result was qualified as non-detect (U).
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?		•		Although chloroethane LCSD RPD was outside criteria, the associated sample results were not detected therefore no data were qualified.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?	•			Although ADR flagged acetone and vinyl chloride difference as outside criteria, QAPP states a difference criteria limit of ±2X LOQ, therefore no data were qualified.
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 rejected during the verification process?		•		All data is acceptable as reported or as qualified during data validation.

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 CCVs 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?			•	A field blank was not 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?		•		MS/MSD not performed.
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 rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?		•		A field blank was not 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?		•		MS/MSD not performed.
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 rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?		•		A field blank was not 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?			•	Only a LCS was performed.
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 rejected during the verification process?		•		All data is acceptable as reported.

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020
Field Duplicates for SDG: 6801902591

Location	Analysis
G6M-13-02X	A2320B

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Alkalinity, Total (as CaCO3)	78.0	71.0	10.0	9.40	30	OK	NA

Location	Analysis
G6M-13-02X	E353.2

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Nitrate-Nitrite (as N)	ND	ND	0.100	NA	30	NA	OK

Location	Analysis
G6M-13-02X	RSK175

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Ethane	1.00	1.00	1.10	0.00	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Ethene	ND	1.40	1.00	NA	30	NA	1.4
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Methane	18000	19000	390	5.41	30	OK	NA

Location	Analysis
G6M-13-02X	SW6010C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Iron (FLDFLT)	2500	2400	50.0	4.08	30	OK	NA
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Manganese (FLDFLT)	540	500	10.0	7.69	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, Fall 2020
Field Duplicates for SDG: 6801902591

Location	Analysis
G6M-13-02X	SW6020A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Arsenic (FLDFLT)	10.0	11.0	3.00	9.52	30	NA	OK

Location	Analysis
G6M-13-02X	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-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	1,1,1,2-Tetrachloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	1,1,1-Trichloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	1,1,2,2-Tetrachloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	1,1,2-Trichloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	1,1-Dichloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	1,1-Dichloroethene	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	1,1-Dichloropropene	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	1,2,3-Trichlorobenzene	ND	ND	5.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	1,2,3-Trichloropropane	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	1,2,4-Trichlorobenzene	ND	ND	5.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	1,2,4-Trimethylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	1,2-Dibromo-3-chloropropane	ND	ND	5.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	1,2-Dibromoethane (EDB)	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	1,2-Dichlorobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	1,2-Dichloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	1,2-Dichloroethene	9.70	10.0	2.00	3.05	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	1,2-Dichloropropane	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	1,3,5-Trimethylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	1,3-Dichlorobenzene	ND	ND	1.00	NA	30	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020
Field Duplicates for SDG: 6801902591

Location	Analysis
G6M-13-02X	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-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	1,3-Dichloropropane	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	1,4-Dichlorobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	2,2-Dichloropropane	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	2-Butanone (MEK)	ND	ND	10.0	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	2-Chlorotoluene	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	2-Hexanone	ND	ND	10.0	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	4-Chlorotoluene	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	4-Methyl-2-pentanone (MIBK)	ND	ND	10.0	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Acetone	ND	11.0	10.0	NA	30	NA	11.0
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Benzene	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Bromobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Bromochloromethane	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Bromodichloromethane	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Bromoform	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Bromomethane	ND	ND	5.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Carbon disulfide	0.460	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Carbon tetrachloride	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Chlorobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Chloroethane	ND	ND	5.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Chloroform	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Chloromethane	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	cis-1,2-Dichloroethene	8.90	9.40	1.00	5.46	30	OK	NA
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	cis-1,3-Dichloropropene	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Dibromochloromethane	ND	ND	1.00	NA	30	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020
Field Duplicates for SDG: 6801902591

Location	Analysis
G6M-13-02X	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-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Dibromomethane	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Dichlorodifluoromethane	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Ethylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Hexachlorobutadiene	ND	ND	5.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Isopropylbenzene (Cumene)	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	m,p-Xylene	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Methyl tert-butyl ether (MTBE)	ND	ND	10.0	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Methylene chloride	ND	ND	5.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	n-Butylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	n-Propylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Naphthalene	ND	ND	5.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	o-Xylene	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	p-Cymene (p-Isopropyltoluene)	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	sec-Butylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Styrene	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	tert-Butylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Tetrachloroethene (PCE)	14.0	17.0	1.00	19.4	30	OK	NA
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Toluene	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	trans-1,2-Dichloroethene	0.740	0.680	1.00	8.45	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	trans-1,3-Dichloropropene	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Trichloroethene (TCE)	8.40	10.0	1.00	17.4	30	OK	NA
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Trichlorofluoromethane	ND	ND	1.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Vinyl acetate	ND	ND	2.00	NA	30	NA	OK
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Vinyl chloride	3.80	4.90	1.00	25.3	30	NA	1.1

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020
Field Duplicates for SDG: 6801902591

Location	Analysis
G6M-13-02X	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-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Xylenes, Total	ND	ND	2.00	NA	30	NA	OK

Location	Analysis
G6M-13-02X	SW9034

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Sulfide	ND	ND	0.930	NA	30	NA	OK

Location	Analysis
G6M-13-02X	SW9056A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Sulfate	7.30	7.00	1.00	4.20	30	OK	NA

Location	Analysis
G6M-13-02X	SW9060A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-13-02X-FAL20 / AOC50-DUP04-FAL20	680-190259-4 / 680-190259-1	Total Organic Carbon	4.50	4.80	1.00	6.45	30	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

February 19, 2021

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 12, 2020. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #49656:

SDG #	Fraction
680-190098-1, 680-190481-1	Volatiles, Dissolved Metals, Wet Chemistry, 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:

- Former Fort Devens Army Installation – BRAC Legacy Sites, Devens, MA; October 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

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

110 pages-ADV two weeks Attachment 1

Stage 2B EQUIS EDD

LDC #49656 (Arcadis-Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(3) DATE DUE	VOA (8260B)		(3)Diss Metals (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	680-190098-1	11/12/20	11/30/20	11	0	10	0	6	0	6	0	6	0	6	0	6	0	6	0																		
B	680-190481-1	11/12/20	11/30/20	2	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-																		
Total	J/PG			13	0	11	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	0	0	60

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

L:\Arcadis\Fort Devens\49656ST.wpd

Data Validation Report for 6801900981

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020
SDG:	6801900981
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
Data Review Contractor:	Laboratory Data Consultants, Inc.
Data Review Level:	2B
Primary Data Reviewer:	Kevin Kha, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	November 30, 2020

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	E353.2	RSK175	SW6010C - Dissolved	SW6020A - Dissolved	SW8260B	SW9034	SW9056A	SW9060A
AOC50-DUP01-FAL20	680-190098-1	Water	Field Duplicate/FD				X	X	X			
AOC50-DUP02-FAL20	680-190098-2	Water	Field Duplicate/FD	X	X	X	X	X	X	X	X	X
G6M-02-08X-FAL20	680-190098-3	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-02-11X-FAL20	680-190098-4	Water	Field Sample/N				X	X	X			
G6M-04-06X-FAL20	680-190098-6	Water	Field Sample/N				X	X	X			
G6M-04-07X-FAL20	680-190098-7	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-04-10A-FAL20	680-190098-8	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-04-10X-FAL20	680-190098-9	Water	Field Sample/N						X			
G6M-07-02X-FAL20	680-190098-10	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-13-01X-FAL20	680-190098-11	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-95-20X-FAL20	680-190098-12	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 and were reported under sample delivery group (SDG) 6801900981. 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
- Extracted Internal Standard
- Field Duplicate RPD
- Interference Check Sample A
- Interference Check Sample A - Negative
- Interference Check Sample AB
- Lab Blank
- LCS Recovery
- LCS RPD
- Prep Hold Time
- Surrogate
- Test Hold Time

Results of the ADR process were subsequently reviewed and updated as applicable by the data review chemists identified on the signature page. Quality control elements that were not included in the electronic deliverable were reviewed manually and findings are documented within this report. Summaries of findings and associated qualified results are documented throughout this report.

A total of 39 results (4.72%) out of the 826 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. 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
E353.2	No additional comments; see Checklist for detail.
SW6010C	No additional comments; see Checklist for detail.
SW9060A	No additional comments; see Checklist for detail.
SW9056A	No additional comments; see Checklist for detail.
A2320B	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
SW9034	No additional comments; see Checklist for detail.
RSK175	No additional comments; see Checklist for detail.
SW8260B	No additional comments; see Checklist for detail.



November 30, 2020

Reviewed by Kevin Kha, 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 a minimum of 10% of the reported sample results and method quality control data between the two deliverables.



March 16, 2021

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 A2320B, 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
CCB28051407417 (CB)/ CCB28051407417	Alkalinity, Total (as CaCO3)	4.180	< 3.1	< 10	mg/l	U/None	B2	
CCB28051407429 (CB)/ CCB28051407429	Alkalinity, Total (as CaCO3)	4.210	< 3.1	< 10	mg/l	U/None	B2	
CCB28051421130 (CB)/ CCB28051421130	Alkalinity, Total (as CaCO3)	3.650	< 3.1	< 10	mg/l	U/None	B2	
CCB28051421156 (CB)/ CCB28051421156	Alkalinity, Total (as CaCO3)	4.290	< 3.1	< 10	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.

No results associated with this QC element required qualification.

Quality Control Outliers for test method A2320B, 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
MB2805140745 (LB)/ MB2805140745	Alkalinity, Total (as CaCO3)	3.800	< 3.1	< 10	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.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW6010C, Dissolved, Calibration Blank

The purpose of calibration blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in calibration blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
CCB680640430119 (CB)/ CCB680640430119	Iron	28.50	< 17	< 50	ug/l	U/None	B2	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW6010C, Dissolved, Lab Blank

The purpose of laboratory blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in laboratory blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
MB6806393831A (LB)/ MB6806393831A	Iron	21.60	< 17	< 50	ug/l	U/None	L	
MB6806401231A (LB)/ MB6806401231A	Manganese	1.070	< 1	< 10	ug/l	U/None	L	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Lab Blank for SW6010C, Dissolved

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-06X-FAL20	N	Iron	86.0	86.0	86.0 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 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
CCVIS6806406362 (CV)/ CCVIS6806406362	Bromomethane	75.60	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6806406992 (CV)/ CCVIS6806406992	Bromomethane	63.20	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6806406992 (CV)/ CCVIS6806406992	Acetone	75.20	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6806406992 (CV)/ CCVIS6806406992	Naphthalene	78.60	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-FAL20	FD	Acetone	10.0	10.0	10.0 J	-	ug/l	V2
AOC50-DUP01-FAL20	FD	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2
AOC50-DUP01-FAL20	FD	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
AOC50-DUP02-FAL20	FD	Acetone	10.0	90.0	90.0 J	-	ug/l	V2
AOC50-DUP02-FAL20	FD	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2
AOC50-DUP02-FAL20	FD	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-02-08X-FAL20	N	Bromomethane	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-02-11X-FAL20	N	Acetone	10.0	10.0 U	10.0 UJ		ug/l	V2
G6M-02-11X-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2
G6M-02-11X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-04-06X-FAL20	N	Acetone	10.0	10.0 U	10.0 UJ		ug/l	V2
G6M-04-06X-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2
G6M-04-06X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-04-07X-FAL20	N	Acetone	10.0	10.0 U	10.0 UJ		ug/l	V2
G6M-04-07X-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2
G6M-04-07X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-04-10A-FAL20	N	Acetone	10.0	10.0 U	10.0 UJ		ug/l	V2
G6M-04-10A-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2
G6M-04-10A-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-04-10X-FAL20	N	Acetone	10.0	10.0 U	10.0 UJ		ug/l	V2
G6M-04-10X-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2
G6M-04-10X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-07-02X-FAL20	N	Acetone	10.0	91.0	91.0 J	-	ug/l	V2
G6M-07-02X-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2
G6M-07-02X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-13-01X-FAL20	N	Bromomethane	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-95-20X-FAL20	N	Acetone	10.0	12.0	12.0 J	-	ug/l	V2
G6M-95-20X-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 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
G6M-95-20X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 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, 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
PZJ2602 (CV)	Chloroethane	79.90	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-FAL20	FD	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	V2
AOC50-DUP02-FAL20	FD	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-02-11X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-04-06X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-04-07X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-04-10A-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-04-10X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-07-02X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-95-20X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 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 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
LCSD6806406994 (BD)/ LCSD6806406994	Dichlorodifluoromethane	28.30	< 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 SW9060A, 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
MB28051481135 (LB)/ MB28051481135	Total Organic Carbon	1.190	< 0.35	< 1	mg/l	U/None	L	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Table of All Qualified Results

Test Method: SW6010C	Extraction Method: Dissolved							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-06X-FAL20	N	Iron	86.0	86.0	86.0 U		ug/l	L

Test Method: SW8260B	Extraction Method: SW5030B							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP01-FAL20	FD	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	V2
AOC50-DUP01-FAL20	FD	Acetone	10.0	10.0	10.0 J	-	ug/l	V2
AOC50-DUP01-FAL20	FD	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2
AOC50-DUP01-FAL20	FD	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
AOC50-DUP02-FAL20	FD	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	V2
AOC50-DUP02-FAL20	FD	Acetone	10.0	90.0	90.0 J	-	ug/l	V2
AOC50-DUP02-FAL20	FD	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2
AOC50-DUP02-FAL20	FD	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-02-08X-FAL20	N	Bromomethane	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-02-11X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-02-11X-FAL20	N	Acetone	10.0	10.0 U	10.0 UJ		ug/l	V2
G6M-02-11X-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2
G6M-02-11X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-04-06X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-04-06X-FAL20	N	Acetone	10.0	10.0 U	10.0 UJ		ug/l	V2
G6M-04-06X-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2
G6M-04-06X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-04-07X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-04-07X-FAL20	N	Acetone	10.0	10.0 U	10.0 UJ		ug/l	V2
G6M-04-07X-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2
G6M-04-07X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-04-10A-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-04-10A-FAL20	N	Acetone	10.0	10.0 U	10.0 UJ		ug/l	V2
G6M-04-10A-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2
G6M-04-10A-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-04-10X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-04-10X-FAL20	N	Acetone	10.0	10.0 U	10.0 UJ		ug/l	V2
G6M-04-10X-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2
G6M-04-10X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-07-02X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-07-02X-FAL20	N	Acetone	10.0	91.0	91.0 J	-	ug/l	V2
G6M-07-02X-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2
G6M-07-02X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-13-01X-FAL20	N	Bromomethane	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-95-20X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-95-20X-FAL20	N	Acetone	10.0	12.0	12.0 J	-	ug/l	V2
G6M-95-20X-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2

Table of All Qualified Results

Test Method: SW8260B	Extraction Method: SW5030B							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-95-20X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 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.

Table of Results with Modified Qualifiers

Modified Qualifiers for test method RSK175

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
AOC50-DUP02-FAL20	FD	Methane	390	6600	6600 J	6600	
G6M-02-08X-FAL20	N	Methane	390	12000	12000 J	12000	
G6M-04-07X-FAL20	N	Methane	390	540	540 J	540	
G6M-04-10A-FAL20	N	Methane	390	10000	10000 J	10000	
G6M-07-02X-FAL20	N	Methane	390	6600	6600 J	6600	
G6M-13-01X-FAL20	N	Methane	390	3100	3100 J	3100	

Modified Qualifiers for test method SW6010C, Dissolved

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-04-06X-FAL20	N	Iron	86.0	86.0	86.0 J	86.0 U	L

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
AOC50-DUP01-FAL20	FD	Chloroethane	5.00	5.00 U	5.00 U	5.00 UJ	V2
AOC50-DUP02-FAL20	FD	Chloroethane	5.00	5.00 U	5.00 U	5.00 UJ	V2
G6M-02-11X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 U	5.00 UJ	V2
G6M-04-06X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 U	5.00 UJ	V2
G6M-04-07X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 U	5.00 UJ	V2
G6M-04-10A-FAL20	N	Chloroethane	5.00	5.00 U	5.00 U	5.00 UJ	V2
G6M-04-10X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 U	5.00 UJ	V2
G6M-07-02X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 U	5.00 UJ	V2
G6M-95-20X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 U	5.00 UJ	V2

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Reason Code Definitions

Code	Definition
B2	CCB
L	Lab Blank
TR	Trace Level Detect
V2	CCV
Z	LCS RPD

Flag Code and Definitions

Flag	Definition
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.
J	Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
B	Blank contamination: The analyte was found in an associated blank above one half the RL, as well as in the sample.
UB	The analyte was also detected in an associated laboratory or field blank at a concentration comparable to the concentration in the sample. The reported result has been requalified as not detected.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team (which should include a project chemist), but exclusion of the data is recommended.

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 CCVs 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?		•		Alkalinity was detected in the method and calibration blanks. The associated sample results were significantly greater than the concentrations found in the blanks, therefore no data were qualified.
Were target analytes reported in the field blank(s) less than MDL?			•	A field blank was not 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?			•	Only a LCS was performed.
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 rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?			•	A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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 rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs run at the required frequency and within acceptance criteria?	•			
Were surrogate recoveries within project acceptance limits?			•	Surrogates not required by the method.
Was a method blank prepared and analyzed with each batch?	•			
Were field blanks (EBs or FBs) submitted with these samples?		•		A field blank was not submitted with these samples.
Were target analytes reported in the field blank(s) less than MDL?			•	A field blank was not 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?		•		MS/MSD not performed.
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 rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?		•		Due to method blank contamination, 1 iron result was qualified as non-detected (U).
Were field blanks (EBs or FBs) submitted with these samples?		•		A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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 rejected during the verification process?		•		All data is acceptable or as qualified during data validation.

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 CCVs 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?		•		A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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 rejected during the verification process?		•		All data is acceptable as reported.

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?	•			
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 CCVs run at the required frequency and within acceptance criteria?		•		Due to CCV %R below criteria, several results were qualified as detected estimated (J) with a low bias (-) or as non-detected estimated (UJ) as applicable.
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?		•		A field blank was not submitted with these samples.
Were target analytes reported in the field blank(s) less than MDL?			•	A field blank was not 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?		•		Although dichlorodifluoromethane LCSD RPD was not within criteria, the associated sample results were non-detected therefore no data were qualified.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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 rejected during the verification process?		•		All data is acceptable as reported or as qualified during data validation.

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 CCVs 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?			•	A field blank was not 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?		•		MS/MSD not performed.
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 rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?			•	A field blank was not 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?		•		MS/MSD not performed.
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 rejected during the verification process?		•		All data is acceptable as reported.

Data Validation Report for 6801900981

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 CCVs 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?		•		Although TOC was detected in the method blank, the associated sample results were significantly greater than the concentration found in the blank, therefore no data were qualified.
Were field blanks (EBs or FBs) submitted with these samples?		•		A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed
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 rejected during the verification process?		•		All data is acceptable as reported.

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020
Field Duplicates for SDG: 6801900981

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-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Alkalinity, Total (as CaCO3)	190	200	10.0	5.13	30	OK	NA

Location	Analysis
G6M-07-02X	E353.2

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Nitrate-Nitrite (as N)	0.170	0.210	0.100	21.1	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-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Ethane	1.30	1.20	1.10	8.00	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Ethene	2.00	1.90	1.00	5.13	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Methane	6600	6600	390	0.00	30	OK	NA

Location	Analysis
G6M-07-02X	SW6010C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Iron (FLDFLT)	220000	220000	50.0	0.00	30	OK	NA
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Manganese (FLDFLT)	4500	4500	10.0	0.00	30	OK	NA

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Field Duplicate Report By SDG

Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020
Field Duplicates for SDG: 6801900981

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-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Arsenic (FLDFLT)	42.0	45.0	3.00	6.90	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-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	1,1,1,2-Tetrachloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	1,1,1-Trichloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	1,1,2,2-Tetrachloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	1,1,2-Trichloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	1,1-Dichloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	1,1-Dichloroethene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	1,1-Dichloropropene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	1,2,3-Trichlorobenzene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	1,2,3-Trichloropropane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	1,2,4-Trichlorobenzene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	1,2,4-Trimethylbenzene	0.520	0.600	1.00	14.3	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	1,2-Dibromo-3-chloropropane	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	1,2-Dibromoethane (EDB)	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	1,2-Dichlorobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	1,2-Dichloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	1,2-Dichloroethene	40.0	41.0	2.00	2.47	30	OK	NA
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	1,2-Dichloropropane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	1,3,5-Trimethylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	1,3-Dichlorobenzene	ND	ND	1.00	NA	30	NA	OK

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Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020
Field Duplicates for SDG: 6801900981

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-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	1,3-Dichloropropane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	1,4-Dichlorobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	2,2-Dichloropropane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	2-Butanone (MEK)	41.0	43.0	10.0	4.76	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	2-Chlorotoluene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	2-Hexanone	10.0	11.0	10.0	9.52	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	4-Chlorotoluene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	4-Methyl-2-pentanone (MIBK)	ND	ND	10.0	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Acetone	91.0	90.0	10.0	1.10	30	OK	NA
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Benzene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Bromobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Bromochloromethane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Bromodichloromethane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Bromoform	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Bromomethane	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Carbon disulfide	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Carbon tetrachloride	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Chlorobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Chloroethane	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Chloroform	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Chloromethane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	cis-1,2-Dichloroethene	40.0	41.0	1.00	2.47	30	OK	NA
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	cis-1,3-Dichloropropene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Dibromochloromethane	ND	ND	1.00	NA	30	NA	OK

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Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020
Field Duplicates for SDG: 6801900981

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-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Dibromomethane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Dichlorodifluoromethane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Ethylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Hexachlorobutadiene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Isopropylbenzene (Cumene)	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	m,p-Xylene	0.600	0.590	1.00	1.68	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Methyl tert-butyl ether (MTBE)	ND	ND	10.0	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Methylene chloride	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	n-Butylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	n-Propylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Naphthalene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	o-Xylene	0.340	0.370	1.00	8.45	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	p-Cymene (p-Isopropyltoluene)	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	sec-Butylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Styrene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	tert-Butylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Tetrachloroethene (PCE)	1.10	1.20	1.00	8.70	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Toluene	0.610	0.650	1.00	6.35	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	trans-1,2-Dichloroethene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	trans-1,3-Dichloropropene	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Trichloroethene (TCE)	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Trichlorofluoromethane	ND	ND	1.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Vinyl acetate	ND	ND	2.00	NA	30	NA	OK
G6M-07-02X-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Vinyl chloride	1.70	1.60	1.00	6.06	30	NA	OK

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Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020
Field Duplicates for SDG: 6801900981

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-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Xylenes, Total	0.940	0.960	2.00	2.11	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-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Sulfide	ND	ND	0.810	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-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Sulfate	ND	ND	5.00	NA	30	NA	OK

Location	Analysis
G6M-07-02X	SW9060A

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-FAL20 / AOC50-DUP02-FAL20	680-190098-10 / 680-190098-2	Total Organic Carbon	230	230	5.00	0.00	30	OK	NA

Location	Analysis
G6M-95-20X	SW6010C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Iron (FLDFLT)	54000	53000	50.0	1.87	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, Fall 2020
Field Duplicates for SDG: 6801900981

Location	Analysis
G6M-95-20X	SW6010C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Manganese (FLDFLT)	2200	2200	10.0	0.00	30	OK	NA

Location	Analysis
G6M-95-20X	SW6020A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Arsenic (FLDFLT)	87.0	91.0	3.00	4.49	30	OK	NA

Location	Analysis
G6M-95-20X	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-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	1,1,1,2-Tetrachloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	1,1,1-Trichloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	1,1,2,2-Tetrachloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	1,1,2-Trichloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	1,1-Dichloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	1,1-Dichloroethene	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	1,1-Dichloropropene	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	1,2,3-Trichlorobenzene	ND	ND	5.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	1,2,3-Trichloropropane	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	1,2,4-Trichlorobenzene	ND	ND	5.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	1,2,4-Trimethylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	1,2-Dibromo-3-chloropropane	ND	ND	5.00	NA	30	NA	OK

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Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020
Field Duplicates for SDG: 6801900981

Location	Analysis
G6M-95-20X	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-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	1,2-Dibromoethane (EDB)	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	1,2-Dichlorobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	1,2-Dichloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	1,2-Dichloroethene	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	1,2-Dichloropropane	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	1,3,5-Trimethylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	1,3-Dichlorobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	1,3-Dichloropropane	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	1,4-Dichlorobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	2,2-Dichloropropane	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	2-Butanone (MEK)	12.0	11.0	10.0	8.70	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	2-Chlorotoluene	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	2-Hexanone	14.0	15.0	10.0	6.90	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	4-Chlorotoluene	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	4-Methyl-2-pentanone (MIBK)	ND	ND	10.0	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Acetone	12.0	10.0	10.0	18.2	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Benzene	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Bromobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Bromochloromethane	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Bromodichloromethane	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Bromoform	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Bromomethane	ND	ND	5.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Carbon disulfide	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Carbon tetrachloride	ND	ND	1.00	NA	30	NA	OK

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Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020
Field Duplicates for SDG: 6801900981

Location	Analysis
G6M-95-20X	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-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Chlorobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Chloroethane	ND	ND	5.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Chloroform	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Chloromethane	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	cis-1,2-Dichloroethene	0.410	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	cis-1,3-Dichloropropene	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Dibromochloromethane	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Dibromomethane	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Dichlorodifluoromethane	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Ethylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Hexachlorobutadiene	ND	ND	5.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Isopropylbenzene (Cumene)	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	m,p-Xylene	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Methyl tert-butyl ether (MTBE)	ND	ND	10.0	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Methylene chloride	ND	ND	5.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	n-Butylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	n-Propylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Naphthalene	ND	ND	5.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	o-Xylene	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	p-Cymene (p-Isopropyltoluene)	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	sec-Butylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Styrene	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	tert-Butylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Tetrachloroethene (PCE)	ND	ND	1.00	NA	30	NA	OK

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Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020
Field Duplicates for SDG: 6801900981

Location	Analysis
G6M-95-20X	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-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Toluene	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	trans-1,2-Dichloroethene	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	trans-1,3-Dichloropropene	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Trichloroethene (TCE)	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Trichlorofluoromethane	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Vinyl acetate	ND	ND	2.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Vinyl chloride	ND	ND	1.00	NA	30	NA	OK
G6M-95-20X-FAL20 / AOC50-DUP01-FAL20	680-190098-12 / 680-190098-1	Xylenes, Total	ND	ND	2.00	NA	30	NA	OK

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LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

February 19, 2021

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 12, 2020. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #49656:

SDG #	Fraction
680-190098-1, 680-190481-1	Volatiles, Dissolved Metals, Wet Chemistry, 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:

- Former Fort Devens Army Installation – BRAC Legacy Sites, Devens, MA; October 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

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

110 pages-ADV two weeks Attachment 1

Stage 2B EQUIS EDD

LDC #49656 (Arcadis-Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(3) DATE DUE	VOA (8260B)		(3)Diss Metals (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	680-190098-1	11/12/20	11/30/20	11	0	10	0	6	0	6	0	6	0	6	0	6	0	6	0																		
B	680-190481-1	11/12/20	11/30/20	2	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-																		
Total	J/PG			13	0	11	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	0	0	60

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

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Data Validation Report for 6801904811

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020
SDG:	6801904811
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:	Kevin Kha, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	November 30, 2020

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	SW6010C - Dissolved	SW6020A - Dissolved	SW8260B
AOC50-TB7-FAL20	680-190481-3	Water	Trip Blank/TB			X
G6M-03-10X-FAL20	680-190481-2	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) 6801904811. 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
- Extracted Internal Standard
- 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 5 results (3.60%) out of the 139 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. 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

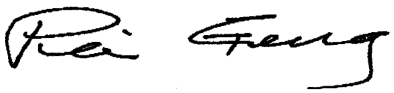
Analytical Method	Data Reviewer Comment
SW6020A	No additional comments; see Checklist for detail.
SW6010C	No additional comments; see Checklist for detail.
SW8260B	No additional comments; see Checklist for detail.



November 30, 2020

Reviewed by Kevin Kha, 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 a minimum of 10% of the reported sample results and method quality control data between the two deliverables.



Reviewed by Pei Geng, Senior Scientist, Laboratory Data Consultants, Inc.

March 16, 2021

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

Quality Control Outliers for test method SW6010C, Dissolved, Lab Blank

The purpose of laboratory blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in laboratory blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
MB6806411441A (LB)/ MB6806411441A	Manganese	1.640	< 1	< 10	ug/l	U/None	L	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

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
CCVC68064255229 (CV)/ CCVC68064255229	Dichlorodifluoromethane	47.60	50 - 150	50 - 150	percent	J/UJ	V2	
CCVIS6806420143 (CV)/ CCVIS6806420143	Dichlorodifluoromethane	75.40	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6806420143 (CV)/ CCVIS6806420143	Bromomethane	76.20	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6806425522 (CV)/ CCVIS6806425522	Bromoform	76.60	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-TB7-FAL20	TB	Dichlorodifluoromethane	1.00	1.00 U Q	1.00 UJ		ug/l	V2
AOC50-TB7-FAL20	TB	Bromoform	1.00	1.00 U	1.00 U		ug/l	V2
G6M-03-10X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ		ug/l	V2
G6M-03-10X-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 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, Initial 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
ICJ2615 (IV)	Chloromethane	127.6	80 - 120	80 - 120	percent	J/None	V1	

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, 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
MB6806425528 (LB)/ MB6806425528	cis-1,2-Dichloroethene	0.7870	< 0.41	< 1	ug/l	U/None	L	
MB6806425528 (LB)/ MB6806425528	1,2-Dichloroethene	0.7870	< 0.74	< 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.

Qualified Results associated with the Lab Blank for SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-TB7-FAL20	TB	cis-1,2-Dichloroethene	1.00	0.690 J B	1.00 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 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
LCSD6806420145 (BD)/ LCSD6806420145	Chloroethane	141.6	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 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
LCSD6806420145 (BD)/ LCSD6806420145	2-Hexanone	20.84	< 20	< 20	rpd	J/None	Z	
LCSD6806420145 (BD)/ LCSD6806420145	4-Methyl-2-pentanone (MIBK)	21.94	< 20	< 20	rpd	J/None	Z	
LCSD6806420145 (BD)/ LCSD6806420145	Bromomethane	33.51	< 20	< 20	rpd	J/None	Z	
LCSD6806420145 (BD)/ LCSD6806420145	Chloroethane	55.37	< 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, Surrogate

Method performance for individual samples is demonstrated through spiking activities. All samples are spiked with surrogate compounds prior to sample preparation. The sample itself may produce effects due to such factors as interferences and high concentrations of analytes. Summary forms were evaluated and compared to electronic data deliverables. Surrogate results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
G6M-03-10X-FAL20 (N)/ 680-190481-2	1-Bromo-4-fluorobenzene (4-Bromofluorobenzene)	122.3	85 - 114	10 - 114	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.

No results associated with this QC element required qualification.

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
AOC50-TB7-FAL20 (TB)/ 680-190481-3		14.89	< 14	< 28	days	J/UJ	H1	Test Exceeds UWL
AOC50-TB7-FAL20 (TB)/ 680-190506-2		14.89	< 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.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW8260B, Trip Blank

The purpose of trip blanks is to determine the existence and magnitude of cross-contamination problems resulting from the shipping of samples. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in trip blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
AOC50-TB7-FAL20 (TB)/ 680-190481-3	cis-1,2-Dichloroethene	0.6900	< 0.41	< 1	ug/l	U/None	T	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Table of All Qualified Results

Test Method: SW8260B	**Extraction Method: SW5030B**							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-TB7-FAL20	TB	Dichlorodifluoromethane	1.00	1.00 U Q	1.00 UJ		ug/l	V2
AOC50-TB7-FAL20	TB	Bromoform	1.00	1.00 U	1.00 U		ug/l	V2
AOC50-TB7-FAL20	TB	cis-1,2-Dichloroethene	1.00	0.690 J B	1.00 U		ug/l	L
G6M-03-10X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ		ug/l	V2
G6M-03-10X-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 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.

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
AOC50-TB7-FAL20	TB	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	1,1,2-Trichloroethane	1.00	0.500 U	0.500 UJ	0.500 U	
AOC50-TB7-FAL20	TB	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
AOC50-TB7-FAL20	TB	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
AOC50-TB7-FAL20	TB	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ	2.00 U	
AOC50-TB7-FAL20	TB	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	1,2-Dichloroethene	2.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
AOC50-TB7-FAL20	TB	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ	10.0 U	
AOC50-TB7-FAL20	TB	2-Chlorotoluene	1.00	0.500 U	0.500 UJ	0.500 U	
AOC50-TB7-FAL20	TB	2-Hexanone	10.0	5.00 U	5.00 UJ	5.00 U	
AOC50-TB7-FAL20	TB	4-Chlorotoluene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ	5.00 U	
AOC50-TB7-FAL20	TB	Acetone	10.0	10.0 U	10.0 UJ	10.0 U	
AOC50-TB7-FAL20	TB	Benzene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	Bromobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	Bromochloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	Bromodichloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	Bromoform	1.00	1.00 U	1.00 UJ	1.00 U	V2
AOC50-TB7-FAL20	TB	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
AOC50-TB7-FAL20	TB	Carbon disulfide	2.00	2.00 U	2.00 UJ	2.00 U	
AOC50-TB7-FAL20	TB	Carbon tetrachloride	1.00	0.500 U	0.500 UJ	0.500 U	
AOC50-TB7-FAL20	TB	Chlorobenzene	1.00	0.500 U	0.500 UJ	0.500 U	
AOC50-TB7-FAL20	TB	Chloroethane	5.00	5.00 U	5.00 UJ	5.00 U	
AOC50-TB7-FAL20	TB	Chloroform	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	Chloromethane	1.00	1.00 U	1.00 UJ	1.00 U	

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260B							
FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
AOC50-TB7-FAL20	TB	cis-1,2-Dichloroethene	1.00	0.690 J B	1.00 UJ	1.00 U	L
AOC50-TB7-FAL20	TB	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	Dibromochloromethane	1.00	0.500 U	0.500 UJ	0.500 U	
AOC50-TB7-FAL20	TB	Dibromomethane	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	Dichlorodifluoromethane	1.00	1.00 U Q	1.00 UJ	1.00 UJ	V2
AOC50-TB7-FAL20	TB	Ethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
AOC50-TB7-FAL20	TB	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ	5.00 U	
AOC50-TB7-FAL20	TB	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	m,p-Xylene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ	0.500 U	
AOC50-TB7-FAL20	TB	Methylene chloride	5.00	5.00 U	5.00 UJ	5.00 U	
AOC50-TB7-FAL20	TB	Naphthalene	5.00	5.00 U	5.00 UJ	5.00 U	
AOC50-TB7-FAL20	TB	n-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	n-Propylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	o-Xylene	1.00	0.500 U	0.500 UJ	0.500 U	
AOC50-TB7-FAL20	TB	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	sec-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	Styrene	1.00	0.500 U	0.500 UJ	0.500 U	
AOC50-TB7-FAL20	TB	tert-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	Tetrachloroethene (PCE)	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	Toluene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	trans-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	Trichloroethene (TCE)	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	Vinyl acetate	2.00	2.00 U	2.00 UJ	2.00 U	
AOC50-TB7-FAL20	TB	Vinyl chloride	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-TB7-FAL20	TB	Xylenes, Total	2.00	0.500 U	0.500 UJ	0.500 U	

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.
L	Lab Blank
T	Trip Blank
TR	Trace Level Detect
V1	ICV
V2	CCV
Z	LCS RPD

Flag Code and Definitions

Flag	Definition
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.
J	Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
B	Blank contamination: The analyte was found in an associated blank above one half the RL, as well as in the sample.
UB	The analyte was also detected in an associated laboratory or field blank at a concentration comparable to the concentration in the sample. The reported result has been requalified as not detected.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team (which should include a project chemist), but exclusion of the data is recommended.

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 CCVs 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?		•		Although manganese was detected in the method blank, the associated sample result was significantly greater than the concentration found in the method blank, therefore no data were qualified.
Were field blanks (EBs or FBs) submitted with these samples?		•		A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?		•		A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

Data Validation Report for 6801904811

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?	•			Although ADR flagged sample AOC50-TB7-FAL20 as analyzed outside of hold time, the sample was analyzed within the 14th day of hold, therefore no sample qualification was necessary.
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?		•		Chloromethane %R was above the criteria, however the associated sample results were non-detect, therefore no sample qualification was necessary.
Were CCVs run at the required frequency and within acceptance criteria?		•		Due to CCV %R below the criteria, several results were qualified as non-detected estimated (UJ).
Were surrogate recoveries within project acceptance limits?		•		Although surrogate recovery in sample G6M-03-10X-FAL20 was above criteria, the associated sample results were non-detected, therefore no sample qualification was necessary.
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?		•		Although trip blank AOC50-TB7-FAL20 had detections for cis-1,2-dichloroethene, the associated sample results were non-detected, therefore no sample qualification was necessary.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?		•		Although chloroethane LCS recovery was above the criteria, the associated sample results were non-detected, therefore no sample qualification was necessary.
Was the LCS/LCSD RPD within project acceptance limits?		•		Although LCSD RPD was above the criteria for several analytes, the associated sample results were non-detected, therefore no sample qualification was necessary.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
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?	•			

Review Questions

Method: SW8260B (Volatile Organic Compounds by Capillary GC/MS)				
Review Questions	Yes	No	NA	Comment
Were any data rejected during the verification process?		•		All data is acceptable as reported or as qualified during data validation.

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

February 19, 2021

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 16, 2020. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #49688:

SDG #	Fraction
680-190226-1, 680-190296-1 680-190373-1, 680-190506-1	Volatiles, Dissolved Metals, Wet Chemistry, 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:

- Former Fort Devens Army Installation – BRAC Legacy Sites, Devens, MA; October 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

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

194 pages-ADV 2 WEEK TAT Attachment 1

Stage 2B EQUIS EDD

LDC #49688 (Arcadis-Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(3) DATE DUE	VOA (8260B)		(3)Diss Metals (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	680-190226-1	11/16/20	12/02/20	8	0	6	0	1	0	1	0	1	0	1	0	1	0	1	0																		
B	680-190296-1	11/16/20	12/02/20	9	0	7	0	1	0	1	0	1	0	1	0	1	0	1	0																		
C	680-190373-1	11/16/20	12/02/20	4	0	3	0	1	0	1	0	1	0	1	0	1	0	1	0																		
D	680-190506-1	11/16/20	12/02/20	2	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-																		
Total	T/PG			23	0	17	0	3	0	3	0	3	0	3	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

L:\Arcadis\Fort Devens\49688ST.wpd

Data Validation Report for 6801902261

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020
SDG:	6801902261
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
Data Review Contractor:	Laboratory Data Consultants, Inc.
Data Review Level:	2B
Primary Data Reviewer:	Kevin Kha, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	December 02, 2020

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	E353.2	RSK175	SW6010C - Dissolved	SW6020A - Dissolved	SW8260B	SW9034	SW9056A	SW9060A
AOC50-TB2-FAL20	680-190226-2	Water	Trip Blank/TB						X			
G6M-02-12X-FAL20	680-190226-1	Water	Field Sample/N				X	X	X			
G6M-04-13X-FAL20	680-190226-3	Water	Field Sample/N						X			
G6M-18-02-FAL20	680-190226-4	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-97-28X-FAL20	680-190226-5	Water	Field Sample/N				X	X	X			
MW-3-FAL20	680-190226-6	Water	Field Sample/N				X	X	X			
MW-7-FAL20	680-190226-7	Water	Field Sample/N				X	X	X			
XSA-12-95X-FAL20	680-190226-8	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 and were reported under sample delivery group (SDG) 6801902261. 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
- Extracted Internal Standard
- 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 274 results (48.07%) out of the 570 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. 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.
SW6010C	No additional comments; see Checklist for detail.
SW9056A	No additional comments; see Checklist for detail.
SW9060A	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
E353.2	No additional comments; see Checklist for detail.
SW9034	No additional comments; see Checklist for detail.
RSK175	No additional comments; see Checklist for detail.
SW8260B	No additional comments; see Checklist for detail.



December 02, 2020

Reviewed by Kevin Kha, 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 a minimum of 10% of the reported sample results and method quality control data between the two deliverables.



March 16, 2021

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 A2320B, 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
CCB28051421130 (CB)/ CCB28051421130	Alkalinity, Total (as CaCO3)	3.650	< 3.1	< 10	mg/l	U/None	B2	
CCB28051421156 (CB)/ CCB28051421156	Alkalinity, Total (as CaCO3)	4.290	< 3.1	< 10	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.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW6010C, Dissolved, Calibration Blank

The purpose of calibration blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in calibration blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
CCB680640430119 (CB)/ CCB680640430119	Iron	28.50	< 17	< 50	ug/l	U/None	B2	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW6010C, Dissolved, Lab Blank

The purpose of laboratory blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in laboratory blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
MB6806401231A (LB)/ MB6806401231A	Manganese	1.070	< 1	< 10	ug/l	U/None	L	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

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-FAL20 (SD)/ 680-190226-6	Manganese	135.0	90 - 114	10 - 125	percent	J/None	M	Spike amount Insignificant
MW-3-FAL20 (MS)/ 680-190226-6	Manganese	45.00	90 - 114	10 - 125	percent	J/UJ	M	Spike amount Insignificant
MW-3-FAL20 (MS)/ 680-190226-6	Iron	72.00	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
MW-3-FAL20 (SD)/ 680-190226-6	Arsenic	17.00	84 - 116	10 - 125	percent	J/UJ	M	Spike amount Insignificant
MW-3-FAL20 (MS)/ 680-190226-6	Arsenic	82.00	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 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
CCVIS6806412773 (CV)/ CCVIS6806412773	Bromomethane	79.80	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6806412773 (CV)/ CCVIS6806412773	Naphthalene	79.80	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-TB2-FAL20	TB	Bromomethane	5.00	5.00 U H	5.00 UJ		ug/l	H1/V2
AOC50-TB2-FAL20	TB	Naphthalene	5.00	5.00 U H	5.00 UJ		ug/l	H1/V2
G6M-04-13X-FAL20	N	Bromomethane	5.00	5.00 U H	5.00 UJ		ug/l	H1/V2
G6M-04-13X-FAL20	N	Naphthalene	5.00	5.00 U H	5.00 UJ		ug/l	H1/V2
G6M-18-02-FAL20	N	Bromomethane	5.00	5.00 U H	5.00 UJ		ug/l	H1/V2
G6M-18-02-FAL20	N	Naphthalene	5.00	5.00 U H	5.00 UJ		ug/l	H1/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, Initial 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
ICj2615 (IV)	Chloromethane	127.6	80 - 120	80 - 120	percent	J/None	V1	

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, 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
MW-7-FAL20 (N)/ 680-190226-7	Toluene-d8	88.38	89 - 112	10 - 112	percent	J/UJ	I	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Surrogate for SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
MW-7-FAL20	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	1,1,2-Trichloroethane	1.00	0.500 U	0.500 UJ		ug/l	I
MW-7-FAL20	N	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
MW-7-FAL20	N	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
MW-7-FAL20	N	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ		ug/l	I
MW-7-FAL20	N	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ		ug/l	I
MW-7-FAL20	N	1,2-Dichloroethene	2.00	2.20	2.20 J	-	ug/l	I
MW-7-FAL20	N	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
MW-7-FAL20	N	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ		ug/l	I
MW-7-FAL20	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ		ug/l	I
MW-7-FAL20	N	2-Hexanone	10.0	5.00 U	5.00 UJ		ug/l	I
MW-7-FAL20	N	4-Chlorotoluene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ		ug/l	I
MW-7-FAL20	N	Acetone	10.0	10.0 U	10.0 UJ		ug/l	I
MW-7-FAL20	N	Benzene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	Bromobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	Bromochloromethane	1.00	1.00 U	1.00 UJ		ug/l	I

Qualified Results associated with the Surrogate for SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
MW-7-FAL20	N	Bromodichloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	Bromomethane	5.00	5.00 U	5.00 UJ		ug/l	I
MW-7-FAL20	N	Carbon disulfide	2.00	2.00 U	2.00 UJ		ug/l	I
MW-7-FAL20	N	Carbon tetrachloride	1.00	0.500 U	0.500 UJ		ug/l	I
MW-7-FAL20	N	Chlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	I
MW-7-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	I
MW-7-FAL20	N	Chloroform	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	Chloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	cis-1,2-Dichloroethene	1.00	2.20	2.20 J	-	ug/l	I
MW-7-FAL20	N	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	Dibromochloromethane	1.00	0.500 U	0.500 UJ		ug/l	I
MW-7-FAL20	N	Dibromomethane	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	Ethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
MW-7-FAL20	N	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ		ug/l	I
MW-7-FAL20	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	m,p-Xylene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ		ug/l	I
MW-7-FAL20	N	Methylene chloride	5.00	5.00 U	5.00 UJ		ug/l	I
MW-7-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	I
MW-7-FAL20	N	n-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	n-Propylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	o-Xylene	1.00	0.500 U	0.500 UJ		ug/l	I
MW-7-FAL20	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	sec-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	Styrene	1.00	0.500 U	0.500 UJ		ug/l	I
MW-7-FAL20	N	tert-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	Tetrachloroethene (PCE)	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	Toluene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	trans-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	Trichloroethene (TCE)	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	Vinyl acetate	2.00	2.00 U	2.00 UJ		ug/l	I
MW-7-FAL20	N	Vinyl chloride	1.00	2.00	2.00 J	-	ug/l	I
MW-7-FAL20	N	Xylenes, Total	2.00	0.500 U	0.500 UJ		ug/l	I

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (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
AOC50-TB2-FAL20 (TB)/ 680-190226-2		15.10	< 14	< 28	days	J/UJ	H1	Test Exceeds UWL
G6M-04-13X-FAL20 (N)/ 680-190226-3		14.67	< 14	< 28	days	J/UJ	H1	Test Exceeds UWL
G6M-18-02-FAL20 (N)/ 680-190226-4		14.72	< 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
AOC50-TB2-FAL20	TB	1,1,1,2-Tetrachloroethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,1,1-Trichloroethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,1,2,2-Tetrachloroethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,1,2-Trichloroethane	1.00	0.500 U H	0.500 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,1-Dichloroethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,1-Dichloroethene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,1-Dichloropropene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,2,3-Trichlorobenzene	5.00	5.00 U H	5.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,2,3-Trichloropropane	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,2,4-Trichlorobenzene	5.00	5.00 U H	5.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,2,4-Trimethylbenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,2-Dibromo-3-chloropropane	5.00	2.00 U H	2.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,2-Dibromoethane (EDB)	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,2-Dichlorobenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,2-Dichloroethane	1.00	1.00 U M H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,2-Dichloroethene	2.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,2-Dichloropropane	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,3,5-Trimethylbenzene	1.00	0.500 U H	0.500 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,3-Dichlorobenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,3-Dichloropropane	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,4-Dichlorobenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	2,2-Dichloropropane	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	2-Butanone (MEK)	10.0	10.0 U H	10.0 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	2-Chlorotoluene	1.00	0.500 U H	0.500 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	2-Hexanone	10.0	5.00 U H	5.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	4-Chlorotoluene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U H	5.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Acetone	10.0	10.0 U H	10.0 UJ		ug/l	H1

Qualified Results associated with the Test Hold Time for SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-TB2-FAL20	TB	Benzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Bromobenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Bromochloromethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Bromodichloromethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Bromoform	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Bromomethane	5.00	5.00 U H	5.00 UJ		ug/l	H1/V2
AOC50-TB2-FAL20	TB	Carbon disulfide	2.00	2.00 U H	2.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Carbon tetrachloride	1.00	0.500 U H	0.500 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Chlorobenzene	1.00	0.500 U H	0.500 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Chloroethane	5.00	5.00 U H	5.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Chloroform	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Chloromethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	cis-1,2-Dichloroethene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	cis-1,3-Dichloropropene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Dibromochloromethane	1.00	0.500 U H	0.500 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Dibromomethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Dichlorodifluoromethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Ethylbenzene	1.00	0.500 U H	0.500 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Hexachlorobutadiene	5.00	5.00 U H	5.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Isopropylbenzene (Cumene)	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	m,p-Xylene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Methyl tert-butyl ether (MTBE)	10.0	0.500 U H	0.500 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Methylene chloride	5.00	5.00 U H	5.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Naphthalene	5.00	5.00 U H	5.00 UJ		ug/l	H1/V2
AOC50-TB2-FAL20	TB	n-Butylbenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	n-Propylbenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	o-Xylene	1.00	0.500 U H	0.500 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	sec-Butylbenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Styrene	1.00	0.500 U H	0.500 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	tert-Butylbenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Tetrachloroethene (PCE)	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Toluene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	trans-1,2-Dichloroethene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	trans-1,3-Dichloropropene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Trichloroethene (TCE)	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Trichlorofluoromethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Vinyl acetate	2.00	2.00 U H	2.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Vinyl chloride	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Xylenes, Total	2.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U H	1.00 UJ		ug/l	H1

Qualified Results associated with the Test Hold Time for SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-13X-FAL20	N	1,1,1-Trichloroethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,1,2-Trichloroethane	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,1-Dichloroethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,1-Dichloroethene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,1-Dichloropropene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U H	5.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,2,3-Trichloropropane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,2,4-Trichlorobenzene	5.00	5.00 U H	5.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,2,4-Trimethylbenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U H	2.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,2-Dibromoethane (EDB)	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,2-Dichlorobenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,2-Dichloroethane	1.00	1.00 U M H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,2-Dichloroethene	2.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,2-Dichloropropane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,3,5-Trimethylbenzene	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,3-Dichlorobenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,3-Dichloropropane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,4-Dichlorobenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	2-Butanone (MEK)	10.0	10.0 U H	10.0 UJ		ug/l	H1
G6M-04-13X-FAL20	N	2-Chlorotoluene	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-04-13X-FAL20	N	2-Hexanone	10.0	5.00 U H	5.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	4-Chlorotoluene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U H	5.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Acetone	10.0	10.0 U H	10.0 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Benzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Bromobenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Bromochloromethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Bromodichloromethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Bromoform	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Bromomethane	5.00	5.00 U H	5.00 UJ		ug/l	H1/V2
G6M-04-13X-FAL20	N	Carbon disulfide	2.00	2.00 U H	2.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Carbon tetrachloride	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Chlorobenzene	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Chloroethane	5.00	5.00 U H	5.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Chloroform	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Chloromethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	cis-1,2-Dichloroethene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	cis-1,3-Dichloropropene	1.00	1.00 U H	1.00 UJ		ug/l	H1

Qualified Results associated with the Test Hold Time for SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-13X-FAL20	N	Dibromochloromethane	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Dibromomethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Ethylbenzene	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Hexachlorobutadiene	5.00	5.00 U H	5.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Isopropylbenzene (Cumene)	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	m,p-Xylene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U H	0.500 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Methylene chloride	5.00	5.00 U H	5.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Naphthalene	5.00	5.00 U H	5.00 UJ		ug/l	H1/V2
G6M-04-13X-FAL20	N	n-Butylbenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	n-Propylbenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	o-Xylene	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-04-13X-FAL20	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	sec-Butylbenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Styrene	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-04-13X-FAL20	N	tert-Butylbenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Tetrachloroethene (PCE)	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Toluene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	trans-1,2-Dichloroethene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	trans-1,3-Dichloropropene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Trichloroethene (TCE)	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Trichlorofluoromethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Vinyl acetate	2.00	2.00 U H	2.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Vinyl chloride	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Xylenes, Total	2.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,1,1-Trichloroethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,1,2-Trichloroethane	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,1-Dichloroethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,1-Dichloroethene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,1-Dichloropropene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U H	5.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,2,3-Trichloropropane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,2,4-Trichlorobenzene	5.00	5.00 U H	5.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,2,4-Trimethylbenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U H	2.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,2-Dibromoethane (EDB)	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,2-Dichlorobenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1

Qualified Results associated with the Test Hold Time for SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-18-02-FAL20	N	1,2-Dichloroethane	1.00	1.00 U M H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,2-Dichloroethene	2.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,2-Dichloropropane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,3,5-Trimethylbenzene	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,3-Dichlorobenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,3-Dichloropropane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,4-Dichlorobenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	2,2-Dichloropropane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	2-Butanone (MEK)	10.0	10.0 U H	10.0 UJ		ug/l	H1
G6M-18-02-FAL20	N	2-Chlorotoluene	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-18-02-FAL20	N	2-Hexanone	10.0	5.00 U H	5.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	4-Chlorotoluene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U H	5.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Acetone	10.0	10.0 U H	10.0 UJ		ug/l	H1
G6M-18-02-FAL20	N	Benzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Bromobenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Bromochloromethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Bromodichloromethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Bromoform	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Bromomethane	5.00	5.00 U H	5.00 UJ		ug/l	H1/V2
G6M-18-02-FAL20	N	Carbon disulfide	2.00	2.00 U H	2.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Carbon tetrachloride	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-18-02-FAL20	N	Chlorobenzene	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-18-02-FAL20	N	Chloroethane	5.00	5.00 U H	5.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Chloroform	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Chloromethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	cis-1,2-Dichloroethene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	cis-1,3-Dichloropropene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Dibromochloromethane	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-18-02-FAL20	N	Dibromomethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Ethylbenzene	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-18-02-FAL20	N	Hexachlorobutadiene	5.00	5.00 U H	5.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Isopropylbenzene (Cumene)	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	m,p-Xylene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U H	0.500 UJ		ug/l	H1
G6M-18-02-FAL20	N	Methylene chloride	5.00	5.00 U H	5.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Naphthalene	5.00	5.00 U H	5.00 UJ		ug/l	H1/V2
G6M-18-02-FAL20	N	n-Butylbenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	n-Propylbenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	o-Xylene	1.00	0.500 U H	0.500 UJ		ug/l	H1

Qualified Results associated with the Test Hold Time for SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-18-02-FAL20	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	sec-Butylbenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Styrene	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-18-02-FAL20	N	tert-Butylbenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Tetrachloroethene (PCE)	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Toluene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	trans-1,2-Dichloroethene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	trans-1,3-Dichloropropene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Trichloroethene (TCE)	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Trichlorofluoromethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Vinyl acetate	2.00	2.00 U H	2.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Vinyl chloride	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Xylenes, Total	2.00	0.500 U H	0.500 UJ		ug/l	H1

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (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: SW8260B	Extraction Method: SW5030B							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-TB2-FAL20	TB	1,1,1,2-Tetrachloroethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,1,1-Trichloroethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,1,2,2-Tetrachloroethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,1,2-Trichloroethane	1.00	0.500 U H	0.500 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,1-Dichloroethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,1-Dichloroethene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,1-Dichloropropene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,2,3-Trichlorobenzene	5.00	5.00 U H	5.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,2,3-Trichloropropane	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,2,4-Trichlorobenzene	5.00	5.00 U H	5.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,2,4-Trimethylbenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,2-Dibromo-3-chloropropane	5.00	2.00 U H	2.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,2-Dibromoethane (EDB)	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,2-Dichlorobenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,2-Dichloroethane	1.00	1.00 U M H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,2-Dichloroethene	2.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,2-Dichloropropane	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,3,5-Trimethylbenzene	1.00	0.500 U H	0.500 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,3-Dichlorobenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,3-Dichloropropane	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	1,4-Dichlorobenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	2,2-Dichloropropane	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	2-Butanone (MEK)	10.0	10.0 U H	10.0 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	2-Chlorotoluene	1.00	0.500 U H	0.500 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	2-Hexanone	10.0	5.00 U H	5.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	4-Chlorotoluene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U H	5.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Acetone	10.0	10.0 U H	10.0 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Benzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Bromobenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Bromochloromethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Bromodichloromethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Bromoform	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Bromomethane	5.00	5.00 U H	5.00 UJ		ug/l	H1/V2
AOC50-TB2-FAL20	TB	Carbon disulfide	2.00	2.00 U H	2.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Carbon tetrachloride	1.00	0.500 U H	0.500 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Chlorobenzene	1.00	0.500 U H	0.500 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Chloroethane	5.00	5.00 U H	5.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Chloroform	1.00	1.00 U H	1.00 UJ		ug/l	H1

Table of All Qualified Results

Test Method: SW8260B	Extraction Method: SW5030B							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-TB2-FAL20	TB	Chloromethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	cis-1,2-Dichloroethene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	cis-1,3-Dichloropropene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Dibromochloromethane	1.00	0.500 U H	0.500 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Dibromomethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Dichlorodifluoromethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Ethylbenzene	1.00	0.500 U H	0.500 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Hexachlorobutadiene	5.00	5.00 U H	5.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Isopropylbenzene (Cumene)	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	m,p-Xylene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Methyl tert-butyl ether (MTBE)	10.0	0.500 U H	0.500 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Methylene chloride	5.00	5.00 U H	5.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Naphthalene	5.00	5.00 U H	5.00 UJ		ug/l	H1/V2
AOC50-TB2-FAL20	TB	n-Butylbenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	n-Propylbenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	o-Xylene	1.00	0.500 U H	0.500 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	sec-Butylbenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Styrene	1.00	0.500 U H	0.500 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	tert-Butylbenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Tetrachloroethene (PCE)	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Toluene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	trans-1,2-Dichloroethene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	trans-1,3-Dichloropropene	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Trichloroethene (TCE)	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Trichlorofluoromethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Vinyl acetate	2.00	2.00 U H	2.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Vinyl chloride	1.00	1.00 U H	1.00 UJ		ug/l	H1
AOC50-TB2-FAL20	TB	Xylenes, Total	2.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,1,1-Trichloroethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,1,2-Trichloroethane	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,1-Dichloroethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,1-Dichloroethene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,1-Dichloropropene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U H	5.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,2,3-Trichloropropane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,2,4-Trichlorobenzene	5.00	5.00 U H	5.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,2,4-Trimethylbenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1

Table of All Qualified Results

Test Method: SW8260B	Extraction Method: SW5030B							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-13X-FAL20	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U H	2.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,2-Dibromoethane (EDB)	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,2-Dichlorobenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,2-Dichloroethane	1.00	1.00 U M H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,2-Dichloroethene	2.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,2-Dichloropropane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,3,5-Trimethylbenzene	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,3-Dichlorobenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,3-Dichloropropane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	1,4-Dichlorobenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	2-Butanone (MEK)	10.0	10.0 U H	10.0 UJ		ug/l	H1
G6M-04-13X-FAL20	N	2-Chlorotoluene	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-04-13X-FAL20	N	2-Hexanone	10.0	5.00 U H	5.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	4-Chlorotoluene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U H	5.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Acetone	10.0	10.0 U H	10.0 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Benzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Bromobenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Bromochloromethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Bromodichloromethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Bromoform	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Bromomethane	5.00	5.00 U H	5.00 UJ		ug/l	H1/V2
G6M-04-13X-FAL20	N	Carbon disulfide	2.00	2.00 U H	2.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Carbon tetrachloride	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Chlorobenzene	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Chloroethane	5.00	5.00 U H	5.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Chloroform	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Chloromethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	cis-1,2-Dichloroethene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	cis-1,3-Dichloropropene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Dibromochloromethane	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Dibromomethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Ethylbenzene	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Hexachlorobutadiene	5.00	5.00 U H	5.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Isopropylbenzene (Cumene)	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	m,p-Xylene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U H	0.500 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Methylene chloride	5.00	5.00 U H	5.00 UJ		ug/l	H1

Table of All Qualified Results

Test Method: SW8260B	Extraction Method: SW5030B							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-13X-FAL20	N	Naphthalene	5.00	5.00 U H	5.00 UJ		ug/l	H1/V2
G6M-04-13X-FAL20	N	n-Butylbenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	n-Propylbenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	o-Xylene	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-04-13X-FAL20	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	sec-Butylbenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Styrene	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-04-13X-FAL20	N	tert-Butylbenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Tetrachloroethene (PCE)	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Toluene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	trans-1,2-Dichloroethene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	trans-1,3-Dichloropropene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Trichloroethene (TCE)	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Trichlorofluoromethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Vinyl acetate	2.00	2.00 U H	2.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Vinyl chloride	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-04-13X-FAL20	N	Xylenes, Total	2.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,1,1-Trichloroethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,1,2-Trichloroethane	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,1-Dichloroethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,1-Dichloroethene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,1-Dichloropropene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U H	5.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,2,3-Trichloropropane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,2,4-Trichlorobenzene	5.00	5.00 U H	5.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,2,4-Trimethylbenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U H	2.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,2-Dibromoethane (EDB)	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,2-Dichlorobenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,2-Dichloroethane	1.00	1.00 U M H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,2-Dichloroethene	2.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,2-Dichloropropane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,3,5-Trimethylbenzene	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,3-Dichlorobenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,3-Dichloropropane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	1,4-Dichlorobenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	2,2-Dichloropropane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	2-Butanone (MEK)	10.0	10.0 U H	10.0 UJ		ug/l	H1
G6M-18-02-FAL20	N	2-Chlorotoluene	1.00	0.500 U H	0.500 UJ		ug/l	H1

Table of All Qualified Results

Test Method: SW8260B	Extraction Method: SW5030B							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-18-02-FAL20	N	2-Hexanone	10.0	5.00 U H	5.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	4-Chlorotoluene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U H	5.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Acetone	10.0	10.0 U H	10.0 UJ		ug/l	H1
G6M-18-02-FAL20	N	Benzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Bromobenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Bromochloromethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Bromodichloromethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Bromoform	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Bromomethane	5.00	5.00 U H	5.00 UJ		ug/l	H1/V2
G6M-18-02-FAL20	N	Carbon disulfide	2.00	2.00 U H	2.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Carbon tetrachloride	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-18-02-FAL20	N	Chlorobenzene	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-18-02-FAL20	N	Chloroethane	5.00	5.00 U H	5.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Chloroform	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Chloromethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	cis-1,2-Dichloroethene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	cis-1,3-Dichloropropene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Dibromochloromethane	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-18-02-FAL20	N	Dibromomethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Ethylbenzene	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-18-02-FAL20	N	Hexachlorobutadiene	5.00	5.00 U H	5.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Isopropylbenzene (Cumene)	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	m,p-Xylene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U H	0.500 UJ		ug/l	H1
G6M-18-02-FAL20	N	Methylene chloride	5.00	5.00 U H	5.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Naphthalene	5.00	5.00 U H	5.00 UJ		ug/l	H1/V2
G6M-18-02-FAL20	N	n-Butylbenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	n-Propylbenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	o-Xylene	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-18-02-FAL20	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	sec-Butylbenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Styrene	1.00	0.500 U H	0.500 UJ		ug/l	H1
G6M-18-02-FAL20	N	tert-Butylbenzene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Tetrachloroethene (PCE)	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Toluene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	trans-1,2-Dichloroethene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	trans-1,3-Dichloropropene	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Trichloroethene (TCE)	1.00	1.00 U H	1.00 UJ		ug/l	H1

Table of All Qualified Results

Test Method: SW8260B	Extraction Method: SW5030B							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-18-02-FAL20	N	Trichlorofluoromethane	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Vinyl acetate	2.00	2.00 U H	2.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Vinyl chloride	1.00	1.00 U H	1.00 UJ		ug/l	H1
G6M-18-02-FAL20	N	Xylenes, Total	2.00	0.500 U H	0.500 UJ		ug/l	H1
MW-7-FAL20	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	1,1,2-Trichloroethane	1.00	0.500 U	0.500 UJ		ug/l	I
MW-7-FAL20	N	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
MW-7-FAL20	N	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
MW-7-FAL20	N	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ		ug/l	I
MW-7-FAL20	N	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ		ug/l	I
MW-7-FAL20	N	1,2-Dichloroethene	2.00	2.20	2.20 J	-	ug/l	I
MW-7-FAL20	N	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
MW-7-FAL20	N	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ		ug/l	I
MW-7-FAL20	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ		ug/l	I
MW-7-FAL20	N	2-Hexanone	10.0	5.00 U	5.00 UJ		ug/l	I
MW-7-FAL20	N	4-Chlorotoluene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ		ug/l	I
MW-7-FAL20	N	Acetone	10.0	10.0 U	10.0 UJ		ug/l	I
MW-7-FAL20	N	Benzene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	Bromobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	Bromochloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	Bromodichloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	Bromomethane	5.00	5.00 U	5.00 UJ		ug/l	I
MW-7-FAL20	N	Carbon disulfide	2.00	2.00 U	2.00 UJ		ug/l	I
MW-7-FAL20	N	Carbon tetrachloride	1.00	0.500 U	0.500 UJ		ug/l	I
MW-7-FAL20	N	Chlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	I

Table of All Qualified Results

Test Method: SW8260B	Extraction Method: SW5030B							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
MW-7-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	I
MW-7-FAL20	N	Chloroform	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	Chloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	cis-1,2-Dichloroethene	1.00	2.20	2.20 J	-	ug/l	I
MW-7-FAL20	N	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	Dibromochloromethane	1.00	0.500 U	0.500 UJ		ug/l	I
MW-7-FAL20	N	Dibromomethane	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	Ethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
MW-7-FAL20	N	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ		ug/l	I
MW-7-FAL20	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	m,p-Xylene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ		ug/l	I
MW-7-FAL20	N	Methylene chloride	5.00	5.00 U	5.00 UJ		ug/l	I
MW-7-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	I
MW-7-FAL20	N	n-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	n-Propylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	o-Xylene	1.00	0.500 U	0.500 UJ		ug/l	I
MW-7-FAL20	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	sec-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	Styrene	1.00	0.500 U	0.500 UJ		ug/l	I
MW-7-FAL20	N	tert-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	Tetrachloroethene (PCE)	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	Toluene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	trans-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	Trichloroethene (TCE)	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ		ug/l	I
MW-7-FAL20	N	Vinyl acetate	2.00	2.00 U	2.00 UJ		ug/l	I
MW-7-FAL20	N	Vinyl chloride	1.00	2.00	2.00 J	-	ug/l	I
MW-7-FAL20	N	Xylenes, Total	2.00	0.500 U	0.500 UJ		ug/l	I

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (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	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-18-02-FAL20	N	Methane	0.580	0.510 J	0.510 J	0.510 J	TR

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
AOC50-TB2-FAL20	TB	1,2,3-Trichlorobenzene	5.00	5.00 U H	5.00 UJ	5.00 UJ	H1
AOC50-TB2-FAL20	TB	2,2-Dichloropropane	1.00	1.00 U H	1.00 UJ	1.00 UJ	H1
AOC50-TB2-FAL20	TB	Bromomethane	5.00	5.00 U H	5.00 UJ	5.00 UJ	H1/V2
AOC50-TB2-FAL20	TB	Naphthalene	5.00	5.00 U H	5.00 UJ	5.00 UJ	H1/V2
AOC50-TB2-FAL20	TB	Vinyl acetate	2.00	2.00 U H	2.00 UJ	2.00 UJ	H1
G6M-02-12X-FAL20	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	1,1,2-Trichloroethane	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-02-12X-FAL20	N	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-02-12X-FAL20	N	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-02-12X-FAL20	N	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ	2.00 U	
G6M-02-12X-FAL20	N	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	1,2-Dichloroethene	2.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-02-12X-FAL20	N	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-12X-FAL20	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-02-12X-FAL20	N	2-Hexanone	10.0	5.00 U	5.00 UJ	5.00 U	
G6M-02-12X-FAL20	N	4-Chlorotoluene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ	5.00 U	
G6M-02-12X-FAL20	N	Acetone	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-12X-FAL20	N	Benzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	Bromobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	Bromochloromethane	1.00	1.00 U	1.00 UJ	1.00 U	

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-02-12X-FAL20	N	Bromodichloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	Bromoform	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-02-12X-FAL20	N	Carbon disulfide	2.00	2.00 U	2.00 UJ	2.00 U	
G6M-02-12X-FAL20	N	Carbon tetrachloride	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-02-12X-FAL20	N	Chlorobenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-02-12X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-02-12X-FAL20	N	Chloroform	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	Chloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	cis-1,2-Dichloroethene	1.00	0.420 J	0.420 J	0.420 J	TR
G6M-02-12X-FAL20	N	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	Dibromochloromethane	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-02-12X-FAL20	N	Dibromomethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	Ethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-02-12X-FAL20	N	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-02-12X-FAL20	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	m,p-Xylene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ	0.500 U	
G6M-02-12X-FAL20	N	Methylene chloride	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-02-12X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-02-12X-FAL20	N	n-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	n-Propylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	o-Xylene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-02-12X-FAL20	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	sec-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	Styrene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-02-12X-FAL20	N	tert-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	Tetrachloroethene (PCE)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	Toluene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	trans-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	Trichloroethene (TCE)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	Vinyl acetate	2.00	2.00 U	2.00 UJ	2.00 U	
G6M-02-12X-FAL20	N	Vinyl chloride	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-12X-FAL20	N	Xylenes, Total	2.00	0.500 U	0.500 UJ	0.500 U	
G6M-04-13X-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U H	5.00 UJ	5.00 UJ	H1
G6M-04-13X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U H	1.00 UJ	1.00 UJ	H1
G6M-04-13X-FAL20	N	Bromomethane	5.00	5.00 U H	5.00 UJ	5.00 UJ	H1/V2

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-04-13X-FAL20	N	Naphthalene	5.00	5.00 U H	5.00 UJ	5.00 UJ	H1/V2
G6M-04-13X-FAL20	N	Vinyl acetate	2.00	2.00 U H	2.00 UJ	2.00 UJ	H1
G6M-18-02-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U H	5.00 UJ	5.00 UJ	H1
G6M-18-02-FAL20	N	2,2-Dichloropropane	1.00	1.00 U H	1.00 UJ	1.00 UJ	H1
G6M-18-02-FAL20	N	Bromomethane	5.00	5.00 U H	5.00 UJ	5.00 UJ	H1/V2
G6M-18-02-FAL20	N	Naphthalene	5.00	5.00 U H	5.00 UJ	5.00 UJ	H1/V2
G6M-18-02-FAL20	N	Vinyl acetate	2.00	2.00 U H	2.00 UJ	2.00 UJ	H1
G6M-97-28X-FAL20	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 UJ	
G6M-97-28X-FAL20	N	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	1,1,2-Trichloroethane	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-97-28X-FAL20	N	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-97-28X-FAL20	N	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-97-28X-FAL20	N	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ	2.00 U	
G6M-97-28X-FAL20	N	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	1,2-Dichloroethene	2.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-97-28X-FAL20	N	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-97-28X-FAL20	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-97-28X-FAL20	N	2-Hexanone	10.0	5.00 U	5.00 UJ	5.00 U	
G6M-97-28X-FAL20	N	4-Chlorotoluene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ	5.00 U	
G6M-97-28X-FAL20	N	Acetone	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-97-28X-FAL20	N	Benzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	Bromobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	Bromochloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	Bromodichloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	Bromoform	1.00	1.00 U	1.00 UJ	1.00 U	

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-97-28X-FAL20	N	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-97-28X-FAL20	N	Carbon disulfide	2.00	2.00 U	2.00 UJ	2.00 U	
G6M-97-28X-FAL20	N	Carbon tetrachloride	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-97-28X-FAL20	N	Chlorobenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-97-28X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-97-28X-FAL20	N	Chloroform	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	Chloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	cis-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	Dibromochloromethane	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-97-28X-FAL20	N	Dibromomethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	Ethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-97-28X-FAL20	N	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-97-28X-FAL20	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	m,p-Xylene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ	0.500 U	
G6M-97-28X-FAL20	N	Methylene chloride	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-97-28X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-97-28X-FAL20	N	n-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	n-Propylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	o-Xylene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-97-28X-FAL20	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	sec-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	Styrene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-97-28X-FAL20	N	tert-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	Tetrachloroethene (PCE)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	Toluene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	trans-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	Trichloroethene (TCE)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	Vinyl acetate	2.00	2.00 U	2.00 UJ	2.00 U	
G6M-97-28X-FAL20	N	Vinyl chloride	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X-FAL20	N	Xylenes, Total	2.00	0.500 U	0.500 UJ	0.500 U	
MW-3-FAL20	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	1,1,2-Trichloroethane	1.00	0.500 U	0.500 UJ	0.500 U	
MW-3-FAL20	N	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
MW-3-FAL20	N	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
MW-3-FAL20	N	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
MW-3-FAL20	N	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ	2.00 U	
MW-3-FAL20	N	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ	1.00 U	
MW-3-FAL20	N	1,2-Dichloroethene	2.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
MW-3-FAL20	N	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ	10.0 U	
MW-3-FAL20	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ	0.500 U	
MW-3-FAL20	N	2-Hexanone	10.0	5.00 U	5.00 UJ	5.00 U	
MW-3-FAL20	N	4-Chlorotoluene	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ	5.00 U	
MW-3-FAL20	N	Acetone	10.0	10.0 U	10.0 UJ	10.0 U	
MW-3-FAL20	N	Benzene	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	Bromobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	Bromochloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	Bromodichloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	Bromoform	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
MW-3-FAL20	N	Carbon disulfide	2.00	2.00 U	2.00 UJ	2.00 U	
MW-3-FAL20	N	Carbon tetrachloride	1.00	0.500 U	0.500 UJ	0.500 U	
MW-3-FAL20	N	Chlorobenzene	1.00	0.500 U	0.500 UJ	0.500 U	
MW-3-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ	5.00 U	
MW-3-FAL20	N	Chloroform	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	Chloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	cis-1,2-Dichloroethene	1.00	0.490 J	0.490 J	0.490 J	TR
MW-3-FAL20	N	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	Dibromochloromethane	1.00	0.500 U	0.500 UJ	0.500 U	
MW-3-FAL20	N	Dibromomethane	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
MW-3-FAL20	N	Ethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
MW-3-FAL20	N	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ	5.00 U	
MW-3-FAL20	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	m,p-Xylene	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ	0.500 U	
MW-3-FAL20	N	Methylene chloride	5.00	5.00 U	5.00 UJ	5.00 U	
MW-3-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ	5.00 U	
MW-3-FAL20	N	n-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	n-Propylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	o-Xylene	1.00	0.500 U	0.500 UJ	0.500 U	
MW-3-FAL20	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	sec-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	Styrene	1.00	0.500 U	0.500 UJ	0.500 U	
MW-3-FAL20	N	tert-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	Tetrachloroethene (PCE)	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	Toluene	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	trans-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	Trichloroethene (TCE)	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	Vinyl acetate	2.00	2.00 U	2.00 UJ	2.00 U	
MW-3-FAL20	N	Vinyl chloride	1.00	1.00 U	1.00 UJ	1.00 U	
MW-3-FAL20	N	Xylenes, Total	2.00	0.500 U	0.500 UJ	0.500 U	
MW-7-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 UJ	I
MW-7-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ	1.00 UJ	I
XSA-12-95X-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
XSA-12-95X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-95X-FAL20	N	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
XSA-12-95X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ	5.00 U	
XSA-12-95X-FAL20	N	Vinyl acetate	2.00	2.00 U	2.00 UJ	2.00 U	

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
H1	Test Hold Time
I	Surrogate recovery outside project limits.
L	Lab Blank
M	MS Recovery
TR	Trace Level Detect
V1	ICV
V2	CCV

Flag Code and Definitions

Flag	Definition
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.
J	Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
B	Blank contamination: The analyte was found in an associated blank above one half the RL, as well as in the sample.
UB	The analyte was also detected in an associated laboratory or field blank at a concentration comparable to the concentration in the sample. The reported result has been requalified as not detected.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team (which should include a project chemist), but exclusion of the data is recommended.

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 CCVs 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?		•		Although alkalinity was detected in the calibration blanks, the associated sample results were significantly greater than the concentration found in the calibration blanks, therefore no data were qualified.
Were field blanks (EBs or FBs) submitted with these samples?		•		A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?			•	A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs run at the required frequency and within acceptance criteria?	•			
Were surrogate recoveries within project acceptance limits?			•	Surrogates not required by the 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?			•	A field blank was not 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?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
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 rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?		•		Although manganese and iron were detected in the method and calibration blanks, the associated sample results were significantly greater than the concentrations found in the blank, therefore no data were qualified.
Were field blanks (EBs or FBs) submitted with these samples?		•		A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?		•		Although manganese and iron recoveries were not within criteria, the sample concentrations were significantly greater (>4X) than the spike amounts, therefore no data were qualified.
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?		•		A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?		•		Although arsenic recovery was not within criteria, the sample concentrations were significantly greater (>4X) than the spike amount, therefore no data were qualified.
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

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?		•		Due to samples analyzed outside of hold time, 3 samples were qualified as detected estimated (J) with a low bias (-) or non-detected estimated (UJ) as applicable.
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?		•		Although chloromethane %R was above the criteria, the associated sample results were non-detect, therefore no data were qualified.
Were CCVs run at the required frequency and within acceptance criteria?		•		Due to CCV %R below the criteria, several bromomethane and naphthalene results were qualified as non-detected estimated (UJ).
Were surrogate recoveries within project acceptance limits?		•		Due to low surrogate recovery, the results in sample MW-7-FAL20 were qualified as detected estimated (J) with a low bias (-) or non-detected estimated (UJ) as applicable.
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?	•			
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?			•	A field duplicate was not submitted with these samples.
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 rejected during the verification process?		•		All data is acceptable as reported or as qualified during data validation.

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 CCVs 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?			•	A field blank was not 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?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?		•		A field blank was not 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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

Data Validation Report for 6801902261

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 CCVs 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?		•		A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

February 19, 2021

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 16, 2020. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #49688:

SDG #	Fraction
680-190226-1, 680-190296-1 680-190373-1, 680-190506-1	Volatiles, Dissolved Metals, Wet Chemistry, 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:

- Former Fort Devens Army Installation – BRAC Legacy Sites, Devens, MA; October 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

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

194 pages-ADV 2 WEEK TAT Attachment 1

Stage 2B EQUIS EDD

LDC #49688 (Arcadis-Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(3) DATE DUE	VOA (8260B)		(3)Diss Metals (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	680-190226-1	11/16/20	12/02/20	8	0	6	0	1	0	1	0	1	0	1	0	1	0	1	0																		
B	680-190296-1	11/16/20	12/02/20	9	0	7	0	1	0	1	0	1	0	1	0	1	0	1	0																		
C	680-190373-1	11/16/20	12/02/20	4	0	3	0	1	0	1	0	1	0	1	0	1	0	1	0																		
D	680-190506-1	11/16/20	12/02/20	2	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-																		
Total	T/PG			23	0	17	0	3	0	3	0	3	0	3	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

L:\Arcadis\Fort Devens\49688ST.wpd

Data Validation Report for 6801902961

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020
SDG:	6801902961
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
Data Review Contractor:	Laboratory Data Consultants, Inc.
Data Review Level:	2B
Primary Data Reviewer:	Kevin Kha, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	December 02, 2020

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	E353.2	RSK175	SW6010C - Dissolved	SW6020A - Dissolved	SW8260B	SW9034	SW9056A	SW9060A
AOC50-TB4-FAL20	680-190296-9	Water	Trip Blank/TB						X			
G6M-02-01X-FAL20	680-190296-6	Water	Field Sample/N				X	X	X			
G6M-04-01X-FAL20	680-190296-7	Water	Field Sample/N				X	X	X			
G6M-04-02X-FAL20	680-190296-8	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-04-05X-FAL20	680-190296-1	Water	Field Sample/N						X			
G6M-04-09X-FAL20	680-190296-2	Water	Field Sample/N				X	X	X			
G6M-04-15X-FAL20	680-190296-3	Water	Field Sample/N				X	X	X			
G6M-04-22X-FAL20	680-190296-4	Water	Field Sample/N				X	X	X			
G6M-04-31X-FAL20	680-190296-5	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 and were reported under sample delivery group (SDG) 6801902961. 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
- Extracted Internal Standard
- 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 152 results (23.71%) out of the 641 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. 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

Sample ID discrepancy: Client sample ID for sample 680-190296-9 is inconsistent between the laboratory report (TB5-FAL20) and Fort Devens EDMS (AOC50-TB4-FAL20). The sample ID in the Fort Devens EDMS is the correct ID.

Analytical Method	Data Reviewer Comment
SW9056A	No additional comments; see Checklist for detail.
SW9060A	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
A2320B	No additional comments; see Checklist for detail.
RSK175	No additional comments; see Checklist for detail.
E353.2	No additional comments; see Checklist for detail.
SW6010C	No additional comments; see Checklist for detail.
SW9034	No additional comments; see Checklist for detail.
SW8260B	No additional comments; see Checklist for detail.



December 02, 2020

Reviewed by Kevin Kha, 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 a minimum of 10% of the reported sample results and method quality control data between the two deliverables.



Reviewed by Pei Geng, Senior Scientist, Laboratory Data Consultants, Inc.

March 16, 2021

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

Quality Control Outliers for test method SW6010C, Dissolved, Calibration Blank

The purpose of calibration blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in calibration blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
CCB680640641132 (CB)/ CCB680640641132	Iron	22.30	< 17	< 50	ug/l	U/None	B2	
CCB680640641156 (CB)/ CCB680640641156	Iron	19.20	< 17	< 50	ug/l	U/None	B2	
CCB68064064272 (CB)/ CCB68064064272	Iron	18.00	< 17	< 50	ug/l	U/None	B2	
CCB68064064296 (CB)/ CCB68064064296	Iron	17.20	< 17	< 50	ug/l	U/None	B2	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW6010C, Dissolved, Lab Blank

The purpose of laboratory blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in laboratory blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
MB6806403921A (LB)/ MB6806403921A	Manganese	1.920	< 1	< 10	ug/l	U/None	L	
MB6806403921A (LB)/ MB6806403921A	Iron	23.20	< 17	< 50	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.

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-04-31X-FAL20 (SD)/ 680-190296-5	Iron	124.0	87 - 115	10 - 125	percent	J/None	M	Spike amount Insignificant
G6M-04-31X-FAL20 (MS)/ 680-190296-5	Manganese	125.0	90 - 114	10 - 125	percent	J/None	M	Spike amount Insignificant
G6M-04-31X-FAL20 (SD)/ 680-190296-5	Manganese	140.0	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
G6M-04-31X-FAL20 (MS)/ 680-190296-5	Arsenic	147.0	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-04-31X-FAL20	N	Arsenic	3.00	360 J	360 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
CCVIS6806413263 (CV)/ CCVIS6806413263	Bromomethane	65.60	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6806413263 (CV)/ CCVIS6806413263	Dichlorodifluoromethane	76.80	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6806417893 (CV)/ CCVIS6806417893	Carbon disulfide	120.8	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6806417893 (CV)/ CCVIS6806417893	Bromomethane	130.4	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6806417893 (CV)/ CCVIS6806417893	Chloroethane	143.0	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6806417893 (CV)/ CCVIS6806417893	Naphthalene	79.20	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-TB4-FAL20	TB	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-02-01X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-04-01X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ		ug/l	I/V2
G6M-04-01X-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	I/V2
G6M-04-02X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ		ug/l	I/V2
G6M-04-02X-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	I/V2
G6M-04-05X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-04-09X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-04-15X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-04-22X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-04-31X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 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, Initial 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
ICj2615 (IV)	Chloromethane	127.6	80 - 120	80 - 120	percent	J/None	V1	

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, 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
LCS6806417894 (BS)/ LCS6806417894	Chloroethane	140.8	60 - 138	10 - 138	percent	J/None	C	
LCSD6806417895 (BD)/ LCSD6806417895	Chloroethane	140.0	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 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-04-01X-FAL20 (N)/ 680-190296-7	Toluene-d8	88.14	89 - 112	10 - 112	percent	J/UJ	I	
G6M-04-02X-FAL20 (N)/ 680-190296-8	Toluene-d8	84.26	89 - 112	10 - 112	percent	J/UJ	I	
G6M-04-31X-FAL20 (N)/ 680-190296-5	1-Bromo-4-fluorobenzene (4-Bromofluorobenzene)	117.3	85 - 114	10 - 114	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-04-01X-FAL20	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,1,2-Trichloroethane	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,2-Dichloroethene	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ		ug/l	I
G6M-04-01X-FAL20	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-01X-FAL20	N	2-Hexanone	10.0	5.00 U	5.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	4-Chlorotoluene	1.00	1.00 U	1.00 UJ		ug/l	I

Qualified Results associated with the Surrogate for SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-01X-FAL20	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Acetone	10.0	10.0 U	10.0 UJ		ug/l	I
G6M-04-01X-FAL20	N	Benzene	1.00	1.00 U M	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Bromobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Bromochloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Bromodichloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	I/V2
G6M-04-01X-FAL20	N	Carbon disulfide	2.00	2.00 U	2.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Carbon tetrachloride	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-01X-FAL20	N	Chlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-01X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Chloroform	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Chloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	cis-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Dibromochloromethane	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-01X-FAL20	N	Dibromomethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ		ug/l	I/V2
G6M-04-01X-FAL20	N	Ethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-01X-FAL20	N	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	m,p-Xylene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ		ug/l	I
G6M-04-01X-FAL20	N	Methylene chloride	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	n-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	n-Propylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	o-Xylene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-01X-FAL20	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	sec-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Styrene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-01X-FAL20	N	tert-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Tetrachloroethene (PCE)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Toluene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	trans-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Trichloroethene (TCE)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Vinyl acetate	2.00	2.00 U	2.00 UJ		ug/l	I

Qualified Results associated with the Surrogate for SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-01X-FAL20	N	Vinyl chloride	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Xylenes, Total	2.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,1,2-Trichloroethane	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,2-Dichloroethene	2.00	120	120 J	-	ug/l	I
G6M-04-02X-FAL20	N	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	2-Butanone (MEK)	39.0	39.0	39.0 UJ		ug/l	T/I
G6M-04-02X-FAL20	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-02X-FAL20	N	2-Hexanone	10.0	14.0	14.0 J	-	ug/l	I
G6M-04-02X-FAL20	N	4-Chlorotoluene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	4-Methyl-2-pentanone (MIBK)	10.0	4.20 J	4.20 J	-	ug/l	I/TR
G6M-04-02X-FAL20	N	Acetone	47.0	47.0	47.0 UJ		ug/l	T/I
G6M-04-02X-FAL20	N	Benzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Bromobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Bromochloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Bromodichloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	I/V2
G6M-04-02X-FAL20	N	Carbon disulfide	2.00	2.00 U	2.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Carbon tetrachloride	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-02X-FAL20	N	Chlorobenzene	1.00	0.500 U M	0.500 UJ		ug/l	I
G6M-04-02X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Chloroform	1.00	1.00 U	1.00 UJ		ug/l	I

Qualified Results associated with the Surrogate for SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-02X-FAL20	N	Chloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	cis-1,2-Dichloroethene	1.00	120	120 J	-	ug/l	I
G6M-04-02X-FAL20	N	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Dibromochloromethane	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-02X-FAL20	N	Dibromomethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ		ug/l	I/V2
G6M-04-02X-FAL20	N	Ethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-02X-FAL20	N	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	m,p-Xylene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ		ug/l	I
G6M-04-02X-FAL20	N	Methylene chloride	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	n-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	n-Propylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	o-Xylene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-02X-FAL20	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	sec-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Styrene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-02X-FAL20	N	tert-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Tetrachloroethene (PCE)	1.00	5.70	5.70 J	-	ug/l	I
G6M-04-02X-FAL20	N	Toluene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	trans-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Trichloroethene (TCE)	1.00	6.10	6.10 J	-	ug/l	I
G6M-04-02X-FAL20	N	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Vinyl acetate	2.00	2.00 U M	2.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Vinyl chloride	1.00	5.10	5.10 J	-	ug/l	I
G6M-04-02X-FAL20	N	Xylenes, Total	2.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-31X-FAL20	N	Vinyl chloride	1.00	0.980 J	0.980 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, Trip Blank

The purpose of trip blanks is to determine the existence and magnitude of cross-contamination problems resulting from the shipping of samples. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in trip blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
AOC50-TB4-FAL20 (TB)/ 680-190296-9	Tetrachloroethene (PCE)	0.8100	< 0.74	< 1	ug/l	U/None	T	
AOC50-TB4-FAL20 (TB)/ 680-190296-9	Acetone	12.00	< 7	< 10	ug/l	U/None	T	
AOC50-TB4-FAL20 (TB)/ 680-190296-9	2-Butanone (MEK)	21.00	< 3.4	< 10	ug/l	U/None	T	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Trip Blank for SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-02X-FAL20	N	2-Butanone (MEK)	39.0	39.0	39.0 UJ		ug/l	T/I
G6M-04-02X-FAL20	N	Acetone	47.0	47.0	47.0 UJ		ug/l	T/I
G6M-04-05X-FAL20	N	Tetrachloroethene (PCE)	1.00	0.750 J	1.00 U		ug/l	T
G6M-04-15X-FAL20	N	Tetrachloroethene (PCE)	1.00	0.860 J	1.00 U		ug/l	T
G6M-04-31X-FAL20	N	Tetrachloroethene (PCE)	1.50	1.50	1.50 U		ug/l	T

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: SW6020A	Extraction Method: Dissolved							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-31X-FAL20	N	Arsenic	3.00	360 J	360 J	+	ug/l	M

Test Method: SW8260B	Extraction Method: SW5030B							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-TB4-FAL20	TB	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-02-01X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-04-01X-FAL20	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,1,2-Trichloroethane	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,2-Dichloroethene	2.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ		ug/l	I
G6M-04-01X-FAL20	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-01X-FAL20	N	2-Hexanone	10.0	5.00 U	5.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	4-Chlorotoluene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Acetone	10.0	10.0 U	10.0 UJ		ug/l	I
G6M-04-01X-FAL20	N	Benzene	1.00	1.00 U M	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Bromobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Bromochloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Bromodichloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Carbon disulfide	2.00	2.00 U	2.00 UJ		ug/l	I

Table of All Qualified Results

Test Method: SW8260B	Extraction Method: SW5030B							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-01X-FAL20	N	Carbon tetrachloride	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-01X-FAL20	N	Chlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-01X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Chloroform	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Chloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	cis-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Dibromochloromethane	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-01X-FAL20	N	Dibromomethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Ethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-01X-FAL20	N	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	m,p-Xylene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ		ug/l	I
G6M-04-01X-FAL20	N	Methylene chloride	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	n-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	n-Propylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	o-Xylene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-01X-FAL20	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	sec-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Styrene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-01X-FAL20	N	tert-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Tetrachloroethene (PCE)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Toluene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	trans-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Trichloroethene (TCE)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Vinyl acetate	2.00	2.00 U	2.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Vinyl chloride	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-01X-FAL20	N	Xylenes, Total	2.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-01X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ		ug/l	I/V2
G6M-04-01X-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	I/V2
G6M-04-02X-FAL20	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,1,2-Trichloroethane	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I

Table of All Qualified Results

Test Method: SW8260B	Extraction Method: SW5030B							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-02X-FAL20	N	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,2-Dichloroethene	2.00	120	120 J	-	ug/l	I
G6M-04-02X-FAL20	N	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-02X-FAL20	N	2-Hexanone	10.0	14.0	14.0 J	-	ug/l	I
G6M-04-02X-FAL20	N	4-Chlorotoluene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	4-Methyl-2-pentanone (MIBK)	10.0	4.20 J	4.20 J	-	ug/l	I/TR
G6M-04-02X-FAL20	N	Benzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Bromobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Bromochloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Bromodichloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Carbon disulfide	2.00	2.00 U	2.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Carbon tetrachloride	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-02X-FAL20	N	Chlorobenzene	1.00	0.500 U M	0.500 UJ		ug/l	I
G6M-04-02X-FAL20	N	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Chloroform	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Chloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	cis-1,2-Dichloroethene	1.00	120	120 J	-	ug/l	I
G6M-04-02X-FAL20	N	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Dibromochloromethane	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-02X-FAL20	N	Dibromomethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Ethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-02X-FAL20	N	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	m,p-Xylene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ		ug/l	I

Table of All Qualified Results

Test Method: SW8260B	Extraction Method: SW5030B							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-02X-FAL20	N	Methylene chloride	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	n-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	n-Propylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	o-Xylene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-02X-FAL20	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	sec-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Styrene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-02X-FAL20	N	tert-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Tetrachloroethene (PCE)	1.00	5.70	5.70 J	-	ug/l	I
G6M-04-02X-FAL20	N	Toluene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	trans-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Trichloroethene (TCE)	1.00	6.10	6.10 J	-	ug/l	I
G6M-04-02X-FAL20	N	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Vinyl acetate	2.00	2.00 U M	2.00 UJ		ug/l	I
G6M-04-02X-FAL20	N	Vinyl chloride	1.00	5.10	5.10 J	-	ug/l	I
G6M-04-02X-FAL20	N	Xylenes, Total	2.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-02X-FAL20	N	2-Butanone (MEK)	39.0	39.0	39.0 UJ		ug/l	T/I
G6M-04-02X-FAL20	N	Acetone	47.0	47.0	47.0 UJ		ug/l	T/I
G6M-04-02X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ		ug/l	I/V2
G6M-04-02X-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	I/V2
G6M-04-05X-FAL20	N	Tetrachloroethene (PCE)	1.00	0.750 J	1.00 U		ug/l	T
G6M-04-05X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-04-09X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-04-15X-FAL20	N	Tetrachloroethene (PCE)	1.00	0.860 J	1.00 U		ug/l	T
G6M-04-15X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-04-22X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-04-31X-FAL20	N	Vinyl chloride	1.00	0.980 J	0.980 J	+	ug/l	I/TR
G6M-04-31X-FAL20	N	Tetrachloroethene (PCE)	1.50	1.50	1.50 U		ug/l	T
G6M-04-31X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 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.

Table of Results with Modified Qualifiers

Modified Qualifiers for test method RSK175

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-04-02X-FAL20	N	Methane	390	2600	2600 J	2600	

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
AOC50-TB4-FAL20	TB	2-Butanone (MEK)	10.0	21.0	21.0 J	21.0	
AOC50-TB4-FAL20	TB	Acetone	10.0	12.0	12.0 J	12.0	
AOC50-TB4-FAL20	TB	Tetrachloroethene (PCE)	1.00	0.810 J	0.810 J	0.810 J	TR
G6M-04-01X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 UJ	I
G6M-04-01X-FAL20	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ	10.0 UJ	I
G6M-04-01X-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 UJ	5.00 UJ	I/V2
G6M-04-01X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ	1.00 UJ	I/V2
G6M-04-02X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 UJ	I
G6M-04-02X-FAL20	N	2-Butanone (MEK)	39.0	39.0	39.0 UJ	39.0 UJ	T/I
G6M-04-02X-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 UJ	5.00 UJ	I/V2
G6M-04-02X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ	1.00 UJ	I/V2
G6M-04-09X-FAL20	N	1,1-Dichloroethene	1.00	0.940 J	0.940 J	0.940 J	TR
G6M-04-09X-FAL20	N	1,2,4-Trimethylbenzene	1.00	0.720 J	0.720 J	0.720 J	TR
G6M-04-09X-FAL20	N	1,2-Dichloroethene	2.00	70.0	70.0 J	70.0	
G6M-04-09X-FAL20	N	cis-1,2-Dichloroethene	1.00	68.0	68.0 J	68.0	
G6M-04-09X-FAL20	N	Tetrachloroethene (PCE)	1.00	110	110 J	110	
G6M-04-09X-FAL20	N	trans-1,2-Dichloroethene	1.00	2.30	2.30 J	2.30	
G6M-04-09X-FAL20	N	Trichloroethene (TCE)	1.00	110	110 J	110	
G6M-04-09X-FAL20	N	Vinyl chloride	1.00	34.0	34.0 J	34.0	

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
T	Trip Blank
TR	Trace Level Detect
V1	ICV
V2	CCV

Flag Code and Definitions

Flag	Definition
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.
J	Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
B	Blank contamination: The analyte was found in an associated blank above one half the RL, as well as in the sample.
UB	The analyte was also detected in an associated laboratory or field blank at a concentration comparable to the concentration in the sample. The reported result has been requalified as not detected.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team (which should include a project chemist), but exclusion of the data is recommended.

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 CCVs 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?			•	A field blank was not 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?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?		•		A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs run at the required frequency and within acceptance criteria?	•			
Were surrogate recoveries within project acceptance limits?			•	Surrogates not required by the 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?			•	A field blank was not 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?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
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 rejected during the verification process?		•		All data is acceptable as reported.

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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 CCVs 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?		•		Although iron and manganese were detected in the method and calibration blanks, the associated sample results were significantly greater than the concentrations found in the blanks, therefore no data were qualified.
Were field blanks (EBs or FBs) submitted with these samples?		•		A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?		•		Although iron and manganese recoveries were not within criteria, the sample concentrations were significantly greater (>4X) than the spike amounts, therefore no data were qualified.
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

Data Validation Report for 6801902961

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 CCVs 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?		•		A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?		•		Due to MS %R above criteria, 1 arsenic result was qualified as detected estimated (J) with a high bias (+).
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported or as qualified during data validation.

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?	•			
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?		•		Although chloromethane %R was above the criteria, the associated sample results were non-detect, therefore no data were qualified.
Were CCVs run at the required frequency and within acceptance criteria?		•		Due to CCV %R below the criteria, 2 dichlorodifluoromethane, 2 bromomethane, and 7 naphthalene results were qualified as non-detected estimated (UJ). Although CCV %R for bromomethane, chloroethane, and carbon disulfide were above criteria, the associated sample results were not detected, therefore no qualification was necessary.
Were surrogate recoveries within project acceptance limits?		•		Due to surrogate %R below criteria, results in samples G6M-04-01X-FAL20 and G6M-04-02X-FAL20 were qualified as detected estimated (J) with a low bias (-) or as non-detected estimated (UJ) as applicable. Due to surrogate %R above criteria, results in sample G6M-04-31X-FAL20 were qualified as detected estimated (J) with a high bias (+) as applicable.
Was a method blank prepared and analyzed with each batch?	•			
Were field blanks (EBs or FBs) submitted with these samples?	•			A trip blank was submitted with these samples.
Were target analytes reported in the field blank(s) less than MDL?		•		Due to trip blank contamination, 1 2-butanone, 1 acetone, and 3 tetrachloroethene results were qualified as not detected (U).
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?		•		Although chloroethane %R was above criteria, the associated sample results were non-detected, therefore no data were qualified.
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
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?	•			

Review Questions

Method: SW8260B (Volatile Organic Compounds by Capillary GC/MS)				
Review Questions	Yes	No	NA	Comment
Were any data rejected during the verification process?		•		All data is acceptable as reported or as qualified during data validation.

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 CCVs 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?			•	A field blank was not 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?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?			•	A field blank was not 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?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?		•		A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

February 19, 2021

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 16, 2020. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #49688:

SDG #	Fraction
680-190226-1, 680-190296-1 680-190373-1, 680-190506-1	Volatiles, Dissolved Metals, Wet Chemistry, 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:

- Former Fort Devens Army Installation – BRAC Legacy Sites, Devens, MA; October 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

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

194 pages-ADV 2 WEEK TAT Attachment 1

Stage 2B EQUIS EDD

LDC #49688 (Arcadis-Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(3) DATE DUE	VOA (8260B)		(3)Diss Metals (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	680-190226-1	11/16/20	12/02/20	8	0	6	0	1	0	1	0	1	0	1	0	1	0	1	0																		
B	680-190296-1	11/16/20	12/02/20	9	0	7	0	1	0	1	0	1	0	1	0	1	0	1	0																		
C	680-190373-1	11/16/20	12/02/20	4	0	3	0	1	0	1	0	1	0	1	0	1	0	1	0																		
D	680-190506-1	11/16/20	12/02/20	2	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-																		
Total	T/PG			23	0	17	0	3	0	3	0	3	0	3	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

L:\Arcadis\Fort Devens\49688ST.wpd

Data Validation Report for 6801903731

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020
SDG:	6801903731
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
Data Review Contractor:	Laboratory Data Consultants, Inc.
Data Review Level:	2B
Primary Data Reviewer:	Kevin Kha, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	December 02, 2020

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	E353.2	RSK175	SW6010C - Dissolved	SW6020A - Dissolved	SW8260B	SW9034	SW9056A	SW9060A
AOC50-DUP03-FAL20	680-190373-1	Water	Field Duplicate/FD				X	X	X			
AOC50-TB5-FAL20	680-190373-4	Water	Trip Blank/TB						X			
G6M-03-07X-FAL20	680-190373-2	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-04-04X-FAL20	680-190373-3	Water	Field Sample/N				X	X	X			

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page at 2B data validation level. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020 and the additional guidance documents incorporated by reference to the extent possible. Where definitive guidance is not provided, results have been evaluated in a conservative manner using professional judgment.

Sample collection was managed and directed by Seres-Arcadis JV; analyses were performed by Eurofins Environment Testing TestAmerica, Arvada, CO and were reported under sample delivery group (SDG) 6801903731. 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
- Extracted Internal Standard
- 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 82 results (28.37%) out of the 289 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. 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

Sample ID discrepancy: Client sample ID for sample 680-190373-4 is inconsistent between the laboratory report (TB6-FAL20) and Fort Devens EDMS (AOC50-TB5-FAL20). The sample ID in the Fort Devens EDMS is the correct ID.

Analytical Method	Data Reviewer Comment
RSK175	No additional comments; see Checklist for detail.
SW6010C	No additional comments; see Checklist for detail.
SW9056A	No additional comments; see Checklist for detail.
SW9060A	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
E353.2	No additional comments; see Checklist for detail.
A2320B	No additional comments; see Checklist for detail.
SW9034	No additional comments; see Checklist for detail.
SW8260B	No additional comments; see Checklist for detail.



December 02, 2020

Reviewed by Kevin Kha, 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 a minimum of 10% of the reported sample results and method quality control data between the two deliverables.



Reviewed by Pei Geng, Senior Scientist, Laboratory Data Consultants, Inc.

March 16, 2021

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

Quality Control Outliers for test method SW6010C, Dissolved, Lab Blank

The purpose of laboratory blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in laboratory blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
MB6806407421A (LB)/ MB6806407421A	Manganese	1.740	< 1	< 10	ug/l	U/None	L	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

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
CCVIS6806420143 (CV)/ CCVIS6806420143	Dichlorodifluoromethane	75.40	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6806420143 (CV)/ CCVIS6806420143	Bromomethane	76.20	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6806420222 (CV)/ CCVIS6806420222	Naphthalene	79.00	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6806422583 (CV)/ 680-190373-2	2-Butanone (MEK)	79.90	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6806422583 (CV)/ CCVIS6806422583	Chloroethane	134.6	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6806422583 (CV)/ CCVIS6806422583	Naphthalene	72.00	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6806422583 (CV)/ CCVIS6806422583	1,2-Dibromo-3-chloropropane	76.00	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6806422583 (CV)/ CCVIS6806422583	2-Hexanone	76.00	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6806422583 (CV)/ CCVIS6806422583	4-Methyl-2-pentanone (MIBK)	76.40	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6806422583 (CV)/ CCVIS6806422583	Acetone	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-TB5-FAL20	TB	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2/I
AOC50-TB5-FAL20	TB	Dichlorodifluoromethane	1.00	1.00 U M	1.00 UJ		ug/l	V2/I
G6M-03-07X-FAL20	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ		ug/l	V2
G6M-03-07X-FAL20	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ		ug/l	V2
G6M-03-07X-FAL20	N	2-Hexanone	10.0	5.00 U	5.00 UJ		ug/l	V2
G6M-03-07X-FAL20	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ		ug/l	V2
G6M-03-07X-FAL20	N	Acetone	10.0	10.0 U	10.0 UJ		ug/l	V2
G6M-03-07X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 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
LCSD6806420145 (BD)/ LCSD6806420145	Chloroethane	141.6	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 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
LCSD6806420145 (BD)/ LCSD6806420145	2-Hexanone	20.84	< 20	< 20	rpd	J/None	Z	
LCSD6806420145 (BD)/ LCSD6806420145	4-Methyl-2-pentanone (MIBK)	21.94	< 20	< 20	rpd	J/None	Z	
LCSD6806420145 (BD)/ LCSD6806420145	Bromomethane	33.51	< 20	< 20	rpd	J/None	Z	
LCSD6806420145 (BD)/ LCSD6806420145	Chloroethane	55.37	< 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, 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-TB5-FAL20 (TB)/ 680-190373-4	1,2-Dichloroethane-d4	80.43	81 - 118	10 - 118	percent	J/UJ	I	
G6M-03-07X-FAL20 (N)/ 680-190373-2	1-Bromo-4-fluorobenzene (4-Bromofluorobenzene)	120.8	85 - 114	10 - 114	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
AOC50-TB5-FAL20	TB	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,1,2-Trichloroethane	1.00	0.500 U	0.500 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,2-Dichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,2-Dichloroethene	2.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	2-Butanone (MEK)	10.0	22.0	22.0 J	-	ug/l	I
AOC50-TB5-FAL20	TB	2-Chlorotoluene	1.00	0.500 U	0.500 UJ		ug/l	I
AOC50-TB5-FAL20	TB	2-Hexanone	10.0	5.00 U Q	5.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	4-Chlorotoluene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U Q	5.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Acetone	10.0	11.0	11.0 J	-	ug/l	I

Qualified Results associated with the Surrogate for SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-TB5-FAL20	TB	Benzene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Bromobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Bromochloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Bromodichloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2/I
AOC50-TB5-FAL20	TB	Carbon disulfide	2.00	2.00 U	2.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Carbon tetrachloride	1.00	0.500 U	0.500 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Chlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Chloroethane	5.00	5.00 U Q	5.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Chloroform	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Chloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	cis-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Dibromochloromethane	1.00	0.500 U	0.500 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Dibromomethane	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Dichlorodifluoromethane	1.00	1.00 U M	1.00 UJ		ug/l	V2/I
AOC50-TB5-FAL20	TB	Ethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	m,p-Xylene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Methylene chloride	5.00	5.00 U	5.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	n-Butylbenzene	1.00	0.610 J	0.610 J	-	ug/l	I/TR
AOC50-TB5-FAL20	TB	n-Propylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	o-Xylene	1.00	0.500 U	0.500 UJ		ug/l	I
AOC50-TB5-FAL20	TB	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	sec-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Styrene	1.00	0.500 U	0.500 UJ		ug/l	I
AOC50-TB5-FAL20	TB	tert-Butylbenzene	1.00	1.00 U M	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Tetrachloroethene (PCE)	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Toluene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	trans-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Trichloroethene (TCE)	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Trichlorofluoromethane	1.00	1.00 U Q	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Vinyl acetate	2.00	2.00 U	2.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Vinyl chloride	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Xylenes, Total	2.00	0.500 U	0.500 UJ		ug/l	I
G6M-03-07X-FAL20	N	1,2-Dichloroethene	2.00	0.910 J	0.910 J	+	ug/l	I/TR

Qualified Results associated with the Surrogate for SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-03-07X-FAL20	N	1,3,5-Trimethylbenzene	1.00	0.610 J	0.610 J	+	ug/l	I/TR
G6M-03-07X-FAL20	N	cis-1,2-Dichloroethene	1.00	0.580 J	0.580 J	+	ug/l	I/TR
G6M-03-07X-FAL20	N	Toluene	1.00	2.20	2.20 J	+	ug/l	I

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (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-03-07X-FAL20 (N)/ 680-190373-2		14.13	< 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.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW8260B, Trip Blank

The purpose of trip blanks is to determine the existence and magnitude of cross-contamination problems resulting from the shipping of samples. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in trip blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
AOC50-TB5-FAL20 (TB)/ 680-190373-4	n-Butylbenzene	0.6100	< 0.47	< 1	ug/l	U/None	T	
AOC50-TB5-FAL20 (TB)/ 680-190373-4	Acetone	11.00	< 7	< 10	ug/l	U/None	T	
AOC50-TB5-FAL20 (TB)/ 680-190373-4	2-Butanone (MEK)	22.00	< 3.4	< 10	ug/l	U/None	T	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Table of All Qualified Results

Test Method: SW8260B	Extraction Method: SW5030B							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-TB5-FAL20	TB	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,1,2-Trichloroethane	1.00	0.500 U	0.500 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,2-Dichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,2-Dichloroethene	2.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	2-Butanone (MEK)	10.0	22.0	22.0 J	-	ug/l	I
AOC50-TB5-FAL20	TB	2-Chlorotoluene	1.00	0.500 U	0.500 UJ		ug/l	I
AOC50-TB5-FAL20	TB	2-Hexanone	10.0	5.00 U Q	5.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	4-Chlorotoluene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U Q	5.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Acetone	10.0	11.0	11.0 J	-	ug/l	I
AOC50-TB5-FAL20	TB	Benzene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Bromobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Bromochloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Bromodichloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Carbon disulfide	2.00	2.00 U	2.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Carbon tetrachloride	1.00	0.500 U	0.500 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Chlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Chloroethane	5.00	5.00 U Q	5.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Chloroform	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Chloromethane	1.00	1.00 U	1.00 UJ		ug/l	I

Table of All Qualified Results

Test Method: SW8260B	Extraction Method: SW5030B							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-TB5-FAL20	TB	cis-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Dibromochloromethane	1.00	0.500 U	0.500 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Dibromomethane	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Ethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	m,p-Xylene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Methylene chloride	5.00	5.00 U	5.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	n-Butylbenzene	1.00	0.610 J	0.610 J	-	ug/l	I/TR
AOC50-TB5-FAL20	TB	n-Propylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	o-Xylene	1.00	0.500 U	0.500 UJ		ug/l	I
AOC50-TB5-FAL20	TB	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	sec-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Styrene	1.00	0.500 U	0.500 UJ		ug/l	I
AOC50-TB5-FAL20	TB	tert-Butylbenzene	1.00	1.00 U M	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Tetrachloroethene (PCE)	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Toluene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	trans-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Trichloroethene (TCE)	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Trichlorofluoromethane	1.00	1.00 U Q	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Vinyl acetate	2.00	2.00 U	2.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Vinyl chloride	1.00	1.00 U	1.00 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Xylenes, Total	2.00	0.500 U	0.500 UJ		ug/l	I
AOC50-TB5-FAL20	TB	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2/I
AOC50-TB5-FAL20	TB	Dichlorodifluoromethane	1.00	1.00 U M	1.00 UJ		ug/l	V2/I
G6M-03-07X-FAL20	N	1,2-Dichloroethene	2.00	0.910 J	0.910 J	+	ug/l	I/TR
G6M-03-07X-FAL20	N	1,3,5-Trimethylbenzene	1.00	0.610 J	0.610 J	+	ug/l	I/TR
G6M-03-07X-FAL20	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ		ug/l	V2
G6M-03-07X-FAL20	N	cis-1,2-Dichloroethene	1.00	0.580 J	0.580 J	+	ug/l	I/TR
G6M-03-07X-FAL20	N	Toluene	1.00	2.20	2.20 J	+	ug/l	I
G6M-03-07X-FAL20	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ		ug/l	V2
G6M-03-07X-FAL20	N	2-Hexanone	10.0	5.00 U	5.00 UJ		ug/l	V2
G6M-03-07X-FAL20	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ		ug/l	V2

Table of All Qualified Results

Test Method: SW8260B	Extraction Method: SW5030B							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-03-07X-FAL20	N	Acetone	10.0	10.0 U	10.0 UJ		ug/l	V2
G6M-03-07X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 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.

Table of Results with Modified Qualifiers

Modified Qualifiers for test method RSK175

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-03-07X-FAL20	N	Methane	390	34000	34000 J	34000	

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
AOC50-DUP03-FAL20	FD	Naphthalene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-03-07X-FAL20	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	1,1,2-Trichloroethane	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-03-07X-FAL20	N	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-03-07X-FAL20	N	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-03-07X-FAL20	N	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ	2.00 UJ	V2
G6M-03-07X-FAL20	N	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	1,2-Dichloroethene	2.00	0.910 J	0.910 J	0.910 J	I/TR
G6M-03-07X-FAL20	N	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	1,3,5-Trimethylbenzene	1.00	0.610 J	0.610 J	0.610 J	I/TR
G6M-03-07X-FAL20	N	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ	10.0 UJ	V2
G6M-03-07X-FAL20	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-03-07X-FAL20	N	2-Hexanone	10.0	5.00 U	5.00 UJ	5.00 UJ	V2
G6M-03-07X-FAL20	N	4-Chlorotoluene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ	5.00 UJ	V2
G6M-03-07X-FAL20	N	Acetone	10.0	10.0 U	10.0 UJ	10.0 UJ	V2
G6M-03-07X-FAL20	N	Benzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	Bromobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	Bromochloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	Bromodichloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	Bromoform	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-03-07X-FAL20	N	Carbon disulfide	2.00	2.00 U	2.00 UJ	2.00 U	

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-03-07X-FAL20	N	Carbon tetrachloride	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-03-07X-FAL20	N	Chlorobenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-03-07X-FAL20	N	Chloroethane	5.00	5.00 U Q	5.00 UJ	5.00 U	
G6M-03-07X-FAL20	N	Chloroform	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	Chloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	cis-1,2-Dichloroethene	1.00	0.580 J	0.580 J	0.580 J	I/TR
G6M-03-07X-FAL20	N	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	Dibromochloromethane	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-03-07X-FAL20	N	Dibromomethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	Ethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-03-07X-FAL20	N	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-03-07X-FAL20	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	m,p-Xylene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ	0.500 U	
G6M-03-07X-FAL20	N	Methylene chloride	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-03-07X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ	5.00 UJ	V2
G6M-03-07X-FAL20	N	n-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	n-Propylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	o-Xylene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-03-07X-FAL20	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	sec-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	Styrene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-03-07X-FAL20	N	tert-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	Tetrachloroethene (PCE)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	Toluene	1.00	2.20	2.20 J	2.20 J	I
G6M-03-07X-FAL20	N	trans-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	Trichloroethene (TCE)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	Vinyl acetate	2.00	2.00 U	2.00 UJ	2.00 U	
G6M-03-07X-FAL20	N	Vinyl chloride	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-03-07X-FAL20	N	Xylenes, Total	2.00	0.500 U	0.500 UJ	0.500 U	
G6M-04-04X-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ	5.00 U	

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.
L	Lab Blank
T	Trip Blank
TR	Trace Level Detect
V2	CCV
Z	LCS RPD

Flag Code and Definitions

Flag	Definition
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.
J	Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
B	Blank contamination: The analyte was found in an associated blank above one half the RL, as well as in the sample.
UB	The analyte was also detected in an associated laboratory or field blank at a concentration comparable to the concentration in the sample. The reported result has been requalified as not detected.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team (which should include a project chemist), but exclusion of the data is recommended.

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 CCVs 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?			•	A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?			•	A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs run at the required frequency and within acceptance criteria?	•			
Were surrogate recoveries within project acceptance limits?			•	Surrogates not required by the method.
Was a method blank prepared and analyzed with each batch?	•			
Were field blanks (EBs or FBs) submitted with these samples?		•		A field blank was not submitted with these samples.
Were target analytes reported in the field blank(s) less than MDL?			•	A field blank was not 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?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
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 rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?		•		Although manganese was detected in the method blank, the associated sample results were significantly greater than the concentration found in the blank, therefore no data were qualified.
Were field blanks (EBs or FBs) submitted with these samples?		•		A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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 rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?		•		A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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 rejected during the verification process?		•		All data is acceptable as reported.

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?	•			Although ADR flagged sample G6M-03-07X-FAL20 as analyzed outside hold time, the sample was analyzed within the 14th day of hold, therefore no sample qualification was necessary.
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?		•		Although chloromethane %R was above the criteria, the associated sample results were non-detected, therefore no data were qualified.
Were CCVs run at the required frequency and within acceptance criteria?		•		Due to CCV %R below the criteria, several results were qualified as non-detected estimated (UJ) as applicable. Although chloroethane %R was above the criteria, the associated sample results were non-detected, therefore no qualification was necessary.
Were surrogate recoveries within project acceptance limits?		•		Due to surrogate %R below criteria, sample AOC50-TB5-FAL20 was qualified as detected estimated (J) with a low bias (-) or non-detected estimated (UJ) as applicable. Due to surrogate %R above criteria, sample G6M-03-07X-FAL20 was qualified as detected estimated (J) with a high bias (+) as applicable.
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?		•		Sample AOC50-TB5-FAL20 was identified as a trip blank. The trip blank had detections for n-butylbenzene, acetone, and 2-butanone (MEK). The associated sample results were non-detected, therefore no data were qualified.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?		•		Although chloroethane %R was above criteria, the associated sample results were non-detected, therefore no data were qualified.
Was the LCS/LCSD RPD within project acceptance limits?		•		Although RPD in several analytes were above criteria, the associated sample results were non-detected, therefore no data were qualified.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?	•			

Review Questions

Method: SW8260B (Volatile Organic Compounds by Capillary GC/MS)				
Review Questions	Yes	No	NA	Comment
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 rejected during the verification process?		•		All data is acceptable as reported or as qualified during data validation.

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 CCVs 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?			•	A field blank was not 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?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?		•		A field blank was not 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?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

Data Validation Report for 6801903731

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 CCVs 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?		•		A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020
Field Duplicates for SDG: 6801903731

Location	Analysis
G6M-04-04X	SW6010C

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Iron (FLDFLT)	130000	120000	50.0	8.00	30	OK	NA
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Manganese (FLDFLT)	16000	15000	10.0	6.45	30	OK	NA

Location	Analysis
G6M-04-04X	SW6020A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Arsenic (FLDFLT)	510	480	3.00	6.06	30	OK	NA

Location	Analysis
G6M-04-04X	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-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	1,1,1,2-Tetrachloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	1,1,1-Trichloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	1,1,2,2-Tetrachloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	1,1,2-Trichloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	1,1-Dichloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	1,1-Dichloroethene	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	1,1-Dichloropropene	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	1,2,3-Trichlorobenzene	ND	ND	5.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	1,2,3-Trichloropropane	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	1,2,4-Trichlorobenzene	ND	ND	5.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	1,2,4-Trimethylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	1,2-Dibromo-3-chloropropane	ND	ND	5.00	NA	30	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020
Field Duplicates for SDG: 6801903731

Location	Analysis
G6M-04-04X	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-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	1,2-Dibromoethane (EDB)	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	1,2-Dichlorobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	1,2-Dichloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	1,2-Dichloroethene	1.00	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	1,2-Dichloropropane	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	1,3,5-Trimethylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	1,3-Dichlorobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	1,3-Dichloropropane	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	1,4-Dichlorobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	2,2-Dichloropropane	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	2-Butanone (MEK)	ND	ND	10.0	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	2-Chlorotoluene	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	2-Hexanone	ND	ND	10.0	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	4-Chlorotoluene	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	4-Methyl-2-pentanone (MIBK)	ND	ND	10.0	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Acetone	ND	ND	10.0	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Benzene	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Bromobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Bromochloromethane	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Bromodichloromethane	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Bromoform	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Bromomethane	ND	ND	5.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Carbon disulfide	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Carbon tetrachloride	ND	ND	1.00	NA	30	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020
Field Duplicates for SDG: 6801903731

Location	Analysis
G6M-04-04X	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-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Chlorobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Chloroethane	ND	ND	5.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Chloroform	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Chloromethane	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	cis-1,2-Dichloroethene	0.640	0.670	1.00	4.58	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	cis-1,3-Dichloropropene	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Dibromochloromethane	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Dibromomethane	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Dichlorodifluoromethane	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Ethylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Hexachlorobutadiene	ND	ND	5.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Isopropylbenzene (Cumene)	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	m,p-Xylene	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Methyl tert-butyl ether (MTBE)	ND	ND	10.0	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Methylene chloride	ND	ND	5.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	n-Butylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	n-Propylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Naphthalene	ND	ND	5.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	o-Xylene	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	p-Cymene (p-Isopropyltoluene)	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	sec-Butylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Styrene	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	tert-Butylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Tetrachloroethene (PCE)	ND	ND	1.00	NA	30	NA	OK

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RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

Field Duplicate Report By SDG
Former Fort Devens, Long Term Monitoring
Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020
Field Duplicates for SDG: 6801903731

Location	Analysis
G6M-04-04X	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-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Toluene	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	trans-1,2-Dichloroethene	0.390	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	trans-1,3-Dichloropropene	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Trichloroethene (TCE)	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Trichlorofluoromethane	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Vinyl acetate	ND	ND	2.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Vinyl chloride	ND	ND	1.00	NA	30	NA	OK
G6M-04-04X-FAL20 / AOC50-DUP03-FAL20	680-190373-3 / 680-190373-1	Xylenes, Total	ND	ND	2.00	NA	30	NA	OK

FD = Field Duplicate
RL = Reporting Limit
RPD = Relative Percent Difference

RL Check = If either the primary sample or field duplicate result is less than 5 times the RL then the criteria used to determine if the field duplicate is outside QC limits is +/- RL for Water and +/- 2 times RL for Soil"

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

February 19, 2021

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 16, 2020. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #49688:

SDG #	Fraction
680-190226-1, 680-190296-1 680-190373-1, 680-190506-1	Volatiles, Dissolved Metals, Wet Chemistry, 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:

- Former Fort Devens Army Installation – BRAC Legacy Sites, Devens, MA; October 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

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

194 pages-ADV 2 WEEK TAT Attachment 1

Stage 2B EQUIS EDD

LDC #49688 (Arcadis-Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(3) DATE DUE	VOA (8260B)		(3)Diss Metals (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	680-190226-1	11/16/20	12/02/20	8	0	6	0	1	0	1	0	1	0	1	0	1	0	1	0																		
B	680-190296-1	11/16/20	12/02/20	9	0	7	0	1	0	1	0	1	0	1	0	1	0	1	0																		
C	680-190373-1	11/16/20	12/02/20	4	0	3	0	1	0	1	0	1	0	1	0	1	0	1	0																		
D	680-190506-1	11/16/20	12/02/20	2	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-																		
Total	T/PG			23	0	17	0	3	0	3	0	3	0	3	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

L:\Arcadis\Fort Devens\49688ST.wpd

Data Validation Report for 6801905061

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020
SDG:	6801905061
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:	Kevin Kha, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	December 02, 2020

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	SW6010C - Dissolved	SW6020A - Dissolved	SW8260B
AOC50-TB7-FAL20	680-190506-2	Water	Trip Blank/TB			X
G6M-03-08X-FAL20	680-190506-1	Water	Field Sample/N	X	X	X

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page at 2B data validation level. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2020 and the additional guidance documents incorporated by reference to the extent possible. Where definitive guidance is not provided, results have been evaluated in a conservative manner using professional judgment.

Sample collection was managed and directed by Seres-Arcadis JV; analyses were performed by Eurofins Environment Testing TestAmerica, Savannah, GA and were reported under sample delivery group (SDG) 6801905061. 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
- Extracted Internal Standard
- 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 2 results (1.44%) out of the 139 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. 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

Sample ID discrepancy: Client sample ID for sample 680-190506-2 is inconsistent between the laboratory report (TB8-FAL20) and Fort Devens EDMS (AOC50-TB7-FAL20). The sample ID in the Fort Devens EDMS is the correct ID.

Analytical Method	Data Reviewer Comment
SW6010C	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
SW8260B	No additional comments; see Checklist for detail.



December 02, 2020

Reviewed by Kevin Kha, 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 a minimum of 10% of the reported sample results and method quality control data between the two deliverables.



Reviewed by Pei Geng, Senior Scientist, Laboratory Data Consultants, Inc.

March 16, 2021

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

Quality Control Outliers for test method SW6010C, Dissolved, Lab Blank

The purpose of laboratory blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in laboratory blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
MB6806411441A (LB)/ MB6806411441A	Manganese	1.640	< 1	< 10	ug/l	U/None	L	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

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
CCVIS6806420222 (CV)/ CCVIS6806420222	Naphthalene	79.00	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6806420283 (CV)/ CCVIS6806420283	Bromomethane	58.40	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-TB7-FAL20	TB	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-03-08X-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 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.

Table of All Qualified Results

Test Method: SW8260B	**Extraction Method: SW5030B**							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-TB7-FAL20	TB	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2
G6M-03-08X-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 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.

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-03-08X-FAL20	N	2-Hexanone	10.0	5.00 U	5.00 UJ	5.00 U	
G6M-03-08X-FAL20	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ	5.00 U	

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
L	Lab Blank
TR	Trace Level Detect
V2	CCV

Flag Code and Definitions

Flag	Definition
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.
J	Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
B	Blank contamination: The analyte was found in an associated blank above one half the RL, as well as in the sample.
UB	The analyte was also detected in an associated laboratory or field blank at a concentration comparable to the concentration in the sample. The reported result has been requalified as not detected.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team (which should include a project chemist), but exclusion of the data is recommended.

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 CCVs 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?		•		Although manganese was detected in the method blank, the associated sample results were significantly greater than the concentration found in the blank, therefore no data were qualified.
Were target analytes reported in the field blank(s) less than MDL?			•	A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?		•		A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

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?	•			
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 CCVs run at the required frequency and within acceptance criteria?		•		Due to CCV %R below criteria, 1 naphthalene and 1 bromomethane result were qualified as non-detected estimated (UJ).
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?		•		A field blank was not submitted with these samples.
Were target analytes reported in the field blank(s) less than MDL?			•	A field blank was not 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?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
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 rejected during the verification process?		•		All data is acceptable as reported or as qualified during data validation.

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

February 19, 2021

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, 2020. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #49902:

SDG #	Fraction
680-191150-2, 680-191377-1 680-191519-1	Volatiles, Dissolved Metals, Alkalinity, Wet Chemistry, 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:

- Former Fort Devens Army Installation – BRAC Legacy Sites, Devens, MA; October 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

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

127 pages-ADV

Attachment 1

Stage 2B EQUIS EDD

LDC #49902 (Arcadis-Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	VOA (8260B)		3 D.Metal (6010C/ 6020A)		Methane Ethane Ethene		Alk. (2320B)		DOC (9060A)		Cl, SO_4 (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	W	S
A	680-191150-2	12/07/20	12/21/20	4	0	3	0	1	0	1	0	-	-	-	-	1	0	1	0	1	0	1	0															
B	680-191377-1	12/07/20	12/21/20	-	-	8	0	-	-	8	0	13	0	8	0	-	-	-	-	-	-	-	-															
C	680-191519-1	12/07/20	12/21/20	-	-	13	0	-	-	12	0	12	0	12	0	-	-	-	-	-	-	-	-															
Total	T/PG			4	0	24	0	1	0	21	0	25	0	20	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	99

Shaded cells indicate Stage 4 validation (all other cells are Stage 2B validation). These sample counts do not include MS/MSD, and DUPs

L:\Arcadis\Fort Devens\49902ST.wpd

Data Validation Report for 6801911502

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020
SDG:	6801911502
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
Data Review Contractor:	Laboratory Data Consultants, Inc.
Data Review Level:	2B
Primary Data Reviewer:	Kevin Kha, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	December 21, 2020

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	E353.2	RSK175	SW6010C - Dissolved	SW6020A - Dissolved	SW8260B	SW9034	SW9056A	SW9060A
AOC50-RB1-FAL20	680-191150-2	Water	Equipment Blank/EB				X	X	X			
AOC50-TB8-FAL20	680-191150-8	Water	Trip Blank/TB						X			
G6M-06-01X-FAL20	680-191150-3	Water	Field Sample/N				X	X	X			
G6M-18-01-FAL20	680-191150-1	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 and were reported under sample delivery group (SDG) 6801911502. 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
- Extracted Internal Standard
- 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 31 results (10.73%) out of the 289 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. 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
E353.2	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
SW9056A	No additional comments; see Checklist for detail.
SW9060A	No additional comments; see Checklist for detail.
RSK175	No additional comments; see Checklist for detail.
SW6010C	No additional comments; see Checklist for detail.
A2320B	No additional comments; see Checklist for detail.
SW9034	No additional comments; see Checklist for detail.
SW8260B	No additional comments; see Checklist for detail.



December 21, 2020

Reviewed by Kevin Kha, 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 a minimum of 10% of the reported sample results and method quality control data between the two deliverables.



March 16, 2021

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 SW6010C, Dissolved, Calibration Blank

The purpose of calibration blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in calibration blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
CCB680643527226 (CB)/ CCB680643527226	Iron	19.80	< 17	< 50	ug/l	U/None	B2	
CCB680643527250 (CB)/ CCB680643527250	Iron	17.30	< 17	< 50	ug/l	U/None	B2	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Calibration Blank for SW6010C, Dissolved

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-18-01-FAL20	N	Iron	50.0	22.0 J	50.0 U		ug/l	B2/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 SW6010C, Dissolved, Equipment Blank

The purpose of equipment blanks is to determine the existence and magnitude of cross-contamination problems resulting from the process during sampling. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in equipment blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
AOC50-RB1-FAL20 (EB)/ 680-191150-2	Iron	93.00	< 17	< 50	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.

Qualified Results associated with the Equipment Blank for SW6010C, Dissolved

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-18-01-FAL20	N	Iron	50.0	22.0 J	50.0 U		ug/l	B2/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 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
CCVIS6806441342 (CV)/ CCVIS6806441342	Dichlorodifluoromethane	130.4	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6806441342 (CV)/ CCVIS6806441342	1,2,3-Trichlorobenzene	70.80	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6806441342 (CV)/ CCVIS6806441342	Naphthalene	74.00	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6806441342 (CV)/ CCVIS6806441342	1,2,4-Trichlorobenzene	78.80	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6806445352 (CV)/ CCVIS6806445352	Bromomethane	57.40	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6806445352 (CV)/ CCVIS6806445352	Dichlorodifluoromethane	71.60	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6806445352 (CV)/ CCVIS6806445352	2-Hexanone	78.00	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6806445352 (CV)/ CCVIS6806445352	4-Methyl-2-pentanone (MIBK)	78.40	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6806445352 (CV)/ CCVIS6806445352	Acetone	79.20	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-RB1-FAL20	EB	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	V2/V1
AOC50-RB1-FAL20	EB	1,2,4-Trichlorobenzene	5.00	5.00 U Q	5.00 UJ		ug/l	V2/V1
AOC50-RB1-FAL20	EB	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2/V1
AOC50-TB8-FAL20	TB	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	V2/V1
AOC50-TB8-FAL20	TB	1,2,4-Trichlorobenzene	5.00	5.00 U Q	5.00 UJ		ug/l	V2/V1
AOC50-TB8-FAL20	TB	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2/V1
G6M-06-01X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ		ug/l	V2
G6M-06-01X-FAL20	N	2-Hexanone	10.0	5.00 U	5.00 UJ		ug/l	V2
G6M-06-01X-FAL20	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ		ug/l	V2
G6M-06-01X-FAL20	N	Acetone	10.0	130	130 J		ug/l	V2/I
G6M-06-01X-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2
G6M-18-01-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	V2/V1
G6M-18-01-FAL20	N	1,2,4-Trichlorobenzene	5.00	5.00 U Q	5.00 UJ		ug/l	V2/V1
G6M-18-01-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2/V1

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260B, Initial 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
BJ1615 (IV)	1,2,3-Trichlorobenzene	67.90	80 - 120	80 - 120	percent	J/UJ	V1	
BJ1615 (IV)	1,2,4-Trichlorobenzene	69.40	80 - 120	80 - 120	percent	J/UJ	V1	
BJ1615 (IV)	Naphthalene	70.60	80 - 120	80 - 120	percent	J/UJ	V1	
Bj1615 (IV)	Dichlorodifluoromethane	73.60	80 - 120	80 - 120	percent	J/UJ	V1	

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 Initial Calibration Verification for SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-RB1-FAL20	EB	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	V2/V1
AOC50-RB1-FAL20	EB	1,2,4-Trichlorobenzene	5.00	5.00 U Q	5.00 UJ		ug/l	V2/V1
AOC50-RB1-FAL20	EB	Dichlorodifluoromethane	1.00	1.00 U Q	1.00 UJ		ug/l	V1
AOC50-RB1-FAL20	EB	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2/V1
AOC50-TB8-FAL20	TB	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	V2/V1
AOC50-TB8-FAL20	TB	1,2,4-Trichlorobenzene	5.00	5.00 U Q	5.00 UJ		ug/l	V2/V1
AOC50-TB8-FAL20	TB	Dichlorodifluoromethane	1.00	1.00 U Q	1.00 UJ		ug/l	V1
AOC50-TB8-FAL20	TB	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2/V1
G6M-18-01-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	V2/V1
G6M-18-01-FAL20	N	1,2,4-Trichlorobenzene	5.00	5.00 U Q	5.00 UJ		ug/l	V2/V1
G6M-18-01-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U Q	1.00 UJ		ug/l	V1
G6M-18-01-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2/V1

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

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
LCS6806441343 (BS)/ LCS6806441343	Styrene	123.6	78 - 123	10 - 123	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 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-06-01X-FAL20 (N)/ 680-191150-3	Toluene-d8	141.4	89 - 112	10 - 112	percent	J/None	I	
G6M-06-01X-FAL20 (N)/ 680-191150-3	1-Bromo-4-fluorobenzene (4-Bromofluorobenzene)	168.0	85 - 114	10 - 114	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-06-01X-FAL20	N	1,2,4-Trimethylbenzene	1.00	1.10 Q	1.10 J	+	ug/l	I
G6M-06-01X-FAL20	N	1,2-Dichloroethene	2.00	9.00	9.00 J	+	ug/l	I
G6M-06-01X-FAL20	N	1,3,5-Trimethylbenzene	1.00	0.360 J Q	0.360 J	+	ug/l	I/TR
G6M-06-01X-FAL20	N	2-Butanone (MEK)	10.0	70.0	70.0 J	+	ug/l	I
G6M-06-01X-FAL20	N	Acetone	10.0	130	130 J		ug/l	V2/I
G6M-06-01X-FAL20	N	cis-1,2-Dichloroethene	1.00	9.00	9.00 J	+	ug/l	I
G6M-06-01X-FAL20	N	Ethylbenzene	1.00	0.490 J Q	0.490 J	+	ug/l	I/TR
G6M-06-01X-FAL20	N	m,p-Xylene	1.00	1.50 Q	1.50 J	+	ug/l	I
G6M-06-01X-FAL20	N	n-Butylbenzene	1.00	2.80 Q	2.80 J	+	ug/l	I
G6M-06-01X-FAL20	N	o-Xylene	1.00	0.580 J Q	0.580 J	+	ug/l	I/TR
G6M-06-01X-FAL20	N	Tetrachloroethene (PCE)	1.00	0.950 J	0.950 J	+	ug/l	I/TR
G6M-06-01X-FAL20	N	Trichloroethene (TCE)	1.00	1.10	1.10 J	+	ug/l	I
G6M-06-01X-FAL20	N	Xylenes, Total	2.00	2.10	2.10 J	+	ug/l	I

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (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 SW9060A, 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
CCB28051719728 (CB)/ CCB28051719728	Total Organic Carbon	0.3780	< 0.35	< 1	mg/l	U/None	B2	
CCB28051719740 (CB)/ CCB28051719740	Total Organic Carbon	0.5320	< 0.35	< 1	mg/l	U/None	B2	
CCB28051719752 (CB)/ CCB28051719752	Total Organic Carbon	0.3600	< 0.35	< 1	mg/l	U/None	B2	
CCB28051719764 (CB)/ CCB28051719764	Total Organic Carbon	0.5670	< 0.35	< 1	mg/l	U/None	B2	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Calibration Blank for SW9060A

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-18-01-FAL20	N	Total Organic Carbon	1.00	0.650 J	1.00 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.

Table of All Qualified Results

Test Method: SW6010C	Extraction Method: Dissolved							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-18-01-FAL20	N	Iron	50.0	22.0 J	50.0 U		ug/l	B2/V

Test Method: SW8260B	Extraction Method: SW5030B							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-RB1-FAL20	EB	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	V2/V1
AOC50-RB1-FAL20	EB	1,2,4-Trichlorobenzene	5.00	5.00 U Q	5.00 UJ		ug/l	V2/V1
AOC50-RB1-FAL20	EB	Dichlorodifluoromethane	1.00	1.00 U Q	1.00 UJ		ug/l	V1
AOC50-RB1-FAL20	EB	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2/V1
AOC50-TB8-FAL20	TB	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	V2/V1
AOC50-TB8-FAL20	TB	1,2,4-Trichlorobenzene	5.00	5.00 U Q	5.00 UJ		ug/l	V2/V1
AOC50-TB8-FAL20	TB	Dichlorodifluoromethane	1.00	1.00 U Q	1.00 UJ		ug/l	V1
AOC50-TB8-FAL20	TB	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2/V1
G6M-06-01X-FAL20	N	1,2,4-Trimethylbenzene	1.00	1.10 Q	1.10 J	+	ug/l	I
G6M-06-01X-FAL20	N	1,2-Dichloroethene	2.00	9.00	9.00 J	+	ug/l	I
G6M-06-01X-FAL20	N	1,3,5-Trimethylbenzene	1.00	0.360 J Q	0.360 J	+	ug/l	I/TR
G6M-06-01X-FAL20	N	2-Butanone (MEK)	10.0	70.0	70.0 J	+	ug/l	I
G6M-06-01X-FAL20	N	Acetone	10.0	130	130 J		ug/l	V2/I
G6M-06-01X-FAL20	N	cis-1,2-Dichloroethene	1.00	9.00	9.00 J	+	ug/l	I
G6M-06-01X-FAL20	N	Ethylbenzene	1.00	0.490 J Q	0.490 J	+	ug/l	I/TR
G6M-06-01X-FAL20	N	m,p-Xylene	1.00	1.50 Q	1.50 J	+	ug/l	I
G6M-06-01X-FAL20	N	n-Butylbenzene	1.00	2.80 Q	2.80 J	+	ug/l	I
G6M-06-01X-FAL20	N	o-Xylene	1.00	0.580 J Q	0.580 J	+	ug/l	I/TR
G6M-06-01X-FAL20	N	Tetrachloroethene (PCE)	1.00	0.950 J	0.950 J	+	ug/l	I/TR
G6M-06-01X-FAL20	N	Trichloroethene (TCE)	1.00	1.10	1.10 J	+	ug/l	I
G6M-06-01X-FAL20	N	Xylenes, Total	2.00	2.10	2.10 J	+	ug/l	I
G6M-06-01X-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ		ug/l	V2
G6M-06-01X-FAL20	N	2-Hexanone	10.0	5.00 U	5.00 UJ		ug/l	V2
G6M-06-01X-FAL20	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ		ug/l	V2
G6M-06-01X-FAL20	N	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2
G6M-18-01-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	V2/V1
G6M-18-01-FAL20	N	1,2,4-Trichlorobenzene	5.00	5.00 U Q	5.00 UJ		ug/l	V2/V1
G6M-18-01-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U Q	1.00 UJ		ug/l	V1
G6M-18-01-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	V2/V1

Test Method: SW9060A	Extraction Method: NONE							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-18-01-FAL20	N	Total Organic Carbon	1.00	0.650 J	1.00 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.
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	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-18-01-FAL20	N	Methane	0.580	0.400 J	0.400 J	0.400	

Modified Qualifiers for test method SW6010C, Dissolved

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
AOC50-RB1-FAL20	EB	Iron	50.0	93.0	50.0 U	93.0	

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
AOC50-RB1-FAL20	EB	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 UJ	V2/V1
AOC50-RB1-FAL20	EB	1,2,4-Trichlorobenzene	5.00	5.00 U Q	5.00 UJ	5.00 UJ	V2/V1
AOC50-RB1-FAL20	EB	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ	10.0 U	
AOC50-RB1-FAL20	EB	2-Hexanone	10.0	5.00 U	5.00 UJ	5.00 U	
AOC50-RB1-FAL20	EB	Acetone	10.0	10.0 U	10.0 UJ	10.0 U	
AOC50-RB1-FAL20	EB	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
AOC50-RB1-FAL20	EB	Dichlorodifluoromethane	1.00	1.00 U Q	1.00 U	1.00 UJ	V1
AOC50-RB1-FAL20	EB	Naphthalene	5.00	5.00 U	5.00 UJ	5.00 UJ	V2/V1
AOC50-TB8-FAL20	TB	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 UJ	V2/V1
AOC50-TB8-FAL20	TB	1,2,4-Trichlorobenzene	5.00	5.00 U Q	5.00 UJ	5.00 UJ	V2/V1
AOC50-TB8-FAL20	TB	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ	10.0 U	
AOC50-TB8-FAL20	TB	2-Hexanone	10.0	5.00 U	5.00 UJ	5.00 U	
AOC50-TB8-FAL20	TB	Acetone	10.0	10.0 U	10.0 UJ	10.0 U	
AOC50-TB8-FAL20	TB	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
AOC50-TB8-FAL20	TB	Dichlorodifluoromethane	1.00	1.00 U Q	1.00 U	1.00 UJ	V1
AOC50-TB8-FAL20	TB	Naphthalene	5.00	5.00 U	5.00 UJ	5.00 UJ	V2/V1
G6M-06-01X-FAL20	N	Vinyl acetate	2.00	2.00 U	2.00 UJ	2.00 U	
G6M-18-01-FAL20	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 UJ	V2/V1
G6M-18-01-FAL20	N	1,2,4-Trichlorobenzene	5.00	5.00 U Q	5.00 UJ	5.00 UJ	V2/V1
G6M-18-01-FAL20	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-18-01-FAL20	N	2-Hexanone	10.0	5.00 U	5.00 UJ	5.00 U	
G6M-18-01-FAL20	N	Acetone	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-18-01-FAL20	N	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-18-01-FAL20	N	Dichlorodifluoromethane	1.00	1.00 U Q	1.00 U	1.00 UJ	V1
G6M-18-01-FAL20	N	Naphthalene	5.00	5.00 U	5.00 UJ	5.00 UJ	V2/V1

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Reason Code Definitions

Code	Definition
B2	CCB
C	LCS Recovery
I	Surrogate recovery outside project limits.
TR	Trace Level Detect
V	Equipment Blank
V1	ICV
V2	CCV

Flag Code and Definitions

Flag	Definition
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.
J	Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
B	Blank contamination: The analyte was found in an associated blank above one half the RL, as well as in the sample.
UB	The analyte was also detected in an associated laboratory or field blank at a concentration comparable to the concentration in the sample. The reported result has been requalified as not detected.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team (which should include a project chemist), but exclusion of the data is recommended.

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 CCVs 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?		•		A field blank was not 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?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?			•	A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs run at the required frequency and within acceptance criteria?	•			
Were surrogate recoveries within project acceptance limits?			•	Surrogates not required by the method.
Was a method blank prepared and analyzed with each batch?	•			
Were field blanks (EBs or FBs) submitted with these samples?		•		A field blank was not submitted with these samples.
Were target analytes reported in the field blank(s) less than MDL?			•	A field blank was not 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?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
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 rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?		•		Due to calibration blank contamination, 1 iron result was qualified as non-detected (U).
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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported or as qualified during data validation.

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 CCVs 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

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?	•			
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?		•		Due to ICV %R outside critiera, several results were qualified as non-detected estimated (UJ).
Were CCVs run at the required frequency and within acceptance criteria?		•		Due to CCV %R outside criteria, several results were qualified as detected estimated (J) or non-detected estimated (UJ) as applicable.
Were surrogate recoveries within project acceptance limits?		•		Due to surrogate %R above criteria, detected results in sample G6M-06-01X-FAL20 were qualified as detected estimated (J) with a high bias (+).
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?		•		Although styrene was above criteria limits, the associated sample results were not detected, therefore no data was qualified.
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
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 rejected during the verification process?		•		All data is acceptable as reported or as qualified during data validation.

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 CCVs 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?			•	A field blank was not 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?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

Data Validation Report for 6801911502

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 CCVs 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?		•		A field blank was not 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?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

Data Validation Report for 6801911502

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 CCVs 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?		•		Due to calibration blank contamination, 1 TOC result was qualified as non-detected (U).
Were field blanks (EBs or FBs) submitted with these samples?		•		A field blank was not 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?			•	Only a LCS was performed.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported or as qualified during data validation.

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

ARCADIS U.S., Inc.
3109 West Martin Luther King Jr. Blvd, Suite 350
Tampa, FL 33607
ATTN: Mr. Nathan Mullens
nrmullens@seres-es.com

February 19, 2021

SUBJECT: Fort Devens, Data Validation

Dear Mr. Mullens,

Enclosed are the final validation reports for the fractions listed below. This SDG was received on December 11, 2020. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #49971:

SDG #	Fraction
680-191900-1	Volatiles, Dissolved Metals

The data validation was performed under Stage 2B guidelines. The analyses were validated using the following documents and variances, as applicable to each method:

- Former Fort Devens Army Installation – BRAC Legacy Sites, Devens, MA; October 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

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

Stage 2B EQUIS EDD

LDC #49971 (Arcadis-Millersville, MD / Fort Devens)

LDC	SDG#	DATE REC'D	(2) DATE DUE	VOA (8260B)		3 D.Metal (6010C/ 6020A)																															
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	680-191900-1	12/11/20	12/28/20	3	0	2	0																														

Data Validation Report for 6801919001

Facility:	Former Fort Devens, Long Term Monitoring
Event:	Seres-Arcadis JV, Long Term Monitoring, AOC 50, Fall 2020
SDG:	6801919001
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:	Kevin Kha, Environmental Scientist
Second Reviewer:	Pei Geng, Senior Scientist
Date Submitted:	December 29, 2020

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	SW6010C - Dissolved	SW6020A - Dissolved	SW8260B
AOC50-RB2-FAL20	680-191900-1	Water	Equipment Blank/EB	X	X	X
AOC50-TB9-FAL20	680-191900-3	Water	Trip Blank/TB			X
XSA-12-97X-FAL20	680-191900-2	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) 6801919001. 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
- Extracted Internal Standard
- 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 8 results (3.81%) out of the 210 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected or deemed a serious deficiency. 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

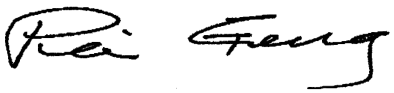
Analytical Method	Data Reviewer Comment
SW6020A	No additional comments; see Checklist for detail.
SW6010C	No additional comments; see Checklist for detail.
SW8260B	No additional comments; see Checklist for detail.



December 29, 2020

Reviewed by Kevin Kha, 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 a minimum of 10% of the reported sample results and method quality control data between the two deliverables.



Reviewed by Pei Geng, Senior Scientist, Laboratory Data Consultants, Inc.

March 16, 2021

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

Quality Control Outliers for test method SW6010C, Dissolved, Calibration Blank

The purpose of calibration blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in calibration blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
CCB68064619712 (CB)/ CCB68064619712	Iron	19.80	< 17	< 50	ug/l	U/None	B2	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

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
CCVC68064704329 (CV)/ CCVC68064704329	Bromomethane	160.2	50 - 150	50 - 150	percent	J/None	V2	
CCVIS6806470152 (CV)/ CCVIS6806470152	1,1-Dichloropropene	122.2	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6806470152 (CV)/ CCVIS6806470152	Bromomethane	59.80	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6806470152 (CV)/ CCVIS6806470152	1,2-Dibromo-3-chloropropane	76.60	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6806470152 (CV)/ CCVIS6806470152	Bromoform	76.60	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6806470152 (CV)/ CCVIS6806470152	2-Butanone (MEK)	77.20	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS6806470432 (CV)/ CCVIS6806470432	Acetone	137.6	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6806470432 (CV)/ CCVIS6806470432	Chloroethane	141.4	80 - 120	80 - 120	percent	J/None	V2	
CCVIS6806470432 (CV)/ CCVIS6806470432	Bromomethane	144.0	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 SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-RB2-FAL20	EB	1,2-Dibromo-3-chloropropane	5.00	4.00 U	4.00 UJ		ug/l	V2
AOC50-RB2-FAL20	EB	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ		ug/l	V2
AOC50-RB2-FAL20	EB	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2
AOC50-RB2-FAL20	EB	Bromomethane	5.00	5.00 U M Q	5.00 UJ		ug/l	V2
XSA-12-97X-FAL20	N	1,2-Dibromo-3-chloropropane	5.00	4.00 U	4.00 UJ		ug/l	V2
XSA-12-97X-FAL20	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ		ug/l	V2
XSA-12-97X-FAL20	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2
XSA-12-97X-FAL20	N	Bromomethane	5.00	5.00 U M Q	5.00 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, 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-RB2-FAL20 (EB)/ 680-191900-1	Carbon disulfide	0.6300	< 0.43	< 2	ug/l	U/None	V	
AOC50-RB2-FAL20 (EB)/ 680-191900-1	cis-1,2-Dichloroethene	0.6700	< 0.41	< 1	ug/l	U/None	V	
AOC50-RB2-FAL20 (EB)/ 680-191900-1	1,2-Dichloroethene	0.9400	< 0.74	< 2	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.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW8260B, Initial 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
ICJ2615 (IV)	Chloromethane	127.6	80 - 120	80 - 120	percent	J/None	V1	

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, Initial 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
P2L0217 (IV)/ 680-191900-3	Chloroethane	133.3	80 - 120	80 - 120	percent	J/None	V1	
P2L0217 (IV)/ 680-191900-3	Bromomethane	147.8	80 - 120	80 - 120	percent	J/None	V1	

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, 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
LCS6806470153 (BS)/ LCS6806470153	1,1,2,2-Tetrachloroethane	124.2	71 - 121	10 - 121	percent	J/None	C	
LCS6806470153 (BS)/ LCS6806470153	1,2,3-Trichloropropane	127.0	73 - 122	10 - 122	percent	J/None	C	
LCS6806470153 (BS)/ LCS6806470153	Naphthalene	130.2	61 - 128	10 - 128	percent	J/None	C	
LCS6806470153 (BS)/ LCS6806470153	1,1-Dichloropropene	130.2	79 - 125	10 - 125	percent	J/None	C	
LCS6806470153 (BS)/ LCS6806470153	4-Methyl-2-pentanone (MIBK)	141.2	67 - 130	10 - 130	percent	J/None	C	
LCS6806470153 (BS)/ LCS6806470153	Acetone	182.0	39 - 160	10 - 160	percent	J/None	C	
LCSD6806470154 (BD)/ LCSD6806470154	1,2,3-Trichloropropane	124.2	73 - 122	10 - 122	percent	J/None	C	
LCSD6806470154 (BD)/ LCSD6806470154	1,1-Dichloropropene	129.2	79 - 125	10 - 125	percent	J/None	C	
LCSD6806470154 (BD)/ LCSD6806470154	4-Methyl-2-pentanone (MIBK)	132.0	67 - 130	10 - 130	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 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
LCSD6806470154 (BD)/ LCSD6806470154	Acetone	27.78	< 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: SW8260B	**Extraction Method: SW5030B**							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-RB2-FAL20	EB	1,2-Dibromo-3-chloropropane	5.00	4.00 U	4.00 UJ		ug/l	V2
AOC50-RB2-FAL20	EB	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ		ug/l	V2
AOC50-RB2-FAL20	EB	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2
AOC50-RB2-FAL20	EB	Bromomethane	5.00	5.00 U M Q	5.00 UJ		ug/l	V2
XSA-12-97X-FAL20	N	1,2-Dibromo-3-chloropropane	5.00	4.00 U	4.00 UJ		ug/l	V2
XSA-12-97X-FAL20	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ		ug/l	V2
XSA-12-97X-FAL20	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2
XSA-12-97X-FAL20	N	Bromomethane	5.00	5.00 U M Q	5.00 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.

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
AOC50-RB2-FAL20	EB	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-97X-FAL20	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	

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
TR	Trace Level Detect
V	Equipment Blank
V1	ICV
V2	CCV
Z	LCS RPD

Flag Code and Definitions

Flag	Definition
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.
J	Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
R	The data are rejected due to deficiencies in meeting QC criteria and may not be used for decision making.
B	Blank contamination: The analyte was found in an associated blank above one half the RL, as well as in the sample.
UB	The analyte was also detected in an associated laboratory or field blank at a concentration comparable to the concentration in the sample. The reported result has been requalified as not detected.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team (which should include a project chemist), but exclusion of the data is recommended.

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 CCVs 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?		•		Although iron was detected in the calibration blanks, no data were qualified since the associated sample results were significantly greater than the concentrations found in the calibration blank.
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?			•	Only a LCS was performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

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 CCVs 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?			•	Only a LCS was performed.
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?			•	A field duplicate was not submitted with these samples.
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		All data is acceptable as reported.

Data Validation Report for 6801919001

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?	•			
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?		•		Although several compounds were above ICV criteria, the associated sample results were non-detected, therefore no data were qualified.
Were CCVs run at the required frequency and within acceptance criteria?		•		Due to CCV %R below criteria, several VOC results were qualified as non-detected estimated (UJ). Although several compounds were above CCV criteria, the associated sample results were non-detected, therefore no data were qualified.
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?		•		Although the equipment blank AOC50-RB2-FAL20 had detections for several VOCs, no data were qualified since the associated sample results were non-detected.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?		•		Although LCS recoveries were above criteria for several compounds, no data were qualified since the associated sample results were non-detected.
Was the LCS/LCSD RPD within project acceptance limits?		•		Although LCS/LCSD RPD was above criteria for acetone, no data were qualified since the associated sample results were non-detected.
Was a MS/MSD pair prepared with each batch?		•		MS/MSD not performed.
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?			•	A field duplicate was not submitted with these samples.
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 rejected during the verification process?		•		All data is acceptable as reported or as qualified during data validation.

Appendix D

Historical Groundwater Analytical Results

Appendix D
Historical Groundwater Analytical Results
2020 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

			Laboratory Parameters																	Field Parameters					
			PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	VC	Ethane	Ethene	Methane	Dissolved Arsenic	Dissolved Iron	Dissolved Manganese	TOC	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	Phosphate	pH	DO	ORP	SpC	Turbidity	Temp
Area	Well ID	Date Sampled	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
Area 1	G6M-02-08X	5/17/2002	2,300	35	250	2U	1U	5.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.04
Area 1	G6M-02-08X	1/31/2003	3,600	46	480	2.3	1U	2.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.98
Area 1	G6M-02-08X	3/31/2005	1,300	38J	250	50U	50U	50U	0.049	0.79	1.2	5U	0.3J	770	15	62	1.1	6.2	2U	-	7.08	9.1	-50	0.563	24.6	9.64
Area 1	G6M-02-08X	7/5/2005	1,000	130	1,800	12U	12U	12U	0.16	0.22	3	33	110	29,000	450	350	0.05U	3.7	8.3	-	4.23	1.66	19.1	1.616	4.72	14.95
Area 1	G6M-02-08X	9/27/2005	560	26	1,300	1U	1.8	2.5	0.11	0.25	21	270	310J	75U	1,200	466	0.05U	320J	16	-	5.03	0.33	-68.6	1.965	3.16	18.79
Area 1	G6M-02-08X	12/16/2005	300	24	1,200	4U	2U	4U	0.19	0.36	2.1	4.4B	350J	15U	1,500	520	0.05U	57	9.4	-	5.46	0.03	-31.4	1.999	66.4	9.72
Area 1	G6M-02-08X	3/21/2006	180	25	1,300	2U	2.1	2.3	0.084	0.24	15	80	470	40,000	3,000	1,400	1U	245	14	-	5.46	0.33	-62.5	2.450	6.98	15.04
Area 1	G6M-02-08X	6/21/2006	230	30	850	2U	1U	2U	0.14	0.23	19	100	970	44,000	5,700	1,800	1.67	759	40	-	4.80	1.32	-25.2	4.528	45.4	12.38
Area 1	G6M-02-08X	9/20/2006	150	25	1,300	2U	1.6	2U	0.072	0.14	11	77	860	29,000	4,400	1,000	2U	655	16	-	5.20	1.57	-14.4	4.503	53.4	19.59
Area 1	G6M-02-08X	12/12/2006	140	28	910	2U	1.1	2U	0.18	0.17	30	73	1,000	32,000	6,400	-	-	13.6	110	-	4.93	0.67	-38.3	6.436	108.6	7.42
Area 1	G6M-02-08X	3/28/2007	60	14	500	2U	1U	2U	0.31	0.14	62	72	1,200	30,000J	7,200	-	-	1,170	80	-	4.46	0.21	-144.5	7.243	60.9	11.74
Area 1	G6M-02-08X	6/13/2007	110	8.4	420	2U	1U	2U	0.092	0.11	180	130	1,200	33,000	6,800	-	-	1,160	82	-	4.70	1.78	24.1	6.948	1328.4	9.25
Area 1	G6M-02-08X	9/13/2007	140	74	1,400	2U	1U	2U	0.22	0.17	120	410	1,100	37,000	4,400	3,000	0.2U	890	200	-	5.34	2.68	-150.5	6.823	28.2	11.52
Area 1	G6M-02-08X	12/10/2007	250	66	1,100	2U	2.0	3.3	0.14	0.23	240	360	1,200	42,000	7,700	-	-	414	120	-	5.17	0.15	-115.7	7.569	10.8	11.11
Area 1	G6M-02-08X	3/10/2008	32	5.5	170	2U	1U	2U	0.36	0.15	280	570	970	20,000	11,000	-	-	770	16	-	4.28	0.5	-55.7	7.828	13.8	15.4
Area 1	G6M-02-08X	10/6/2008	49	4.5J	81	5U	5U	5U	6.3U	7.9U	3,000	103J	598	7,630	4,190	1,800	0.13U	610	0.75UJ	-	4.52	-0.12	-25.9	4.495	65	12.25
Area 1	G6M-02-08X	1/21/2009	29	18U	39	11U	14U	11U	1.2U	1.5U	3,400	76	474J	6,650	2,900J	3,000	0.13U	710	0.39	.24J	4.76	0.15	39.2	3.739	46.4	13.10
Area 1	G6M-02-08X	5/7/2009	25	20U	29	20U	20U	20U	1.3U	5.8	3,500	53.2	356	5,130	3,000	550J	0.092J	410	0.053	0.5UJ	3.97	0.4	71.4	3.538	15.4	14.96
Area 1	G6M-02-08X	10/20/2009	0.5U	0.5U	0.31J	0.5U	0.5U	0.5U	1.3U	1.6U	2,300J	70.6	486	6,840	2,300	40	1.3U	440	0.3UJ	0.12J	4.61	1.88	79.4	3.973	20.1	12.49
Area 1	G6M-02-08X	4/21/2010	11J	2.0UJ	75J	2.0UJ	2.0UJ	2.0UJ	1.3U	1.6U	4,400	98.9	447 J	8,720	3,400	40	1.3U	130	0.28	0.22	4.49	0.10	28.2	3.353	22.3	11.07
Area 1	G6M-02-08X	10/7/2010	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1.3U	1.6U	27,000	73.4	381	8,080	2,400	860	2.6U	100	0.095	0.61J	4.47	0.33	58.0	3.209	4.33	12.69
Area 1	G6M-02-08X	6/9/2011	13	0.5U	140	0.5U	0.5U	1.6	1.2U	1.5U	83,000	155	473	14,000	2,800	1,100	6.5U	99J	0.38	-	4.64	0.11	18.9	2.968	11	11.14
Area 1	G6M-02-08X	10/4/2011	8.0U	8.0U	210	8.0U	8.0U	8.0U	1.2U	1.5U	28,000	194	491	15,900	2,400	230	0.13U	86	0.091	-	4.81	0.02	18.1	2.376	4.99	13.73
Area 1	G6M-02-08X	5/10/2012	9.8	8.0U	270	8.0U	8.0U	8.0U	1.2U	1.5U	14,000	184	581	19,000	1,900	730	0.13U	64	1.8	-	5.16	0.21	-9.9	3.338	3.29	11.46
Area 1	G6M-02-08X	10/15/2012	12	4.0U	270	4.0U	4.0U	6.2	1.2U	1.5U	3,600	121	523	20,300	1,800	900	0.080J	37	0.096	-	4.85	0.32	-1.0	2.915	3.76	10.42
Area 1	G6M-02-08X	5/23/2013	20	8.0U	510	8.0U	8.0U	24	1.2U	1.5U	11,000	160	460	18,200	1,600	610	0.041J	5.3	3.5J	-	4.88	0.10	9.4	2.618	4.01	-
Area 1	G6M-02-08X	10/22/2013	13U	13U	500	13U	13U	51	3.6	84	40,000	200	428	15,400	1,100	630	0.13U	8.9	3.8	-	5.23	0.27	1.1	1.308	10.8	8.2
Area 1	G6M-02-08X	6/12/2014	12	1.5	400	0.5U	0.7	140	1.3UJ	1.6UJ	9,400	241	420	10,100	670	700J	0.13U	1.0J	0.03U	-	5.23	0.21	11.2	2.023	6.68	16.6
Area 1	G6M-02-08X	11/3/2014	8.3	5U	260	5U	5U	44	4.4	7.7	26,000	258	461	10,400	1,400	590	0.13U	0.96J	0.03U	-	5.28	0.12	-33.6	0.994	33.6	15
Area 1	G6M-02-08X	6/16/2015	10 U	10 U	98.8	10 U	10 U	10 U	10 U	10 U	1,410	318	455	10,200	1,020	582	0.15	8.6 J	1.0 U	-	5.43	2.94	43.0	1.476	110	13.62
Area 1	G6M-02-08X	9/9/2015	20 U	20 U	83.8	20 U	20 U	20 U	10 U	10 U	10,600	340	428	8,780	976	-	0.078 J	15.8	4.80		5.59	0.07	-39.2	1.337	12.0	13.71
Area 1	G6M-02-08X	10/13/2015	20 U	21 U	83.5	21 U	21 U	21 U	10 U	10 U	18,400	320	483	9,410	1280	526	0.11 U	7.1 J	2.0 U		5.02	0.33	0.4	1.689	47.8	9.80
Area 1	G6M-02-08X	2/10/2016	2.9	2.0 U	49.0	2.0 U	2.0 U	4.7	10 U	10 U	14,500	272	1,150	12,100	3,110	879	0.10 J	5.3 J	2.0 U		4.89	0.47	52.6	2.906	17.2	10.44
Area 1	G6M-02-08X	6/14/2016	10 U	10 U	35.0	10 U	10 U	10 U	2.80	1.0 UJ	19,000	220	1,200	8,000	2,600	1,200	0.05 U	1.3	1.0 U		5.21	0.33	29.1	3.370	10.71	16.41
Area 1	G6M-02-08X	11/10/2016	4.3	1.0 U	27	1.0 U	1.0 U	2.1	1.1 U	1.0 U	11,000	230	880	8,600	2,100	1,000	0.053 J	0.58 J	7.0		5.27	0.77	-0.9	1.370	9.44	8.3
Area 1	G6M-02-08X	5/18/2017	20 U	20 U	51	20 U	20 U	20 U	1.1 U	1.0 U	15,000	410	770	4,300	740	930	0.10 U	1.0 U	1.0 U		12.31	0.01	-111.3	2.650	30.4	13.04
Area 1	G6M-02-08X	10/18/2017	20 U	20 U	20 U	20 U	20 U	20 U	1.1 U	1.0 U	16,000	370	640	3,300	250	680	0.26	2.0 U	1.6		6.66	0.44	-144.8	1.970	38.1	12.23
Area 1	G6M-02-08X	10/19/2018	10 U	10 U	8 J	10 U	10 U	10 U	1.1 U	1.0 U	38,000	300	240	1,400	110	190	0.23	2.0 U	1.0 U		6.37	0.35	111.3	1.439	41.6	11.20
Area 1	G6M-02-08X	10/16/2019	5.0 UJ	5.0 UJ	5.9 J	5.0 UJ	5.0 UJ	5.0 UJ	1.1 U	4.3	31,000	370	180	1,100	89	120	0.054 J	1.0 U	1.8		6.43	1.82	-115	1.400	44	12.00
Area 1	G6M-02-08X	10/13/2020	1.00 U	1.00 U	3.50	1.00 U	1.00 U	1.00 U	1.10 U	0.760 J	12,000	390	78,000	420	37.0	95.0	0.120	5.00 U	0.810 U		6.61	0.510	-93.1	0.522	8.12	11.6
Area 1	G6M-03-01X	10/21/2009	380	65	670	25U	25U	25U	-	-	-	-	-	-	-	-	-	-	-	-	6.52	0.88	-153.5	0.559	7.25	11.99
Area 1	G6M-03-01X	10/16/2012	200	60	200	10U	10U	550	-	-	-	-	-	-	-	-	-	-	-	-	6.51	0.95	-69.4	1.776	2.28	20.17
Area 1	G6M-03-01X	6/12/2014	0.29J	37	19	0.59	0.51	68	-	-	-	-	-	-	-	-	-	-	-	-	6.52	1.95	11.7	0.812	13.1	16.73
Area 1	G6M-03-01X	10/31/2014	300	310	98	0.5U	0.5U	34	-	-	-	-	-	-	-	-	-	-	-	-	6.40	0.75	-106.6	1.263	8.57	9.6
Area 1	G6M-03-01X	6/18/2015	0.65 J	37	53	0.50 U	0.55 J	18.8	-	-	-	-	-	-	-	-	-	-	-		6.36	1.82	19.9	1.093	22.9	13.63
Area 1	G6M-03-01X	9/10/2015	103	67	65	2.40	1.40	62.8	10 U	68.9	8,640	46.0	41.8	7,080	5.30	-	0.076 J	10.30	2.0 U		6.00	0.61	-55.0	1.881	4.38	12.57
Area 1	G6M-03-01X	10/13/2015	126	190	141	5.20	1.50	57.5	-	-	-	-	-	-	-	-	-	-	-		6.27	0.28	-83.5	2.096	3.61	13.25
Area 1	G6M-03-01X	2/22/2016	1.0 U	81	87	1.9	1.0 U	50.6	10 U	95.5	16,300	23.5	20.0	6,330	6.4	144	0.11 U	3.4 J	2.0 U		6.62	2.11	33.6	1.162	4.98	8.46
Area 1	G6M-03-01X	6/15/2016	9.6	180	180	8.8	1.4	99	-	-	-	-	-	-	-	-	-	-	-		5.84	2.81	-48.3	1.726	5.61	12.87
Area 1	G6M-03-01X	11/10/2016	1.0 U	130	180	4.0	1.4	140	-	-	-	-	-	-	-	-	-	-	-		6.25	0.47	-84.7	1.097	2.4	8.21
Area 1	G6M-03-01X	5/18/2017	61	77	210	2.3	0.70 J	73	1.1 U	120	7,900	75	120	70,000	26	310	0.08 J	8.6	1.0 U		12.52	0.12	-93.1	2.275	8.51	13.56
Area 1	G6M-03-01X	10/12/2017	2.0 UJ	9.7 J	240 J	2.0 UJ	2.0 UJ	160 J	1.1 U	1.0 U	8,000	130	210	65,000	72	390	0.12	0.50 J	1.0 U		6.42	2.23	-69.7	2.020	7.96	12.49
Area 1	G6M-03-02X	5/12/2003	1,300	2U	4.4	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.92
Area 1	G6M-03-02X	10/11/2004	690	2U	5.6	2U	1U	2U	0.051	0.03	2.6	5U	1U	17	1U	12	3.7	20	1.7J	-	6.29	8.25	97.4	0.321	12.1	8.83
Area 1	G6M-03-02X	12/15/2004	200	2U	5	2U	1U	2U	0.056	0.063	3.4	5U	1U	610	390	29	2.4	30	2U	-	5.86	1.75	-132.9	0.382	1.93	12.75
Area 1	G6M-03-02X	3/29/2005	340	20U	14J	20U	10U	20U	0.15	0.34	5.1	640	140	49,000	1,300	366	0.2U	230	6.7J	-	5.23	0.65	-20.1	1.654	28.7	15.46
Area 1	G6M-03-02X	6/29/2005	190	11	91	2.5U	2.5U	2.5U	0.29	0.65	43	130	220J	35,000J	1,200	431	0.05U	74	11	-	4.62	1.13	2.9	1.723	29.1	15.57
Area 1	G6M-03-02X	9/29/2005	57	7.8	190	2.5U	2.5U	2.5U	0.2	0.29	560	150	260J	37,000	850	345	0.05U	62	16	-	4.94	0.53	-73.7	1.752	23.8	11.33
Area 1	G6M-03-02X	12/15/2005	39	8U	190	8U	4U	8U	0.17	0.26	4,300	146	290J	38,000	1,100	550	0.05U	66	16	-	5.42	4.55	13.9	1.650	19.7	12.12
Area 1	G6M-03-02X	3/21/2006	17	2U	140	2U	1U	2U	0.016J	0.14	6,700	140	320	37,000	1,400	1,200	2U	88.4	8.8	-	5.56	0.16	-47.7	1.731	17.3	13.35
Area 1	G6M-03-02X	6/21/2006	8.2	2U	160	2U	1U	2U	0.044	0.12	10,000	240	410	23,000	1,300	1,000	1U	120	9.6	-	3.21	0.89	140.1	2.428	11.6	10.08
Area 1	G6M-03-02X	9/20/2006	9.7	2.3	230	2U	1U	2U	0.05	0.2	8,700	200	440	21,000	1,300	570	1U	115	8.4	-	5.55	0.71	-27.8	2.029	13.7	11.46
Area 1	G6M-03-02X	12/12/2006	6.9	2U	180	2U	1U	2U	0.047	0.16	6,800	170	350	11,000	890	-	-	53	8.0	-	5.85	1.31	-43.1	2.326	26.7	12.11
Area 1	G6M-03-02X	3/28/2007	13	2.2	320	2U	1U	2U	0.033	0.11	9,800	230	470	14,000J	920	-	-	74.5	9.2	-	5.38	0.17	-62.3	2.523	14.9	12.75
Area 1	G6M-03-02X	6/12/2007	11	2U	650	2U	1.4	17	0.025U	0.14	21,000	200	360	10,000	840	-	-	39	8.4	-	5.77	0.38	-59.3	2.268	39.5	12
Area 1	G6M-03-02X	9/12/2007	12	2.1	800	2U	1U	81	0.006J	0.6	17,000	230	350	12,000	740	790	0.2U	580	20	-	5.44	10.26	-122.8	2.156	18.1	12.29
Area 1	G6M-03-02X	12/10/2007	3.8	2U	720	2U	1.8	94	0.005J	1.4	14,000	290	390	29,000	1,000	-	-	24.7	7.0	-	5.67	6.03	-80.2	2.802	5.3	12.33
Area 1	G6M-03-02X	3/10/2008	2U	2U	590	2U	1.8	50	0.098	3.4	11,000	320	410	100,000	2,000	-	-	50U	4.8	-	5.47	0.51	-55.9	3.113	24.5	11.74
Area 1	G6M-03-02X	10/15/2008	5U	5U	260	5U	5U	27	1.2U	10	12,000	193	366	108,000	454	860	0.13U	59	0.03UJ	-	5.6	0.75	-28.1	2.376	15	11
Area 1	G6M-03-02X	5/7/2009	4.0U	4.0U	220	4.0U	4.0U	12	1.2U	18	23,000	188	396	56,700	900	1,100J	0.13U	44	0.03U	-	5.45	0.32	-46.7	1.962	4.81	11.27
Area 1	G6M-03-02X	10/19/2009	10U	20U	290	10U	10U	9.5J	1.3U	14	18,000	205	423	43,400	290	920	0.13U	300	0.03U	-	5.99	2.56	-44.2	1.832	11.9	-
Area 1	G6M-03-02X	4/21/2010	2.0UJ	2.0UJ	120J	2.0UJ	2.0UJ	9.3J	1.3U	16	16,000	189	566J	39,600	1,200	1,000	0.13U	0.28J	0.03U	-	5.85	0.29	18.9	1.902	7.28	18.13
Area 1	G6M-03-02X	10/6/2010	0.5U	0.5U	3.2	0.5U	0.5U	0.42J	1.2U	20	35,000	118	580	36,100	810	1,100	0.29	0.40J	0.03U	-	5.65	0.57	-21.1	2.137	5.47	13.03

Appendix D
Historical Groundwater Analytical Results
2020 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

			Laboratory Parameters																	Field Parameters					
			PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	VC	Ethane	Ethene	Methane	Dissolved Arsenic	Dissolved Iron	Dissolved Manganese	TOC	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	Phosphate	pH	DO	ORP	SpC	Turbidity	Temp
Area	Well ID	Date Sampled	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
Area 1	G6M-03-02X	10/4/2011	13U	13U	410	13U	13U	30	1.2U	63	47,000	379	352	12,400	190	3,300	0.13U	0.51J	0.035	-	6.32	0.09	-86.1	1.140	13	16.73
Area 1	G6M-03-02X	10/11/2012	2.0U	2.0U	59	2.0U	2.0U	34	1.2U	540	39,000	270	295	10,200	140	500	0.051J	5.0U	0.49	-	6.13	0.46	-68.9	1.310	9.5	23.98
Area 1	G6M-03-02X	10/22/2013	1.3U	1.3U	44	1.3U	1.3U	36	1.2U	200	44,000	296	212	6,750	57	300	0.13U	5.0U	0.19	-	6.24	0.41	-68.8	0.609	9.19	17.97
Area 1	G6M-03-02X	10/30/2014	0.5U	0.27J	6.6	0.5U	0.5U	6.3	1.2U	12	38,000	254	251	6,090	340	450	0.13U	0.23J	0.03U	-	6.45	0.33	-61.7	0.820	13.6	10.2
Area 1	G6M-03-02X	10/13/2015	1.0 U	1.0 U	6.0	1.0 U	1.0 U	5.30	10 U	10 U	17,600	168	116	3,540	33.0	156	0.062 J	10.2	2.0 U		5.85	0.39	-86.6	0.679	23.1	13.10
Area 1	G6M-03-02X	11/10/2016	1.0 U	0.54 J	18	1.0 U	1.0 U	6.4	1.1 U	1.0 U	17,000	180	260	3,900	120	300	0.05 U	0.44 J	1.9		6.21	0.25	-57	0.730	8.87	9.15
Area 1	G6M-03-02X	10/12/2017	1.0 U	1.0 U	3.5	1.0 U	1.0 U	4.0	1.1 U	13	16,000	250	150	2,000	21	140	0.15	1.0 U	1.0 U		6.29	1.29	-44.1	1.130	13.9	11.17
Area 1	G6M-04-09X	9/24/2004	7,400	4.2	9.0	2U	1U	2U	-	-	-	5U	1UJ	160	-	-	-	-	-	-	5.15	3.84	637.6	0.495	0.82	9.54
Area 1	G6M-04-09X	9/28/2005	3,200	5U	5U	5U	5U	5U	-	-	-	5U	1U	37	-	-	-	-	-	-	5.92	3.41	678.4	0.169	2.07	10.21
Area 1	G6M-04-09X	9/21/2006	190	2U	2U	2U	1U	2U	-	-	-	5U	0.10U	50	-	-	-	-	-	-	5.83	8.18	215.6	0.102	5.51	15.4
Area 1	G6M-04-09X	9/12/2007	440	22	31	2U	1U	2U	-	-	-	5U	0.83	390	-	-	-	-	-	-	6.22	2.18	49.7	0.179	4.3	14
Area 1	G6M-04-09X	10/17/2008	4,000	330	410	50U	50U	44	-	-	-	63.4	13.3	5,700	-	-	-	-	-	-	6.23	0.66	-36.2	0.497	9.2	10.50
Area 1	G6M-04-09X	10/21/2009	1,600	210	210	50U	50U	51	-	-	-	70.8	13	3,960	-	-	-	-	-	-	5.80	0.58	33.3	0.376	4.53	12.35
Area 1	G6M-04-09X	10/8/2010	1,000	420	990	0.79	0.89	7.8	-	-	-	69.9	14.3	15,300	-	-	-	-	-	-	6.17	0.99	-20.8	0.388	1.58	11.9
Area 1	G6M-04-09X	6/9/2011	260	140	950	0.56	1.7	200	-	-	-	203	43.3	9,820	-	-	-	-	-	-	6.14	0.35	-49.3	0.562	0.03	11.27
Area 1	G6M-04-09X	10/7/2011	20U	23	910	20U	20U	240	-	-	-	291	107	50,900	45	-	-	-	-	-	6.45	0.14	-105.8	0.626	2	10.1
Area 1	G6M-04-09X	5/9/2012	970	250	510	40U	40U	340	-	-	-	344	76.7	17,800	9.1J	-	-	-	-	-	6.66	0.08	-85.2	0.495	12.5	10.11
Area 1	G6M-04-09X	10/16/2012	260	70	100	20U	20U	350	-	-	-	225	41.7	13,800	3.0J	-	-	-	-	-	6.24	0.31	-79.9	0.289	10.3	10.75
Area 1	G6M-04-09X	5/22/2013	5.9	3.6	5.9	0.81	0.5U	9.9	-	-	-	321	135	30,800	11	-	-	-	-	-	6.29	0.15	-84.7	0.812	4.21	8.74
Area 1	G6M-04-09X	10/22/2013	0.5U	0.5U	52	0.53	0.5U	38	-	-	-	551	303	27,100	34	-	-	-	-	-	6.64	3.3	-130.9	0.917	18.5	10
Area 1	G6M-04-09X	6/12/2014	1.4	0.75	12	0.6	0.5U	26	-	-	-	607	315	19,200	29	-	-	-	-	-	6.37	0.26	-82.0	1.392	3.64	10.42
Area 1	G6M-04-09X	11/3/2014	0.21J	0.5U	0.43J	0.21J	0.5U	0.83	-	-	-	600	339	16,500	31	-	-	-	-	-	6.59	0.05	-129.2	1.030	21.8	10.47
Area 1	G6M-04-09X	6/17/2015	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	-	-	-	351	159	3,560	14.10	-	-	-	-	-	6.33	0.64	-65.0	1.384	96	14.03
Area 1	G6M-04-09X	10/14/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	577	241	5,600	16.4	-	-	-	-	-	6.61	0.13	134.9	1.604	15.3	10.75
Area 1	G6M-04-09X	2/19/2016	1.0 U	1.0 U	0.55 J	1.0 U	1.0 U	1.0 U	10 U	10 U	16,700	514	202	3,600	13.4	439	0.37	4.5 J	2.0 U		6.74	1.09	-95.7	1.280	12.42	9.9
Area 1	G6M-04-09X	6/15/2016	1.0 U	0.85 J	1.0	1.0 U	1.0 U	0.61 J	-	-	-	550	200	3,100	14.0	-	-	-	-		6.38	2.56	-87.6	2.118	11.48	11.23
Area 1	G6M-04-09X	11/9/2016	1.0 U	1.0 U	0.67 J	1.0 U	1.0 U	0.56 J	-	-	-	430	160	2,600	-	-	-	-	-		7.32	0.52	-139.7	1.277	21.7	8.53
Area 1	G6M-04-09X	5/18/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	14,000	430	180.0	3,200	11	190	0.15	5.4	1.0 U		6.58	0.45	-116.7	1.813	17.0	10.40
Area 1	G6M-04-09X	10/23/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.74 J	--	--	--	370	110	2,400	7.8	-	-	-	-		6.72	0.13	-106.4	1.860	30.7	10.44
Area 1	G6M-04-09X	10/19/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	330	140	2,600	-	-	-	-	-		6.42	0.81	14.3	1.315	16.8	10.31
Area 1	G6M-04-09X	10/10/2019	2.8	11	23	1.4	1.0 U	11	-	-	-	310	64	1,600	-	-	-	-	-		6.48	0.28	-116.9	0.443	43.6	10.00
Area 1	G6M-04-09X	10/20/2020	110	110	68.0	2.30	0.940 J	34.0	-	-	-	200	44,000	2,100	-	-	-	-	-		6.62	0.540	-122	0.298	20.3	11.6
Area 1	G6M-04-11X	9/20/2004	8.5	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	6.54	3.42	374.7	0.782	16.8	14.39
Area 1	G6M-04-11X	9/26/2005	7.8	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	6.96	5.14	94.6	0.390	8.7	10.63
Area 1	G6M-04-11X	9/20/2006	4.0	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	6.24	6	129	0.380	5.99	14.35
Area 1	G6M-04-11X	9/11/2007	2.1	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	6.87	6.59	46.5	0.380	14.8	11.82
Area 1	G6M-04-11X	10/17/2008	1.4	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	-	-	-	-	-	-	-	-	-	6.53	5.62	98.1	0.302	3.5	9.54
Area 1	G6M-04-11X	10/16/2009	1.1	53	1U	1U	1U	1U	-	-	-	-	-	-	-	-	-	-	-	-	6.46	7.04	176	0.225	4.2	9.76
Area 1	G6M-04-11X	10/8/2010	0.41J	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	-	-	-	-	-	-	-	-	-	6.71	6.95	152.6	0.247	3.15	9.59
Area 1	G6M-04-11X	10/6/2011	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	-	-	-	-	-	-	-	-	-	6.77	2.5	87.7	0.219	4.0	10.61
Area 1	G6M-04-11X	10/16/2012	0.62	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	-	-	-	-	-	-	-	-	-	6.36	9.4	161.8	0.224	0	10.14
Area 1	G6M-04-11X	10/31/2014	0.54	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	-	-	-	-	-	-	-	-	-	6.88	7.12	167.7	0.163	0.91	10.43
Area 1	G6M-04-11X	11/10/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-		6.65	6.67	25.6	0.167	1.18	10.28
Area 1	G6M-04-11X	10/22/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	3.0 U	0.05 U	0.003 U	-	-	-	-	-		6.23	6.24	206	0.254	2.65	10.4
Area 1	G6M-04-11X	10/16/2020	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	-	-	-	3.00 U	50.0 U	1.60 J	-	-	-	-	-		6.62	7.29	135	0.144	1.57	16.6
Area 1	G6M-04-12X	9/20/2004	310	7.5	56	2U	1U	2U	-	-	-	5U	1.0	44	-	-	-	-	-	-	11.03	0.86	102.6	2.003	5.22	9.63
Area 1	G6M-04-12X	9/26/2005	250	6.8	49	2U	1U	2U	-	-	-	15	1U	360	-	-	-	-	-	-	8.41	1.05	234.2	1.961	1.65	-
Area 1	G6M-04-12X	9/18/2006	470	9.4	60	2U	1U	2U	-	-	-	6.5	0.10U	550	-	-	-	-	-	-	7.21	3.22	253.5	1.764	7.11	12.69
Area 1	G6M-04-12X	9/10/2007	350	11	50	2U	1U	2U	-	-	-	2U	0.1U	580	-	-	-	-	-	-	6.84	1.73	90.2	2.613	29.8	12.19
Area 1	G6M-04-12X	10/16/2008	360	7.7J	35	10U	10U	10U	-	-	-	3.1J	0.2U	360	-	-	-	-	-	-	7.23	1.45	91.2	2.623	2.00	12.44
Area 1	G6M-04-12X	10/19/2009	170	22U	28	10U	10U	10U	-	-	-	2.3J	0.2U	308	-	-	-	-	-	-	6.72	1.8	66.7	2.543	5.91	11.5
Area 1	G6M-04-12X	10/8/2010	100	4.4	22	0.5U	0.5U	0.5U	-	-	-	5U	0.1U	336	-	-	-	-	-	-	6.57	1.75	208.0	3.632	2.35	10.62
Area 1	G6M-04-12X	6/9/2011	180	3.9	19	0.5U	0.5U	0.5U	-	-	-	5U	0.1U	209	-	-	-	-	-	-	7.26	1.38	25.6	2.816	9	10.24
Area 1	G6M-04-12X	10/4/2011	280	4.6	27	4.0U	4.0U	4.0U	-	-	-	5U	0.1U	200	-	-	-	-	-	-	6.62	1.06	63.8	2.332	2.44	13.35
Area 1	G6M-04-12X	5/9/2012	160	5.0U	12	5.0U	5.0U	5.0U	-	-	-	4.1J	0.1U	155	-	-	-	-	-	-	6.7	1.34	85.1	2.680	1.42	12.32
Area 1	G6M-04-12X	10/16/2012	120	5.0U	14	5.0U	5.0U	5.0U	-	-	-	5U	0.1U	156	-	-	-	-	-	-	6.6	2.11	62.5	3.799	2.03	12.96
Area 1	G6M-04-12X	5/22/2013	220	3.4J	18	5.0U	5.0U	5.0U	-	-	-	3.8J	0.1U	92.5	-	-	-	-	-	-	6.55	0.87	120.8	2.927	2.58	12.5
Area 1	G6M-04-12X	10/22/2013	190	3.7J	23	4.0U	4.0U	4.0U	-	-	-	5U	0.1U	106	-	-	-	-	-	-	6.58	1.6	133.7	2.231	4.88	12.27
Area 1	G6M-04-12X	6/10/2014	130	2.7	13	0.50U	0.50U	0.50U	-	-	-	5U	0.1U	75	-	-	-	-	-	-	6.59	0.84	178.9	2.675	13.04	14.4
Area 1	G6M-04-15X	9/21/2004	5.2	2U	5.3	2U	1U	2U	-	-	-	5U	4.8	8,100	-	-	-	-	-	-	5.26	0.82	410	2.640	0.23	11.25
Area 1	G6M-04-15X	9/28/2005	9.1	2U	6.4	2U	1U	2U	-	-	-	33	1.8	4,400	-	-	-	-	-	-	5.11	0.39	248.1	0.674	0.29	11.78
Area 1	G6M-04-15X	9/20/2006	3.5	2U	5.2	2U	1U	2U	-	-	-	20	2.0	4,300	-	-	-	-	-	-	4.60	1.07	-100.3	1.555	0.95	11.07
Area 1	G6M-04-15X	9/11/2007	2.7	2U	2U	2U	1U	2U	-	-	-	18	0.75	2,100	-	-	-	-	-	-	6.21	3.21	85.1	1.353	3.5	11.29
Area 1	G6M-04-15X	10/17/2008	4.8	1.0	2.3	0.5U	0.5U	0.5U	-	-	-	36.3	3.01	3,010	-	-	-	-	-	-	6.34	1.5	-8.1	0.910	4.0	11.1
Area 1	G6M-04-15X	10/19/2009	1.9	14	3.2	0.5U	0.5U	0.5U	-	-	-	48.9	4.8	3,130	-	-	-	-	-	-	6.19	0.31	24.4	0.799	4.68	11.1
Area 1	G6M-04-15X	10/8/2010	0.65	0.34J	3.2	0.5U	0.5U	0.5U	-	-	-	59.1	4.76	2,900	-	-	-	-	-	-	6.14	0.3	3.2	0.704	1.34	10.85
Area 1	G6M-04-15X	10/6/2011	0.52	0.5U	3.7	0.5U	0.5U	0.5U	-	-	-	55.5	3.75	3,470	-	-	-	-	-	-	6.12	0.05	37.3	0.446	4.89	19.25
Area 1	G6M-04-15X	10/16/2012	1.0	0.5U	3.9	0.5U	0.5U	0.5U	-	-	-	111	11.1	4,300	-	-	-	-	-	-	6.15	0.49	-48.6	0.760	1.08	14.33
Area 1	G6M-04-15X	10/18/2013	0.97	0.27J	2.2	0.5U	0.5U	0.5U	-	-	-	112	14.5	3,530	-	-	-	-	-	-	5.68	0.24	14.1	0.838	1.33	18.79
Area 1	G6M-04-15X	11/4/2014	1.60	0.29J	2.2	0.5U	0.5U	0.5U	-	-	-	135	33.4	14,000	-	-	-	-	-	-	6.08	0.14	-16	1.937	3.61	12.98
Area 1	G6M-04-15X	10/14/2015	0.76 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	103	45.0	21,200	-	-	-	-	-		5.93	0.69	-38.2	4.011	1.24	13.62
Area 1	G6M-04-15X	11/10/2016	1.0 U	0.95 J	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	55	16	14,000	-	-	-	-	-		4.64	0.5	-21.4	2.929	4.6	13.9
Area 1	G6M-04-15X	10/9/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	70	15	19,000	--	--	--	--	--		6.13	0.59	0.59	4.280	8.9	14.50

			Laboratory Parameters																	Field Parameters					
			PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	VC	Ethane	Ethene	Methane	Dissolved Arsenic	Dissolved Iron	Dissolved Manganese	TOC	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	Phosphate	pH	DO	ORP	SpC	Turbidity	Temp
Area	Well ID	Date Sampled	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
Area 1	G6M-04-15X	10/19/2018	1.5	0.6 J	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	62	11	5,900	--	--	--	--	--		6.21	0.12	116	3.171	7.49	11.99
Area 1	G6M-04-15X	10/9/2019	2.2	1.1	0.64 J	1.0 U	1.0 U	1.0 U	-	-	-	71	8.9	2,500	-	-	-	-	-		6.45	0.19	-10	2.500	5.5	11.00
Area 1	G6M-04-15X	10/20/2020	1.00 U	0.860 J	0.620 J	1.00 U	1.00 U	1.00 U	-	-	-	75.0	5,200	630	-	-	-	-	-		7.06	0.490	-121	1.00	3.81	11.2
Area 1	G6M-04-22X	9/21/2004	900	24	110	2U	1U	2U	-	-	-	5U	1U	990	-	-	-	-	-	-	6.30	4.78	192.2	0.897	19	13.17
Area 1	G6M-04-22X	9/28/2005	210	6.8	45	2.5	1U	2U	-	-	-	5U	1U	120	-	-	-	-	-	-	5.52	6.13	391.3	0.757	21	14.07
Area 1	G6M-04-22X	9/20/2006	200	8.7	54	2U	1U	2U	-	-	-	5U	0.43	4,500	-	-	-	-	-	-	5.68	2.8	197.8	1.048	6.98	15.37
Area 1	G6M-04-22X	9/11/2007	95	12	75	2U	1U	9.4	-	-	-	390	250	44,000	-	-	-	-	-	-	6.92	0.28	-160.8	2.250	20.7	13.43
Area 1	G6M-04-22X	10/17/2008	18	3.7	53	0.44J	1U	26	-	-	-	439	421	15,900	-	-	-	-	-	-	6.34	0.28	-106.1	2.104	18	12.88
Area 1	G6M-04-22X	10/19/2009	7.2	9.7	16	0.5U	0.5U	4.9	-	-	-	320	355	9,360	-	-	-	-	-	-	6.26	1.27	-48.7	2.181	290	14.32
Area 1	G6M-04-22X	10/8/2010	0.39J	2.2	7.1	0.23J	0.5U	4.7	-	-	-	522	210	3,020	-	-	-	-	-	-	6.32	2.51	-59.7	1.691	22.2	14.77
Area 1	G6M-04-22X	10/6/2011	0.5U	0.5U	13	0.5U	0.5U	7.5	-	-	-	534	232	15,800	-	-	-	-	-	-	6.25	0.39	-53.4	0.016	6.47	12.2
Area 1	G6M-04-22X	10/12/2012	0.5U	0.5U	5.7	0.5U	0.5U	6.6	-	-	-	657	162	9,080	-	-	-	-	-	-	6.41	0.6	-66.8	1.701	8.66	12.39
Area 1	G6M-04-22X	10/18/2013	-	-	-	-	-	-	-	-	-	767	-	-	-	-	-	-	-	-	6.12	0.29	-68.7	1.113	14.3	12.78
Area 1	G6M-04-22X	11/4/2014	0.5U	0.5U	2.0	0.72	0.5U	4.6	-	-	-	667	150	1,600	-	-	-	-	-	-	6.39	0.2	-64	0.951	42.9	13.26
Area 1	G6M-04-22X	10/13/2015	-	-	-	-	-	-	-	-	-	223	-	-	-	-	-	-	-		-	-	-	-	-	-
Area 1	G6M-04-22X	11/9/2016	2.5	1.4	1.2	1.0 U	1.0 U	1.0 U	-	-	-	650	150	960	-	-	-	-	-		6.92	1.22	-73.1	0.740	55.5	7.02
Area 1	G6M-04-22X	10/18/2017	--	--	--	--	--	--	--	--	--	970			--	--	--	--	--		6.32	0.48	-66.9	1.270	120	11.74
Area 1	G6M-04-22X	10/22/2018	1.0 UJ	1.0 UJ	2.8 J	1.0 UJ	1.0 UJ	3.4 J	--	--	--	820	140	760	--	--	--	--	--		6.18	0.24	49.6	1.371	35.9	12.00
Area 1	G6M-04-22X	10/20/2020	1.00 U	1.00 U	2.00	1.00 U	1.00 U	1.80	-	-	-	780	120,000	890	-	-	-	-	-		6.25	0.490	-81.1	0.717	0.00	11.0
Area 1	G6M-04-31X	9/21/2004	1,600	2U	4.2	2U	1U	2U	-	-	-	5U	1U	190	-	-	-	-	-	-	5.69	5.1	211	1.000	2.99	13.27
Area 1	G6M-04-31X	9/28/2005	1,900	5U	5.2	5U	5U	5U	-	-	-	5U	1U	35	-	-	-	-	-	-	5.63	3.66	305.4	0.388	2.2	9.28
Area 1	G6M-04-31X	9/20/2006	600	6.1	2.5	2U	1U	2U	-	-	-	5U	0.10U	15U	-	-	-	-	-	-	6.52	0.28	-108.5	0.729	3.56	9.22
Area 1	G6M-04-31X	9/11/2007	340	260	330	2.8	1.3	2U	-	-	-	5U	0.1	890	-	-	-	-	-	-	6.38	5.61	101.6	0.217	6.9	10.90
Area 1	G6M-04-31X	10/17/2008	110	72	340	20U	20U	730	-	-	-	103	68.4	9,710	-	-	-	-	-	-	6.43	2	-72.7	0.636	9.0	9.42
Area 1	G6M-04-31X	10/21/2009	86	11	270	10U	10U	560	-	-	-	311	181	16,900	-	-	-	-	-	-	5.82	1.96	-102.01	0.626	6.23	10.26
Area 1	G6M-04-31X	10/8/2010	3.1	1.1	7.4	0.30J	0.5U	31	-	-	-	428	127	9,620	-	-	-	-	-	-	6.41	0.93	-107.6	0.728	1.21	9.54
Area 1	G6M-04-31X	10/6/2011	18	5.3	38	0.5U	0.5U	37	-	-	-	635	223	15,800	-	-	-	-	-	-	6.62	0.07	-112.4	1.333	2.89	11.23
Area 1	G6M-04-31X	10/12/2012	25	31	61	2.0U	2.0U	72	-	-	-	556	181	8,940	-	-	-	-	-	-	6.62	0.43	-104.6	1.193	4.58	11.36
Area 1	G6M-04-31X	10/18/2013	-	-	-	-	-	-	-	-	-	498	-	-	-	-	-	-	-	-	6.36	1.71	-87.6	1.656	1.13	10.83
Area 1	G6M-04-31X	11/4/2014	0.5U	0.51	6.9	0.23J	0.5U	3.4	-	-	-	468	121	9,690	-	-	-	-	-	-	6.51	0.12	-95.5	1.775	9.01	11.58
Area 1	G6M-04-31X	10/13/2015	-	-	-	-	-	-	-	-	-	420	-	-	-	-	-	-	-		5.93	0.84	-144.3	3.980	9.80	8.97
Area 1	G6M-04-31X	11/10/2016	1.0 U	0.95 J	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	430	-	-	-	-	-	-	-		6.15	0.89	-95.8	2.490	2.95	14.11
Area 1	G6M-04-31X	10/9/2017	--	--	--	--	--	--	--	--	--	410			--	--	--		--		6.52	0.58	-83.5	2.830	8.7	14.26
Area 1	G6M-04-31X	10/22/2018	1.0 U	0.58 J	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	370	60	6800	--	--	--		--		6.59	0.2	111.5	2.999	4.49	10.60
Area 1	G6M-04-31X	10/20/2020	1.50 U	1.00 U	1.00 U	1.00 U	1.00 U	0.980 J	-	-	-	360 J	30,000	2,100	-	-	-	-	-		6.71	0.510	-124	1.58	0.930	13.2
Area 1	G6M-13-05X	1/30/2014	250	10U	16	10U	10U	10U	-	-	-	-	-	-	-	-	-	-	-	-	8.63	0.37	-86.6	1.112	3.09	11.35
Area 1	G6M-13-05X	6/10/2014	1,200	12	70	0.40J	0.54	0.50U	-	-	-	10.7	0.299 J	556	-	-	-	-	-	-	7.65	0.46	-107	0.515	8.19	11.34
Area 1	G6M-13-05X	11/4/2014	1,700	13J	77	32U	32U	32U	-	-	-	6.6	0.233	565	-	-	-	-	-	-	7.43	0.47	-93.6	0.417	9.73	18.31
Area 1	G6M-13-05X	6/16/2015	1,520	12	62	0.50 U	0.50 U	0.50 U	-	-	-	5.20	0.05 U	229	-	-	-	-	-		7.04	1.63	57.0	0.398	33.2	12.71
Area 1	G6M-13-05X	10/13/2015	1,120	11	63	1.0 U	1.0 U	1.0 U	-	-	-	2.3 J	0.10 U	235	-	-	-	-	-		7.22	0.99	59.5	0.525	2.14	11.23
Area 1	G6M-13-05X	2/10/2016	770	5.2 J	24	10 U	10 U	10 U	10 U	10 U	10 U	4.0 U	0.10 U	199	1.0 U	25	1.4	10 U	2.0 U		6.2	4.39	244.6	0.523	20.2	9.67
Area 1	G6M-13-05X	6/15/2016	1,200	9.6	50	10 U	10 U	10 U	-	-	-	3.0	0.022 J	130	-	-	-	-	-		6.41	0.89	55.2	0.582	2.59	12.33
Area 1	G6M-13-05X	11/10/2016	830	7.2 J	31	10 U	10 U	10 U	-	-	-	3.0 U	0.05 U	54	-	-	-	-	-		6.57	2.63	20.9	0.404	2.47	9.16
Area 1	G6M-13-05X	5/18/2017	1,300	20 U	64 J	20 U	20 U	20 U	1.1 U	1.0 U	0.58 U	3.0 U	0.28	350	1.0 U	32 J	1.5	1.0 U	1.0 U		11.40	3.97	25.1	0.550	7.65	12.67
Area 1	G6M-13-05X	10/5/2017	280	69	750	10 U	10 U	10 U	1.1 U	1.0 U	32	35	12	1,700	28	49	0.04 J	1.0 U	1.0 U		5.95	0.51	19.7	0.630	27.4	12.80
Area 1	G6M-13-05X	4/5/2018	59	81	410	10 U	10 U	5.6 J	0.75 J	1.1	6,800	85	32	3,900	85	77	0.10	0.95 J	1.0 U		6.31	0.89	-20.9	0.641	5.92	10.27
Area 1	G6M-13-05X	10/16/2018	5.0 U	2.7 J	250	5.0 U	5.0 U	57	4.1	39.0	16,000	95	66	15,000	210	170	0.05 U	5.0 U	1.0 U		4.99	0.45	87.2	0.973	4.83	11.21
Area 1	G6M-13-05X	4/5/2019	1.0 U	0.62 J	120	1.2	1.0 U	39	8.7	65	25,000	120	83	20,000	150	-	0.23	1.0 U	1.0 U		6.00	0.74	-13	1.100	1.8	8.60
Area 1	G6M-13-05X	10/10/2019	1.5 J	1.8	33	0.93 J	1.0 U	38	3.3	33	12,000	130	94	19,000	37	140	0.050 J	1.0 U	0.83 U		7.80	0.14	-65.6	0.950	7	12.00
Area 1	G6M-13-05X	5/12/2020	1.00 U	1.30 J	8.4	0.008 J	1.00 U	10																		
Area 1	G6M-13-05X	05/12/2020	1.00 U	1.30 J	8.40	0.880 J	1.00 U	10.0	27.0	57.0	19,000	120	100,000	16,000	27.0	160	0.100 UJ	5.00 U	0.810 U		6.30	0.600	-54.2	1010	7.30	12.7
Area 1	G6M-13-05X	10/13/2020	1.00 U	1.00 U	1.30	0.480 J	1.00 U	1.70	21.0	11.0	4.00	150	110,000	15,000	12.0	130	0.120 U	1.00 U	0.810 U		6.82	0.610	-104	0.689	4.82	11.1
Area 1	G6M-13-05X																									
Area 1	G6M-13-06X	1/30/2014	3.9J	8U	300	8U	8U	95	-	-	-	-	-	-	-	-	-	-	-	-	6.61	0.33	-38.3	2.521	35.9	10.81
Area 1	G6M-13-06X	6/12/2014	0.5U	0.44J	180	0.68	0.37J	330	1.3UJ	33J	18,000J	444	365	16,900	160	710J	0.13U	0.68J	0.03U	-	6.42	0.24	-88.9	1.710	13.7	19.03
Area 1	G6M-13-06X	10/30/2014	0.5U	0.5U	14	0.7	0.5U	15	1.2U	63	79,000	558	274	12,500	42	580	0.13U	0.42J	0.03U	-	6.31	0.24	-99	1.943	20.1	18.31
Area 1	G6M-13-06X	6/16/2015	0.50 U	0.50 U	3.9	0.98 J	0.50 U	6.0	10 U	27.3	10,300	546	246	16,900	54.5	510	0.15	1.0 J	1.0 U	-	6.25	0.11	-40.1	1.989	31.9	11.27
Area 1	G6M-13-06X	9/9/2015	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	4.0 J	5.0 U	36.6	18,200	511	269	22,500	82.2	-	0.11	10 U	6.50		6.02	0.16	-53.6	1.745	4.09	12.15
Area 1	G6M-13-06X	10/14/2015	5.0 U	5.0 U	3.2 J	5.0 U	5.0 U	5.0 U	10 U	30.2	11,300	531	260	21,300	61.5	434	0071 J	1.70	1.50		5.71	1.19	100.7	0.904	1.46	19.27
Area 1	G6M-13-06X	2/9/2016	1.0 U	1.0 U	2.0	0.80 J	1.0 U	4.6	10 U	31.7	14,500	536	226	12,000	46.0	409	0.17	10 U	2.0 U		6.35	1.07	-23.7	1.204	3.69	7.11
Area 1	G6M-13-06X	6/14/2016	1.0 U	1.0 U	1.9	0.59 J	1.0 U	4.2	1.1 U	41.0	13,000	490	280	18,000	150	640	0.05 UJ	0.8 UJ	1.0 U		6.40	0.57	-48.4	2.223	2.27	10.67
Area 1	G6M-13-06X	11/8/2016	1.0 U	1.0 U	9.8	0.55 J	1.0 U	7.7	1.1 U	23	11,000	470	250	9,600	55	560	0.05 UJ	1.0 U	5.8		6.42	1.47	-127.3	1.230	4.72	8.19
Area 1	G6M-13-06X	5/19/2017	1.0 U	1.0 U	2.2	0.45 J	1.0 U	2.6	14	16	17,000	500	250	7,000	70 J	470	0.14 J	3.0	1.0 U		5.96	1.01	-64.8	1.450	7.43	10.87
Area 1	G6M-13-06X	10/5/2017	1.0 U	1.0 U	2.3 J	1.0 U	1.0 U	1.1	6.0	6.3	6,000	490	220	7,500	72	440	0.17 J	1.0 UJ	1.0 UJ		6.20	0.31	-88.6	1.460	15.2	10.97
Area 1	G6M-13-06X	10/19/2018	1.0 U	1.0 U	0.67 J	1.0 U	1.0 U	1.2	12.0	18	17,000	400	220	5,300	120	480	0.18	2.0 U	1.0 U		6.25	1.5	-61.9	2.131	13.2	10.53
Area 1	G6M-13-06X	10/10/2019	1.0 U	1.0 U	1.0	1.0 U	1.0 U	0.82 J	11.0	14	11,000	500	220	2,900	110	420	0.29 J	1.0 UJ	1.2		7.00	0.11	-35	1.500	18	11.00
Area 1	G6M-13-06X	10/13/2020	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	10.0	3.00	11,000	430	220,000	2,500	120	540	0.220 U	1.00 U	0.810 U		6.26	0.390	-63.2	1.08	41.5	11.2
Area 1	G6M-93-13X	10/15/2001	0.55J	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	5.30	9.9	355	6.000	1.2	14.88
Area 1	G6M-93-13X	9/20/2004	3.8	2U	2U	2U	1U	2U	0.0081	0.014	0.89	5U	1.0	15U	1U	23	1.3J	10	2.7J	-	6.14	13.07	250.7	0.059	4.31	12.36
Area 1	G6M-93-13X	12/13/2004	2U	2U	2U	2U	1U	2U	0.005U	0.005U	3.8	5U	1U	15U	5U	20	1.2	9.6M	2U	-	6.16	10.41	192.5	0.080	1.42	14.8
Area 1	G6M-93-13X	3/29/2005	2U	2U	2U	2U	1U	2U	0.0063	0.28	3.1	5U	1UM	15U	0.6J	22	0.2U	9.1	2U	-	6.24	10.4	97.3	0.090	0.64	15.91
Area 1	G6M-93-13X	6/28/2005	2U	2U	2U	2U	1U	2U	0.023	0.02	9.4	2U	1U	10U	4.9	41.2	0.081	8.2	1U	-	11.30	11.43	146.1	0.275	2.46	13.31
Area 1	G6M-93-13X	9/26/2005	2U	2U	2U	2U	1U	2U	0.006J	0.018J	4.9	5U	1U	15U	3.1	27	0.083	9.5	1U	-	6.04	7.98	191.8	0.126	18.2	15.19

Appendix D
Historical Groundwater Analytical Results
2020 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

			Laboratory Parameters																	Field Parameters					
			PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	VC	Ethane	Ethene	Methane	Dissolved Arsenic	Dissolved Iron	Dissolved Manganese	TOC	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	Phosphate	pH	DO	ORP	SpC	Turbidity	Temp
Area	Well ID	Date Sampled	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
Area 1	G6M-93-13X	12/13/2005	2U	2U	2U	2U	1U	2U	0.008J	0.011J	9.3	5U	1U	15U	4.4J	41	3.4	9.4	1U	-	6.48	9.55	69.6	0.086	0.5	13.7
Area 1	G6M-93-13X	3/21/2006	2U	2U	2U	2U	1U	2U	0.025U	0.046	9.5	5U	0.1U	19	6.8	24	0.2U	6.83	1U	-	6.87	9.55	-9.4	0.058	0.61	13
Area 1	G6M-93-13X	6/19/2006	2U	2U	2U	2U	1U	2U	0.008J	0.008J	5.3	5U	0.1U	28	1.4J	46	0.2UH	4.42	1U	-	6.33	9.14	190.1	0.087	1.34	11.49
Area 1	G6M-93-13X	9/18/2006	2U	2U	2U	2U	1U	2U	0.006J	0.014J	5	5U	0.10U	15U	4.6J	22	0.2U	7.76	1U	-	6.22	9.33	173.6	0.062	4.62	10.39
Area 1	G6M-93-13X	12/11/2006	2U	2U	2U	2U	1U	2U	0.008J	0.038	11	5U	0.1U	15U	5U	-	-	6.55	1U	-	6.38	10.68	91.3	0.076	2.23	12.11
Area 1	G6M-93-13X	3/28/2007	2U	2U	2U	2U	1U	2U	0.005J	0.014J	9.6	5U	0.1U	15U	5U*	-	-	5.74	1U	-	6.14	9.8	-3.1	0.071	8.73	12.58
Area 1	G6M-93-13X	6/11/2007	2U	2U	2U	2U	1U	2U	0.034	0.3	13	5U	0.1U	15U	0.4J	-	-	8.96	1U	-	6.64	10.12	125.4	0.121	3.3	13.98
Area 1	G6M-93-13X	9/11/2007	3.0	2U	2U	2U	1U	2U	0.005J	0.025U	2.8	6U	0.1U	15U	0.7J	99	0.2U	12	1U	-	6.31	9.67	96.7	0.095	7.1	12.44
Area 1	G6M-93-13X	12/10/2007	2U	2U	2U	2U	1U	2U	0.004J	0.007J	1.1	5U	0.1U	15U	5U	-	-	6.92	1U	-	6.25	8.81	71	0.156	0.6	11.83
Area 1	G6M-93-13X	3/10/2008	2U	2U	2U	2U	1U	2U	0.008J	0.05	10	5U	0.2	12,000	34	-	-	100	1U	-	6.3	3.84	141	0.953	0	16
Area 1	G6M-93-13X	10/15/2008	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1.3U	1.6U	5.6	8.0U	0.2U	3,270	10U	110	3.6	34	0.03UJ	-	6.31	2.97	116.4	0.304	0	15.24
Area 1	G6M-93-13X	5/7/2009	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1.2U	1.5U	2.2	3.5J	0.2U	50U	10U	67J	0.71	16	0.03U	-	6.26	6.1	79.6	0.164	1.1	-
Area 1	G6M-93-13X	10/19/2009	0.5U	15	0.5U	0.5U	0.5U	0.5U	1.3U	1.6U	6	8U	0.142U	50U	10U	54	0.058J	9.2	0.03UJ	-	6.42	4.79	182	0.110	1.01	15.69
Area 1	G6M-93-13X	4/21/2010	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1.2U	1.5U	440	5.0U	0.115U	25U	6.5J	140	0.13U	10	0.03U	-	6.19	9.03	37.3	0.109	0.00	15.22
Area 1	G6M-93-13X	10/6/2010	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1.2U	1.5U	16	5U	0.1U	25U	10U	63	0.050J	11	0.03U	-	6.12	4.77	114	0.116	3.42	17.33
Area 1	G6M-93-13X	9/9/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 U	10 U	4.0 U	0.10 U	207	-	-	0.11 U	49.6	2.0 U		6.02	0.16	-53.6	1.745	4.09	12.15
Area 1	G6M-93-13X	2/9/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 U	10 U	4.0 U	0.10 U	12 J	2.2	85.7	0.11 U	73.4	2.0 U		6.21	1.64	232.3	0.350	10.7	8.96
Area 1	G6M-93-13X	6/14/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	3.0 U	0.045 J	130	-	-	-	-	-		6.35	1.01	63.1	0.306	14.0	13.39
Area 1	G6M-93-13X	11/8/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	3.0 U	0.15	230	-	-	-	-	-		6.47	0.91	-29.7	0.192	11.39	9.52
Area 1	G6M-95-19X	10/15/2001	110	6.6	42	1.5J	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	5.46	6.24	202	2.870	8.5	9.84
Area 1	G6M-95-19X	9/20/2004	41	2.9	16	2U	1U	2U	-	-	-	5U	1	210	-	-	-	-	-	-	5.45	7.92	467.5	4.170	3.1	14.08
Area 1	G6M-95-19X	9/26/2005	21	2U	5.4	2U	1U	2U	-	-	-	8.3	1U	160	-	-	-	-	-	-	4.00	4.51	595.3	4.361	0.72	14.45
Area 1	G6M-95-19X	9/19/2006	12	2U	2U	2U	1U	2U	-	-	-	5U	0.10U	160	-	-	-	-	-	-	3.82	6.77	281	4.236	2.41	11.78
Area 1	G6M-95-19X	9/12/2007	21	2U	4	2U	1U	2U	-	-	-	5U	0.1U	200	-	-	-	-	-	-	5.28	7.62	175.1	6.566	0.4	12.46
Area 1	G6M-95-19X	10/15/2008	14J	0.39J	1.6J	0.5U	0.5U	0.5U	-	-	-	8U	0.2U	212	-	-	-	-	-	-	5.35	6.63	267.9	5.306	0.9	12.15
Area 1	G6M-95-19X	10/16/2009	20U	540	20U	20U	20U	20U	-	-	-	8U	0.2U	153	-	-	-	-	-	-	5.22	4.53	232	4.529	1.49	11.54
Area 1	G6M-95-19X	1/15/2010	6.9	0.5U	0.46J	0.75U	0.75U	1.0U	-	-	-	-	-	-	-	-	-	-	-	-	5.46	4.09	243.8	4.733	2.17	10.45
Area 1	G6M-95-19X	10/7/2010	1.8	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	5U	0.1U	186	-	-	-	-	-	-	5.34	3.35	159.4	4.211	3.88	9.77
Area 1	G6M-95-19X	10/7/2011	2.2	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	5U	0.1U	242	-	-	-	-	-	-	5.51	2.9	132.2	2.319	1.1	12.69
Area 1	G6M-95-19X	10/15/2012	3.3	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	5U	0.1U	1,450	-	-	-	-	-	-	5.53	2.8	225.1	7.618	0.19	9.91
Area 1	G6M-95-19X	10/18/2013	2.4	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	5U	0.1U	2,250	-	-	-	-	-	-	5.49	1.44	154.9	3.827	5.42	10.34
Area 1	G6M-95-19X	11/3/2014	3.0	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	2.5U	0.0847U	1,190	-	-	-	-	-	-	5.73	3.06	202.5	2.189	2.78	10.00
Area 1	G6M-95-19X	10/14/2015	1.9	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	4.0 U	0.10 U	739	-	-	-	-	-		5.85	1.10	170.4	4.126	1.43	10.94
Area 1	G6M-95-19X	10/5/2017	1.9	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	3.0 U	0.05 U	1,400	--	--	--	--	--		5.60	1.22	171.7	3.530	3.41	13.04
Area 1	G6M-95-19X	10/17/2018	1.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	-	-	-	--	--	--	--	--		5.43	2.08	246.1	4.601	1.99	11.71
Area 1	G6M-95-19X	10/9/2019	1.9	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-		5.58	2.75	103	4.800	0.77	12.00
Area 1	G6M-95-19X	10/16/2020	1.40	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	-	-	-	-	-	-	-	-	-	-	-		5.54	1.88	170	3.02	3.38	14.6
Area 1	G6M-95-20X	10/16/2001	4.4	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	5.90	7.2	212	0.270	4.1	11.2
Area 1	G6M-95-20X	2/25/2002	5.0	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	6.59	12.37	155.7	0.171	7.67	11.53
Area 1	G6M-95-20X	2/27/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.7	-	-	-	-	-	-	-	-	10.42
Area 1	G6M-95-20X	9/21/2004	2.8	2U	2U	2U	1U	2U	-	-	-	5U	1U	15U	-	-	-	-	-	-	5.76	8.88	205.5	0.544	0	11.25
Area 1	G6M-95-20X	9/26/2005	2.3	2U	2U	2U	1U	2U	-	-	-	5U	1U	15U	-	-	-	-	-	-	5.62	8.75	328.7	0.741	0.95	11.42
Area 1	G6M-95-20X	9/19/2006	2.2	2U	42	2U	1U	2U	-	-	-	71	350	39,000	-	-	-	-	-	-	6.31	0.76	-108	2.715	4.19	12.17
Area 1	G6M-95-20X	9/12/2007	2U	2U	11	2U	1U	2U	-	-	-	160	110	15,000	-	-	-	-	-	-	6.49	3.19	-114.3	0.740	73.7	12.6
Area 1	G6M-95-20X	10/15/2008	0.38J	0.2J	2.5	0.5U	0.5U	0.5U	-	-	-	97.2	45.6	5,250	-	-	-	-	-	-	6.45	0.49	-104.4	0.511	4.2	9.54
Area 1	G6M-95-20X	10/16/2009	0.5U	37J	3.1	0.5U	0.5U	0.5U	-	-	-	166	206	7,660	-	-	-	-	-	-	6.61	0.29	-81.4	0.898	8.81	13.42
Area 1	G6M-95-20X	10/6/2010	0.5U	0.5U	5.1	0.5U	0.5U	1.8	-	-	-	149	546	12,200	-	-	-	-	-	-	6.49	0.11	-124.3	2.047	36.6	14.15
Area 1	G6M-95-20X	10/7/2011	0.5U	0.5U	1.5	0.5U	0.5U	0.5U	-	-	-	108	57.8	3,610	-	-	-	-	-	-	6.59	0.10	-112.9	0.234	4.0	14.3
Area 1	G6M-95-20X	10/15/2012	0.5U	0.5U	1.0	0.5U	0.5U	0.5U	-	-	-	112	67.9	3,140	-	-	-	-	-	-	6.58	0.60	-98.2	0.526	4.83	12.73
Area 1	G6M-95-20X	10/18/2013	0.5U	0.29J	0.59	0.5U	0.5U	0.5U	-	-	-	79.9	30	1,760	-	-	-	-	-	-	6.56	0.18	-79.5	0.410	3.37	12.63
Area 1	G6M-95-20X	10/31/2014	2.7	0.53	0.5U	0.5U	0.5U	0.5U	-	-	-	7.9	20.3	1,160	-	-	-	-	-	-	6.59	0.16	-105.1	0.688	4.03	10.88
Area 1	G6M-95-20X	10/13/2015	1.2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	32.2	110	614	-	-	-	-	-		6.61	0.55	-55	0.722	2.86	12.15
Area 1	G6M-95-20X	11/8/2016	0.82 J	1.0	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	26	14	940	-	-	-	-	-		4.99	0.54	-5.6	0.799	7.04	13.62
Area 1	G6M-95-20X	10/5/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	18	6.3	410	--	--	--	--	--		5.80	0.35	27.8	0.603	11.0	14.46
Area 1	G6M-95-20X	10/17/2018	1.1	0.64 J	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	18	3.5	170	--	--	--	--	--		5.84	0.13	154.3	0.426	24.9	12.21
Area 1	G6M-95-20X	10/10/2019	1.0 U	0.55 J	1.5	1.0 U	1.0 U	1.0 U	-	-	-	73	39	1,500	-	-	-	-	-		6.92	0.15	-39.8	0.310	9.7	12.00
Area 1	G6M-95-20X	10/14/2020	1.00 U	1.00 U	0.410 J	1.00 U	1.00 U	1.00 U	-	-	-	87.0	54,000	2,200	-	-	-	-	-		6.49	0.500	-52.1	0.255	3.45	11.8
Area 1	G6M-95-20X (FD)	10/14/2020	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	-	-	-	91.0	53,000	2,200	-	-	-	-	-		5.32	0.420	181	0.655	2600	11.8
Area 1	G6M-96-13B	10/15/2001	3,600	39	220	12	1U	1.1J	-	-	-	-	-	-	-	-	-	-	-	-	6.10	2.9	219	0.120	6.8	12.55
Area 1	G6M-96-13B	2/25/2002	5,200	34	200	1.4J	1U	1.5J	-	-	-	-	-	-	-	-	-	-	-	-	6.40	3.85	181.5	1.142	6.59	13.56
Area 1	G6M-96-13B	1/31/2003	3,800	31	190	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.13
Area 1	G6M-96-13B	9/20/2004	4,500	35	210	2U	1U	2.1	0.022	0.12	1.7	5U	1	15U	1U	38	5.4J	19	2.0	-	6.30	3.57	186.4	1.035	0.5	11.41
Area 1	G6M-96-13B	12/13/2004	2,500	24	150	2U	1U	2U	0.05	0.025	24	5U	1U	23	5U	35	5.0	31M	2U	-	6.26	2.57	316.5	0.787	2.68	12.51
Area 1	G6M-96-13B	3/28/2005	4,500	200U	180J	200U	200U	200U	0.17	0.22	37	5U	2.6M	1,600	5.7	47	0.46	17	2UJ	-	6.24	0.87	21.2	0.943	0.68	10.08
Area 1	G6M-96-13B	8/10/2005	2,800	190	1,500	3.6	4.8	6.8	0.15	0.44	2.9	32	24J	8,100	140	98.9	0.23	4.6	5.3	-	4.35	0.16	-35.6	0.838	3.5	-
Area 1	G6M-96-13B	9/26/2005	3,700	140	570	5U	5U	5U	0.054	0.33	18	44	51J	12,000	200	134	0.28	11	11	-	4.98	1.32	-45.9	1.071	4.54	13.5
Area 1	G6M-96-13B	12/13/2005	3,400	130	350	10U	5U	10U	0.069	0.35	31	46.3	63J	12,100	140	150	0.05U	11	4.5	-	5.51	0.13	-52.1	0.851	0.9	16.38
Area 1	G6M-96-13B	3/20/2006	2,100	250	400	2U	1.2	2.5	0.036	0.42	97	38	96	17,000	360	300	0.207	6.77	2.4	-	5.68	0.17	-161.5	0.759	7.1	15.13
Area 1	G6M-96-13B	6/20/2006	1,900	280	370	2U	1U	3.5	0.044	0.27	200	48J	100	16,000	110	310	0.2U	4.21	4.8	-	5.46	0.62	-86.8	1.252	2.63	13.27
Area 1	G6M-96-13B	9/18/2006	880	370	530	2U	1.3	9.4	0.022J	0.43	2,400	150	110	20,000	300	370	0.262	4.56	3.0	-	6.14	0.48	-120.9	1.555	2.19	12.5
Area 1	G6M-96-13B	12/11/2006	830	340	620	2U	1.6	7.3	0.020J	0.047	9,000	190	130	27,000	360	-	-	6.06	1.2	-	6.28	14.07	-260	1.930	2.1	11.04
Area 1	G6M-96-13B	3/27/2007	940	290	590	2.6	2.1	26	0.025U	0.96	22,000	250	230	35,000J	140	-	-	4.3	1.6	-	5.71	0.1	-16.8	1.861	1.79	12.5

			Laboratory Parameters																	Field Parameters					
			PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	VC	Ethane	Ethene	Methane	Dissolved Arsenic	Dissolved Iron	Dissolved Manganese	TOC	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	Phosphate	pH	DO	ORP	SpC	Turbidity	Temp
Area	Well ID	Date Sampled	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
Area 1	G6M-96-13B	6/11/2007	1,200	280	610	2U	1.7	55	0.025U	0.68	22,000	200	200	15U	260	-	-	8.17	2.2	-	6.24	0.15	-97.5	1.870	1322	12.04
Area 1	G6M-96-13B	9/10/2007	2,600	130J	590	2U	1.6	38	0.036	6.3	32,000	240	210	25,000	270	410	0.2U	580	2.8	-	6.25	0.4	-136.3	1.866	15.5	12.96
Area 1	G6M-96-13B	12/11/2007	750	99	830	2U	1.5	110	0.005J	3.6	26,000	260	230	25,000	240	-	-	429	2.4	-	6.11	1.92	-25.7	1.907	8.0	11.98
Area 1	G6M-96-13B	3/10/2008	1,200	140	1,000	2U	1.7	140	0.025U	8.3	29,000	240	240	26,000	210	-	-	5U	2.0	-	6.18	1.55	-90.2	1.958	6.4	11.33
Area 1	G6M-96-13B	10/15/2008	7.3J	6.5J	490	10U	10U	350	1.2U	5.7	9,700	172	290	39,500	91.8U	470	0.13U	21	0.03UJ	-	6.19	0.90	-59.2	2.046	11	12.96
Area 1	G6M-96-13B	5/7/2009	190	75	310	10U	10U	95	1.2U	13	46,000	169	323	38,600	74	740J	0.13U	32	0.03U	-	6.09	0.10	-97.6	1.909	4.0	10.53
Area 1	G6M-96-13B	10/19/2009	440	140	290	10U	10U	89	1.2U	9.2	52,000	173	325	36,000	54	630	0.022U	53	0.041	-	6.32	1.53	-93.1	2.054	13.6	-
Area 1	G6M-96-13B	4/21/2010	93	29	100	2.0U	2.0U	57	1.3U	15	37,000	217	400J	39,100	130	610	0.13U	0.71J	0.041	-	6.21	0.13	18.2	2.496	10.99	-
Area 1	G6M-96-13B	10/6/2010	360	150	150	1.5	0.70	65	1.2U	18	96,000	222	366	37,500	57	95	0.045J	1.1J	0.03U	-	6.19	0.22	-103.4	2.547	12.9	12.34
Area 1	G6M-96-13B	6/9/2011	740	90	270	1.9	1.4	86	3.7	44	110,000	242	304	25,100	75	300	0.023J	0.49J	0.03U	-	6.22	0.09	-112	2.126	13.1	11.49
Area 1	G6M-96-13B	10/4/2011	160	24	79	8.0U	8.0U	43	1.2U	1.5U	98,000	284	335	25,300	73	620	0.13U	0.35J	0.03U	-	6.36	0.02	-77.8	1.733	20	10.82
Area 1	G6M-96-13B	5/9/2012	130	47	150	5.0U	5.0U	38	44	100	29,000	298	231	16,600	51	500	0.13U	0.58J	0.13	-	6.47	1.7	-89.7	1.680	12.1	16.85
Area 1	G6M-96-13B	10/11/2012	130	48	130	5.0U	5.0U	76	81	190	62,000	282	209	17,100	38	480	0.13U	5.0U	0.14	-	6.26	0.44	-66.4	2.335	7.09	10.87
Area 1	G6M-96-13B	5/22/2013	170	55	230	2.7J	5.0U	100	1.1U	86	23,000	395	241	18,600	29	540J	0.13U	5.0U	0.12J	-	6.23	0.15	-84.3	2.270	13	9.71
Area 1	G6M-96-13B	10/17/2013	78	38	200	4.0U	4.0U	170	2.4	36	18,000	365	234	17,600	37	560	0.13U	5.0U	0.058	-	6.46	0.15	-113.1	1.728	17.3	10.91
Area 1	G6M-96-25B	10/15/2001	360	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	5.81	5.3	142	0.498	3.9	12
Area 1	G6M-96-25B	2/25/2002	130	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	6.70	11.51	158.5	0.150	9.75	13.7
Area 1	G6M-96-25B	2/27/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.2	-	-	-	-	-	-	-	-	13.8
Area 1	G6M-96-25B	1/31/2003	52	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17
Area 1	G6M-96-25B	9/20/2004	56	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	4.98	7.63	593	0.589	0.0	13.7
Area 1	G6M-96-25B	9/26/2005	40	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	5.82	6.74	314.1	0.587	1.1	17
Area 1	G6M-96-25B	9/19/2006	44	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	5.20	7.64	223.5	0.496	1.46	12.2
Area 1	G6M-96-25B	9/11/2007	16	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	5.91	6.29	96.6	0.802	9.5	16.3
Area 1	G6M-96-25B	10/17/2008	1.7	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	-	-	-	-	-	-	-	-	-	6.80	8.41	89.7	0.151	4.0	14.5
Area 1	G6M-96-25B	10/16/2009	1.9	38J	0.5UJ	0.5U	0.5U	0.5U	-	-	-	-	-	-	-	-	-	-	-	-	6.27	8.08	183.5	0.404	4.7	10.5
Area 1	G6M-96-25B	10/8/2010	3.1	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	-	-	-	-	-	-	-	-	-	5.80	6.70	190.2	0.622	1.59	16.3
Area 1	G6M-96-25B	10/6/2011	0.58	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	-	-	-	-	-	-	-	-	-	6.85	8.11	69.8	0.131	4.5	16.8
Area 1	G6M-96-25B	10/16/2012	2.0	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	-	-	-	-	-	-	-	-	-	5.87	7.09	181.7	0.572	7.76	12.7
Area 1	IW-17D	5/19/2017	4.1	6.1	16	5.0 U	5.0 U	5.0 U	1.1 U	1.0 U	24,000	110	130	14,000	680	110	0.11	1.0 U	1.0 U		11.10	0.45	40.9	1.781	21.28	11.27
Area 1	IW-18D	5/19/2017	5.1	5.0 U	660	5.0 U	5.0 U	5.0 U	1.1 U	15	21,000	150	140	8,900	680	110	0.21	1.0 U	1.0 UJ		11.00	0.46	44.3	1.265	85	12.65
Area 1/FDSA	G6M-03-04X	10/21/2009	4.2U	4.0U	81	4.0U	4.0U	4.1	-	-	-	-	-	-	-	-	-	-	-	-	6.04	0.7	-99.6	0.635	24.5	19.6
Area 1/FDSA	G6M-03-04X	10/16/2012	0.5U	0.5U	0.5U	0.5U	0.5U	1.3	-	-	-	-	-	-	-	-	-	-	-	-	6.79	0.7	-123	0.622	80.4	22.98
Area 1/FDSA	G6M-04-10A	9/20/2004	2,900	2.5	3.4	2U	1U	2U	0.021	0.03	1.1	5U	1	170	1U	41	4.5J	22	2	-	5.91	3.75	206.5	0.552	1.7	10.79
Area 1/FDSA	G6M-04-10A	3/30/2005	640	40U	40U	40U	40U	40U	0.33	0.07	1.4	8.4	1.2	8,100	52	107	0.33	16	2U	-	5.90	4.22	68.3	1.010	1.76	10.99
Area 1/FDSA	G6M-04-10A	8/11/2005	380	45	390	2U	2U	2U	0.24	0.23	3.4	77	87J	50,000J	240	359	.05U	7.8	1U	-	5.65	1.84	11.9	0.977	14.9	10.06
Area 1/FDSA	G6M-04-10A	9/27/2005	340	88	260	1U	1U	1U	0.08	0.15	110	190	230J	76,000	330	442	0.084	3.0J	5.9	-	6.33	1.89	-1.9	1.135	4.3	10.77
Area 1/FDSA	G6M-04-10A	12/14/2005	1,500	180	220	2U	1U	2U	0.048	0.13	6,800	179	250J	32,500	370	480	0.05U	3.7	7.4	-	6.41	1.57	-64.8	0.985	1.9	10.24
Area 1/FDSA	G6M-04-10A	3/21/2006	4,400	180	450	2U	1U	8.3	0.025U	0.69	20,000	180	220	8,100	180	390	0.2U	4.08	2	-	6.72	0.27	-121.4	0.676	7.51	9.75
Area 1/FDSA	G6M-04-10A	6/20/2006	6,100	650	330	2U	1U	27	0.025U	0.12	16,000	160	220	5,700	120	340	0.2U	4.32	3.2	-	6.34	0.22	-99.8	0.893	9.82	10.97
Area 1/FDSA	G6M-04-10A	9/19/2006	1,000	15	59	2U	1U	14	0.23	0.11	11,000	170	97	5,000	61	150	0.311	5.2	1.2	-	6.56	1.14	-86.9	0.430	6.0	14.64
Area 1/FDSA	G6M-04-10A	12/13/2006	450	37	860	2U	1.2	76	0.025U	0.12	22,000	150	96	4,800	73	-	-	1.82	1.6	-	6.91	0.14	-111	0.662	27.3	6.31
Area 1/FDSA	G6M-04-10A	3/28/2007	1,200J	230J	680J	2U	1.6J	60J	0.65	0.26	20,000	380	260	27,000J	130	-	-	2.07	1U	-	6.1	0.19	-89.9	1.188	15.4	11.18
Area 1/FDSA	G6M-04-10A	6/12/2007	760	140	900	2U	2.1	130	0.54	1.1	23,000	310	260	15,000	190	-	-	1U	2.4	-	6.58	0.19	-145.2	1.295	128.5	15.77
Area 1/FDSA	G6M-04-10A	9/11/2007	2,700	99J	400	2U	1U	91	0.35	0.47	18,000	240	290	13,000	220	440	0.2U	54	2.4	-	6.42	1.72	-138.2	0.864	42.3	13.97
Area 1/FDSA	G6M-04-10A	12/11/2007	830	8.8	280	2U	1U	90	0.3	0.52	31,000	330	280	12,000	270	-	-	3.57	3.0	-	6.4	1.2	-70.1	1.366	8.0	10.09
Area 1/FDSA	G6M-04-10A	3/10/2008	200	830	670	3.4	1.8	37	0.34	0.61	25,000	340	230	35,000	210	-	-	10	2.2	-	6.53	0.94	-123.8	1.362	24	9.82
Area 1/FDSA	G6M-04-10A	10/6/2008	4,000	450	990	100U	100U	1,400	1.3U	11	16,000	247	187	9,100	34	210	0.13U	12	0.03UJ	-	6.38	0.21	-168	0.948	15	15.25
Area 1/FDSA	G6M-04-10A	1/21/2009	1,500	390	1,400	1,100U	0.67J	1,200	1.2U	9.6	53,000	250	234J	7.8	46J	20U	0.13U	20	0.03UJ	0.10J	6.6	0.2	-112.6	0.937	7.02	14.25
Area 1/FDSA	G6M-04-10A	5/7/2009	380	41	390J	10U	10U	420	1.2U	11	34,000	292	194	17,200	49	590J	0.13U	24	0.03U	0.13J	6.4	0.8	-125	1.165	4.2	11.25
Area 1/FDSA	G6M-04-10A	10/20/2009	2,700	290	2,100	50U	50U	1,400	1.3U	15	11,000	220	127	8,960	21	350	0.13U	8.7	0.03U	0.1J	6.42	0.17	-121.4	0.805	11.43	12.63
Area 1/FDSA	G6M-04-10A	4/21/2010	170	21	170	4.0U	4.0U	130	1.3U	15	21,000J	286	297J	18,200J	120	670	0.017J	0.65J	0.03U	0.25	6.58	0.70	-139.5	0.880	7.00	14.71
Area 1/FDSA	G6M-04-10A	10/6/2010	25	10J	600	20U	20U	190	1.2U	14	51,000	296	119	4,280	26	260	0.13U	0.98J	0.03U	0.23J	6.32	0.17	-85.2	0.694	6.24	13.56
Area 1/FDSA	G6M-04-10A	6/9/2011	110	36	300	0.5U	0.5U	170	1.2U	5.7	92,000	295	198	9,140	63	660	0.13U	1.2J	0.03U	-	6.4	0.39	-105.1	1.243	5.1	10.45
Area 1/FDSA	G6M-04-10A	10/4/2011	850	170	1,100	40U	40U	270	1.2U	74	36,000	322	304	17,600	160	750	0.13U	1.1J	0.22	-	6.07	0.21	-94	0.629	8.18	8.25
Area 1/FDSA	G6M-04-10A	5/10/2012	180	120	610	20U	20U	200	1.1U	250	46,000	367	183	6,700	16	340	0.13U	0.70J	0.10	-	6.49	0.48	-107.7	0.710	9.05	10.96
Area 1/FDSA	G6M-04-10A	10/15/2012	2.0U	2.0U	26	2.0U	2.0U	110	1.2U	44	14,000	291	185	8,250	64	340	0.092J	5.0U	0.13J	-	6.43	0.6	-103.7	0.920	5.5	10.36
Area 1/FDSA	G6M-04-10A	5/23/2013	0.5U	0.5U	13	0.53	0.5U	15	1.2U	1.5U	18,000	342	400	7,110	200	650	0.11J	0.84J	0.1J	-	6.37	1.3	-84.4	1.311	11	10.6
Area 1/FDSA	G6M-04-10A	10/17/2013	360J	92J	130J	10U	10U	14J	1.2U	9.4	24,000J	292	341	5,000	150	650	0.13U	1.1J	0.034J	-	6.37	0.29	-95.5	1.756	9.78	10.48
Area 1/FDSA	G6M-04-10A	6/12/2014	0.5U	0.23J	1.4	0.5U	0.5U	5.1	2.2J	1.6UJ	9,500J	264	164	3,730	29	200J	0.13U	17	0.03U	-	6.36	0.59	-82.7	1.761	10.93	10.89
Area 1/FDSA	G6M-04-10A	11/3/2014	0.5U	0.5U	0.92	0.5U	0.5U	4.4	1.2U	3.6J	21,000	288	184	2,100	34	240	0.13U	16J	0.03U	-	6.62	0.15	-136.9	1.742	16.98	11.17
Area 1/FDSA	G6M-04-10A	6/19/2015	0.50 U	0.50 U	0.50 J	0.50 U	0.50 U	5.00	5.0 U	5.0 U	7,510	274	145	1,940	18.3	278	0.11 U	21.70	1.0 U	-	6.62	0.51	-94.6	2.201	8.06	10.47
Area 1/FDSA	G6M-04-10A	10/13/2015	1.0 U	1.0 U	0.72 J	1.0 U	1.0 U	1.60	10 U	10 U	15,000	292	205	2,360	26.7	241	0.099 J	8.6 J	2.0 U		6.53	0.08	-119.6	2.367	17	11.30
Area 1/FDSA	G6M-04-10A	6/14/2016	1.0 U	0.64 J	1.1	1.0 U	1.0 U	4.0	1.1 U	1.0 UJ	13,000	220	82	1,700	10.0	190	0.05 U	7.3	1.0 U		5.94	0.23	-66.6	1.878	7.73	11.89
Area 1/FDSA	G6M-04-10A	11/9/2016	1.0 U	0.49 J	0.96 J	1.0 U	1.0 U	1.40	1.1 U	1.0 U	7,100	220	92	3,200	5.5	86	0.05 U	17	1.5		6.50	0.37	-96.9	1.440	5.27	8.47
Area 1/FDSA	G6M-04-10A	5/18/2017	1.0 U	0.52 J	1.4	1.0 U	1.0 U	0.85 J	1.1 U	1.0 U	5,500	170	74	4,800	5.7	38	0.12	15	1.0 U		6.59	0.33	-98.6	1.780	19.2	10.93
Area 1/FDSA	G6M-04-10A	10/12/2017	1.0 U	1.0 U	1.2	1.0 U	1.0 U	0.81 J	1.1 U	3.6	9,200	290	100	4,600	8.4	78	0.12	8.4	1.2		6.62	0.97	-94.7	1.870	16.0	10.01
Area 1/FDSA	G6M-04-10A	4/4/2018	1.0 U	1.0 U	0.89 J	1.0 U	1.0 U	0.6 J	1.1 U	3.6	25,000	250	98	2,600	19	190	0.17	11.0	1.0 U		6.61	1.04	-90.7	1.279	9.8	9.57
Area 1/FDSA	G6M-04-10A	10/16/2018	1.0 U	1.0 U	1.9	1.0 U	1.0 U	1.20	0.99 J	1.0 U	32,000	230	140	6,100	240	210	0.05 UJ	6.5 J	1.0 U		5.51	0.72	-47.2	1.243	346.0	10.72
Area 1/FDSA	G6M-04-10A	4/4/2019	1.0 U	12.00	29	1.0 U	1.0 U	9.3	3.8	46	19,000 J	240	140	4,400	95	-	0.26	4.3	1.0 U		5.80	1.7	-29	0.800	11.0	9.50
Area 1/FDSA	G6M-04-10A	10/16/2019	11	34	150	1.2	1.0 U	45	4.0	160	33,000	210	89	2,300	65	170	0.05 U	5.6	0.96 U		6.37	1.12	-75.7	0.700	21.0	10.00
Area 1/FDSA	G6M-04-10A	05/12/2020	1.00 U	1.00 U	11.0	0.930 J	1.00 U	2.90	0.900 J	18.0	14,000	270	130,000	3,700	44.0	300	0.100 U	3.80 J	0.830 U		6.26	0.250	29.8	628	30.8	9.88
Area 1/FDSA	G6M-04-10A	10/14/2020	35.0	49.0	120	0.650 J	1.00 U	26.0	1.20	25.0	10,000	230	96,000	3,000	22.0	210	0.0870 J	6.20	0.810 U		6.52	0.370	-91.2	0.530	9.96	15.4

Appendix D
Historical Groundwater Analytical Results
2020 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

			Laboratory Parameters																	Field Parameters					
			PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	VC	Ethane	Ethene	Methane	Dissolved Arsenic	Dissolved Iron	Dissolved Manganese	TOC	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	Phosphate	pH	DO	ORP	SpC	Turbidity	Temp
Area	Well ID	Date Sampled	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
Area 1/FDSA	G6M-04-10X	9/20/2004	70	7.5	32	2U	1U	2U	0.019	0.039	1.0	5U	1.0	260	1U	11	6.7J	21	3.4	-	5.59	6.87	246.2	0.902	0.95	10.24
Area 1/FDSA	G6M-04-10X	12/14/2004	65	7.8	35	2U	1U	2U	0.022	0.053	2.2	5U	1U	200	5U	10U	6.6	23	2U	-	5.40	7.57	424.2	0.816	5.5	16.22
Area 1/FDSA	G6M-04-10X	3/31/2005	56	6.8	30	2U	2U	2U	0.022	0.86	1.1	5U	1U	190	0.4J	10U	1.5	25	2U	-	5.18	7.65	256.7	1.337	0.41	13.05
Area 1/FDSA	G6M-04-10X	7/1/2005	50	5.4	23	2U	1U	2U	0.035	0.05	12	4.2	1UJ	10U	5.9	43.5	1.7	12	1U	-	5.33	6.09	265.2	1.502	0.90	17.5
Area 1/FDSA	G6M-04-10X	9/27/2005	48	4.7	23	2U	1U	2U	0.010J	0.018J	16	5U	1U	170	4	7.7	1.4	26	1U	-	5.26	6.68	450.9	1.123	0.50	14.74
Area 1/FDSA	G6M-04-10X	12/14/2005	67	6.3	27	2U	1U	2U	0.016J	0.034	11	5U	1U	164	5U	9.8	1.5	28	1U	-	5.49	6.78	205.1	1.032	3.40	10.78
Area 1/FDSA	G6M-04-10X	3/22/2006	76	9.1J	32	2U	1U	2U	0.015J	0.025J	25	5U	.1U	200	5.6	10U	1.44	23.6	1U	-	5.57	6.74	195.7	0.940	1.45	10.62
Area 1/FDSA	G6M-04-10X	6/20/2006	87	10	47	2U	1U	2U	0.013J	0.012J	18	5U	0.1U	240	5U	10U	1.69	25.2	1U	-	5.08	6.23	248.8	1.512	1.9	10.93
Area 1/FDSA	G6M-04-10X	9/19/2006	65	6.8	32	2U	1U	2U	0.026	0.025J	13	5U	0.10U	240	2.2J	8.0	1.27	22.2	1U	-	5.21	6.94	273.9	1.660	4.68	12.18
Area 1/FDSA	G6M-04-10X	12/13/2006	64	7.2	35	2U	1U	2U	0.008J	0.011J	28	5U	0.1U	280	5U	-	-	27	1U	-	5.38	7.9	39.3	2.160	0.59	11.34
Area 1/FDSA	G6M-04-10X	3/28/2007	56	5.9	26	2U	1U	2U	0.017J	0.054	21	5U	0.21	290J	5U	-	-	27.9	1U	-	5.21	6.37	77.9	1.947	3.71	10.56
Area 1/FDSA	G6M-04-10X	6/12/2007	28	2.4	9.9	2U	1U	2U	0.010J	0.065	18	5U	0.1U	250	5U	-	-	31.2	1U	-	5.35	6.31	230.7	3.150	14	15.88
Area 1/FDSA	G6M-04-10X	9/11/2007	35	3.4	13	2U	1U	2U	0.008J	0.010J	13	6U	0.1U	270	5U	10U	1.4	2000	1U	-	5.29	8.98	-40.6	2.617	10.5	14.25
Area 1/FDSA	G6M-04-10X	12/11/2007	20	2U	6.4	2U	1U	2U	0.010J	0.028	5.3	5U	0.1U	230	5U	-	-	34.7	1U	-	5.46	5.62	27.7	3.660	2.8	14.5
Area 1/FDSA	G6M-04-10X	3/11/2008	22	2.1	9.7	2U	1U	2U	0.004J	0.010J	4.1	5U	0.16	250	5U	-	-	28	1U	-	4.99	6.42	213.5	2.890	0	13.63
Area 1/FDSA	G6M-04-10X	10/15/2008	18	1.6	8.4	0.5U	0.5U	0.5U	1.2U	1.5U	6.1	8.0U	0.2U	265	10U	30	1.4	27	0.03U	-	5.28	6.58	247.1	3.339	1.4	11.75
Area 1/FDSA	G6M-04-10X	5/7/2009	15	1.2	5	0.5U	0.5U	0.5U	1.3U	1.6U	0.76	8.0U	0.2U	213	10U	20UJ	1.2	33	0.03U	-	5.20	5.86	196.8	2.229	1.53	11.22
Area 1/FDSA	G6M-04-10X	10/20/2009	9.8	4.8	5.2	0.5U	0.5U	0.27J	1.3U	1.6U	19	8U	0.139U	197	10U	20U	1.1	29	0.03U	-	5.20	5.72	226.2	2.651	2.68	11.56
Area 1/FDSA	G6M-04-10X	4/21/2010	24	1.5	6.5	0.5U	0.5U	0.5U	1.3U	1.6U	87	5.0U	0.1U	200	10U	25	1.4	31	0.03U	-	5.26	5.13	187.2	2.760	4.00	14.4
Area 1/FDSA	G6M-04-10X	10/6/2010	24	1.8	7.9	0.5U	0.5U	0.5U	1.2U	1.5U	3.7	5U	0.1U	208	10U	25	1.8	28	0.03U	-	5.18	5.63	225.7	2.937	0.00	12.4
Area 1/FDSA	G6M-04-10X	10/4/2011	9.0	0.5U	1.9	0.5U	0.5U	0.5U	1.2U	1.5U	47	5U	0.1U	173	4.5J	20U	1.3	28	0.03U	-	5.01	4.46	192.8	1.078	1.16	11.3
Area 1/FDSA	G6M-04-10X	10/15/2012	15	0.72	1.9	0.5U	0.5U	0.5U	1.2U	1.5U	32	5U	0.103U	224	10U	20U	1.2	35	0.03U	-	5.53	5.25	204	3.135	0.33	12.88
Area 1/FDSA	G6M-04-10X	10/17/2013	6.2	0.28J	0.5J	0.5U	0.5U	0.5U	1.2U	1.5U	5,500	3.3J	1.27	262	2.7J	20U	0.95	37	0.03U	-	5.32	3.9	164.1	4.698	2.89	13.02
Area 1/FDSA	G6M-04-10X	11/3/2014	7.4	0.27J	0.47J	0.5U	0.5U	0.5U	1.2U	1.5U	200	2.5U	1.32	308	5U	20U	1.3J	30J	0.03U	-	5.27	5.28	148.4	2.562	0.97	12.55
Area 1/FDSA	G6M-04-10X	9/9/2015	2.8	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	5.0 U	5.0 U	2.0 U	0.114	383	0.81 U	-	0.92	34.7	1.0 U		5.38	3.32	169.9	2.257	4.98	13.13
Area 1/FDSA	G6M-04-10X	10/13/2015	3.1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 U	10 U	4.0 U	0.10 U	344	1.0 U	7.2	1.10	35.4	2.0 U		5.31	2.86	202.1	3.174	28.5	12.33
Area 1/FDSA	G6M-04-10X	2/9/2016	2.3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 U	6.9 J	4.0 U	0.053 J	274	1.0 U	7.1	0.91	35.1	2.0 U		5.49	2.49	196.7	1.922	19.3	8.62
Area 1/FDSA	G6M-04-10X	6/14/2016	3.0	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.3	5.1 J	27	3.0 U	0.073	330	0.63 J	9.4	1.0	35.0	1.0 U		5.72	1.77	102.1	3.364	0.96	11.60
Area 1/FDSA	G6M-04-10X	11/9/2016	2.1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	170	3.0 U	0.036 J	420	0.72 J	10	0.58	32	2.2		5.70	0.76	67.9	1.546	4.27	9.16
Area 1/FDSA	G6M-04-10X	5/18/2017	1.2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	180	3.0 U	0.020 J	1,100	1.0 U	12	0.42	32	1.0 U		5.51	0.63	162.1	1.523	11.3	10.93
Area 1/FDSA	G6M-04-10X	10/12/2017	1.2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	760	3.0 U	0.075 U	1,200	1.0 U	13	0.46	34	1.0 U		5.56	1.11	195.3	2.020	4.17	10.29
Area 1/FDSA	G6M-04-10X	10/17/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-		5.20	0.26	181.2	1.534	4.23	11.32
Area 1/FDSA	G6M-04-10X	10/9/2019	1.3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	--	--	--	1.3	--	--	--	--		7.21	0.3	93.9	2.300	2.1	11.00
Area 1/FDSA	G6M-04-13X	9/21/2004	8.0	2U	2U	2U	1U	2U	-	-	-	5U	1U	350	-	-	-	-	-	-	5.96	8	551.8	0.138	1.75	16.01
Area 1/FDSA	G6M-04-13X	9/26/2005	2U	2U	2U	2U	1U	2U	-	-	-	5U	1U	15U	-	-	-	-	-	-	6.43	10.5	180	0.042	3.8	17.24
Area 1/FDSA	G6M-04-13X	9/18/2006	2U	2U	2U	2U	1U	2U	-	-	-	5U	0.10U	15U	-	-	-	-	-	-	5.65	8.63	213.9	0.076	12.1	13.33
Area 1/FDSA	G6M-04-13X	9/12/2007	2U	2U	2U	2U	1U	2U	-	-	-	5U	0.1U	15U	-	-	-	-	-	-	6.07	8.7	147.4	140.000	14.1	13.36
Area 1/FDSA	G6M-04-13X	10/17/2008	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	8U	0.2U	50U	-	-	-	-	-	-	5.22	9.98	124.4	0.046	45	10.56
Area 1/FDSA	G6M-04-13X	10/20/2009	25U	16J	25U	25U	25U	25U	-	-	-	2J	0.132U	50U	-	-	-	-	-	-	5.78	10.61	283.7	0.049	12.2	11.05
Area 1/FDSA	G6M-04-13X	10/7/2010	0.29J	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	5U	0.102U	25U	-	-	-	-	-	-	5.83	8.84	147.3	0.048	2.87	10.33
Area 1/FDSA	G6M-04-13X	10/4/2011	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	5U	0.1U	14.0J	-	-	-	-	-	-	5.54	9.15	208.7	0.024	13.5	11.43
Area 1/FDSA	G6M-04-13X	10/16/2012	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	5U	0.1U	5.1J	-	-	-	-	-	-	6.28	9.95	108.1	0.047	17.2	11.11
Area 1/FDSA	G6M-04-13X	10/22/2013	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	5U	0.1U	25U	-	-	-	-	-	-	5.92	10.69	120.9	0.021	45.6	10.28
Area 1/FDSA	G6M-04-13X	11/3/2014	0.36J	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	2.5U	0.0247U	7.5U	-	-	-	-	-	-	6.23	6.38	147.6	0.029	35.2	15.24
Area 1/FDSA	G6M-04-13X	10/14/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	4.0 U	0.10 U	15 U	-	-	-	-	-		6.85	8.83	114.7	0.045	1.07	14.69
Area 1/FDSA	G6M-04-13X	11/10/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	3.0 U	0.05 U	3.0 U	-	-	-	-	-		6.13	8.22	-8.8	0.027	2.69	6.8
Area 1/FDSA	G6M-04-13X	5/16/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	12	10	21	3.0 U	0.05 U	3.6 J	1.0 U	9.5	0.62	4.8	1.0 U		6.47	9.01	210.7	0.034	2.36	9.67
Area 1/FDSA	G6M-04-13X	10/6/2017	1.3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	0.33 J	3.0 U	0.05 U	3.0 U	0.45 J	8.7 U	0.84	4.6	1.0 U		5.86	3.64	223.4	0.056	2.6	10.42
Area 1/FDSA	G6M-04-13X	10/19/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-		5.02	10.4	77.8	0.162	3.31	10.35
Area 1/FDSA	G6M-04-13X	10/9/2019	1.0 U	1.0 U	2.4	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-		7.41	1.56 J	14.3	0.100	3.1	10.00
Area 1/FDSA	G6M-04-13X	10/14/2020	1.00 UJ	1.00 UJ	1.00 UJ	1.00 UJ	1.00 UJ	1.00 UJ	-	-	-	-	-	-	-	-	-	-	-		6.45	1.77	-14.6	0.0600	3.32	12.1
Area 1/FDSA	G6M-07-02X	12/12/2007	50	2U	2U	2U	1U	2U	0.024J	0.022J	0.73	5U	0.1U	64	5U	-	-	16.2	1U	-	5.9	7.54	194.2	0.148	5.4	9.8
Area 1/FDSA	G6M-07-02X	3/11/2008	1,800	2U	2U	2U	1U	2U	0.014J	0.019J	7.1	5U	0.1U	35	5U	-	-	26	1U	-	5.7	7.5	165.5	0.108	0	10.96
Area 1/FDSA	G6M-07-02X	10/15/2008	170	5.0U	5.0U	5.0U	5.0U	5.0U	1.2U	10	12,000	5.5J	0.2U	21.2J	10U	20U	0.13U	11	0.030UJ	-	5.34	9.25	93.2	0.067	19	10.69
Area 1/FDSA	G6M-07-02X	5/11/2009	46	0.5U	0.5U	0.5U	0.5U	0.5U	1.2U	1.5U	7	7.1	0.2U	5.8J	5.7J	20U	0.062	8.6J	0.030UJ	-	6.17	9.4	115.7	0.055	4	11.27
Area 1/FDSA	G6M-07-02X	10/20/2009	30J	0.5U	0.5U	0.5U	0.5U	0.5U	1.3U	1.6U	6.2J	6.6	0.2U	50U	10U	20U	0.13U	7.2	0.03UJ	-	6	9.34	128.9	0.053	9.35	14.5
Area 1/FDSA	G6M-07-02X	4/21/2010	63	2U	2U	2U	2U	2U	1.2U	1.5U	3,200	6.2	0.176U	25U	10U	30	0.0098J	6.8	0.03U	-	6.10	0.33	139.3	0.034	12	16.26
Area 1/FDSA	G6M-07-02X	10/6/2010	26J	0.5U	0.5U	0.5U	0.5U	0.5U	1.2U	1.5U	28	3.4J	0.1U	25U	10U	32	0.21	5.6	0.03U	-	5.31	6.13	170	0.053	5.48	12.95
Area 1/FDSA	G6M-07-02X	10/4/2011	700	0.5U	0.5U	0.5U	0.5U	0.5U	1.2U	1.5U	46,000	4.6J	0.1U	79.8	10U	31	0.13U	4.4J	0.03U	-	5.17	0.09	176.5	0.045	8.2	10.89
Area 1/FDSA	G6M-07-02X	10/11/2012	90	190	6.4	5.0U	5.0U	5.0U	1.2U	1.5U	46,000J	5U	0.286	40.1	10U	20U	0.056J	6.4	0.03U	-	6.28	1.60	76.1	0.068	11.31	19.81
Area 1/FDSA	G6M-07-02X	10/17/2013	1,000	8.7J	20U	20U	20U	20U	1.2U	1.5U	520J	5U	0.1U	31.7	10U	21	0.13U	4.5J	0.03U	-	6.03	4.25	143	0.060	1.17	20.19
Area 1/FDSA	G6M-07-02X	11/3/2014	14,000	40J	31J	50U	50U	50U	1.2U	1.5U	6,200	2.2J	0.421J	43.3	5U	22	0.13U	4.2J	0.03U	-	5.85	0.23	70.2	0.040	12.1	9.22
Area 1/FDSA	G6M-07-02X	12/11/2014	6,200	57	50U	50U	50U	50U	-	-	-	-	-	-	-	-	-	-	-	-	5.39	0.51	218.1	0.098	0.85	7.38
Area 1/FDSA	G6M-07-02X	10/13/2015	482	13.0	1.0 U	3.1 J	1.0 U	1.0 U	10 U	10 U	3,200 J	4.0 U	0.303	32.8	1.0 U	10.3	0.11 U	10.2	2.0 U		5.86	0.27	59.3	0.055	5.95	15.55
Area 1/FDSA	G6M-07-02X	6/14/2016	1,400	10 J	20 U	20 U	20 U	20 U	1.1 U	1.0 UJ	970	3.0 U	0.110	37	1.2	12	0.05 U	6.6	1.0 U		5.56	1.86	94.3	0.060	0.92	10.27
Area 1/FDSA	G6M-07-02X	11/9/2016	3,200	20 U	20 U	20 U	20 U	20 U	1.1 U	1.0 U	100	3.0 U	0.10	41	0.93 J	15	0.062 J	6.0	1.0 U		5.91	1.18	39.5	0.042	2.63	8.23
Area 1/FDSA	G6M-07-02X	5/16/2017	1,800	20 U	20 U	20 U	20 U	20 U	1.1 U	1.0 U	1.8	3.0 U	0.05 U	17	1.0 U	14	0.32	6.2	1.0 U		5.70	3.69	213.3	0.042	2.73	9.73
Area 1/FDSA	G6M-07-02X	10/10/2017	910 J	20 U	20 U	20 U	20 U	20 U	24 J	4.3 J	1,200	37 J	220 J	14,000 J	3,400	520	2.0	20	1.0 U		6.21	0.51	-161.2	2.080	overrange	11.07
Area 1/FDSA	G6M-07-02X	4/4/2018	350	5.0 U	33	5.0 U	5.0 U	5.0 U	10	17	25,000	89	85	2,800	580	150	0.13	10	1.0 U		5.91	0.81	-69.7	0.652	1,700	8.99
Area 1/FDSA	G6M-07-02X	10/17/2018	370	4.1 J	110	5.0 U	5.0 U	3.3 J	14	43	25,000	69	370	6,100	1,300	400	0.43 J	6.6 J	1.0 U		5.48	0.15	44.9	1.315	overrange	10.65
Area 1/FDSA	G6M-07-02X	4/5/2019	71 J	1.8	110	1.0 U	1.0 U	3.4	7.6	11	16,000	40	210	5,600	350	-	0.27	1.0 U	1.0 U		6.10	0.37	82	0.850	35	8.40
Area 1/FDSA	G6M-07-02X	10/9/2019	5.3	5.0 U	140	5.0 U	5.0 U	4.6 J	5.0	6.2	13,000	48	210	5,500	260	210	0.39	1.0 U	0.83 U		7.34	0.21	-55.3	0.730	12	11.00

			Laboratory Parameters																	Field Parameters					
			PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	VC	Ethane	Ethene	Methane	Dissolved Arsenic	Dissolved Iron	Dissolved Manganese	TOC	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	Phosphate	pH	DO	ORP	SpC	Turbidity	Temp
Area	Well ID	Date Sampled	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
Area 1/FDSA	G6M-07-02X	05/12/2020	2.40	0.720 J	110	1.00 U	1.00 U	3.60	3.60	4.40	14,000	43.0	250,000	4,900	290	250	0.130 U	5.00 U	1.90		6.58	0.320	7.00	620	27.8	9.79
Area 1/FDSA	G6M-07-02X	10/14/2020	1.10	1.00 U	40.0	1.00 U	1.00 U	1.70	1.30	2.00	6,600	42.0	220,000	4,500	230	190	0.170	5.00 U	0.810 U		6.63	0.510	-111	0.526	20.9	12.0
Area 1/FDSA	G6M-07-02X (FD)	05/12/2020	2.90	0.730 J	110	1.00 U	1.00 U	3.60	3.40	4.60	14,000	56.0	250,000	4,600	290 J	250	0.140 U	5.00 U	1.90		6.58	0.320	7.00	620	27.8	9.79
Area 1/FDSA	G6M-07-02X (FD)	10/14/2020	1.20	1.00 U	41.0	1.00 U	1.00 U	1.60	1.20	1.90	6,600	45.0	220,000	4,500	230	200	0.210	5.00 U	0.810 U		6.63	0.510	-111	0.526	20.9	12.0
Area 2	G6M-02-01X	2/28/2002	11	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	6.91	4.7	66.6	0.624	14	13.53
Area 2	G6M-02-01X	9/23/2004	24	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	6.64	2.54	145	0.784	6.11	19.41
Area 2	G6M-02-01X	9/30/2005	110	2U	3.1	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	6.07	3.82	384.8	0.555	10.9	18.04
Area 2	G6M-02-01X	9/20/2006	1,300	12	91	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	6.19	3.68	-108.2	0.708	9.07	17.33
Area 2	G6M-02-01X	12/14/2006	1,600	18	120	2U	1U	2U	-	-	-	-	-	-	5U	-	-	-	-	-	6.54	3.64	-34.8	0.831	2.81	14.32
Area 2	G6M-02-01X	3/30/2007	1,700	19	120	2U	1U	2U	0.012J	0.081	-	5U	0.1U	120J	3.3J	-	-	9.43	1U	-	6.64	4.22	-35.3	0.800	0.78	14.06
Area 2	G6M-02-01X	6/14/2007	1,700	16	97	2U	1U	2U	-	-	-	-	-	-	1.9J	-	-	-	-	-	6.72	3.3	69.6	0.853	10.4	14.82
Area 2	G6M-02-01X	9/14/2007	1,900	24	150	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	6.57	3.32	102.4	0.747	0.1	14.44
Area 2	G6M-02-01X	12/13/2007	1,600	21J	130J	2U	1U	2U	-	-	-	-	-	-	3.6J	-	-	-	-	-	6.61	2.73	128	0.807	0	12.57
Area 2	G6M-02-01X	3/14/2008	520	70	600	2U	2.2	2U	0.052	0.16	12	150	26	23000	180	-	-	5U	1U	-	6.45	0.38	-99.2	1.620	2.7	13.35
Area 2	G6M-02-01X	10/7/2008	180	49	360	10U	10U	10U	6.3U	9.5	5,000	141	14.5	5,880	17.7	200	0.13U	11	0.03UJ	-	6.97	0.18	-112.9	1.193	8.4	12.07
Area 2	G6M-02-01X	1/21/2009	280	76U	170	1.3U	1.2J	94U	1.3U	24	4,000	148	11,200J	4,500	11J	170	0.13U	7.0U	0.03U	0.25J	7.13	0.39	-142.7	1.279	1.2	11.08
Area 2	G6M-02-01X	5/6/2009	610	190	100	10U	10U	54	1.2U	29	29,000	133	18.7	3,950	13	220J	0.059J	8.4	0.03U	0.38J	6.69	0.2	-127.7	1.085	1.15	11.42
Area 2	G6M-02-01X	10/20/2009	820	180	76	40U	40U	47	1.3U	9	5,000J	108	11.8	2,470	4.6J	130	0.074J	7.6	0.03UJ	0.12J	6.66	1.24	32.9	0.925	3.52	11.45
Area 2	G6M-02-01X	4/21/2010	37J	53J	95J	2U	2U	69J	1.3U	43	12,000J	164	20.5J	4,480	40	280J	0.024J	4.0J	0.03U	0.20	6.70	0.42	-122.0	1.180	1.60	11.63
Area 2	G6M-02-01X	10/6/2010	470	120	72	1.4	1.4	84	1.2U	49	25,000	133	13.7	3,050	10U	120	0.13U	5.2	0.03U	0.78J	6.39	0.28	-77.8	1.039	3.65	12.53
Area 2	G6M-02-01X	6/9/2011	0.5U	4.3	11	0.69	0.5U	12	1.2U	230	71,000	173	45.9	7,380	90	400	0.11J	3.3J	0.03U	-	6.42	0.3	-86.3	1.423	0	14.56
Area 2	G6M-02-01X	10/5/2011	0.5U	0.88	3.6	0.5U	0.5U	7.3	1.2U	290	72,000J	271	27.3	5,470	18	190	0.13U	1.4J	0.03U	-	6.6	0.02	-106	0.681	0.87	12.53
Area 2	G6M-02-01X	5/9/2012	250	310	65	8.0U	8.0U	63	1.1U	260	41,000	271	10.8	2,050	2.3J	86	0.13U	6.8	0.081	-	6.66	0.07	-79.2	0.798	1.6	12.38
Area 2	G6M-02-01X	10/10/2012	350	120	75	10U	10U	160	1.2U	250	37,000J	220	10.4	2,080	10U	120 J	0.13U	6.5	0.36 J	-	6.64	0.5	-80.5	0.906	3.71	13.24
Area 2	G6M-02-01X	5/21/2013	0.25J	4.7	8.4	0.67	0.5U	5.2	1.2U	220	22,000	272	35.6	7,450	43	240J	0.13UJ	3.0J	0.076J	-	6.57	0.14	-91.7	1.439	0.71	14.22
Area 2	G6M-02-01X	10/17/2013	0.5U	2.4	11	0.58	0.5U	14	1.2U	450J	52,000	323	40.3	4,000	2.6J	140	0.13U	5.0U	0.078	-	6.66	0.22	-117.5	0.753	2.24	13.12
Area 2	G6M-02-01X	6/11/2014	0.5U	0.5U	1.4	0.5U	0.5U	2.6	1.3UJ	16J	5,300J	449	83.9J	4,260	9.5J	210J	0.13U	1.2U	0.030U	-	6.73	0.25	-103.1	1.174	4.68	13.08
Area 2	G6M-02-01X	10/30/2014	0.5U	0.21J	1.5	0.5U	0.5U	0.87	15	40	24,000	384	47.9	1,820	5U	86	0.13U	2.3J	0.03U	-	6.57	0.23	-130.8	0.959	1.81	12.73
Area 2	G6M-02-01X	6/17/2015	0.50 U	0.50 U	0.53 J	0.50 U	0.50 U	0.50 U	5.0 U	6.0 J	712	418	61.9	1,760	6.20	66.6	0.11 U	0.50 U	1.0 U	-	6.80	0.25	-91.1	0.671	8.45	13.66
Area 2	G6M-02-01X	9/10/2015	1.0 U	0.5 J	1.0 U	1.0 U	1.0 U	1.0 U	10 U	5.3 J	8,550	374	60.9	1,750	2.10	-	0.061 J	0.96 J	2.0 U		6.77	0.24	-110.5	0.807	0.81	16.00
Area 2	G6M-02-01X	10/16/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 U	14,200	360	56.2	1,750	2.14	54.6	0.11 U	1.1 J	2.0 U		6.86	0.11	-128.2	1.109	2.79	16.08
Area 2	G6M-02-01X	2/18/2016	1.0 U	1.0 U	0.89 J	1.0 U	1.0 U	0.53 J	10 U	10 U	12,500	347	52.5	2,420	6.8	155	0.10 U	1.5 J	2.0 U		7.01	0.8	31.9	1.659	3.95	10.29
Area 2	G6M-02-01X	6/13/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	1.0 UJ	22,000	450	100	2,700	7.7	150	0.021 J	0.8 U	1.0 U		6.87	0.21	-145.7	1.691	5.91	17.21
Area 2	G6M-02-01X	11/9/2016	1.0 U	1.0 U	0.69 J	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	18,000	430	62	2,100	3.1	140	0.05 U	1.0 U	1.8		6.92	0.23	-13.04	1.743	4.67	13.12
Area 2	G6M-02-01X	5/19/2017	1.0 U	1.0 U	0.52 J	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	24,000	500	110	2,600	4.9	220	0.09 J	0.51 J	1.0 U		6.85	0.42	-132.4	1.590	7.23	14.39
Area 2	G6M-02-01X	10/13/2017	1.0 U	1.0 U	0.77 J	1.0 U	1.0 U	0.52 J	1.1 U	3.8	12,000	400	76	1,300	3.3	64	0.10	0.57 J	1.0 U		6.66	0.46	-107.4	0.958	7.14	12.14
Area 2	G6M-02-01X	10/29/2018	1.0 U	0.73 J	1.30	1.0 U	1.0 U	1.0 U	-	-	-	51	3.1	2,700	-	-	-	-	-		7.48	0.17	-115.8	3.070	18.2	12.80
Area 2	G6M-02-01X	10/16/2019	1.0 U	4.1	2.0	1.0 U	1.0 U	0.63 J	-	-	-	100	5.3	2,700	-	-	-	-	-		6.60	0.13	-120	2.700	16	12.00
Area 2	G6M-02-01X	10/20/2020	5.30	25.0	4.50	1.00 U	1.00 U	2.80	-	-	-	270	27,000	2,000	-	-	-	-	-		6.95	0.200	-103	1.45	17.8	13.7
Area 2	G6M-04-01X	9/23/2004	250	3.6	21	2U	1U	2U	-	-	-	5U	1U	220	-	-	-	-	-	-	6.82	3.92	245.2	2.391	9.42	15.38
Area 2	G6M-04-01X	9/28/2005	140	2U	9.2	2U	1U	2U	-	-	-	5.1	1U	170	-	-	-	-	-	-	6.49	5.85	202.3	2.699	7.29	13.21
Area 2	G6M-04-01X	9/20/2006	150	2U	7.2	2U	1U	2U	-	-	-	5U	0.10U	220	-	-	-	-	-	-	5.87	4.88	-91.4	2.920	3.53	11.85
Area 2	G6M-04-01X	9/14/2007	290	2U	8.6	2U	1U	2U	-	-	-	6U	0.1U	130	-	-	-	-	-	-	6.00	5.21	155.3	2.055	35.8	12.16
Area 2	G6M-04-01X	10/20/2008	270J	11J	10UJ	10UJ	10UJ	10UJ	-	-	-	8UJ	0.2UJ	53.1J	-	-	-	-	-	-	7.32	3.37	96.2	0.999	3.5	17.25
Area 2	G6M-04-01X	10/20/2009	190	130	360	13U	13U	15	-	-	-	8U	0.107U	113	-	-	-	-	-	-	5.79	2.25	342.4	0.908	4.8	13.38
Area 2	G6M-04-01X	10/7/2010	27	19	120	0.68	0.29J	140	-	-	-	5U	1.05	164	-	-	-	-	-	-	6.14	0.29	124.3	1.312	1.55	11.53
Area 2	G6M-04-01X	10/5/2011	14	7.6	36	0.71	0.5U	160	-	-	-	3.7J	0.381	261	-	-	-	-	-	-	6.27	0.48	69.9	1.132	3.3	12.65
Area 2	G6M-04-01X	10/12/2012	5.5	4.0U	18	4.0U	4.0U	130	-	-	-	3.5 J	0.742	925	-	-	-	-	-	-	6.36	0.38	19.1	1.700	1.85	12.4
Area 2	G6M-04-01X	10/17/2013	0.5U	0.78	0.99	0.29J	0.5U	14	-	-	-	6.0	1.06	8,890	-	-	-	-	-	-	6.46	0.40	17.4	2.509	2.49	14.53
Area 2	G6M-04-01X	10/31/2014	0.39J	0.52	0.56	0.37J	0.5U	7.9	-	-	-	164	59.4	28,900	-	-	-	-	-	-	6.69	0.48	-95.3	1.850	19.6	13.34
Area 2	G6M-04-01X	9/10/2015	1.0 U	1.0 U	0.93 J	1.0 U	1.0 U	0.75 J	10 U	10 U	6,240	162	31.7	9,040	18.9	-	0.12	3.6 J	2.0 U		7.15	0.45	-152.7	1.880	41.6	15.91
Area 2	G6M-04-01X	10/14/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	382	96.4	24,400	-	-	-	-	-		6.78	0.10	-133.0	2.878	4.83	12.46
Area 2	G6M-04-01X	2/18/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 U	7,060	75.5	16.4	7460	11.8	411	0.10 U	13.8	2.0 U		6.68	1.67	182.6	1.624	6.39	9.49
Area 2	G6M-04-01X	6/13/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	380	80.0	19,000	-	-	-	-	-		6.69	0.65	-120.3	3.639	17.6	17.67
Area 2	G6M-04-01X	11/9/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	320	95	19,000	-	-	-	-	-		6.76	0.42	-82	2.631	4.6	11.4
Area 2	G6M-04-01X	10/13/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	450	81	18,000	--	--	--	--	--		6.66	0.87	-99.2	3.540	11.5	13.49
Area 2	G6M-04-01X	10/30/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	470	68	19,000	--	--	--	--	--		6.48	0.55	-73.1	5.152	3.01	11.74
Area 2	G6M-04-01X	10/16/2019	1.0 U	0.48 J	0.41 J	1.0 U	1.0 U	1.0 U	-	-	-	540	52	13,000	-	-	-	-	-		6.20	0.18	-67	4.400	3.7	13.00
Area 2	G6M-04-01X	10/19/2020	1.00 UJ	1.00 UJ	1.00 UJ	1.00 UJ	1.00 UJ	1.00 UJ	-	-	-	580	45,000	13,000	-	-	-	-	-		6.56	0.290	-73.4	2.84	34.7	12.9
Area 2	G6M-04-02X	10/20/2020	5.70 J	6.10 J	120 J	1.00 UJ	1.00 UJ	5.10 J	3.70	8.60	2,600	82.0	44,000	8,200	220	100	0.0670 J	10.0 U	4.00		6.09	0.100	-63.1	1.03	313	14.1
Area 2	G6M-04-03X	9/23/2004	440	2U	3.3	2U	1U	2U	0.22	0.036	100	5U	1U	3,100	1.4	53	5.1	23	2.2	-	6.37	3.41	446.5	1.236	12.2	12.85
Area 2	G6M-04-03X	9/27/2005	680	14	10	1U	1U	1U	0.19	0.32	52	5U	0.6J	3,500	6.0	81.5	0.35	38J	1U	-	6.29	0.79	377.5	1.361	9.62	12.87
Area 2	G6M-04-03X	9/22/2006	2,600	420	6.3	2U	1U	2U	0.049	0.3	17	5U	0.10U	2,900	7.2	190	0.2U	16.6	1U	-	6.30	0.43	152.1	0.524	3.52	15.12
Area 2	G6M-04-03X	9/14/2007	770	68	2.7	2U	1U	2U	0.062	0.11	3	38	0.87	2,300	1.6J	100	0.2U	24	1U	-	7.29	0.49	-110.3	0.294	3.6	14.18
Area 2	G6M-04-03X	10/16/2008	160	18	7.6	5U	5U	5U	1.3U	1.6U	6.2J	94.8	0.2U	930	10U	150J	0.10U	8.0	0.03U	-	10.48	2.01	18	0.539	5.8	14
Area 2	G6M-04-03X	10/15/2009	16	8.4	8.6	0.5U	0.5U	0.5U	1.3U	1.6U	2,000	148	2.02	3,270	10U	240	0.13U	7U	0.03U	-	8.80	1.49	-46.9	0.227	5.0	13.3
Area 2	G6M-04-03X	10/7/2010	300	52	94	0.62	0.25J	29	1.2U	3.5	29,000	133	5.47	3,910	10U	120	0.13U	4.8J	0.03U	-	6.67	2.47	-35.2	0.345	9.09	14.76
Area 2	G6M-04-03X	10/5/2011	7.3	1.8	7.5	0.5U	0.5U	4.6	1.2U	1.5U	29,000	72.9	0.19U	559	3.1J	130	0.13U	6.0	0.03U	-	10.63	0.49	6.3	0.307	0	12.74
Area 2	G6M-04-03X	10/10/2012	8.7	1.9	6.3	0.5U	0.5U	16	1.2U	170	38,000	65.8	0.261	1,320	10U	160	0.096J	8.0	0.03U	-	10.65	1.09	-18.4	0.556	6.84	13.84
Area 2	G6M-04-03X	10/17/2013	190	87	200	4U	4U	86	1.2U	270	51,000	31.6	32.7	8,450	2.5J	67	0.13U	8.6	0.03U	-	6.55	0.69	-77.3	0.583	28	15.41
Area 2	G6M-04-03X	10/30/2014	20	15	53	0.38J	0.5U	19	1.2U	17	6,700	14.4	0.29	114	4.7J	420	0.13U	7.5	0.03U	-	10.60	1.99	-70.1	1.152	24.3	13.53
Area 2	G6M-04-03X	9/11/2015	11	9.3	39.6	1.0 U	1.0 U	5.5	10 U	10 U	3,450	105	22.9	2,720	5.30	-	0.068 J	7.0 J	2.0 U		7.71	0.36	-194.0	1.079	11.6	14.60
Area 2	G6M-04-03X	10/14/2015	5.0	3.20	43.0	1.0 U	1.0 U	6.8	10 U	10 U	8,190	232	75.1	11,300	8.2	337	0.13 J	7.0 J	2.0 U		6.79	1.03	-68.4	1.208	9.64	12.80

			Laboratory Parameters																	Field Parameters					
			PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	VC	Ethane	Ethene	Methane	Dissolved Arsenic	Dissolved Iron	Dissolved Manganese	TOC	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	Phosphate	pH	DO	ORP	SpC	Turbidity	Temp
Area	Well ID	Date Sampled	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
Area 2	G6M-04-03X	2/18/2016	0.60 J	0.59 J	25.3	1.0 U	1.0 U	7.3	10 U	10 U	12,500	673	97.0	15,200	8.1	456	0.10 U	1.2 J	2.0 U		8.56	0.99	212.9	0.799	11.2	6.66
Area 2	G6M-04-03X	11/10/2016	1.0 U	0.65 J	5.8	1.0 U	1.0 U	4.1	1.1 U	25 J	20,000	380	110	31,000	9.8	390	0.05 U	2.2	1.0 U		6.47	0.43	-74.1	1.018	6.66	11.47
Area 2	G6M-04-03X	10/20/2017	1.0 U	1.0 U	2.2	1.0 U	1.0 U	1.6	1.1 U	1.0 U	9,100	260	85	20,000	5.1	160	0.06 J	19	1.0 U		6.45	0.38	-55.0	2.750	5.87	12.73
Area 2	G6M-04-03X	10/30/2018	1.0 U	0.93 J	0.44 J	1.0 U	1.0 U	1.0 U	--	--	--	310	74	10,000	--	--	--	--	--		6.78	0.57	-113.0	2.944	6.82	13.41
Area 2	G6M-04-03X	10/16/2019	9.0	12	26	1.0 U	1.0 U	5.8	-	-	-	220	59	7,100	-	-	-	-	-		5.80	0.18	-46.0	1.600	1.8	14.00
Area 2	G6M-04-03X	05/12/2020	6.90	4.50	10.0	1.00 U	1.00 U	3.50	1.10 U	2.10	11,000	73.0	47,000	5,600	4.00	140	0.100 U	13.0	0.810 U		5.92	1.11	28.6	1600	5.51	12.8
Area 2	G6M-04-03X	10/16/2020	1.00 U	0.800 J	0.700 J	1.00 U	1.00 U	1.00 U	1.10 U	1.50	22,000	180	27,000	3,100	6.00	190	0.0820 J	6.40	0.810 U		6.55	0.160	-84.1	0.772	3.43	13.1
Area 2	G6M-07-01X	10/15/2008	26	0.24J	0.5U	0.5U	0.5U	0.5U	-	-	-	-	-	-	-	-	-	-	-	-	7.78	2.22	53.9	0.591	608	12.35
Area 2	G6M-07-01X	10/20/2009	21	15	0.5U	0.5U	0.5U	0.5U	-	-	-	-	-	-	-	-	-	-	-	-	7.44	4.11	171.9	0.532	283	27.28
Area 2	G6M-07-01X	10/7/2010	50	0.31J	0.25J	0.5U	0.5U	0.5U	-	-	-	-	-	-	-	-	-	-	-	-	7.03	3.62	139	0.414	4.78	10.05
Area 2	G6M-07-01X	10/5/2011	11	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	5U	0.1U	11.5J	-	-	-	-	-	-	7.06	4.43	72.9	0.285	130	11.95
Area 2	G6M-07-01X	10/12/2012	19	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	5U	.0886 J	10.8 J	-	-	-	-	-	-	6.92	3.56	59	0.437	30.2	11.92
Area 2	G6M-07-01X	10/17/2013	15	0.37J	0.5U	0.5U	0.5U	0.5U	-	-	-	5U	0.1U	5.4J	-	-	-	-	-	-	6.86	4.34	95.1	0.450	16.4	12.71
Area 2	G6M-07-01X	4/5/2019	35 J	1.2	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	36	3.5	210	95	0.61 J	-	1.1	6.6	1.0 U		6.9	1.4	32	0.880	6.9	12.00
Area 2	G6M-07-01X	05/13/2020	27.0	0.970 J	1.00 U	1.00 U	1.00 U	1.00 U	1.10 U	1.00 U	1.40	3.00 U	93.0 U	19.0	0.470 J	35.0	1.20	7.60	0.830 U		6.12	2.30	101	972	3.81	13.8
Area 2	G6M-07-01X	10/19/2020	32.0 J	0.710 J	1.00 UJ	1.00 UJ	1.00 UJ	1.00 UJ	1.10 U	1.00 U	34.0	2.10 J	120	30.0	3.30	31.0	1.50	3.60	0.810 U		6.23	2.79	107	0.547	6.92	13.1
Area 2	G6M-97-08B	10/18/2001	92	6.1	36	1.6J	1U	2U	-	-	-	-	-	-	-	-	-	0	-	-	5.60	4.8	224	0.130	18	14.17
Area 2	G6M-97-08B	2/26/2002	100	5.9	32	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	5.87	5.13	186.4	1.157	5.3	12.77
Area 2	G6M-97-08B	9/22/2004	220	9.3	41	2U	1U	2U	0.0075	0.005U	1.3	5U	1U	26	1U	10U	6.1	12	1.5J	-	5.69	4.66	252.8	1.516	18.3	12.89
Area 2	G6M-97-08B	12/16/2004	200	7.7	41	2U	1U	2U	0.13	0.072	0.92	5U	1U	25	5U	10U	6.1	12	5.4	-	5.79	8.78	165	1.633	3.81	16.41
Area 2	G6M-97-08B	3/30/2005	95	3.4J	16	4U	2U	4U	0.015	0.032	0.54	5U	1U	21	0.4J	12	0.8	7	2U	-	5.58	8.06	202.8	0.999	9.42	15.56
Area 2	G6M-97-08B	6/28/2005	140	8	36	1.4	1U	2U	0.016	0.041	35	2U	1J	27	7.1	16.7	1.4	12	1U	-	11.30	4.94	173.7	1.506	8.16	13.88
Area 2	G6M-97-08B	9/27/2005	180	7.5	42	2U	1U	2U	0.013J	0.027	0.39	5U	1U	33	4.4	15.9	1.3	16	1U	-	5.60	5.73	319.2	1.713	2.82	13.47
Area 2	G6M-97-08B	12/12/2005	120	5.7	27	2U	1U	2U	0.04	0.11	26	5U	1U	28.1	0.6J	23	0.05UJ	13	1U	-	5.87	4.19	171.1	1.110	0.7	15.76
Area 2	G6M-97-08B	3/23/2006	240	8.8	44	2U	1U	2U	0.022J	0.13	12	5U	0.1U	46	5U	13	1.25	13.7	1U	-	5.85	5.13	181.5	1.440	3.16	14.21
Area 2	G6M-97-08B	6/21/2006	220	11	35	2U	1U	2U	0.019J	0.086	24	5U	0.17	1,300	16	66	0.809	13.5	1	-	5.90	2.39	141.1	2.015	1.48	-
Area 2	G6M-97-08B	9/19/2006	190	14	55	2U	1U	2U	0.078	0.13	18	130	21	13,000	270	300	0.2U	23.6	2.8	-	5.79	1.58	47.6	2.287	4.58	12.47
Area 2	G6M-97-08B	12/13/2006	200	11	75	2U	1U	2U	0.004J	0.038	1,700	160	83	20,000	440	-	-	49.6	2.8	-	6.07	1.43	-72.8	3.107	5.21	13.56
Area 2	G6M-97-08B	3/30/2007	200	8.5	46	2U	1U	2U	0.028	0.19	6,000	130	170	26,000J	620	-	-	126	4.6	-	5.36	0.46	14.8	3.626	1.13	12.47
Area 2	G6M-97-08B	6/14/2007	140	5.5	37	2U	1U	2U	0.025U	0.021J	7,900	100	370	24,000	760	-	-	120	6.4	-	5.66	1.68	-45.4	3.659	1.0	9.9
Area 2	G6M-97-08B	9/12/2007	170	8.4	43	2U	1U	3	0.004J	0.05	8,400	120	370	18,000	630	650	0.2U	1500	3.2	-	5.66	2.72	-31.4	3.924	5.5	11.04
Area 2	G6M-97-08B	12/14/2007	150J	5.7J	31J	2UJ	1UJ	4.5J	0.006J	0.054	10,000	150	280	12,000	520	-	-	92	5.6	-	5.84	0.75	-45.3	3.673	0	11.83
Area 2	G6M-97-08B	3/12/2008	150	6.5	32	2U	1U	6.8	0.008J	0.15	9,800	160	190	8,100	270	-	-	38	2.8	-	5.94	2.15	-66.4	3.091	0	12.36
Area 3	G6M-03-07X	5/12/2003	1,200	7.2	34	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.74
Area 3	G6M-03-07X	9/24/2004	1,700	6.3	31	2U	1U	2U	0.035	0.28	5.7	5U	1UJ	20	1U	10U	4.3J	12	1.6J	-	5.77	7	168.3	0.341	84.6	16.04
Area 3	G6M-03-07X	12/16/2004	1,500	6	35	2U	1U	2U	0.026	0.08	0.39	5U	1U	190	5U	10U	4.2	12	2.9	-	6.02	17.09	321.7	0.348	8.46	14.01
Area 3	G6M-03-07X	3/30/2005	1,100	91	140	40U	20U	40U	0.078	0.21	1.8	18	18	10,000	29	76	0.33	8	2U	-	6.33	1.9	-54.6	0.671	0.7	14.14
Area 3	G6M-03-07X	6/29/2005	940	78	940	40U	20U	40U	0.06	0.34	3.9	31	39J	15,000J	83	118	0.079	6.4	1U	-	11.97	1.12	-20.1	0.915	5.93	8.48
Area 3	G6M-03-07X	9/29/2005	300	44	1000	2.3	2.7	1U	0.068	0.45	660	46	210J	30,000	290	307	0.05U	3.2	12	-	6.20	2.7	-62	1.266	7.68	14.74
Area 3	G6M-03-07X	12/12/2005	92	22	710	20U	10U	20U	0.078	0.13	13,000	96.1	190	46,600	220	320	0.05UJ	2U	6.2	-	6.5	0.22	-82.1	1.038	3.6	14.16
Area 3	G6M-03-07X	3/24/2006	110	23	430	2U	2	270	0.010J	2	22,000	130	280	48,000	260	590	0.2U	1	8.6	-	6.87	0.17	-130.5	1.390	10.1	11.35
Area 3	G6M-03-07X	6/21/2006	9.5	3.6	180	2U	1U	310	0.073	21	21,000	140	460	59,000	280	570	0.2U	1U	4.8	-	5.13	0.7	-170.4	2.258	31.4	13.04
Area 3	G6M-03-07X	9/19/2006	47	7.9	260	2U	1U	300	0.037	9.2	25,000	140	470	44,000	290	460	0.926	1.27	5	-	6.48	0.27	-147.2	2.150	15.1	12.69
Area 3	G6M-03-07X	12/14/2006	190	30	310	2U	1.3	160	0.025	5.9	26,000	220	400	38,000	300	-	-	2.44	2.8	-	6.37	0.17	-160	2.155	6.19	12.57
Area 3	G6M-03-07X	3/29/2007	2U	2U	35	2U	1U	360	0.08	5.1	15,000	190	420	20,000J	130	-	-	1U	4.4	-	6.32	2.46	-69.3	1.787	39.6	13.39
Area 3	G6M-03-07X	6/14/2007	37	8.1	190	2U	1U	200	0.025U	2.3	25,000	220	490	37,000	310	-	-	10.5	2.4	-	6.40	1.31	-159	2.386	9.7	13.63
Area 3	G6M-03-07X	9/13/2007	27	13	290	2.2	1.1	140	0.008J	12	26,000	210	500	29,000	72	560	0.2U	420	4.8	-	6.26	3.08	-174.9	2.743	117.6	14.45
Area 3	G6M-03-07X	12/14/2007	2.6	2U	9.8	3.0	1U	120	0.010J	34	25,000	270	320	12,000	140	-	-	10U	4.0	-	6.51	0.99	-123.7	2.138	70.9	13.23
Area 3	G6M-03-07X	3/14/2008	2U	2U	2.3	2U	1U	4.3	0.11	26	30,000	210	230	11,000	130	-	-	5U	4.0	-	6.41	1.06	-85.5	1.897	235.9	14.9
Area 3	G6M-03-07X	10/7/2008	5U	2.2J	5U	21	5U	5U	6.3U	12	14,000	246	348	5,370	64.3	190	190	24	0.03UJ	-	6.24	0.10	-44.4	1.742	16	14.09
Area 3	G6M-03-07X	1/22/2009	1.4U	2.3U	1.7J	15	1.7U	3.6	1.2U	10	16,000	227	338J	5,000	110J	20U	0.13U	37	0.03U	0.10R	6.6	1.20	-74.9	1.743	30	14.38
Area 3	G6M-03-07X	5/6/2009	0.5U	0.5U	1.8	20	0.5U	2.6	1.2U	9.9	28,000	351	361	5,500	66	720J	0.025J	32	0.03U	0.1UJ	5.88	0.21	-117.9	1.735	20.3	14.21
Area 3	G6M-03-07X	10/15/2009	0.27J	0.5U	2.3	19	0.5U	2.2	1.1U	7.3	16,000	318	251	4,870	44	550	0.13U	30	0.03UJ	0.16J	6.25	0.88	-100.4	1.362	5.6	13.4
Area 3	G6M-03-07X	4/21/2010	0.5U	0.5U	0.88	5.3	0.5U	1.3	1.3U	6.3	27,000	339	176J	2,000	46	320	0.13U	0.11J	0.03U	0.53	6.46	0.69	-106.3	1.086	8.9	16.20
Area 3	G6M-03-07X	10/5/2010	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1.2U	14	48,000	346	164	4,650	16	35	0.13U	0.27J	0.03U	0.18J	6.35	0.11	-106.1	1.276	4.56	-
Area 3	G6M-03-07X	6/8/2011	0.5U	0.5U	1.7	7.8	0.5U	2.1	1.2U	13	72,000	381	158	3,540	41	460	0.13U	5.0U	0.10	-	6.25	0.08	-87	0.841	9.82	15.28
Area 3	G6M-03-07X	10/5/2011	0.5U	0.5U	0.86	5.6	0.5U	1.4	1.2U	1.5U	48,000	375	133	2,500	39	320	0.13U	5.0U	0.049	-	6.4	0.02	-42	0.764	6.0	9.73
Area 3	G6M-03-07X	5/9/2012	0.5U	0.5U	1.2	4.4	0.5U	0.92	1.2U	200	74,000	388	131	3,090	31	320	0.13U	0.35J	0.063	-	6.52	0.14	-111.7	1.046	2.43	12.88
Area 3	G6M-03-07X	10/11/2012	0.5U	0.5U	0.74	3.4	0.5U	1.5	1.2U	800	97,000	365	116	2,900	26	270	0.027J	5.0U	0.04	-	6.5	0.34	-96.2	0.962	4.81	15.32
Area 3	G6M-03-07X	5/21/2013	0.5U	0.5U	1	3.4	0.5U	0.77	1.2U	1.5U	22,000	413	114	2,150	23	180J	0.13UJ	5.0U	0.03UJ	-	6.01	0.17	-64.9	0.923	1.28	14.79
Area 3	G6M-03-07X	10/16/2013	0.5U	0.5U	0.86	2.9	0.5U	1.3	1.2U	33	31,000	434	120	2,340	26	340	0.13U	5.0U	0.065	-	6.53	0.21	-102.4	0.901	1.01	9.71
Area 3	G6M-03-07X	6/11/2014	0.40J	0.5U	0.72	3	0.5U	2.5	1.3UJ	3.5J	10,000J	422	105J	1,670	45	260J	0.13U	0.52U	0.03J	-	6.32	0.28	-48.4	0.787	2.54	11.63
Area 3	G6M-03-07X	10/30/2014	0.5U	0.5U	0.69	2.8	0.5U	1.1	1.2U	1.8	54,000	355	78.5	1,400	22	180	0.13U	0.38J	0.03U	-	6.49	0.24	-120.7	0.532	5.63	12.93
Area 3	G6M-03-07X	6/18/2015	0.50 U	0.50 U	0.62 J	2.10	0.50 U	0.77 J	5.0 U	5.7 J	12,400	97.1	107	1,810	27.1	262	0.15 U	0.50 U	1.0 U	-	6.40	0.16	-94.9	0.626	15.1	16.20
Area 3	G6M-03-07X	9/14/2015	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	10 U	6.0 J	11,900	436	103	1,700	25.2	-	0.086 J	0.94 J	2.0 U		6.45	0.56	-112.8	0.545	5.16	14.23
Area 3	G6M-03-07X	10/14/2015	1.0 U	1.0 U	0.59 J	1.80	1.0 U	0.73 J	10 U	6.5 J	16,600	441	102	1,660	243	161	0.085 J	2.3 J	2.0 U		6.61	0.24	-76.2	0.754	5.37	12.30
Area 3	G6M-03-07X	2/10/2016	1.0 U	1.0 U	1.0 U	1.80	1.0 U	0.78 J	10 U	5.0 J	12,800	461	96.7	1,360	24.7	194	0.18	10 U	2.0 U		6.49	0.84	-68.8	0.704	16.1	11.20
Area 3	G6M-03-07X	6/16/2016	1.0 U	0.61 J	0.73 J	1.50	1.0 U	0.73 J	1.1 U	1.0 U	28,000	440	90	1,600	26	200	0.05 U	0.8 U	1.0 U		6.46	0.29	-71.9	0.759	9.0	17.00
Area 3	G6M-03-07X	11/10/2016	1.0 U	1.0 U	0.44 J	1.4	1.0 U	0.63 J	1.1 U	16	23,000	420	81	1,400	22	170	0.05 UJ	1.0 U	1.0 U		5.50	0.29	-86	0.480	17.4	14.89
Area 3	G6M-03-07X	5/16/2017	1.0 U	1.0 U	0.51 J	0.76 J	1.0 U	1.0 U	1.2	7.2	14,000	370	84	1,600	19	200	0.14	1.0 U	1.0 U		6.59	0.35	-91.3	0.589	11.0	17.46
Area 3	G6M-03-07X	10/23/2017	1.0 U	1.0 U	0.55 J	0.97 J	1.0 U	0.72 J	2.7	14	21,000	450	94	1,800	24	170	0.13	1.0 U	1.0 U		6.32	0.07	-75.1	0.657	5.78	13.52
Area 3	G6M-03-07X	10/29/2018	1.0 U	1.0 U	0.55 J	0.66 J	1.0 U	0.74 J	2.8	19	37,000	420	99	2,100	18	170	0.2	5.0 U	1.0 U		6.54	0.27	-78	0.795	3.12	13.22
Area 3	G6M-03-07X	10/18/2019	1.0 U	1.0 U	0.70 J	1.0 U	1.0 U	0.55 J	3.0	17	29,000	430	120,000	3,100	15	170	0.075 J	1.0 U	0.86 U		6.30	0.12	-84	0.930	3.7	14.00

Appendix D
Historical Groundwater Analytical Results
2020 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

			Laboratory Parameters																	Field Parameters					
			PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	VC	Ethane	Ethene	Methane	Dissolved Arsenic	Dissolved Iron	Dissolved Manganese	TOC	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	Phosphate	pH	DO	ORP	SpC	Turbidity	Temp
Area	Well ID	Date Sampled	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
Area 3	G6M-03-07X	05/13/2020	50.0 U	26.0 J	50.0 U	50.0 U	50.0 U	50.0 U	6.10	1.00 U	11,000	340	95,000	2,100	19.0	160	0.0320 J	1.00 U	0.960 U		6.01	0.510	32.1	498	8.60	11.9
Area 3	G6M-03-07X	10/21/2020	1.00 U	1.00 U	0.580 J	1.00 U	1.00 U	1.00 U	4.30	12.0	34,000	410	110,000	2,900	14.0	150	0.0570 J	1.00 U	0.890 U		6.07	0.420	-79.4	0.816	5.61	17.4
Area 3	G6M-04-02X	9/23/2004	1,900	2U	3.8	2U	1U	2U	-	-	-	5U	1U	86	-	-	-	-	-	-	6.59	7.25	152.4	0.704	9.52	13.09
Area 3	G6M-04-02X	9/28/2005	1,800	5U	5U	5U	5U	5U	-	-	-	5U	1U	15U	-	-	-	-	-	-	5.21	6.54	294	0.607	12	18.36
Area 3	G6M-04-02X	9/20/2006	1,100	170	2.2	2U	1U	2U	-	-	-	5U	0.10U	24	-	-	-	-	-	-	5.22	2.88	-101.5	0.696	10.61	17.15
Area 3	G6M-04-02X	9/14/2007	710	98	290	21	1U	2U	-	-	-	48	16	13,000	-	-	-	-	-	-	6.52	2.91	-31.3	1.356	2.3	15.3
Area 3	G6M-04-02X	10/16/2008	320	47	290	5U	5U	5U	-	-	-	135	56.6	6,530	-	-	-	-	-	-	6.32	0.74	-143.6	1.302	3.8	15.75
Area 3	G6M-04-02X	10/15/2009	400	110	15	8U	8U	8U	-	-	-	78.3	20.8	3,580	-	-	-	-	-	-	6.19	0.9	-25	1.011	4.0	14.12
Area 3	G6M-04-02X	10/6/2010	380	54	27	20U	20U	20U	-	-	-	182	40.2	5,530	-	-	-	-	-	-	6.25	0.51	-50.1	1.071	3.53	13
Area 3	G6M-04-02X	6/8/2011	-	-	-	-	-	-	-	-	-	317	42.7	4,540	-	-	-	-	-	-	6.44	0.76	-95.9	0.678	1.9	13.61
Area 3	G6M-04-02X	10/5/2011	630	93	13U	13U	13U	13U	-	-	-	172	18.1	4,370	-	-	-	-	-	-	6.24	0.41	1	0.669	6.6	15.18
Area 3	G6M-04-02X	5/8/2012	-	-	-	-	-	-	-	-	-	225	15.5	3,980	-	-	-	-	-	-	6.36	0.2	-25.6	0.475	1.12	14.93
Area 3	G6M-04-02X	10/12/2012	160	30	5.0U	5.0U	5.0U	5.0U	-	-	-	228	16.9	4,890	-	-	-	-	-	-	6.33	0.44	-33.5	0.534	2.02	15.92
Area 3	G6M-04-02X	5/21/2013	-	-	-	-	-	-	-	-	-	143	7.29	5,400	-	-	-	-	-	-	5.98	0.36	18.3	0.699	0.74	13.55
Area 3	G6M-04-02X	10/17/2013	140	31	5.7	4.0U	4.0U	4.0U	-	-	-	231	20.6	6,800	-	-	-	-	-	-	5.70	0.37	-12.3	0.485	3.75	15.8
Area 3	G6M-04-02X	6/11/2014	-	-	-	-	-	-	-	-	-	137	13.9J	5,900	-	-	-	-	-	-	6.15	0.62	4.5	0.795	2.48	18.26
Area 3	G6M-04-02X	10/30/2014	480	70	33	0.5U	0.5U	2.7J	-	-	-	160	40.5	5,980	-	-	-	-	-	-	6.34	0.28	-63.1	0.628	1.86	19.03
Area 3	G6M-04-02X	6/18/2015	62	20.3	15.7	0.50 U	0.50 U	1.8	-	-	-	362	82.4	7,220	-	-	-	-	-		6.30	0.32	-101.0	0.500	10.9	13.09
Area 3	G6M-04-02X	9/11/2015	16	7.4	8.8	1.0 U	1.0 U	1.8	10 U	10 U	7,390	343	91.4	6,920	3.3	-	0.067 J	0.87 J	2.0 U		6.59	0.39	-147.8	0.663	2.50	14.02
Area 3	G6M-04-02X	10/16/2015	105	30.5	1.0 U	1.0 U	1.0 U	1.6	-	-	-	237	65.8	7,570	-	-	-	-	-		6.32	0.23	-56.1	0.818	2.43	12.79
Area 3	G6M-04-02X	2/10/2016	333	60.2 J	12.3	2.0 U	2.0 U	1.5 J	10 U	10 U	4,410 J	118	28.3	8,730	2.1	118.0	0.11	10.1	2.0 U		6.74	0.87	-112.9	0.536	10.8	10.04
Area 3	G6M-04-02X	6/13/2016	120	48.0	23.0	1.0 U	1.0 U	3.40	-	-	-	200	44.0	8,000	-	-	-	-	-		6.43	0.34	-56.2	0.875	1.59	13.40
Area 3	G6M-04-02X	11/10/2016	160	60	58	0.37 J	1.0 U	8.40	-	-	-	180	48	9100	-	-	-	-	-		6.62	0.51	-67.3	0.629	4.32	10.3
Area 3	G6M-04-02X	5/16/2017	280	120	22 J	0.39 J	1.0 U	2.3 J	1.1 U	2.2	4,800	42	15	11,000	2.5 J	130	0.065 J	10	1.0 U		6.00	2.09	29.5	0.956	3.90	13.17
Area 3	G6M-04-02X	10/20/2017	97	26	13	2.0 U	2.0 U	1.8 J	1.1 U	1.0 U	16,000	260	66	10,000	3.3	160	0.08 J	6.2	1.0 U		6.36	0.28	-66.9	0.910	4.26	12.51
Area 3	G6M-04-02X	4/3/2018	300	74	19	2.0 U	2.0 U	1.7 J	1.1 U	3.4	23,000	99	30	9,800	2.5	120	0.10	11.0	1.0 U		6.34	0.96	-22.3	1.139	1.90	10.93
Area 3	G6M-04-02X	10/30/2018	200	64	27	2.0 U	2.0 U	3.0	1.1 U	4.1	14000 J	81	45	14,000	8.4	140	0.13	9.10	1.0 U		6.01	0.9	-22.7	1.317	0.58	12.12
Area 3	G6M-04-02X	4/3/2019	160	130	29	0.61 J	1.0 U	3.5	1.1 U	7.9	16,000	120	47,000	9,800	3.1	-	0.17 U	7.10	1.0 U		6.20	1.1	-76	1.500	0.49	11.00
Area 3	G6M-04-02X	10/18/2019	5.4	7.0	260	2.0 U	0.90 J	1.7 J	2.9	3.6	11,000	230 J	81,000	13,000	170	150	0.040 J	1.0 U	0.88 U		5.40	0.08	-52	1.600	1000	13.00
Area 3	G6M-04-02X	05/12/2020	1.70	2.30	290 J	0.920 J	0.880 J	28.0	1.30	31.0	18,000	93.0	52,000	6,900	100	130	0.100 UJ	2.00 J	0.880 U		5.54	1.19	31.6	1380	344	11.9
Area 3	G6M-04-04X	9/24/2004	2,300	7.8	24	2U	1U	2U	0.037	0.12	13	5U	1UJ	560	1U	10U	5.5	20	2U	-	5.75	5.05	197.3	1.637	169	12.51
Area 3	G6M-04-04X	9/29/2005	1,600	5.4	15	2.5U	2.5U	2.5U	0.018J	0.06	0.44	5U	1U	430	0.5J	5.3	1.4	23	1U	-	5.34	5.66	295.9	1.666	7.39	13.87
Area 3	G6M-04-04X	9/19/2006	1,600	45	260	2U	1U	2U	0.12	0.095	33	110	84	31,000	120	190	0.2U	10.2	1.6	-	6.22	0.32	-71.5	1.765	7.64	13.53
Area 3	G6M-04-04X	10/16/2008	6.0	8.1	48	2.8	2.5U	150J	1.3U	62	18,000	523	248	19,300	34.6U	520	0.10U	7	0.03UJ	-	6.40	2.39	-106.2	2.239	4.0	13.16
Area 3	G6M-04-04X	10/15/2009	0.5U	0.5U	4.8	5.2	0.5U	6.9	1.3U	61	38,000J	615	239	16,800	32	520	0.13U	23J	0.03UJ	-	6.47	0.86	-123.0	1.744	5.0	14.24
Area 3	G6M-04-04X	10/5/2010	0.5U	0.5U	2.8	2.6	0.5U	3.2	1.2U	210	52,000J	529	155	16,900	15	81J	0.13U	5.0U	0.03U	-	6.35	0.40	-112.0	2.133	3.1	13.59
Area 3	G6M-04-04X	10/5/2011	0.5U	0.5U	1.1	4.1	0.5U	2.7	1.2U	160	31,000J	615	145	16,400	17	350J	0.13U	5.0U	0.049	-	6.61	0.10	-88	1.042	5	12.99
Area 3	G6M-04-04X	10/11/2012	0.5U	0.5U	0.80	3.7	0.5U	2.6	1.3U	460	51,000	590	133	15,700	13	220	0.13U	5.0U	0.052	-	6.66	0.39	-108.6	1.693	1.53	14.02
Area 3	G6M-04-04X	10/16/2013	0.5U	0.5U	1.8	3.1	0.5U	3.0	3.5	420	44,000	601	114	11,000	11	240	0.13U	0.94J	0.049	-	6.57	0.24	-109.9	1.345	4.75	10.96
Area 3	G6M-04-04X	10/30/2014	0.5U	0.5U	0.5U	1.7	0.5U	0.39J	1.2U	85	43,000	453	113	8,520	9.0J	180	0.098J	0.18J	0.03U	-	6.59	0.42	-145.8	1.537	6.54	11.41
Area 3	G6M-04-04X	9/14/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.91 J	10 U	32.6	9,170	486	11.9 J	10,700 J	7.50	-	0.068 J	3.4 J	2.0 U		6.7	0.28	-180.4	1.264	3.25	14.95
Area 3	G6M-04-04X	10/16/2015	0.76 J	1.0 U	1.0 U	1.0 U	2.80	1.0 U	10 U	61.3	20,000	505	115	10,000	8.5	167	0.11 U	1.6 J	2.0 U		5.99	0.57	-114.6	1.727	3.13	10.70
Area 3	G6M-04-04X	2/19/2016	1.0 U	1.0 U	0.50 J	2.8	1.0 U	1.0	10 U	65.1	13,900	550	114	9,760	7.3	278	0.10	1.3 J	2.0 U		7.68	1.29	-38.7	1.173	3.97	11.53
Area 3	G6M-04-04X	6/16/2016	1.0 U	1.0 U	0.65 J	1.0 U	1.0 U	1.1	9.2	86	31,000	580	120	10,000	8.6	160	0.05 U	30.0	1.0 U		6.51	1.46	-108.1	1.407	4.2	16.19
Area 3	G6M-04-04X	11/8/2016	1.0 U	1.0 U	0.43 J	1.2	1.0 U	0.57 J	3.0	38	20,000	530	120	9,700	7.3	180	0.05 UJ	1.0 U	4.4		6.01	0.32	-106.9	1.402	3.49	13.83
Area 3	G6M-04-04X	10/20/2017	1.0 U	1.0 U	0.51 J	1.4	1.0 U	1.0 U	3.8	39	19,000	600	170	17,000	11	250	0.11	0.72 J	1.0 U		6.64	0.24	-111.1	0.940	4.39	12.69
Area 3	G6M-04-04X	10/26/2018	1.0 U	1.0 U	0.83 J	0.37 J	1.0 U	0.6 J	--	--	--	460	110	21,000	--	--	--		--		6.44	0.21	-91.7	2.529	9.98	13.00
Area 3	G6M-04-04X	10/10/2019	1.0 U	1.0 U	0.93 J	1.0 U	1.0 U	0.55 J	-	-	-	3.0 U	50 U	61	-	-	-	-	-		6.40	0.34	-88	3.000	2.3	13.00
Area 3	G6M-04-04X	10/21/2020	1.00 U	1.00 U	0.640 J	0.390 J	1.00 U	1.00 U	-	-	-	510	130,000	16,000	-	-	-	-	-		6.23	0.150	-56.9	2.46	3.79	15.1
Area 3	G6M-04-04X (FD)	10/21/2020	1.00 U	1.00 U	0.670 J	1.00 U	1.00 U	1.00 U	-	-	-	480	120,000	15,000	-	-	-	-	-		6.23	0.150	-56.9	2.46	3.79	15.1
Area 3	G6M-13-03X	1/30/2014	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	-	-	-	-	-	-	-	-	-	5.58	0.69	205	0.248	1.11	10.87
Area 3	G6M-13-03X	10/30/2014	0.5J	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	2.5U	0.0285U	407	-	-	-	-	-	-	6.39	1.65	183.6	0.192	15.3	6.67
Area 3	G6M-13-03X	10/16/2015	0.57 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	4.0 U	100 U	362	-	-	-	-	-		5.53	1.58	157.6	2.539	36.6	11.90
Area 3	G6M-13-03X	11/10/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	2.2 J	0.45	420	-	-	-	-	-		4.15	0.43	40	1.540	31.6	12.48
Area 3	G6M-13-03X	10/18/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	3.0 U	0.075 U	550	--	--	--		--		5.61	0.58	170.1	2.250	4.69	11.89
Area 3	G6M-13-03X	10/30/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	--	--	--	--	--	--		--		5.01	0.81	-5.1	2.618	7.29	12.06
Area 3	G6M-13-03X	10/16/2020	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	-	-	-	3.00 U	50.0 U	430	-	-	-	-	-		5.33	0.420	172	1.82	3.11	13.7
Area 4	G6M-02-03X	2/26/2002	210	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	11.61	2.21	11	1.154	18.1	18.88
Area 4	G6M-02-03X	9/23/2004	48	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	4.95	1.17	632.1	1.374	3.8	17.6
Area 4	G6M-02-03X	9/29/2005	12	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	5.70	2.9	204.9	1.138	10.67	17.62
Area 4	G6M-02-03X	9/18/2006	10	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	5.20	0.35	219.4	0.993	4.32	14.39
Area 4	G6M-02-03X	9/14/2015	0.82 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 U	284	4.0 U	0.10 U	79	1.10	-	1.30	9.7 J	2.0 U		5.67	5.09	93.2	0.722	3.00	14.06
Area 4	G6M-02-03X	6/16/2016	-	-	-	-	-	-	-	-	-	3.0 U	0.05 U	310	-	-	-	-	-		4.87	0.45	139.6	1.658	19.87	16.74
Area 4	G6M-02-03X	11/8/2016	-	-	-	-	-	-	-	-	-	3.0 U	0.029 J	99	-	-	-	-	-		7.58	1.03	-53.7	0.960	3.88	11.73
Area 4	G6M-02-03X	10/24/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	430.00	3.0 U	0.18	320	0.5 U	-	-	-	-		5.72	5.81	37.1	1.931	50.9	13.23
Area 4	G6M-02-04X	2/26/2002	470	0.88J	1.3J	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	6.47	3.4	189.5	0.260	24	17.99
Area 4	G6M-02-04X	9/23/2004	170	2U	2.9	2U	1U	2U	-	-	-	5U	1U	15U	-	-	-	-	-	-	6.29	3.03	175.5	0.453	8.48	19.59
Area 4	G6M-02-04X	9/28/2005	150	2U	6.2	2U	1U	2U	-	-	-	5U	1U	15U	-	-	-	-	-	-	5.61	2.75	302.3	0.502	12.6	17.26
Area 4	G6M-02-04X	9/20/2006	48	2U	2U	2U	1U	2U	-	-	-	5U	0.10U	15U	-	-	-	-	-	-	5.84	4.57	189	0.467	8.45	14.49
Area 4	G6M-02-04X	9/13/2007	21	4.2	2U	2U	1U	2U	-	-	-	6U	0.1U	15	-	-	-	-	-	-	6.39	3.13	93	0.927	4.8	14.85
Area 4	G6M-02-04X	10/16/2008	9.0	2.5U	150	2.5U	2.5U	2.5U	-	-	-	78.2	8.56	7,370	-	-	-	-	-	-	6.91	1.05	-80	1.126	4.0	12.08
Area 4	G6M-02-04X	10/15/2009	5U	17	120	5U	5U	10	-	-	-	309	82	10,900	-	-	-	-	-	-	6.55	1.52	-139.8	0.766	2.18	15.6

Appendix D
Historical Groundwater Analytical Results
2020 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

			Laboratory Parameters																	Field Parameters					
			PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	VC	Ethane	Ethene	Methane	Dissolved Arsenic	Dissolved Iron	Dissolved Manganese	TOC	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	Phosphate	pH	DO	ORP	SpC	Turbidity	Temp
Area	Well ID	Date Sampled	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
Area 4	G6M-02-04X	10/4/2010	5.3	2.6	2.1	0.5U	0.5U	0.5U	-	-	-	101	20.2	1,240	-	-	-	-	-	-	6.48	0.98	-86.9	0.975	2.8	14.68
Area 4	G6M-02-04X	6/9/2011	-	-	-	-	-	-	-	-	-	246	28.2	3,180	-	-	-	-	-	-	6.67	0.28	-88.3	0.856	0	13.32
Area 4	G6M-02-04X	10/6/2011	0.69	0.80	0.67	0.5U	0.5U	0.5U	-	-	-	292	35.6	2,480	-	-	-	-	-	-	6.84	0.26	-112.5	0.601	3.71	12.68
Area 4	G6M-02-04X	5/9/2012	-	-	-	-	-	-	-	-	-	451	43.4	2,510	-	-	-	-	-	-	6.94	0.52	-114.8	0.487	2.9	13.7
Area 4	G6M-02-04X	10/9/2012	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	374	30	1,860	-	-	-	-	-	-	6.87	0.43	-129.3	0.591	0	13.4
Area 4	G6M-02-04X	5/21/2013	-	-	-	-	-	-	-	-	-	313	28.1	1,890	-	-	-	-	-	-	6.88	0.3	-110.5	0.745	2.26	13.62
Area 4	G6M-02-04X	10/16/2013	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	370	23.9	1,390	-	-	-	-	-	-	6.92	0.38	-124.4	0.522	1.32	13.21
Area 4	G6M-02-04X	6/11/2014	-	-	-	-	-	-	-	-	-	175	14.2	997	-	-	-	-	-	-	6.60	0.59	-10.8	0.956	3.35	13.12
Area 4	G6M-02-04X	11/3/2014	0.5U	0.24J	0.5U	0.5U	0.5U	0.5U	-	-	-	350	15.6	971	-	-	-	-	-		7.08	1.42	-111.1	0.550	1.38	14.70
Area 4	G6M-02-04X	6/26/2015	0.60 J	0.52 J	0.91 J	0.50 U	0.50 U	0.50 U	-	-	-	157	10.4	1,060	-	-	-	-	-		7.39	0.71	-55.4	1.238	1.55	14.70
Area 4	G6M-02-04X	9/14/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 U	4,350	408	20.4	995	1.60	-	0.057 U	9.6 J	2.0 U		7.01	0.40	-152.4	0.400	1.30	14.56
Area 4	G6M-02-04X	10/16/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	320	15.1	1,000	-	-	-	-	-		6.78	0.43	-97.3	0.665	0.86	13.02
Area 4	G6M-02-04X	2/12/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 U	964	353	22	1,370	1.1	42.3	0.12	8.0 J	2.0 U		7.08	0.79	-79.7	0.711	1.94	11.26
Area 4	G6M-02-04X	6/15/2016	1.0 U	0.59 J	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	470	27	1,400	4.4	250	0.05 U	0.8 U	1.0 U		6.88	0.30	-106.2	1.031	2.84	16.74
Area 4	G6M-02-04X	11/8/2016	1.0 U	1.0 U	1.2	1.0 U	1.0 U	1.0 U	-	-	-	470	21	1,100	-	-	-	-	-		7.00	0.89	-153.6	0.268	2.57	13.15
Area 4	G6M-02-04X	10/16/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	440	22	1,300	--	--	--	--	--		7.07	0.42	-119.3	0.626	4.31	12.63
Area 4	G6M-02-04X	10/26/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.1	1.0 U	6500	470	22	1,400	--	--	--	--	--		7.12	0.25	-141.7	0.741	9.32	13.47
Area 4	G6M-02-04X	10/28/2019	-	-	-	-	-	-	-	-	-	520	53,000	2,600	-	-	-	-	-		7.00	0.34	-130	0.890	4.6	12.00
Area 4	G6M-02-04X	12/20/2019	1.0 U	0.85 J	1.4	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-		7.21	2.93	-181.3	0.391	2.8	6.35
Area 4	G6M-02-04X	10/15/2020	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	-	-	-	430	63,000	3,400	-	-	-	-	-		6.91	0.460	-157	0.731	3.10	13.7
Area 4	G6M-02-13X	8/2/2002	4,600	4	2U	2U	1U	2U	-	-	-	5U	-	-	-	-	-	-	-	-	6.17	0.54	141	0.665	7.62	13.98
Area 4	G6M-02-13X	9/23/2004	5,000	13	16	2U	1U	2U	0.27	0.15	57	5U	1U	1,200	1U	31	2.3	17	1.8J	-	6.37	0.34	170.8	0.618	2.14	16.73
Area 4	G6M-02-13X	12/13/2004	4,600	14	21	2U	1U	2U	0.27	0.11	88	5U	1U	1,300	5U	34	2.5	16M	2U	-	5.79	0.89	274.8	0.518	2.63	18.3
Area 4	G6M-02-13X	3/30/2005	2,100	64J	210	100U	50U	100U	0.16	0.11	38	36	4.2	4,000	8.1	60	0.23	13	2U	-	5.97	0.89	-22.6	0.735	2.91	15.02
Area 4	G6M-02-13X	8/11/2005	2,300	190	460	5.9	2U	2U	0.026	0.045	46	150	34J	12,000J	66	230	0.05U	2.3	1U	-	5.82	0.74	-68.8	0.897	5.6	14.76
Area 4	G6M-02-13X	9/29/2005	3,700	120	470	10U	10U	10U	0.16	0.12	420	74	22	6,800	37	110	0.05U	8.9	2.4	-	6.41	1.26	-89.1	0.710	6.99	15.48
Area 4	G6M-02-13X	12/14/2005	210	50	850	2U	2	2U	0.057	0.087	11,000	477	200J	36,200	290	420	0.083	2U	8.2	-	6.6	0.11	-134.4	1.389	0.6	15.43
Area 4	G6M-02-13X	3/22/2006	660	37J	640	2U	1U	2U	0.025U	0.009J	21,000	320	170	29,000	280	480	0.2U	8.08	3.0	-	6.67	0.9	-214.4	1.379	2.37	14.28
Area 4	G6M-02-13X	6/22/2006	160	8.8	440	2U	1U	280	0.025J	0.51	25,000	750	420	30,000	140	480	0.2U	1.15	20	-	6.54	0.28	-138.7	2.175	16.1	14.68
Area 4	G6M-02-13X	9/18/2006	550	52	160	2U	1U	280	0.15	1.1	24,000	420	160	9,900	52	140	0.2U	8.09	2.8	-	6.12	0.36	-119.3	1.190	6.9	13.37
Area 4	G6M-02-13X	12/14/2006	460	20	190	2U	1U	220	0.025	0.35	23,000	460	260	12,000	140	-	-	4.25	3.6	-	6.49	0.19	-73.7	1.748	8.3	10.99
Area 4	G6M-02-13X	3/27/2007	460	39	120	2U	1U	170	0.031	3.7	27,000	400	170	8,400J	37	-	-	9.74	1.6	-	6.08	0.12	-14.6	1.378	11.2	13.81
Area 4	G6M-02-13X	6/13/2007	440	45	48	2U	1U	46	0.025U	6.3	26,000	380	300	9,400	78	-	-	12.7	3.6	-	6.58	0.46	-178.7	1.926	47.5	12.34
Area 4	G6M-02-13X	9/13/2007	510	150	120	2U	1U	53	0.14	26	20,000	230	88	4,800	18	74	0.2U	480	1U	-	6.54	0.45	-145.3	1.332	18.2	13.69
Area 4	G6M-02-13X	12/14/2007	690	84J	58J	2U	1U	21J	0.068	21	16,000	210	46	4,500	11	-	-	13	1U	-	6.51	0.27	-133.2	1.133	3.6	14.17
Area 4	G6M-02-13X	3/12/2008	130	96	29	2U	1U	12	0.092	35	21,000	260	68	7,600	17	-	-	9	1U	-	6.48	0.57	-140.5	1.221	7.7	14.51
Area 4	G6M-02-13X	10/6/2008	5U	9.7	7.9	5U	5U	7.5	6.5U	8.8	14,000	380	91	4,940	24.3	300	0.13U	11	0.03UJ	-	6.56	0.28	-173.6	1.071	5.2	13.58
Area 4	G6M-02-13X	1/21/2009	1.4U	5	5.4	1.3U	1.7U	5.7	.25U	3.8	17,000	371	72.1J	3,990	11J	200	0.13U	14	0.03U	0.35J	6.88	0.28	-121.2	0.821	4	13.07
Area 4	G6M-02-13X	5/6/2009	0.5U	5.1	9.8	0.24J	0.5U	6.2	1.2U	2.6	26,000	351	69.4	3,820	9.4J	300J	0.012J	12	0.03U	0.51J	6.01	0.29	-93.4	0.916	2.09	14.16
Area 4	G6M-02-13X	10/15/2009	0.92	8.6	16	0.7	0.5U	8.5	1.2U	2.2	7,400	369	93.3	6,800	7J	370	0.13U	13	0.03UJ	0.26	6.47	0.24	-148.8	0.932	1.71	14.48
Area 4	G6M-02-13X	4/20/2010	0.5U	0.29J	14	0.42J	0.5U	13	1.3U	6.4	44,000	322	134J	5,790	36	500	0.13U	5.0U	0.03U	0.43	6.47	0.28	-7.3	1.219	2.98	14.34
Area 4	G6M-02-13X	10/4/2010	0.30J	1.6	8.3	0.24J	0.5U	8.4	1.2U	9.5	48,000	281	58.5	4,690	10U	370	0.046J	3.3J	0.03U	0.61	6.57	0.18	-124.5	1.168	0.90	13.69
Area 4	G6M-02-13X	6/9/2011	-	-	-	-	-	-	-	-	-	302	72.3	6,820	-	-	-	-	-	-	6.49	0.21	-110.8	1.210	2.19	13.41
Area 4	G6M-02-13X	10/6/2011	0.5U	0.5U	0.96	0.5U	0.5U	2.4	1.2U	1.5U	12,000	258	36.2	5,690	6.7J	110	0.13U	0.45J	0.056	-	6.65	0.07	-94.6	1.235	2	14.62
Area 4	G6M-02-13X	5/9/2012	-	-	-	-	-	-	-	-	-	205	25.9	6,670	-	-	-	-	-	-	7	0.16	-118.5	1.281	1.01	11.53
Area 4	G6M-02-13X	10/11/2012	0.5U	0.83	0.69	0.5U	0.5U	0.5U	1.3U	87	22,000	159	24.9	8,190	2.7J	380	0.013J	5.0U	0.03U	-	6.68	0.34	-109.8	1.195	0	12.32
Area 4	G6M-02-13X	5/21/2013	-	-	-	-	-	-	-	-	-	212	22.3	12,500	-	-	-	-	-	-	6.88	0.12	-118	0.900	4.89	11.97
Area 4	G6M-02-13X	10/16/2013	0.5U	0.78	1.8	0.27J	0.5U	1.1	1.8	3.9	34,000	140	19.1	11,400	2.5J	350	0.13U	5.0U	0.037	-	6.87	0.37	-110	0.916	0	11.96
Area 4	G6M-02-13X	6/11/2014	-	-	-	-	-	-	-	-	-	195	20.4	15,800	-	-	-	-	-	-	6.74	0.27	-85	0.958	3.92	13.63
Area 4	G6M-02-13X	10/29/2014	0.5U	1.3	2.8	0.5U	0.5U	1.8	1.2U	1.5U	7,300	128	12J	7,920J	5U	280	0.13U	0.61J	0.03U	-	6.86	0.26	-81	0.822	6.49	-
Area 4	G6M-02-13X	6/23/2015	0.50 U	1.7	3.4	0.50 U	0.50 U	2.5	5.0 U	5.0 U	1,840	142	12.5	11,100	2.90	250	0.11 U	2.6 J	1.0 U	-	6.74	1.24	-107.2	0.817	5.37	14.62
Area 4	G6M-02-13X	9/11/2015	1.0 U	2.8	5.2	1.0 U	1.0 U	4.9	10 U	10 U	832	142	10.5	9,980	2.30	-	0.067 J	0.52 J	2.0 U		6.45	0.25	-76.0	0.619	2.85	13.41
Area 4	G6M-02-13X	10/16/2015	1.0 U	3.6	1.0 U	1.0 U	1.0 U	3.3	10 U	10 U	473	114	9.77	12,300	3.2	261	0.11 U	1.5 J	2.0 U		6.84	0.31	-87.2	0.667	2.90	8.40
Area 4	G6M-02-13X	2/12/2016	4.5	13.7	13.2	0.51 J	1.0 U	7.7	10 U	10 U	500	145	10.2	11,100	2.1	252	0.11	10 U	2.0 U		7.02	0.59	-102.3	0.671	2.00	9.48
Area 4	G6M-02-13X	6/16/2016	1.0 U	22.0	20.0	0.65 J	1.0 U	9.4	0.87 J	8.2	3,400	96	7.90	11,000	2.4	210	0.05 U	0.8 U	1.0 U		7.03	0.66	-86.6	0.618	4.63	16.47
Area 4	G6M-02-13X	11/8/2016	1.0 U	9.7	65	0.59 J	1.0 U	23	1.1 U	7.8	1,500	110	7.70	12,000	1.7	190	0.05 U	0.63 J	1.0 U		6.98	0.77	-152.9	0.383	2.97	12.31
Area 4	G6M-02-13X	10/19/2017	3.3	21	57	0.47 J	1.0 U	17	0.73 J	5.9	1,500	120	6.4	8,500	1.8	180	0.05 U	3.0	1.0 U		6.75	0.22	-58.1	0.501	5.52	12.40
Area 4	G6M-02-13X	10/24/2018	1.0 U	1.0 U	1.8	1.0 U	1.0 U	1.6	1.8	2.8	5,900	150	11	18,000	-	-	-	-	-		6.53	1.39	-40.1	1.260	14.6	12.60
Area 4	G6M-02-13X	10/14/2019	1.0 U	1.0 U	4.4	1.0 U	1.0 U	5.1	-	-	-	140	10,000	20,000	-	-	-	-	-		6.70	0.11	-82	1.300	4.7	14.00
Area 4	G6M-02-13X	10/16/2020	1.00 U	1.00 U	0.900 J	1.00 U	1.00 U	0.960 J	-	-	-	160	12,000 J	26,000	-	-	-	-	-		6.79	0.630	-79.7	0.958	0.00	13.0
Area 4	G6M-06-01X	3/30/2006	30	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	6.03	3.73	-87.8	0.652	70.7	8.22
Area 4	G6M-06-01X	3/30/2007	72	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	5.73	2.87	138.5	1.005	10.21	10.01
Area 4	G6M-06-01X	9/13/2007	83	2U	2.1	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	5.60	10.68	-93.9	0.967	6.3	12.69
Area 4	G6M-06-01X	12/14/2007	110	2U	2.3	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	5.96	2.43	132.9	0.991	3.9	17.46
Area 4	G6M-06-01X	10/16/2008	71	1.8	1.4	1U	1U	1U	-	-	-	-	-	-	-	-	-	-	-	-	5.51	3.08	118.6	0.956	20	10.8
Area 4	G6M-06-01X	10/15/2009	170	28	6.3J	8U	8U	8U	-	-	-	8U	0.321	50U	-	-	-	-	-	-	5.82	2.69	85.3	0.832	0.13	13.69
Area 4	G6M-06-01X	10/4/2010	120	3.4J	7.2	4U	4U	4U	-	-	-	5U	0.211U	33.2U	-	-	-	-	-	-	6	1.72	57.1	1.160	25.1	13.21
Area 4	G6M-06-01X	6/8/2011	190	7.7	7.2	0.5U	0.5U	0.5U	-	-	-	5U	0.1U	25U	-	-	-	-	-	-	5.81	1.39	122	0.979	4.01	17.13
Area 4	G6M-06-01X	10/6/2011	96	30	46	1.3U	1.3U	3.5	-	-	-	3.7J	0.139	38.5	-	-	-	-	-	-	6.22	0.59	40.8	0.825	13.1	11
Area 4	G6M-06-01X	5/8/2012	310	18	16	10U	10U	10U	-	-	-	5U	0.1U	9.4J	-	-	-	-	-	-	6.14	0.65	87.4	0.943	2.59	13.07
Area 4	G6M-06-01X	10/10/2012	180	7.6	9.1	4.0U	4.0U	4.0U	-	-	-	5U	0.0522 J	8.8 J	-	-	-	-	-	-	5.94	0.54	56.2	0.819	2.61	10.6
Area 4	G6M-06-01X	5/21/2013	170	30	17	5.0U	5.0U	2.0J	-	-	-	5U	0.1U	25U	-	-	-	-	-	-	5.96	0.36	81	1.058	8.89	13.06
Area 4	G6M-06-01X	11/05/2020	0.950 J	1.10 J	9.00 J	1.00 U	1.00 U	1.00 U	-	-	-	160	140,000	2,600	-	-	-	-	-		4.18	0.440	123	0.909	16500	16.7

			Laboratory Parameters																	Field Parameters					
			PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	VC	Ethane	Ethene	Methane	Dissolved Arsenic	Dissolved Iron	Dissolved Manganese	TOC	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	Phosphate	pH	DO	ORP	SpC	Turbidity	Temp
Area	Well ID	Date Sampled	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
Area 4	G6M-13-02X	1/30/2014	120	20	34	0.34J	0.5U	14	-	-	-	-	-	-	-	-	-	-	-	-	6.44	0.88	53.9	1.099	3.11	16.01
Area 4	G6M-13-02X	6/11/2014	170	54	81	0.53	0.29J	6	-	-	-	3.2J	0.472	32.5	-	-	-	-	-	-	6.05	0.71	144.8	0.900	4.29	11.56
Area 4	G6M-13-02X	11/3/2014	210	39	95	5U	5U	6.7	-	-	-	2.5U	0.146UJ	20.3J	-	-	-	-	-	-	6.31	1.3	75.8	0.625	2.27	5.69
Area 4	G6M-13-02X	6/26/2015	105	49.6	38.1	0.50 U	0.50 U	1.10	-	-	-	2.1 J	0.050 U	9.4 J	-	-	-	-	-		5.99	1.03	101.6	0.917	9.69	17.13
Area 4	G6M-13-02X	10/16/2015	70	31	1.0 U	1.0 U	1.0 U	1.4 J	-	-	-	4.0 U	0.087	15	-	-	-	-	-		6.27	0.35	72	1.069	2.97	8.03
Area 4	G6M-13-02X	2/22/2016	85.8	24.6	21.1	0.54 J	1.0 U	0.65 J	10 U	10 U	3,560	4.0 U	0.10 U	21.9	0.81 J	56.4	0.28	15.9	2.0 U		6.23	0.9	21.6	0.818	4.89	11.54
Area 4	G6M-13-02X	6/16/2016	77	34	61.0	0.89 J	1.0 U	1.50	-	-	-	1.8 J	0.190	20	-	-	-	-	-		6.17	1.29	3.6	0.937	11.33	16.70
Area 4	G6M-13-02X	11/8/2016	84	27	38	1.0 U	1.0 U	0.93 J	-	-	-	3.0 U	0.05 U	4.7 J	-	-	-	-	-		6.30	0.94	-136.1	0.689	2.01	11.9
Area 4	G6M-13-02X	5/16/2017	79	25	30	0.39 J	1.0 U	0.90 J	0.64 J	1.0 U	4,300	3.0 U	0.05 U	16	1.0 U	54	0.34	12	1.0 U		6.07	0.47	89.7	0.841	5.79	12.93
Area 4	G6M-13-02X	10/19/2017	65	15	13	0.50 J	1.0 U	0.99 J	1.1 U	1.0 U	4,100	1.5 J	0.23	50	2.2	75	0.47	12	1.0 U		6.33	0.22	51.1	0.996	8.18	13.41
Area 4	G6M-13-02X	4/3/2018	58	11	15	0.65 J	1.0 U	1.10	1.1 U	1.0 U	6,300	3.0 U	0.16	54	6.8	53	0.35	11	1.0 U		6.51	0.81	-19.0	1.063	4.17	11.25
Area 4	G6M-13-02X	10/24/2018	28 J	9.6 J	24 J	1 J	1.0 UJ	3.5 J	1.6	1.3	6,700	3.6	0.1	160	29 J	67	0.095 J	10 J	1.0 U		5.79	0.32	-26.4	1.217	38.7	13.40
Area 4	G6M-13-02X	4/4/2019	22	8.5	11	0.42 J	1.0 U	1.5	1.3	1.0 U	7,800	1.5 J	400	80	1.8	-	0.23	12	1.0 U		6.20	0.92	-120	1.200	6.8	13.00
Area 4	G6M-13-02X	10/30/2019	-	-	-	-	-	-	1.2	1.0 U	11,000	2.4 J	750	130	0.86 J	57	0.048 J	12	0.83 U		6.00	0.15	4.8	1.200	7	13.00
Area 4	G6M-13-02X	12/26/2019	16	8.6	8.8	0.53 J	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-		6.22	0.86	-22.4	1.171	1.84	11.70
Area 4	G6M-13-02X	05/12/2020	5.60	12.0	32.0	1.10	1.00 U	17.0	1.30	2.10	16,000	3.00 U	150	16.0	5.20	66.0	0.100 U	4.10	1.40		5.98	0.820	-13.9	1010	12.7	11.9
Area 4	G6M-13-02X	10/19/2020	14.0 J	8.40 J	8.90 J	0.740 J	1.00 UJ	3.80 J	1.00 J	1.00 U	18,000	10.0	2,500	540	4.50	78.0	0.0500 U	7.30	0.930 U		6.04	0.430	-14.8	0.842	11.8	13.6
Area 4	G6M-13-02X (FD)	10/19/2020	17.0	10.0	9.40	0.680 J	1.00 U	4.90	1.00 J	1.40	19,000	11.0	2,400	500	4.80	71.0	0.0500 U	7.00	0.960 U		5.33	0.420	172	1.82	3.11	13.7
Area 4	G6M-18-01	11/05/2020	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.10 U	1.00 U	0.400	3.00 U	50.0 U	4.70 J	1.00 U	22.0	0.510	6.10	0.810 U		8.23	7.42	119	0.149	2.01	13.0
Area 4	G6M-97-28X	9/14/2015	0.57 J	62.8	37.3	1.60	1.0 U	22.3	10 U	10 U	85.0	4.0 U	0.23	2,110	1.10	-	0.11 U	12.10	2.0 U	-	6.21	0.30	67.7	0.256	-	14.43
Area 4	G6M-97-28X	2/12/2016	1.0 U	1.1	1.4	1.0 U	1.0 U	0.53 J	10 U	10 U	235	47.9	2.49	5,690	1.6	111	0.085 J	4.2 J	2.0 U		6.92	1.99	72.8	0.210	8.64	6.05
Area 4	G6M-97-28X	6/16/2016	-	-	-	-	-	-	-	-	-	190	6.0	2,200	-	-	-	-	-		6.68	0.28	-85.3	0.312	2.15	23.12
Area 4	G6M-97-28X	11/8/2016	-	-	-	-	-	-	-	-	-	27	2.2	18,000	-	-	-	-	-		6.72	0.86	-70.9	0.537	11.87	12.8
Area 4	G6M-97-28X	10/26/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	210.00	92	9.5	9,500	0.5 U	-	-	-	-		6.33	0.43	-37.8	0.817	20.1	11.06
Area 4	G6M-97-28X	10/28/2019	-	-	-	-	-	-	-	-	-	71	7,900	10,000	-	-	-	-	-		6.10	0.35	6.8	1.100	1.8	12
Area 4	G6M-97-28X	10/15/2020	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	-	-	-	44.0	8,300	12,000	-	-	-	-	-		6.08	0.590	-7.60	0.875	6.24	14.7
Area 5	G6M-02-05X	2/28/2002	130	2U	1.9J	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	6.15	6.61	181.1	0.597	11	15.72
Area 5	G6M-02-05X	1/30/2003	170	2U	2.3	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.65
Area 5	G6M-02-05X	9/30/2005	200	2U	2.6	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	4.73	3.61	441.8	0.512	7.9	15.78
Area 5	G6M-02-05X	9/22/2006	350	2U	2.2	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	5.52	2.14	94.8	0.543	7.38	12.66
Area 5	G6M-02-05X	9/12/2007	510	50	7.9	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	6.39	0.78	-57.8	0.723	30.6	12.27
Area 5	G6M-02-05X	10/20/2008	390	17	4.4J	10U	10U	10U	-	-	-	-	-	-	-	-	-	-	-	-	7.00	1.83	-41.9	0.588	3.0	12.42
Area 5	G6M-02-05X	10/19/2009	370	53	10U	10U	10U	10U	1.3U	1.6U	410	49.2	3.82	2,490	10U	57	0.26	19	0.03U	-	6.22	0.31	30.6	0.699	1.4	12.53
Area 5	G6M-02-05X	10/5/2010	240	100	4.0J	5U	5U	5U	1.2U	1.5U	160	71.2	5.42	2,420	10U	20U	0.025J	13	0.03U	0.59J	6.25	0.25	-37.5	0.749	5.99	12.27
Area 5	G6M-02-05X	6/8/2011	200	230	78	3.7	0.62	18J	1.2U	10	5,400	105	8.58	2,700	2.6J	180	0.13U	11	0.03U	-	6.16	0.24	-42.8	0.708	0	12.27
Area 5	G6M-02-05X	10/6/2011	37	140	59	2.0U	2.0U	25	1.2U	15	6,600	125	10.8	2,300	2.1J	530	0.012J	14	0.03U	-	6.18	0.73	-4.0	0.959	1.4	11.6
Area 5	G6M-02-05X	10/6/2011	37	140	59	2.0U	2.0U	25	1.2U	15	6,600	125	10.8	2,300	2.1J	530	0.012J	14	0.03U	-	6.18	0.73	-4.0	0.959	1.4	12.36
Area 5	G6M-02-05X	5/9/2012	140	68	17	0.5U	0.5U	0.5U	1.3U	1.6U	3,900	103	8.63	2,060	10U	75	0.13U	14	0.03U	-	6.19	0.78	9.0	0.682	1.52	12.56
Area 5	G6M-02-05X	10/10/2012	94	44	16	2.0U	2.0U	2.0U	1.2U	1.5U	4,400	73	6.78	1,460	10U	64	0.11J	14	0.03U	-	6.14	1.92	15.2	0.809	0	11.16
Area 5	G6M-02-05X	5/21/2013	38J	33J	78	0.48J	0.30J	2.3	1.2U	1.5U	2,200	84.1	8.43	1,310	10U	100J	0.13UJ	12	0.03UJ	-	6.26	0.75	-19.1	0.753	0.77	14.01
Area 5	G6M-02-06X	3/1/2002	2U	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	7.16	8.91	134.8	0.135	32	12.18
Area 5	G6M-02-06X	9/24/2004	5.5	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	7.33	9.48	152.8	0.090	0.02	12.31
Area 5	G6M-02-06X	9/30/2005	2U	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	7.22	8.22	66.4	0.107	4.39	13.26
Area 5	G6M-02-06X	9/21/2006	2U	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	7.30	7.84	139.3	0.098	10.85	11.26
Area 5	G6M-02-06X	9/14/2007	2U	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	6.94	8.5	-140.7	0.149	7.7	10.88
Area 5	G6M-02-06X	10/20/2008	0.47J	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	-	-	-	-	-	-	-	-	-	7.09	7.71	88.8	0.109	6.5	11.28
Area 5	G6M-02-06X	10/14/2009	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	8U	0.2U	50U	-	-	-	-	-	-	6.98	8.96	26.1	0.115	0.2	11.43
Area 5	G6M-02-06X	10/5/2010	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	5U	0.1U	25U	-	-	-	-	-	-	6.90	7.66	63.6	0.128	4.38	11.62
Area 5	G6M-02-06X	10/7/2011	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	2.5J	0.1U	25U	-	-	-	-	-	-	6.87	6.3	24.7	0.076	18.6	11.76
Area 5	G6M-02-06X	10/10/2012	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	5U	0.1U	25U	-	-	-	-	-	-	7.11	8.89	16.8	0.134	10.53	11.39
Area 5	G6M-02-06X	10/15/2013	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	5U	0.1U	25U	-	-	-	-	-	-	7.36	9.84	110.9	0.134	2.62	12.86
Area 5	G6M-02-06X	10/30/2014	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	5U	0.155U	6.0J	-	-	-	-	-	-	7.21	7.73	73.1	0.101	2.18	13.93
Area 5	G6M-02-06X	10/19/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	4.0 U	0.10 U	15 U	-	-	-	-	-		7.29	8.05	82.5	0.114	2.23	12.89
Area 5	G6M-02-06X	11/11/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	3.0 U	0.05 U	3.0 U	-	-	-	-	-		7.86	6.8	-32.7	0.840	4.92	9.57
Area 5	G6M-02-06X	10/19/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	3.0 U	0.075 U	5.0 U	--	--	--	--	--		7.02	5.72	40.2	0.123	4.41	11.94
Area 5	G6M-02-06X	10/22/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	3.0 U	0.050 U	3.0 U	--	--	--	--	--		7.21	5.35	168.4	0.152	11.8	11.20
Area 5	G6M-02-06X	10/15/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	1.7 J	50 U	3.0 U	-	-	-	-	-		7.30	8.40	63	0.150	3.5	11.00
Area 5	G6M-02-07X	2/26/2002	24	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	7.34	-0.68	110.3	0.259	46	11.54
Area 5	G6M-02-07X	9/23/2004	26	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	7.26	1.72	332.8	0.423	25	12.39
Area 5	G6M-02-07X	9/30/2005	16	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	7.69	6.98	121.2	0.389	7.7	11.08
Area 5	G6M-02-07X	9/21/2006	11	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	7.58	3.72	143.6	0.251	14.3	10.8
Area 5	G6M-02-07X	9/13/2007	12	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	7.68	3.78	43.3	0.334	3	10.49
Area 5	G6M-02-07X	10/20/2008	9.8J	0.27J	0.5UJ	0.5UJ	0.5UJ	0.5UJ	-	-	-	-	-	-	-	-	-	-	-	-	7.46	3.15	42.8	0.271	12	10.50
Area 5	G6M-02-07X	10/15/2009	6.7J	210	10U	10U	10U	10U	-	-	-	8U	0.127U	50U	-	-	-	-	-	-	7.41	1.15	-14	0.413	3	11.54
Area 5	G6M-02-07X	1/15/2010	5.7	0.5U	0.5U	0.75U	0.75U	1.0U	-	-	-	-	-	-	-	-	-	-	-	-	7.53	3.26	150.2	0.344	1.88	11.62
Area 5	G6M-02-07X	10/5/2010	4.7	0.24J	0.5U	0.5U	0.5U	0.5U	-	-	-	5U	0.1U	25U	-	-	-	-	-	-	7.39	2.57	60.3	0.296	1.33	11.83
Area 5	G6M-02-07X	10/3/2011	3.6	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	5U	0.1U	25U	-	-	-	-	-	-	7.54	1.58	26.6	0.198	5.12	11.79
Area 5	G6M-02-07X	10/11/2012	4.6	0.5U	0.57	0.5U	0.5U	0.5U	-	-	-	5U	0.0278J	25U	-	-	-	-	-	-	7.68	1.31	98.1	0.352	2.69	-
Area 5	G6M-02-07X	10/15/2013	1.1	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	2.9J	0.1U	5.1J	-	-	-	-	-	-	7.62	2.39	99.8	0.911	1.05	-
Area 5	G6M-02-07X	10/29/2014	3.9	0.27J	0.62	0.5U	0.5U	0.5U	-	-	-	2.4J	0.025U	7.8J	-	-	-	-	-	-	7.41	0.22	10.9	0.535	3.71	11.44
Area 5	G6M-02-07X	10/19/2015	4.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	4.0 U	0.10 U	15 U	-	-	-	-	-		7.64	0.35	75.3	0.362	3.69	15.95
Area 5	G6M-02-07X	11/11/2016	5.4	0.75 J	1.0	1.0 U	1.0 U	1.0 U	-	-	-	3.0 U	0.05	11	-	-	-	-	-		7.86	6.8	-32.7	0.084	4.92	9.57
Area 5	G6M-02-07X	10/23/2017	4.2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.9 J	0.11	12	--	--	--	-	--		7.57	0.29	-39.4	0.335	9.82	11.93

			Laboratory Parameters																	Field Parameters					
			PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	VC	Ethane	Ethene	Methane	Dissolved Arsenic	Dissolved Iron	Dissolved Manganese	TOC	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	Phosphate	pH	DO	ORP	SpC	Turbidity	Temp
Area	Well ID	Date Sampled	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
Area 5	G6M-02-07X	10/23/2018	3.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	3.0 U	0.05 U	3.0 U	--	--	--	--	--		7.65	0.31	81.7	0.575	8.66	11.74
Area 5	G6M-02-07X	10/9/2019	4.7	0.52 J	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	3.0 U	50 U	1.2 J	-	-	-	-	-		7.60	0.48	47	0.320	1.2	11.00
Area 5	G6M-02-07X	10/16/2020	3.80 J	1.00 UJ	1.00 UJ	1.00 UJ	1.00 UJ	1.00 UJ	-	-	-	1.50 J	17.0 J	6.10 J	-	-	-	-	-		7.81	0.730	-5.30	0.217	39.1	12.0
Area 5	G6M-02-11X	8/1/2002	450	2.8	2U	2U	1U	2U	-	-	-	5U	-	-	-	-	-	-	-	-	6.01	0.46	184	0.984	8.13	13.9
Area 5	G6M-02-11X	8/28/2002	540J	2U	2U	2U	1U	2U	-	-	-	5U	-	-	5U	44	-	-	-	-	6.05	0.51	173	0.905	6.49	10.7
Area 5	G6M-02-11X	10/29/2002	970	22	3	2U	1U	2U	-	-	-	5U	1U	1700	5U	51	0.10U	17	2.0U	-	6.02	0.49	51	0.920	5.04	13.2
Area 5	G6M-02-11X	2/3/2003	710	22	2U	20U	1U	2U	-	-	-	5U	1U	-	5U	65	-	-	-	-	6.22	0.71	178	0.971	12.7	14.12
Area 5	G6M-02-11X	7/16/2003	530	54	33	2U	1U	2U	0.005U	0.014	460	5U	1U	-	5U	120	-	16M	2.0U	-	6.31	0.86	166	0.813	11.9	16.05
Area 5	G6M-02-11X	9/26/2003	590	31	37	2U	1U	2U	0.005U	0.005U	1,200	5U	-	1,700	19	-	-	-	-	-	6.60	0.41	146	0.921	7.2	8.61
Area 5	G6M-02-11X	1/8/2004	300	15	49	2U	1U	2U	0.005U	0.0093	2,300	5U	1U	1,900	5U	150	-	12J	2.0U	-	6.29	0	104	0.729	0.6	6.55
Area 5	G6M-02-11X	3/10/2004	160	11	53	2U	1U	2U	0.005U	0.068	14,000	5U	1U	2,200	1.8	130	-	9.6	2U	-	6.39	0.82	103	0.847	7.5	15.58
Area 5	G6M-02-11X	6/4/2004	440	23	54	2U	1U	2U	0.005U	0.01	2,300	5U	1U	1,900	2.4J	110	-	12	1.9J	-	6.72	12.13	54.5	0.807	21.3	13.72
Area 5	G6M-02-11X	9/22/2004	540	50	140	2U	1U	2U	0.005U	0.005U	13,000	5U	1U	2,400	1.2	100	0.5U	12	1.5J	-	6.19	0.96	412.7	0.996	1.25	11.09
Area 5	G6M-02-11X	12/15/2004	760	47	120	2U	1U	2U	0.005U	0.021	9,700	5U	1U	2,100	5U	95	1	15	2U	-	6.35	1.36	200.1	0.675	21.2	13.83
Area 5	G6M-02-11X	3/28/2005	1,100	41	45	40U	40U	40U	0.005U	0.065	10,000	5U	1U	2,200	3.6J	90	0.2U	13	2UJ	-	6.19	1.02	84.3	0.938	48.3	16.04
Area 5	G6M-02-11X	7/1/2005	1,500	90	280	10U	10U	10U	0.028	0.42	15,000	2.1	1UJ	1,800	9.4	98.4	0.05U	14	1U	-	5.78	0.37	221.6	0.806	6.66	14.87
Area 5	G6M-02-11X	9/27/2005	240	78	260	2U	1U	16	0.020J	8.1	21,000	5U	1U	2,500	3.4	148	0.05U	5.9J	1U	-	5.92	0.4	93.6	0.755	0.69	13.00
Area 5	G6M-02-11X	12/12/2005	220	28	50	2U	1U	9.1	0.082	29	24,000	7.8	0.2J	3,100	5.5	270	1.3J	3.5	1U	-	6.28	0.18	64.8	1.107	8.9	12.95
Area 5	G6M-02-11X	3/21/2006	520	94	230	2.3	1U	60	0.025U	34	17,000	5U	0.1U	1,500	8.2	120	0.2U	8.81	1U	-	6.45	12	326.6	0.765	7.15	14.52
Area 5	G6M-02-11X	6/22/2006	130	44	20	20	1U	9.2	0.051	78	22,000	5U	1U	6,300	6.1	210	0.2U	2.45	1U	-	6.19	0.27	59.7	1.231	5.04	14.02
Area 5	G6M-02-11X	9/22/2006	37	17	8.6	2.8	1U	4	0.089	15	21,000	6.9	0.58	9,300	9.8	180	0.2U	4.87	1U	-	5.93	1.22	-158.9	1.079	4.55	12.97
Area 5	G6M-02-11X	12/13/2006	45	7.9	3.6	4.4	1U	2U	0.24	19	28,000	22	1	16,000	9.3	-	-	1.06	1.2	-	6.39	0.19	169.6	1.277	6.94	13.71
Area 5	G6M-02-11X	3/27/2007	38	21	3.6	9.8	1U	2U	6.8	28	23,000	120	7.1	24,000J	10	-	-	-	-	-	6.25	0.61	-39.6	0.912	19	12.57
Area 5	G6M-02-11X	6/13/2007	30	28	12	10	1U	2.8	4.8	33	27,000	310	6.8	18,000	12	-	-	9.62	1.6	-	6.22	0.65	-36.4	1.198	2.1	11.24
Area 5	G6M-02-11X	9/11/2007	4.4	24	7.9	12	1U	4.3	2.8	36	30,000	420	18	18,000	14	270	0.2U	470	1U	-	6.24	3.52	-11.1	1.423	9.7	10.99
Area 5	G6M-02-11X	12/13/2007	2.8J	19J	6J	5.5J	1U	4.4J	8.3	16	29,000	470	47	18,000	15	-	-	5U	1	-	6.36	0.52	-117.9	1.409	0.5	11.79
Area 5	G6M-02-11X	3/11/2008	2U	6.2	2.5	9.7	1U	2U	24	5.8	28,000	570	59	27,000	17	-	-	5U	2.8	-	6.35	0.41	-90.5	1.560	0.3	11.69
Area 5	G6M-02-11X	10/16/2008	1.3	7.3	6.9	0.8	0.5U	2.2	1.2U	5.4	39,000	1,170	116	8,420	21.2U	240	0.10U	9.3	0.03U	-	5.8	1.51	-20.6	0.154	4.0	13.68
Area 5	G6M-02-11X	5/7/2009	0.5U	0.76	0.47J	0.92	0.5U	0.5U	3.1	3.5	42,000	1,060	125	3,950	31	370J	0.13U	17	0.03U	-	6.04	0.24	-117.5	1.605	0.32	12.08
Area 5	G6M-02-11X	10/14/2009	0.23J	1.4	0.58	0.63	0.5U	0.46J	1.2U	1.5U	55,000	1,070	126	2,390	8.7J	430	0.13U	9.7	0.03U	-	6.46	0.52	-114.9	1.342	5.0	11.1
Area 5	G6M-02-11X	4/20/2010	0.5U	1.6	24	0.24J	0.5U	5.8	1.2U	2.0	17,000	1,050	106J	3,760	8.7J	500	0.13U	5U	0.03U	-	6.75	0.38	-130.5	0.778	1.5	11.58
Area 5	G6M-02-11X	10/5/2010	0.5U	0.94	0.52	0.38J	0.5U	0.66	1.2U	1.5U	47,000	956	93.8	1,590	10U	700	0.13U	1.4J	0.03U	-	6.51	0.72	-136	1.368	0.86	11.57
Area 5	G6M-02-11X	6/9/2011	-	-	-	-	-	-	-	-	-	804	91.6	2,480	-	-	-	-	-	-	6.6	0.1	-111.1	1.131	4.53	11.66
Area 5	G6M-02-11X	10/3/2011	0.5U	0.5U	0.64	0.5U	0.5U	1.2	1.2U	1.5U	19,000	901	99.9	2,670	7.6J	520	0.13U	5U	0.03U	-	6.58	0.44	-114.4	0.740	0.95	11.7
Area 5	G6M-02-11X	5/8/2012	-	-	-	-	-	-	-	-	-	769	84.2	2,560	-	-	-	-	-	-	6.83	0.14	-128.1	1.014	1.03	11.58
Area 5	G6M-02-11X	10/10/2012	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	3.9	1.5U	12,000	683	69.9	1,840	4.2J	390	0.11J	1.3J	0.03U	-	6.52	0.28	-122.8	1.341	0.84	12.54
Area 5	G6M-02-11X	5/21/2013	-	-	-	-	-	-	-	-	-	649	59.5	3,660	-	-	-	-	-	-	6.7	0.24	-124.88	1.247	0	18.2
Area 5	G6M-02-11X	10/16/2013	0.5U	0.5U	0.26J	0.20J	0.5U	0.5U	17	1.6U	56,000	616	53	3,230	4.2J	320	0.13U	5.0U	0.03U	-	6.8	0.22	-114.8	1.243	0.39	14.2
Area 5	G6M-02-11X	6/11/2014	-	-	-	-	-	-	-	-	-	573	50	8,010	-	-	-	-	-	-	6.84	0.32	-104.4	1.069	1.38	13.5
Area 5	G6M-02-11X	10/29/2014	0.5U	0.5U	0.42J	0.34J	0.5U	0.44J	8.1J	1.5U	15,000	624	64.3J	4,860J	5U	340	0.13U	0.17J	0.03U	-	6.96	0.35	-156.8	1.224	0.65	12.8
Area 5	G6M-02-11X	6/26/2015	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	5.0 U	8,180	578	51.1	10,800	5.80	312	0.17	2.0 J	1.0 U	-	5.98	2.49	-62.1	0.934	9.2	12.54
Area 5	G6M-02-11X	9/10/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.5 J	10 U	11,500	546	44.4	9,920	5.30	-	0.087 J	0.78 J	2.0 U		6.29	3.21	44.2	0.570	5.37	14.62
Area 5	G6M-02-11X	10/15/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.8 J	10 U	9,710	551	44.2	10,400	4.9	229	0.062 J	10 U	2.0 U		7.03	0.26	-132.7	0.942	1.12	14.83
Area 5	G6M-02-11X	2/11/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 U	4,980	584	45.9	9,880	5.1	219	0.10 J	10 U	2.0 U		7.02	0.6	-117.2	0.717	2.14	10.14
Area 5	G6M-02-11X	6/15/2016	1.0 U	1.0 U	0.63 J	1.0 U	1.0 U	1.0 U	4.6	1.0 UJ	11,000	550	35.0	9,000	4.4	250	0.05 U	0.80 U	1.0 U		6.81	2.29	-130.1	0.861	20.9	18.18
Area 5	G6M-02-11X	11/14/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.6	1.0 U	11,000	530	32.0	7,600	4.1	220	0.05 U	1.0 U	1.0 U		7.16	0.92	-127.9	0.632	5.71	11.82
Area 5	G6M-02-11X	10/19/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.2	1.0 U	6,500	530	33	7,300	3.9	190	0.03 J	1.0 U	1.0 U		6.91	0.22	-115.9	0.816	12.1	12.07
Area 5	G6M-02-11X	10/23/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	480	38	8,800	--	--	--	--	--		6.85	0.21	4.2	1.013	11.2	11.70
Area 5	G6M-02-11X	10/15/2019	1.0 U	1.0 U	0.46 J	1.0 U	1.0 U	1.0 U	-	-	-	500	37,000	9,900	-	-	-	-	-		6.80	0.34	-120	1.400	12	12.00
Area 5	G6M-02-11X	10/14/2020	1.00 U	0.490 J	0.470 J	1.00 U	1.00 U	1.00 U	-	-	-	450	37,000	10,000	-	-	-	-	-		7.08	0.730	-127	1.07	15.2	12.9
Area 5	G6M-02-12X	8/1/2002	330	2U	2U	2U	1U	2U	-	-	-	5U	-	-	-	-	-	-	-	-	6.24	0.64	19	0.924	37.6	14.01
Area 5	G6M-02-12X	8/28/2002	520	6.5	2U	2U	1U	2U	-	-	-	5U	-	-	5U	54	-	-	-	-	6.15	0.19	156	0.868	2.96	14.12
Area 5	G6M-02-12X	10/29/2002	790	10	2U	2U	1U	2U	-	-	-	5U	1U	1,100	2.0J	40	0.10U	17	2.0U	-	6.14	0.27	68	0.927	2.08	14.83
Area 5	G6M-02-12X	2/3/2003	580	4	2U	2U	1U	2U	-	-	-	5U	1U	-	5U	52	-	-	-	-	6.04	-	78	0.947	5.06	12.49
Area 5	G6M-02-12X	7/14/2003	-	-	-	-	-	-	-	-	-	-	-	-	5U	-	-	-	-	-	-	-	-	-	-	11.03
Area 5	G6M-02-12X	9/22/2004	1,000	43	110	2U	1U	2U	0.005U	0.005U	2,900	5U	1U	450	1U	84	0.5U	13	2U	-	5.87	0.35	570.2	0.873	4.95	11.59
Area 5	G6M-02-12X	9/27/2005	1,100	38	250	1.4	1U	5.4	0.025U	1.1	14,000	5U	1U	690	3.5	106	0.05U	13J	1U	-	6.11	1.17	238.5	6.920	24.5	11.73
Area 5	G6M-02-12X	9/21/2006	190	88	64	23	1U	67	0.038	46	15,000	5U	0.37	3,200	7.6	170	0.2U	5.72	1U	-	6.23	0.17	78	0.799	60.6	11.65
Area 5	G6M-02-12X	9/12/2007	62	50	28	4.4	1U	18	0.4	8.4	11,000	20U	0.58	5,500	2.6J	180	0.2U	340	1.0	-	6.52	3.06	52.8	0.934	5.8	11.75
Area 5	G6M-02-12X	10/16/2008	0.37J	7.1	18	1.6	0.5U	4.8	1.2U	3.1	19,000	174	11.8	15,800	10U	310	0.10U	7U	0.03U	-	6.09	0.53	-67.4	1.091	10	11.66
Area 5	G6M-02-12X	10/14/2009	0.5U	0.3J	13	0.74	0.5U	1.6	1.3U	1.6U	6,900	540	24.4	11,000	4.6J	350	0.13U	7U	0.03U	-	6.27	1.27	-40.0	1.025	1.5	19.7
Area 5	G6M-02-12X	10/5/2010	0.5U	0.5U	5.6	0.27J	0.5U	1.5	1.2U	2	40,000	1,040	72.2	13,700	10U	810	0.050J	2.8J	0.03U	-	6.34	0.58	-88.1	1.217	1.11	17.11
Area 5	G6M-02-12X	10/4/2011	0.5U	0.5U	6.3	0.5U	0.5U	4.3	1.2U	1.5U	21,000	1,020	71.2	9,540	6.4J	440	0.13U	0.33J	0.03U	-	6.65	0.48	-89.1	0.807	1.9	13.11
Area 5	G6M-02-12X	10/10/2012	0.5U	0.5U	1.0	0.5U	0.5U	1.0	1.8	1.5U	14,000	865	65.8	5,010	4.0J	320	0.13U	0.59J	0.03U	-	6.76	0.7	-111.4	1.068	1.68	14.37
Area 5	G6M-02-12X	10/16/2013	0.5U	0.5U	0.7	0.21J	0.5U	0.54	10	1.5U	55,000	809	61.3	4,910	4.2J	83	0.13U	5.0U	0.03U	-	6.85	0.45	-127.7	1.010	1.87	21.32
Area 5	G6M-02-12X	10/29/2014	0.5U	0.5U	0.9	0.56	0.5U	0.79	9.2	1.5U	25,000	760	56J	4,870J	6.2J	330	0.13U	0.22J	0.03U	-	6.96	0.83	-103.4	0.995	2.48	15.51
Area 5	G6M-02-12X	10/15/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 U	11,300	714	42.6	8,540	6.4	243	0.11 U	10 U	2.0 U		7.26	1.07	-108.0	0.630	6.17	13.71
Area 5	G6M-02-12X	11/14/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.2	1.0 U	9,400	720	40.0	7,700	4.5	210	0.05 U	2	1.0 U		6.90	1.24	-131	0.530	13.9	11.88
Area 5	G6M-02-12X	10/23/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0	1.0 U	8,000	670	41	8,100	4.3	200	0.055 J	1.0 U	1.0 U		6.90	0.29	-117.9	0.678	7.49	12.24
Area 5	G6M-02-12X	10/23/2018	1.0 U	1.0 U	1.0 U	0.39 J	1.0 U	1.0 U	--	--	--	590	40	7,800	--	--	--	--	--		7.02	0.49	-16.1	0.731	18.9	11.43
Area 5	G6M-02-12X	10/15/2020	1.00 U	1.00 U	0.420 J	1.00 U	1.00 U	1.00 U	-	-	-	530	44,000	8,100	-	-	-	-	-		6.95	0.620	-137	0.871	2.03	12.1
Area 5	G6M-03-08X	5/14/2003	750	2U	2U	2U	1U	2U	-	-	-	5U	1U	-	-	-	-	-	-	-	-	-	-	-	-	13.25
Area 5	G6M-03-08X	9/22/2004	690	6.3	5.4	2U	1U	2U	0.005U	0.005U	1.8	5U	1U	15U	1U	16	8.3	13	1.5J	-	5.89	1.81	247.6	0.463	3.22	14.12

Appendix D
Historical Groundwater Analytical Results
2020 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

			Laboratory Parameters																	Field Parameters					
			PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	VC	Ethane	Ethene	Methane	Dissolved Arsenic	Dissolved Iron	Dissolved Manganese	TOC	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	Phosphate	pH	DO	ORP	SpC	Turbidity	Temp
Area	Well ID	Date Sampled	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
Area 5	G6M-03-08X	12/16/2004	1,100	11	9.6	2U	1U	2U	0.069	0.03	4.7	5U	1U	17	5U	20	5.7	13	2.9	-	5.93	0.7	135.7	0.495	8.98	13.25
Area 5	G6M-03-08X	3/31/2005	340	20U	9.6J	20U	20U	20U	0.011	0.45	14	5U	1U	15U	0.3J	12	2.3	17	2U	-	5.94	1.96	166.3	0.205	0.93	12.82
Area 5	G6M-03-08X	7/6/2005	780	8.2	15	2U	1U	2U	0.11	0.068	410	4U	1U	10U	5.5	28.6	1.8	14	1U	-	5.85	0.78	236.1	0.463	5.37	13.36
Area 5	G6M-03-08X	9/28/2005	620	4.8	14	1U	1U	1U	0.025U	0.009J	2,400M	5U	1U	15U	5U	28.3	1.6	12	1U	-	5.60	3.56	172.3	0.352	8.3	10.8
Area 5	G6M-03-08X	12/14/2005	700	8	17	2U	1U	2U	0.025U	0.025U	7,000	5U	1U	15UJ	5U	32	1.2	12	1U	-	6.16	0.54	153.8	0.404	3.7	11.48
Area 5	G6M-03-08X	3/22/2006	1,100	21J	34	2.6	1U	2U	0.025U	0.006J	12,000	5U	0.1U	15U	6.5	29	0.586	11.7	1U	-	6.28	5.43	394.2	0.299	9.75	10.71
Area 5	G6M-03-08X	6/21/2006	610	16	48	2U	1U	2U	0.004J	0.14	16,000	5U	1.8	42	5U	41J	0.33	10.2	1U	-	5.91	0.29	141.6	0.490	21.4	10.62
Area 5	G6M-03-08X	9/21/2006	660	47	110	2U	1U	5.2	0.023J	0.55	14,000	5U	0.10U	15U	3.2J	41	0.228	9.64	1U	-	6.00	2.36	122.5	0.325	17.1	11.03
Area 5	G6M-03-08X	12/12/2006	750	45	120	2U	1U	7.8	0.013	0.59	16,000	5U	.01U	15U	5U	-	-	-	-	-	5.98	0.22	145	0.350	7.0	11.9
Area 5	G6M-03-08X	3/29/2007	570	37	74	2U	1U	11	0.006J	0.72	14,000	5U	0.1U	15U	5U	-	-	-	-	-	5.79	0.07	21.3	0.392	1.41	11.59
Area 5	G6M-03-08X	6/12/2007	740	55	88	2U	1U	14	0.025U	0.7	15,000	5U	0.1U	15U	0.6J	-	-	-	-	-	5.93	0.25	135.2	0.413	41.3	10.18
Area 5	G6M-03-08X	9/10/2007	520	75	75	2U	1U	21	0.025U	1.7	14,000	2U	0.1U	15U	5U	42	0.2U	200	1U	-	5.92	2.55	154.2	0.385	9.7	11.35
Area 5	G6M-03-08X	12/11/2007	390	53	49	2U	1U	15	0.004J	1.6	15,000	5U	0.1U	20	5U	-	-	-	-	-	5.76	0.23	129.3	0.437	0.8	11.11
Area 5	G6M-03-08X	3/13/2008	390	5	10	2U	1U	2U	0.003J	0.051	2,800	5U	0.1U	20	5U	-	-	-	-	-	5.89	0.22	111.6	0.195	0.3	11.55
Area 5	G6M-03-08X	10/20/2008	290	61	140	5U	5U	26	1.3U	2.1	21,000	8U	0.2U	33.2	10U	110	0.13U	14	0.03U	-	6.42	1.58	68.9	0.548	2.0	12.1
Area 5	G6M-03-08X	5/6/2009	120	38	150	4.0U	4.0U	15	1.2U	1.6	37,000	3.1J	0.2U	144	10U	190J	0.13U	10	0.03U	-	5.93	0.32	100.8	0.701	1.5	13.18
Area 5	G6M-03-08X	10/14/2009	5U	20	120	5U	5U	11	1.3U	1.6U	7,300J	8.0U	0.139U	1,470	10U	240	0.13U	8.3	0.03U	-	5.91	0.33	152.3	0.643	2.11	-
Area 5	G6M-03-08X	4/20/2010	26J	9.9J	88J	2UJ	2UJ	1.5J	1.3U	1.6U	3,500	9.0	0.194U	6,520	10U	250	0.13U	7.8	0.03U	-	6.31	0.90	87.9	0.382	0.3	14.33
Area 5	G6M-03-08X	10/4/2010	8.2	5.2	80	2U	2U	3.5	1.2U	1.5U	890	3.4J	0.132U	11,300	10U	360	0.13U	5.5	0.03U	-	6.07	0.68	84.9	0.549	0.0	10.23
Area 5	G6M-03-08X	6/8/2011	-	-	-	-	-	-	-	-	-	14.1	0.266	16,100	-	-	-	-	-	-	6.28	0.21	49.5	0.686	0.5	11.28
Area 5	G6M-03-08X	10/3/2011	4.3	3.4	62	2.5U	2.5U	9.6	1.2U	1.5U	590	5.1J	0.194J	16,800	10U	360	0.13U	3.2J	0.03U	-	6.17	0.43	77.2	0.603	0.51	15.19
Area 5	G6M-03-08X	5/8/2012	-	-	-	-	-	-	-	-	-	5.0U	0.127U	17,700	-	-	-	-	-	-	6.58	1.87	39.7	0.618	0.55	13.06
Area 5	G6M-03-08X	10/9/2012	0.5U	0.78	9.8	0.76	0.5U	7.4	1.3U	3.6	110	5U	0.152	18,600	2.5J	380	0.13U	1.4J	0.03U	-	6.34	0.43	53.9	0.648	1.42	11.87
Area 5	G6M-03-08X	5/22/2013	-	-	-	-	-	-	-	-	-	3.1J	0.117U	12,500	-	-	-	-	-	-	6.56	1.4	36.5	0.591	0.14	11.9
Area 5	G6M-03-08X	10/15/2013	0.5U	0.87	2.8	1.2	0.5U	1.6	1.8	1.5U	360	5.2	0.121U	12,300	3.0J	450	0.13U	5.0U	0.03U	-	6.57	0.39	82.7	0.851	0.0	16.01
Area 5	G6M-03-08X	6/12/2014	-	-	-	-	-	-	-	-	-	4.3J	0.152	9,850	-	-	-	-	-	-	6.57	1.84	58.9	0.592	6.31	13.03
Area 5	G6M-03-08X	6/18/2015	0.50 U	0.51 J	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	5.0 U	5.0 U	2.5 J	0.05 U	2,320	5.40	83.2	0.11 U	8.4 J	1.0 U	-	6.32	1.11	113.0	0.273	8.42	13.18
Area 5	G6M-03-08X	10/14/2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-
Area 5	G6M-03-08X	2/24/2016	1.0 U	1.0 U	3.0	1.0 U	1.0 U	1.0 U	10 U	10 U	90.7	8.2	1.03	4,710	1.8	155	0.10 U	3.1 J	2.0 U		6.79	1.03	-54.7	0.244	3.93	7.53
Area 5	G6M-03-08X	11/14/2016	1.0 U	0.96 J	0.84 J	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	170	12	0.18	4,200	1.3	140	0.053 J	9.8	1.0 U		7.03	1.19	-99.6	0.339	7.46	8.32
Area 5	G6M-03-08X	10/31/2017	1.0 U	1.0 U	0.6 J	1.0 U	1.0 U	1.0 U	--	--	--	8.6	0.27	7,300	--	--	--	--	--		6.67	1.69	30.9	0.478	25	10.75
Area 5	G6M-03-08X	10/22/2020	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	-	-	-	87.0	1,600	7,800	-	-	-	-	-		6.85	0.750	-20.0	0.391	20.4	12.4
Area 5	G6M-03-09X	5/14/2003	2U	2U	2U	2U	1U	2U	-	-	-	5U	1U	-	-	-	-	-	-	-	-	-	-	-	-	13.34
Area 5	G6M-03-09X	9/23/2004	3.7	2U	2U	2U	1U	2U	0.005U	0.005U	1.9	5U	1U	15U	1U	23	19	15	2.2	-	6.23	8.67	176.2	0.130	4.57	13.22
Area 5	G6M-03-09X	12/14/2004	2U	2U	2U	2U	1U	2U	0.015	0.026	2	5U	1U	15U	5U	25	11	15	2U	-	6.08	8.17	417.6	0.106	12.1	12.43
Area 5	G6M-03-09X	3/29/2005	1.5J	2U	2U	2U	1U	2U	0.013	0.26	1.4	5U	1UM	15U	0.3J	18	1.5	13	2U	-	6.18	6	113.2	0.123	72.4	13.27
Area 5	G6M-03-09X	6/30/2005	5.8	2U	2U	2U	1U	2U	0.077	0.032	1.2	2U	1UJ	10U	15	25.1	1.3	13	1U	-	5.75	2.81	160.2	0.135	53.6	10.23
Area 5	G6M-03-09X	9/28/2005	2U	2U	2U	2U	1U	2U	0.006J	0.009J	29	5U	1U	15U	4J	38.2	3.7	13	1U	-	5.90	10.56	181	0.108	7.6	11.2
Area 5	G6M-03-09X	12/13/2005	2U	2U	2U	2U	1U	2U	0.005J	0.014J	790	5U	1U	15U	5U	53	0.05U	13	1U	-	6.21	3.06	259.3	172.000	4.9	10.62
Area 5	G6M-03-09X	3/22/2006	2U	2U	2U	2U	1U	2U	0.006J	0.016J	39	5U	0.1U	20	7.9	36	1.81	12.1	1U	-	6.40	3	415.5	0.102	10.83	10.99
Area 5	G6M-03-09X	6/23/2006	2U	2U	2U	2U	1U	2U	0.025U	0.042	390	5U	0.1U	15U	5U	39	2.65	13.2	1U	-	5.92	4.55	164.9	0.156	16.9	11.02
Area 5	G6M-03-09X	9/21/2006	2U	2U	2U	2U	1U	2U	0.014J	0.12	140	5U	0.10U	15U	0.8J	36	2.51	9.19	1UJ	-	6.71	2.24	127.6	0.212	4.56	13.75
Area 5	G6M-03-09X	12/13/2006	2U	2U	2U	2U	1U	2U	0.025U	0.019J	870	5U	0.10U	15U	5U	-	-	-	-	-	6.21	3.38	142.8	0.162	5.6	11.45
Area 5	G6M-03-09X	3/29/2007	2U	2U	2U	2U	1U	2U	0.006J	0.032	1,600	5U	0.1U	15U	1.8J	-	-	-	-	-	6.08	0.16	16.4	0.217	2.45	10.57
Area 5	G6M-03-09X	6/13/2007	3.8	2U	2U	2U	1U	2U	0.005J	0.011J	870	5U	0.1U	15U	0.5J	-	-	-	-	-	6.26	0.36	111	0.154	7.6	11.36
Area 5	G6M-03-09X	9/10/2007	2U	2U	2U	2U	1U	2U	0.025U	0.025U	18,000	6U	0.1U	15U	5U	53	2.01	20	1U	-	6.26	2.74	128	0.193	9.9	11.07
Area 5	G6M-03-09X	12/11/2007	2U	2U	2U	2U	1U	2U	0.006J	0.022J	2,200	5U	0.1U	15U	5U*	-	-	-	-	-	6.03	0.11	110.3	0.190	2.1	11.41
Area 5	G6M-03-09X	3/12/2008	2U	2U	2U	2U	1U	2U	0.027	0.016J	5,200	5U	0.11	18	5U	-	-	-	-	-	6.33	0.24	24.6	0.159	0.5	11.51
Area 5	G6M-03-09X	10/20/2008	0.37J	0.5U	0.5U	0.5U	0.5U	0.5U	1.3U	1.6U	1,600	8U	0.2U	50U	10U	48	0.84	19	0.03U	-	5.98	0.24	177.8	0.129	6.5	11.28
Area 5	G6M-03-09X	5/6/2009	0.78	0.5U	0.5U	0.5U	0.5U	0.5U	1.2U	1.5U	340	8U	0.2U	50U	10U	52J	0.9	14	0.03U	-	5.99	0.33	104	0.171	1.0	11.35
Area 5	G6M-03-09X	10/14/2009	0.35J	0.5U	0.5U	0.5U	0.5U	0.5U	1.2U	1.5U	230	8U	0.2U	50U	10U	53	0.32	13	0.03U	-	5.49	0.26	-89.9	0.161	0	-
Area 5	G6M-03-09X	4/20/2010	0.5UJ	0.5UJ	0.5UJ	0.5UJ	0.5UJ	0.5UJ	1.3U	1.6U	700	5U	0.1U	25U	10U	90	0.13U	12	0.03U	-	6.19	0.40	166	0.102	0.6	15.41
Area 5	G6M-03-09X	10/4/2010	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1.2U	1.5U	35J	5U	0.1U	25U	10U	44	0.86	12	0.03U	-	5.90	1.18	146.6	0.159	0.6	12.1
Area 5	G6M-03-09X	6/8/2011	-	-	-	-	-	-	-	-	-	5U	1.68	11.4J	-	-	-	-	-	-	5.99	0.42	122.8	0.154	0.4	11.09
Area 5	G6M-03-09X	10/3/2011	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1.2U	1.5U	230	20U	0.2U	50U	10U	35	0.39	11	0.03U	-	5.82	0.61	163.2	0.107	0.23	16.6
Area 5	G6M-03-09X	5/8/2012	-	-	-	-	-	-	-	-	-	5.0U	0.1U	25U	-	-	-	-	-	-	6.12	2.27	186.4	0.095	0.71	13.41
Area 5	G6M-03-09X	10/9/2012	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1.3U	1.6U	2.6	5U	0.1U	6.2 J	10U	25	2.8	8.9	0.03U	-	5.71	4.36	167.9	0.136	0.58	12.12
Area 5	G6M-03-09X	5/22/2013	-	-	-	-	-	-	-	-	-	5U	0.1U	25U	-	-	-	-	-	-	6.01	0.46	172.9	0.084	1.83	13.94
Area 5	G6M-03-09X	10/15/2013	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1.2U	1.5U	7,600	5U	0.1U	9.6J	10U	29	0.82	10	0.03U	-	6.08	1.16	150.3	0.144	0	15.96
Area 5	G6M-03-09X	6/12/2014	-	-	-	-	-	-	-	-	-	5U	0.0219U	7.4J	-	-	-	-	-	-	5.89	0.54	163.9	0.102	2.49	14.07
Area 5	G6M-03-09X	10/28/2014	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1.4	1.5U	20	2.5U	0.268J	13.4J	5U	35	1.6	11	0.03U	-	6.24	1.65	124.1	0.139	2.78	13.61
Area 5	G6M-03-09X	6/18/2015	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	5.0 U	30	2.0 U	0.05 U	20	0.70 U	27.0	0.057 U	8.6 J	1.0 U	-	5.39	0.45	169.7	0.191	2.25	11.35
Area 5	G6M-03-09X	10/15/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 U	1,090	4.0 U	0.10 U	57	1.0 U	27.8	0.11 U	11.4	2.0 U		6.06	0.22	123.1	0.144	0.81	15.66
Area 5	G6M-03-09X	2/19/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	14.1	6.4 J	270	4.0 U	0.10 U	99.5	1.0 U	36.9	0.19	10.5	2.0 U		8.64	2.29	513.6	0.100	3.99	9.63
Area 5	G6M-03-09X	6/16/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	8.8	3.0 U	0.05 U	81	0.78 J	43.0	0.05 U	16.0	1.0 U		6.02	1.8	131.6	0.220	3.32	11.76
Area 5	G6M-03-09X	11/14/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	0.58 U	3.0 U	0.05 U	90	0.78 J	31	1.5	8.4	1.0 U		6.23	1.27	8.0	0.119	4.19	9.4
Area 5	G6M-03-09X	10/17/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	0.48 J	3.0 U	0.075 U	180	1.0 U	24	1.7	11	1.0 U		6.10	2.03	143.1	0.158	3.92	10.69
Area 5	G6M-03-10X	5/14/2003	15	2U	2U	2U	1U	2U	-	-	-	5U	1.0U	-	-	-	-	-	-	-	-	-	-	-	-	14.23
Area 5	G6M-03-10X	9/22/2004	27	2U	2U	2U	1U	2U	0.05	0.68	680	5U	1U	340	1U	51	2.8	12	1.5J	-	6.28	1.28	-77.2	0.539	20.5	13.06
Area 5	G6M-03-10X	12/14/2004	19	2U	44	2U	1U	2U	0.02	0.025	1.9	5U	1U	880	5U	110	3.8	21	2U	-	6.52	0.94	62	0.801	1.57	13.92
Area 5	G6M-03-10X	3/29/2005	14	0.98J	68	1.2J	1U	2U	0.005U	0.38	2,600	5U	1UM	1,200	5.9	146	0.2U	12	2U	-	6.44	0.59	-14.5	0.869	6.77	11.8
Area 5	G6M-03-10X	6/30/2005	3.6	2U	2U	2U	1U	2U	0.026	0.021	8,600	2U	1UJ	1,900	19	199	0.1	11	1U	-	5.18	0.39	273.2	0.702	5.06	12.45

			Laboratory Parameters																	Field Parameters					
			PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	VC	Ethane	Ethene	Methane	Dissolved Arsenic	Dissolved Iron	Dissolved Manganese	TOC	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	Phosphate	pH	DO	ORP	SpC	Turbidity	Temp
Area	Well ID	Date Sampled	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
Area 5	G6M-03-10X	9/28/2005	6.7	2U	2U	2U	1U	2U	0.025U	0.020J	1,100	5U	1U	720	0.6J	140	0.2	16	1U	-	6.43	4.3	74.1	0.588	7.36	11.31
Area 5	G6M-03-10X	12/13/2005	3.4	2U	2U	2U	1U	2U	0.009J	0.027	12,000	6.9	1U	3,020	5U	250	0.48	8.4	1U	-	6.73	0.15	57.2	1.032	1.3	12.28
Area 5	G6M-03-10X	3/23/2006	9.9	2U	2U	2U	1U	2U	0.020J	0.052	7,000	5U	0.22	3,800	3.5J	170	0.2U	8.9	1U	-	6.64	0.67	36.6	0.663	5.39	12.15
Area 5	G6M-03-10X	6/22/2006	2.6	2U	2U	2U	1U	2U	0.004J	0.042	14,000	5U	0.74	7,300	5J	200	0.2U	4.44	1U	-	4.87	0.64	610.8	0.770	0.64	13.95
Area 5	G6M-03-10X	9/20/2006	2.2	2U	2U	2U	1U	2U	0.006J	0.14	14,000	5U	0.21	6,200	6	180	0.2U	6.95	1U	-	6.41	1.26	-140.2	0.856	3.9	12.27
Area 5	G6M-03-10X	12/13/2006	2.8	2U	3.4	2U	1U	2U	0.025U	0.025U	20,000	5U	0.27	8,500	2J	-	-	-	-	-	6.45	0.26	168.2	0.870	5.0	11.38
Area 5	G6M-03-10X	3/29/2007	2.2	2.1	4.2	2U	1U	2U	0.007J	0.16	24,000	8.6	0.3	9,100J	4.8J	-	-	-	-	-	6.20	0.32	-60.7	0.970	2.99	12.14
Area 5	G6M-03-10X	6/11/2007	2.5	2U	4.1	2U	1U	2U	0.025U	0.095	29,000	23	1	11,000	6.7	-	-	-	-	-	6.27	0.41	45.5	0.947	8.5	11.61
Area 5	G6M-03-10X	9/10/2007	2U	2U	3.8	2U	1U	2U	0.1	0.057	620	29	0.4	8,100	3.5J	150	0.2U	290	1U	-	6.28	0.24	61.3	0.859	13.6	12.27
Area 5	G6M-03-10X	12/12/2007	2U	2U	2.8	2U	1U	2U	0.025U	0.043	20,000	26	0.33	9,200	5.8	-	-	-	-	-	6.14	0.66	69.8	0.755	7.5	12.45
Area 5	G6M-03-10X	3/11/2008	16	8.7	16	2U	1U	4	0.04	59	28,000	91	15	9,200	5J	-	-	-	-	-	6.32	0.22	-62.9	1.029	7.3	11.74
Area 5	G6M-03-10X	10/20/2008	1.0	2.0	5.4	0.5U	0.5U	1.0	1.3U	1.6U	21,000	248	7.07	10,300	170	170	0.13U	8.3	0.03U	-	5.98	0.21	-10.9	0.781	8.2	18.11
Area 5	G6M-03-10X	5/6/2009	1.0	5.0	9.1	0.5U	0.5U	1.5	1.2U	1.5U	31,000	522	54.4	9,210	11	230J	0.0076J	9.3	0.03U	-	5.91	0.33	-64.0	1.040	0.5	18.59
Area 5	G6M-03-10X	10/14/2009	0.61	3.7	10	0.5U	0.5U	2.2	1.3U	1.6U	9,000J	518	57.8	7,410	7.4J	310	0.13U	21	0.03U	-	6.32	0.67	-62.2	0.896	1.2	19.1
Area 5	G6M-03-10X	4/20/2010	1.2	5.6	2.0	0.21J	0.5U	1.1	1.2U	1.5U	4,100	648	60.5J	4,910	4.7J	130	0.13U	6.5	0.03U	-	6.78	0.77	-101.1	0.799	1.4	16.25
Area 5	G6M-03-10X	10/4/2010	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1.2U	6.2	20,000	475	58.1	5,650	10U	230	0.13U	5.9	0.03U	-	6.52	0.22	-115.6	0.729	0.5	11.33
Area 5	G6M-03-10X	6/9/2011	-	-	-	-	-	-	-	-	-	520	53.9	2,550	-	-	-	-	-	-	6.74	0.58	-118.8	0.704	4.62	12.12
Area 5	G6M-03-10X	10/3/2011	0.5U	2.7	1.2	0.5U	0.5U	0.53	1.2U	1.5U	9,800	528	54.5	3,980	3.0J	100	0.21	7.6	0.030U	-	6.75	0.10	-85.8	0.633	0.85	12.31
Area 5	G6M-03-10X	5/8/2012	-	-	-	-	-	-	-	-	-	480	56	4,070	-	-	-	-	-	-	7	0.15	-119.1	0.817	0.77	13.02
Area 5	G6M-03-10X	10/9/2012	0.5U	0.55	0.5U	0.5U	0.5U	0.5U	22	1.6U	13,000	456	47.5	2,280	10U	100	0.13U	8.4	0.03U	-	6.88	0.43	-109.6	0.940	0	12.11
Area 5	G6M-03-10X	5/22/2013	-	-	-	-	-	-	-	-	-	514	57.1	2,340	-	-	-	-	-	-	6.8	0.16	-137.6	1.111	0.4	12
Area 5	G6M-03-10X	10/15/2013	0.5U	0.68	0.52	0.5U	0.5U	0.5U	1.8	1.5U	23,000	452	50.6	2,770	10U	80	0.042U	9.2	0.03U	-	6.87	4.57	-122.7	1.018	0.19	12.22
Area 5	G6M-03-10X	6/12/2014	-	-	-	-	-	-	-	-	-	510	51.9	2,400	-	-	-	-	-	-	6.82	0.51	-88	0.857	Overrange	22.11
Area 5	G6M-03-10X	10/29/2014	0.5U	0.77	0.92	0.5U	0.5U	0.41J	1.2U	1.5U	14,000	418	42.9J	3,090J	5U	92	0.13U	8.6	0.03U	-	7.02	0.29	-122.4	0.787	4.94	19.6
Area 5	G6M-03-10X	9/10/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 U	8,910	453	68.1	2,020	1.50	-	0.080 J	10.8	2.0 U		6.56	0.51	-107.5	0.787	3.00	12.58
Area 5	G6M-03-10X	10/15/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 U	11,500	457	69.3	2,410	1.9	64.9	0.11 U	7.8 J	2.0 U		7.03	0.49	-128.0	1.206	1.74	19.32
Area 5	G6M-03-10X	2/11/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 U	7,550	492	72	2,370	3.3	105	0.11	2.0 J	2.0 U		7.02	0.4	-131.1	1.345	0.1	9.96
Area 5	G6M-03-10X	6/16/2016	16	0.65 J	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	14,000	400	61	1,600	1.8	88	0.05 U	3.3	1.0 U		6.18	1.16	-86.0	1.407	8.39	13.13
Area 5	G6M-03-10X	11/14/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	8,000	430	68	2,700	1.6	110	0.05 U	3.7	1.0 U		7.11	11.66	-101.7	0.745	6.94	7.4
Area 5	G6M-03-10X	10/23/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	6,500	420	62	2,100	1.4	62	0.07 J	5.5	1.0 U		6.88	0.22	-115	1.190	3.99	12.17
Area 5	G6M-03-10X	10/23/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	380	51	1,900	--	--	--	--	--		6.93	0.14	-30.2	1.576	3.98	11.60
Area 5	G6M-03-10X	10/15/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	360	45,000	2,100	-	-	-	-	-		6.80	0.31	-140	1.500	1.2	12.00
Area 5	G6M-03-10X	10/22/2020	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	-	-	-	360	59,000	2,000	-	-	-	-	-		6.94	0.660	-128	0.853	11.3	12.4
Area 5	G6M-04-05X	9/22/2004	140	2U	2U	2U	1U	2U	0.005U	0.0092	1.3	5U	1U	15U*	1U	14	4.9	14	2U	-	6.10	9.68	233.9	0.099	0.68	11.28
Area 5	G6M-04-05X	12/15/2004	17	2U	2U	2U	1U	2U	0.005U	0.016	1.4	5U	1U	15U	5U	14	7.5	13	2U	-	5.87	1.17	228.7	0.098	1.04	11.37
Area 5	G6M-04-05X	3/30/2005	130	10U	10U	10U	5U	10U	0.0074	0.028	15	5U	1U	15U	0.5J	14	1.2	10	2U	-	6.04	2.8	123.1	0.093	1.92	11.81
Area 5	G6M-04-05X	6/30/2005	200	2U	2U	2U	1U	2U	0.041	0.022	96	2U	1UJ	10U	2.4	15.9	0.87	8.9	1U	-	5.48	0.88	207.1	0.094	8.19	11.49
Area 5	G6M-04-05X	9/29/2005	110	2U	2U	2U	1U	2U	0.006J	0.012J	220	5U	1U	33	5U	3.3	0.98	14	1U	-	6.08	0.2	215.3	0.061	2.1	10.48
Area 5	G6M-04-05X	12/14/2005	36	2U	2U	2U	1U	2U	0.007J	0.016J	550	5U	1U	15U	5U	21	1.6	11	1U	-	6.10	0.23	179.3	0.091	0.3	11.31
Area 5	G6M-04-05X	3/22/2006	330	2U	2U	2U	1U	2U	0.025U	0.019J	2,200	5U	0.1U	15U	3.4J	13	1.11	9.33	1U	-	6.21	0.77	343.3	0.062	0.86	11.08
Area 5	G6M-04-05X	6/22/2006	38	2U	2U	2U	1U	2U	0.025U	0.082	33	5U	0.1U	15U	5U	22J	1.82	9.01	1U	-	4.40	2.55	760.6	0.083	0	11.56
Area 5	G6M-04-05X	9/22/2006	30	2U	2U	2U	1U	2U	0.009J	0.084	140	5U	0.10U	15U	5U	15	1.51	10.8	1U	-	5.78	1.48	-127.3	0.123	0.34	11.56
Area 5	G6M-04-05X	12/12/2006	8.7	2U	2U	2U	1U	2U	0.025U	0.010J	850	5U	0.1U	15U	5U	-	-	-	-	-	5.66	0.39	156.7	0.105	0	11.24
Area 5	G6M-04-05X	3/29/2007	16	2U	2U	2U	1U	2U	0.025U	0.022J	460	5U	0.12	15U	1.4J	-	-	-	-	-	5.79	0.13	57.9	0.185	0.01	-
Area 5	G6M-04-05X	6/12/2007	12	2U	2U	2U	1U	2U	0.005J	0.041	330	5U	0.1U	15U	0.4J	-	-	-	-	-	5.89	0.52	168.2	0.116	4.4	15.84
Area 5	G6M-04-05X	9/10/2007	43	2U	2U	2U	1U	2U	0.24	0.089	340	2U	0.1U	15U	5U	20	1.61	17	1U	-	5.89	2.6	142.8	0.103	3.9	12.77
Area 5	G6M-04-05X	12/11/2007	7.2	2U	2U	2U	1U	2U	0.025U	0.013J	1,900	5U	0.19	15U	5U	-	-	-	-	-	5.75	0.23	134.1	0.118	0.6	15.25
Area 5	G6M-04-05X	3/13/2008	2.5	2U	2U	2U	1U	2U	0.009J	0.020J	1,300	5U	0.1U	17	5U	-	-	-	-	-	5.9	0.18	121	0.129	0.2	17.23
Area 5	G6M-04-05X	10/20/2008	3.7	0.5U	0.5U	0.5U	0.5U	0.5U	1.3U	1.6U	3,300	8U	0.2U	50U	10U	30	1.5	10	0.03U	-	5.92	0.73	80	0.152	0	15.18
Area 5	G6M-04-05X	5/6/2009	16	0.38J	0.84	0.5U	0.5U	0.27J	1.3U	1.6U	2,200	8U	0.2U	50U	10U	49J	0.37	17	0.03U	-	5.72	0.2	125.5	0.187	0	11.92
Area 5	G6M-04-05X	10/14/2009	8.2	0.5U	0.29J	0.5U	0.5U	0.5U	1.3U	1.6U	2,000J	8.0U	0.127U	60U	10U	29	0.39	15	0.03U	-	5.62	0.5	184	0.203	0	14.07
Area 5	G6M-04-05X	4/20/2010	2.3J	0.5UJ	0.5UJ	0.5UJ	0.5UJ	0.5UJ	1.2U	1.5U	3,200	5U	0.1U	25U	10U	80	0.30	15	0.03U	-	5.92	0.4	152.5	0.144	0.20	17.68
Area 5	G6M-04-05X	10/4/2010	0.28J	0.5U	0.5U	0.5U	0.5U	0.5U	1.2U	1.5U	18	5U	0.1U	25U	10U	30	1.7	13	0.03U	-	5.67	1.51	145.5	0.131	0.8	15.25
Area 5	G6M-04-05X	6/8/2011	-	-	-	-	-	-	-	-	-	5U	0.1U	12.7J	-	-	-	-	-	-	5.78	0.12	134.1	0.193	1.0	13.15
Area 5	G6M-04-05X	10/3/2011	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1.2U	1.5U	2,000	20U	0.2U	11.4J	2.3J	39	0.47	19	0.03U	-	5.76	0.20	158.9	0.174	0.44	14.14
Area 5	G6M-04-05X	5/8/2012	-	-	-	-	-	-	-	-	-	5.0U	0.1U	10.9J	-	-	-	-	-	-	6.01	0.83	157.2	0.160	0.56	14.76
Area 5	G6M-04-05X	10/9/2012	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1.3U	1.6U	1,800	5U	0.1U	21.8 J	10U	32	0.063J	16	0.03U	-	5.76	0.27	108.4	0.171	0.84	14.36
Area 5	G6M-04-05X	5/22/2013	-	-	-	-	-	-	-	-	-	2.7J	0.1U	25U	-	-	-	-	-	-	5.9	0.25	134.1	0.156	1.75	13.2
Area 5	G6M-04-05X	10/15/2013	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1.3U	1.6U	28,000	5U	0.1U	15.4J	10U	60	0.13U	18	0.03U	-	6.01	0.47	145.8	0.199	0.00	14.17
Area 5	G6M-04-05X	6/12/2014	-	-	-	-	-	-	-	-	-	2.4J	0.195U	13.3J	-	-	-	-	-	-	6.09	0.41	86.2	0.193	0.68	12.29
Area 5	G6M-04-05X	10/28/2014	0.42J	0.5U	0.5U	0.5U	0.5U	0.5U	2.8	1.6	48	4.1J	0.029	12.2J	10U	39	0.31	13	0.03U	-	6.49	0.62	81.9	0.182	0.48	11.61
Area 5	G6M-04-05X	6/17/2015	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	5.0 U	22.4 J	2.0 U	0.05 U	11.8 J	0.81 U	22.9	0.29	23.30	1.0 U	-	-	-	-	-	-	-
Area 5	G6M-04-05X	9/10/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 U	10 U	4.0 U	0.10 U	7.5 J	1.0 U	-	0.21	25.40	2.0 U		5.75	0.95	67.6	0.245	2.08	12.07
Area 5	G6M-04-05X	10/15/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 U	53	4.0 U	0.10 U	20	1.1	31.9	0.20	21.9	2.0 U		5.96	0.50	116.4	0.264	2.44	11.84
Area 5	G6M-04-05X	2/22/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 U	305	4.0 U	0.10 U	21.9	1.0 U	34.7	0.11 U	26.8	2.0 U		5.93	1.03	112.9	0.187	1.92	10.35
Area 5	G6M-04-05X	11/14/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	15	3.0 U	0.05 U	20	0.75 J	36	0.19	24	1.0 U		6.33	1.22	23.9	0.176	4.16	9.56
Area 5	G6M-04-05X	10/17/2017	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	260	3.0 U	0.075 U	15	1.0 U	31	0.17	16	1.0 U		5.66	0.19	185.7	0.171	3.27	11.24
Area 5	G6M-04-05X	10/23/2018	1.2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	--	--	--	--	--	--	--	--		6.03	0.37	18.9	0.187	2.1	10.99
Area 5	G6M-04-05X	10/20/2020	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	-	-	-	-	-	-	-	-	-	-	-		6.35	0.590	206	0.123	1.28	11.8
Area 5	G6M-04-06X	9/22/2004	160	2U	2U	2U	1U	2U	0.056	0.005U	3.4	5U	1U	15U	1U	110	5.3	8.7	2U	-	11.01	9.17	-0.6	0.341	1.34	11.37
Area 5	G6M-04-06X	12/16/2004	24	2U	2U	2U	1U	2U	0.017	0.028	0.47	21	1U	15U	5U	54	7.9	10	2.9	-	10.89	9.42	106.9	0.254	2.26	13.13
Area 5	G6M-04-06X	3/30/2005	37	2U	2U	2U	1U	2U	0.0087	0.051	0.58	7.5	1U	15U	5U	37	2	12	2U	-	9.47	10.46	10.6	0.235	0.32	11.56
Area 5	G6M-04-06X	7/1/2005	140	2U	2U	2U	1U	2U	0.034	0.056	9.7	2U	1UJ	190	2.8J	10.3	1.5	25	1U	-	9.08	9.77	457.2	0.214	0.95	11.76

Appendix D
Historical Groundwater Analytical Results
2020 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

			Laboratory Parameters																	Field Parameters					
			PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	VC	Ethane	Ethene	Methane	Dissolved Arsenic	Dissolved Iron	Dissolved Manganese	TOC	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	Phosphate	pH	DO	ORP	SpC	Turbidity	Temp
Area	Well ID	Date Sampled	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
Area 5	G6M-04-06X	9/29/2005	32	2U	2U	2U	1U	2U	0.009J	0.018J	0.7	11	1U	15U	5.4	70.4	1.9	12	1U	-	9.32	9.43	390.6	0.192	1.99	11.46
Area 5	G6M-04-06X	12/15/2005	26	2U	2U	2U	1U	2U	0.009J	0.022J	3.3	80.9	1U	150	7.6	39	1.9	12	1U	-	9.74	10.17	151.2	0.226	0.3	14.61
Area 5	G6M-04-06X	3/23/2006	100	2U	2U	2U	1U	2U	0.006J	0.036	3.1	5U	0.1U	15U	5U	23	1.71	9.29	1U	-	8.94	9.46	452.5	0.188	1.72	10.34
Area 5	G6M-04-06X	6/23/2006	190	2U	2U	2U	1U	2U	0.012J	0.041	10	13J	0.1U	15U	5U	41	1.69	9.43	1U	-	8.66	9.75	165.3	0.254	3.55	12.76
Area 5	G6M-04-06X	9/21/2006	45	2U	2U	2U	1U	2U	0.016J	0.11	6.3	5U	0.10U	15U	1.9J	31	1.03	10.9	1U	-	9.46	9.75	66.6	0.347	1.45	17.93
Area 5	G6M-04-06X	12/11/2006	37	2U	2U	2U	1U	2U	0.010J	0.044	4.3	5U	0.1U	15U	5U	-	-	-	-	-	9.67	9.67	108	0.257	4.4	14.21
Area 5	G6M-04-06X	3/29/2007	18	2U	2U	2U	1U	2U	0.011J	0.021J	13	5U	0.1U	15U	5U*	-	-	-	-	-	8.99	14.57	150.7	0.137	11.1	11.92
Area 5	G6M-04-06X	6/12/2007	25	2U	3.5	2U	1U	2U	0.010J	0.061	19	5U	0.1U	15U	5U	-	-	-	-	-	8.82	10.12	118.1	0.272	4.9	13.9
Area 5	G6M-04-06X	9/10/2007	23	2U	3	2U	1U	2U	0.005J	0.007J	0.13	8U	0.1U	15U	5U	38	1.32	82	1U	-	8.14	6.73	50.1	0.248	9.9	16.14
Area 5	G6M-04-06X	12/12/2007	22	2U	6.3	2U	1U	2U	0.004J	0.025U	0.21	5U	0.1U	15U	5U	-	-	-	-	-	7.36	12.25	81.7	0.335	0.2	13.66
Area 5	G6M-04-06X	3/14/2008	14	2U	2.4	2U	1U	2U	0.005J	0.025U	2.8	5U	0.1U	15U	5U	-	-	-	-	-	7.29	10.89	186.9	0.224	0.3	13.13
Area 5	G6M-04-06X	10/16/2008	24	0.68	2.2	0.5U	0.5U	0.5U	1.3U	1.6U	2	8.5	0.2U	11.5J	10U	34	1.47U	11	0.03U	-	7.69	9.11	209.6	0.198	1	13.01
Area 5	G6M-04-06X	5/6/2009	13	0.51	1.8	0.5U	0.5U	0.5U	1.3U	1.6U	1.6	6.9	0.2U	50U	10U	44	1.3	14	0.03U	-	7.35	9.41	9.2	0.209	1.9	15.25
Area 5	G6M-04-06X	10/14/2009	10	0.46J	1.8	0.5U	0.5U	0.5U	1.3U	1.6U	22J	7.4U	0.2U	50U	10U	44	1.3	11	0.03U	-	7.15	9.4	150	0.197	0	13.65
Area 5	G6M-04-06X	4/20/2010	3.0J	0.5UJ	0.5UJ	0.5UJ	0.5UJ	0.5UJ	1.2U	1.5U	150	7.3	0.1U	25U	10U	60	1.8	11	0.03U	-	6.75	2.86	27.1	0.147	0.0	12.92
Area 5	G6M-04-06X	10/4/2010	0.95	0.5U	0.5U	0.5U	0.5U	0.5U	1.2U	1.5U	2,000	6.1	0.1U	25U	10U	57	1.8	9.1	0.03U	-	6.50	0.38	121.6	0.216	0.0	14.01
Area 5	G6M-04-06X	10/3/2011	4.0	0.5U	2.0	0.5U	0.5U	0.5U	1.2U	1.5U	9,200	4.7J	0.2U	10.7J	10U	71	0.74	11	0.03U	-	6.06	1.46	70.2	0.133	0.24	11.95
Area 5	G6M-04-06X	10/9/2012	3.7	0.5U	0.5U	0.5U	0.5U	0.5U	1.2U	1.5U	14,000	5U	0.1U	21.2 J	10U	62	0.48	16	0.03U	-	6.05	0.31	135.7	0.239	0	11.64
Area 5	G6M-04-06X	10/15/2013	4.5	0.37J	0.55	0.5U	0.5U	0.5U	1.2U	1.5U	36,000	5U	0.1U	88.2	10U	140	0.13U	12	0.03U	-	6.09	1.07	171.1	0.242	0.04	10.6
Area 5	G6M-04-06X	10/28/2014	1.2	0.78	0.41J	0.5U	0.5U	0.5U	8.1J	1.5U	1,200	2.5U	0.0243U	157J	5U	70	0.29	15	0.03U	-	6.51	0.29	164.7	0.205	1.63	11.28
Area 5	G6M-04-06X	10/19/2015	1.7	0.70 J	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 U	10 U	4.0 U	0.10 U	74	1.0	59.7	0.11 U	13.0	2.0 U		-	-	-	-	-	-
Area 5	G6M-04-06X	11/14/2016	1.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	0.82	3.0 U	0.017 J	77	1.0	62	0.05 U	15	2.0		6.47	1.01	-8.6	0.189	5.87	9.97
Area 5	G6M-04-06X	10/17/2017	1.8	1.0 U	0.60 J	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	1.6	3.0 U	0.03 J	98	1.0 U	58	0.07 J	16	1.0 U		6.42	0.28	81.7	0.271	5.72	10.97
Area 5	G6M-04-06X	10/22/2018	1.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	3.0 U	0.05 U	62	--	--	--	--	--		5.90	0.53	51.1	0.246	8.69	10.90
Area 5	G6M-04-06X	10/10/2019	1.1	1.0 U	0.54 J	1.0 U	1.0 U	1.0 U	-	-	-	550	130,000	17,000	-	-	-	-	-		6.10	0.2	100	0.190	2.4	11.00
Area 5	G6M-04-06X	10/14/2020	1.70	2.10	0.940 J	1.00 U	1.00 U	1.00 U	-	-	-	3.00 U	86.0 U	140	-	-	-	-	-		6.39	0.640	228	0.132	2.51	11.4
Area 5	G6M-04-07X	9/22/2004	900	2.7	8.4	2U	1U	2U	0.061	0.12	3.1	5U	1U	260	1U	56	5.4	32	2U	-	7.10	3.42	110.1	0.243	9.28	11.98
Area 5	G6M-04-07X	12/17/2004	1,100	2	9.3	2U	1U	2U	0.11	2.2	2.1	28	1U	47	0.6J	43	6.4	14	2U	-	7.51	1.98	-38.9	0.246	74.7	11.89
Area 5	G6M-04-07X	3/29/2005	240	10U	10U	10U	5U	10U	0.031	0.64	1.9	12	1UM	27	0.5J	43.2	1.5	14	2U	-	6.88	4.19	22	0.229	4.2	10.79
Area 5	G6M-04-07X	7/5/2005	170	2U	2U	2U	1U	2U	0.07	0.042	1.8	4	1U	37	5U	41.1	1.7	14	1U	-	5.83	5.44	369.9	0.186	23.4	11.51
Area 5	G6M-04-07X	9/29/2005	470	3.0	8.3	2U	1U	2U	0.010J	0.010J	2.4	5U	1U	43	5U	1U	1.9	16	1U	-	6.19	0.86	478.3	0.277	6.62	11.28
Area 5	G6M-04-07X	12/14/2005	390	2U	2	2U	1U	2U	0.006	0.016	7.9	3.8	1U	17.9	6.1	40	1.6	13	1U	-	6.65	4.72	149.3	0.218	34.1	11.66
Area 5	G6M-04-07X	3/23/2006	260	2U	2U	2U	1U	2U	0.005J	0.029	250	5U	0.1U	15U	5U	36	1.57	13.3	1U	-	6.28	2.14	619.7	0.267	4.09	12.09
Area 5	G6M-04-07X	6/23/2006	150	2U	2U	2U	1U	2U	0.005J	0.022J	22	5U	0.1U	24	0.3J	30	1.28	12.5	1U	-	6.29	5.5	117.8	0.240	8.07	11.75
Area 5	G6M-04-07X	9/21/2006	110	2U	2U	2U	1U	2U	0.014J	0.088	2.4	5U	0.10U	19	3.4J	32	2.54	10	1U	-	6.34	4.43	99.8	0.197	2.63	14.46
Area 5	G6M-04-07X	12/11/2006	87	2U	2U	2U	1U	2U	0.007J	0.033	2.2	5U	0.10U	15	5U	-	-	-	-	-	6.65	6.99	116.4	0.134	10.52	17.2
Area 5	G6M-04-07X	3/29/2007	45	2U	2U	2U	1U	2U	0.006J	0.018J	5.2	5U	0.1U	17J	5U	-	-	-	-	-	6.55	10.3	143.7	0.123	3.71	15.42
Area 5	G6M-04-07X	6/12/2007	44	2U	2U	2U	1U	2U	0.010J	0.079	46	5U	0.67	18	1.2J	-	-	-	-	-	6.26	8.12	162.7	0.129	16.1	13.18
Area 5	G6M-04-07X	9/10/2007	25	2U	2U	2U	1U	2U	0.006J	0.006J	0.11	2U	0.1U	15U	5U	19	1.89	45	1U	-	6.20	8.68	117.7	0.130	31.2	14.72
Area 5	G6M-04-07X	12/12/2007	23	2U	2U	2U	1U	2U	0.004J	0.013J	0.48	5U	0.1U	15U	5U	-	-	-	-	-	6.48	10.14	140.2	0.134	3.0	10.24
Area 5	G6M-04-07X	3/13/2008	19	2U	2U	2U	1U	2U	0.003J	0.025U	1.6	5.2	0.1U	15U	5U	-	-	-	-	-	6.54	10.52	83.4	0.143	0.3	10.47
Area 5	G6M-04-07X	10/16/2008	11	0.5U	0.5U	0.5U	0.5U	0.5U	1.2U	1.5U	390	8.0U	0.2U	15.1J	10U	28	1.81U	10	0.03U	-	5.85	1.62	205	0.129	0.45	10.72
Area 5	G6M-04-07X	5/6/2009	2.2	0.5U	0.5U	0.5U	0.5U	0.5U	1.3U	1.6U	660	2.9J	0.2U	50U	10U	41J	2.3	12	0.03U	-	5.90	0.7	119.2	0.103	1.25	13.18
Area 5	G6M-04-07X	10/14/2009	1.3	0.5U	0.5U	0.5U	0.5U	0.5U	1.3U	1.6U	2,500J	8U	0.2U	50U	10U	32	1.9	15	0.03U	-	6.00	0.35	141.6	0.104	0	10.81
Area 5	G6M-04-07X	4/20/2010	13J	0.5UJ	0.5UJ	0.5UJ	0.5UJ	0.5UJ	1.3U	1.6U	630	5U	0.1U	31.8U	10U	50	1.5	12	0.03U	-	5.90	1.11	24.2	0.167	0	10.3
Area 5	G6M-04-07X	10/4/2010	19	2.2	4.5	0.5U	0.5U	0.5U	1.2U	1.5U	5,100	5U	0.1U	25U	10U	43	1.1	10	0.03U	-	6.06	0.94	116.9	0.181	0.32	10.45
Area 5	G6M-04-07X	6/8/2011	-	-	-	-	-	-	-	-	-	5U	0.148	67.9	-	-	-	-	-	-	5.81	1.06	34.1	0.172	0	10.36
Area 5	G6M-04-07X	10/3/2011	8.7	1.2	2.2	0.5U	0.5U	0.5U	1.2U	1.5U	8,300	20U	0.2U	68.0	10U	53	0.59	12	0.03U	-	5.76	0.28	-57.7	0.105	0.96	10.69
Area 5	G6M-04-07X	5/8/2012	-	-	-	-	-	-	-	-	-	4.0J	0.1U	27.2	-	-	-	-	-	-	6.26	0.35	122	0.198	0.48	10.51
Area 5	G6M-04-07X	10/9/2012	31J	6.2	33J	0.5U	0.5U	0.97	1.2U	1.5U	6,400	5U	0.1U	35.4	10U	99	0.5	10	0.03U	-	6.05	0.41	138.9	0.264	0	10.25
Area 5	G6M-04-07X	5/22/2013	-	-	-	-	-	-	-	-	-	3.9J	0.1U	51.4	-	-	-	-	-	-	6.14	0.39	154.1	0.220	0	14.03
Area 5	G6M-04-07X	10/15/2013	26	5.7	16	0.5U	0.5U	0.5U	1.2U	1.5U	37,000	3.8J	0.1U	3,480	10U	110	0.30	11	0.03U	-	6.24	0.37	218.4	0.262	0.05	13.59
Area 5	G6M-04-07X	6/10/2014	-	-	-	-	-	-	-	-	-	3.0J	0.021UJ	6,710	-	-	-	-	-	-	6.01	0.32	210.9	0.257	5.18	8.84
Area 5	G6M-04-07X	10/28/2014	55	11	54	0.31J	0.5U	0.61	1.3U	1.6U	4,900	9.5	0.195J	4,370J	5U	130	0.13	9.6	0.03U	-	6.57	0.24	108	0.254	4.69	10.62
Area 5	G6M-04-07X	10/19/2015	59	12	1.0 U	1.0 U	1.0 U	1.00	10 U	10 U	3,120	14.1	564	4,590	0.98 J	143	0.11 U	11.0	2.0 U		6.35	0.05	23.3	0.324	1.68	10.67
Area 5	G6M-04-07X	11/14/2016	78	18	73	0.42 J	1.0 U	1.8	1.1 U	1.0 U	1,000	29	1.9	4,400	1.2	160	0.05 U	9.4	1.0 U		6.42	1.01	-28.3	0.278	6.77	10.19
Area 5	G6M-04-07X	10/17/2017	38	20	56	0.39 J	1.0 U	3.1	1.1 U	1.0 U	760	18	1.7	5,200	1.1	170	0.05 U	7.6	1.0 U		6.47	0.38	37.8	0.409	9.59	10.78
Area 5	G6M-04-07X	4/3/2018	4.2	3.4	7.7	1.0 U	1.0 U	1.0 U	--	--	--	7.2	0.05 U	2,100	--	--	--	--	--		7.16	1.14	39.4	0.508	2.90	10.53
Area 5	G6M-04-07X	10/22/2018	15	47	120	2.0 U	2.0 U	4.40	--	--	--	18	1.5	4,200	--	--	--	--	--		6.15	0.28	33.7	0.538	4.21	11.20
Area 5	G6M-04-07X	4/4/2019	25	48	78	0.52 J	1.0 U	5.7	-	-	-	14	1,200	4,100	0.89 J	-	-	-	-		6.40	0.89	7.9	0.560	4.50	11.00
Area 5	G6M-04-07X	10/10/2019	36	53	110	0.77 J	1.0 U	8.5	--	--	--	9.3	860	4,000	1.2	--	--	--	--		6.20	0.42	51	0.610	8.40	11.00
Area 5	G6M-04-07X	05/12/2020	18.0	38.0	110	0.590 J	1.00 U	10.0	1.10 U	1.00 U	360	8.30	950	3,800	1.10	220	0.100 U	9.40	0.830 U		6.91	10.4	-83.9	1260	18.4	11.8
Area 5	G6M-04-07X	10/14/2020	9.10	37.0	76.0	0.580 J	1.00 U	11.0	1.10 U	0.540 J	540	7.60	1,000	3,800	1.10	230	0.0500 U	9.90	0.810 U		6.43	0.720	57.0	0.397	4.78	11.6
Area 5	G6M-13-01X	1/30/2014	12	0.42 J	0.73	0.5U	0.5U	0.5U	-	-	-	-	-	-	-	-	-	-	-	-	6.21	1.64	188.4	0.860	38	16.43
Area 5	G6M-13-01X	10/28/2014	150	2.8	7.80	0.5U	0.5U	0.5U	-	-	-	2.5U	0.025U	26.8J	-	-	-	-	-	-	6.25	1.77	100.3	0.495	9.14	12.81
Area 5	G6M-13-01X	6/22/2015	16	0.65 J	1.30	0.50 U	0.50 U	0.50 U	-	-	-	2.3 J	0.05 U	8.7 J	-	-	-	-	-		5.80	0.89	172.2	0.848	1.11	17.46
Area 5	G6M-13-01X	10/16/2015	26	1.10	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	4.0 U	0.0613 J	16	-	-	-	-	-		5.57	0.52	42.7	0.727	22.1	13.66
Area 5	G6M-13-01X	2/11/2016	10	0.69 J	1.6	1.0 U	1.0 U	1.0 U	10 U	10 U	126	4.0 U	0.10 U	10.3 J	1.0 U	31.5	0.31	16.7	2.0 U		6.05	0.57	38.8	0.880	1.02	10.34
Area 5	G6M-13-01X	6/15/2016	18	1.1	2.8	1.0 U	1.0 U	1.0 U	-	-	-	2.1 J	0.083	14	-	-	-	-	-		6.09	0.65	36.9	0.891	25.0	15.57
Area 5	G6M-13-01X	11/11/2016	27	3.5	6.5	1.0 U	1.0 U	2.8	-	-	-	3.5	1.2	29	-	-	-	-	-		5.63	1.11	83.3	0.638	22.1	12.35
Area 5	G6M-13-01X	5/18/2017	13	0.85 J	3.4	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	830	3.0 U	0.039 J	19	1.0 U	36	0.14	14	1.0 U		6.02	0.37	127.6	0.631	5.47	14.52
Area 5	G6M-13-01X	10/16/2017	10	0.79 J	0.65 J	1.0 U	1.0 U	1.0 U	--	--	--	3.6	0.83	34	--	--	--		--		6.09	0.40	49.7	0.809	38.9	12.11
Area 5	G6M-13-01X	4/4/2018	3.4	0.99 J	1.20	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	3,200	10	1.5	260	1.8	31	0.05 U	15	1.0 U		6.15	0.71	41.9	0.907	3.35	11.09

Appendix D
Historical Groundwater Analytical Results
2020 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

			Laboratory Parameters																	Field Parameters					
			PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	VC	Ethane	Ethene	Methane	Dissolved Arsenic	Dissolved Iron	Dissolved Manganese	TOC	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	Phosphate	pH	DO	ORP	SpC	Turbidity	Temp
Area	Well ID	Date Sampled	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
Area 5	G6M-13-01X	10/29/2018	0.85 J	1.30	3.60	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	2,300	13	1,500.0	200	6.7	35	0.05 U	14	1.0 U		5.63	0.46	-1.9	0.975	23.6	12.06
Area 5	G6M-13-01X	4/3/2019	1.0 U	1.0 U	3.10	1.0 U	1.0 U	1.0 U	0.66 J	1.5	4,500	3.4	460	3,300	36	-	0.050 U	13	1.0 U		6.00	1.40	-140	1.000	29	12.00
Area 5	G6M-13-01X	10/21/2019	1.8	7.1	30	1.0 U	1.0 U	4.0	1.1 U	2.2	6,200	6.2	1,300.0	2,700	14	34	0.21	12	0.85 U		5.70	0.15	33	0.790	190	12.00
Area 5	G6M-13-01X	05/11/2020	0.850 J	0.690 J	4.40	1.00 U	1.00 U	1.00 U	1.10 U	0.780 J	8,000	6.20	620	5,100	11.0	66.0	0.100 U	10.0	0.810 U		5.90	0.880	3.80	941	94.2	12.7
Area 5	G6M-13-01X	10/13/2020	2.00	1.60	2.20	1.00 U	1.00 U	1.00 U	1.10 U	1.00 U	3,100	1.80 J	180	2,600	3.80	45.0	0.0500 U	15.0	0.830 U		6.20	1.53	-88.1	0.639	322	11.8
Area 5	G6M-13-04X	1/30/2014	41	51	68	2.7	0.90 J	150	-	-	-	-	-	-	-	-	-	-	-	-	6.57	0.98	-36.4	1.414	4.6	12.6
Area 5	G6M-13-04X	6/10/2014	25	31	29	2.7	0.66	130	2.7J	12J	3,600J	360	49J	5,900	2.5J	280J	0.13U	9.3 B	0.030U	-	6.42	0.58	-49.4	1.212	12.9	-
Area 5	G6M-13-04X	10/29/2014	1.7	17	69	1.6	0.56	72	4.7	41	32,000	321	5.45J	6,170J	13	310	0.13U	3.5J	0.03U	-	6.65	0.42	-95.2	1.081	5.55	12.07
Area 5	G6M-13-04X	6/22/2015	0.50 U	1.80	2.20	0.50 U	0.50 U	1.40	5.0 U	5.0 U	719	360	29	3,840 J	3.20	129	0.11 U	30.5 J	1.0 U	-	6.95	0.7	-156.6	0.800	0.8	17.28
Area 5	G6M-13-04X	10/15/2015	19	19	52	0.76 J	1.0 U	32.7	10 U	18.6	9,470	388	33	7,930	2.8	269	0.16	5.8 J	2.0 U		6.6	0.29	-69.4	1.595	7.5	12.33
Area 5	G6M-13-04X	2/11/2016	0.70 J	5.9	15	1.5	1.0 U	50.9	10 U	18.9	5,690	392	33.9	7,390	3.2	261	0.099 J	6.1 J	2.0 U		6.66	1.23	-2.9	1.086	9.5	8.53
Area 5	G6M-13-04X	6/15/2016	12	18	19	1.2	0.73 J	55.0	2.80	20 J	9,300	340	27	6,800	1.7	280	0.05 U	3.6	1.0 U		6.69	0.59	-54.2	1.669	11.54	14.90
Area 5	G6M-13-04X	11/11/2016	4.9	17	17	0.86 J	0.62 J	36	2.2	12	7,000	340	28	7,600	1.6	250	0.05 U	4.0	1.0 U		7.21	0.88	-80.4	1.175	24.1	12.73
Area 5	G6M-13-04X	5/18/2017	1.0 U	1.8	9.0	0.91 J	1.0 U	7.1	5.7	6.2	7,600	400	47.0	9,000	2.4	250	0.04 J	5.0 U	1.0 U		6.75	0.43	-100.9	1.279	21.0	13.59
Area 5	G6M-13-04X	10/16/2017	40	40	25	0.81 J	0.71 J	33	1.5	7.6	2,500	340 J	27	7,100	1.8	190	0.05 UJ	4.1	1.0 U		6.76	0.65	-79.1	1.410	4.96	12.07
Area 5	G6M-13-04X	4/5/2018	1.0 U	4.1	6.9	1.6	1.0 U	8.6	8.6	14	20,000	350	34	7,500	1.8	210	0.062 J	4.5	1.0 U		6.65	0.9	-31.2	1.579	1.28	10.59
Area 5	G6M-13-04X	10/29/2018	1.0 U	6.9	7.7	0.67 J	1.0 U	6.1	1.8	4.4	2,700	330	23	8,700	1.5	160	0.055 J	6.9	1.0 U		6.42	0.91	-53.9	1.619	9.47	11.18
Area 5	G6M-13-04X	4/4/2019	1.0 J	12	13	0.52 J	1.0 U	6.5	2.4	12	21,000	350 J	35,000	10,000	4.4	-	0.05 U	5.7 J	1.0 U		6.80	1.4	-97	1.700	2	10.00
Area 5	G6M-13-04X	10/23/2019	1.0 U	0.61 J	8.5	1.0 U	1.0 U	4.5	3.2	16	13,000	440	81,000	13,000	55	310	0.042 J	4.1	0.86 U		6.60	1.8	-95	2.000	11	12.00
Area 5	G6M-13-04X	05/11/2020	1.00 U	1.00 U	0.680 J	1.00 U	1.00 U	0.520 J	1.50	2.50	21,000	430	44,000	9,000	6.30	240	0.100 U	5.50	0.810 U		6.83	0.870	-83.4	1700	0.860	11.4
Area 5	G6M-13-04X	10/16/2020	1.00 U	1.00 U	1.20	1.00 U	1.00 U	1.30	3.30	3.60	25,000	550	100,000	10,000	10.0	250	0.0550 J	4.40 J	0.960 U		6.54	0.610	-117	1.45	94.8	12.2
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	7	69	0.166	3.09	11.60
Area 5	G6M-18-01	10/14/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	0.33 J	3.0 U	54	14	0.57 J	26	0.5	7.1	0.93 U		6.00	6.8	130	0.140	5.5	13.00
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	3.85	137.1	0.722	3.69	10.74
Area 5	G6M-18-02	10/18/2019	0.80 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	2.6	3.0 U	19 J	90	1.0 U	18	1.9	11	0.88 U		5.80	2.5	210	0.840	1.3	12.00
Area 5	G6M-18-02	10/14/2020	1.00 UJ	1.00 UJ	1.00 UJ	1.00 UJ	1.00 UJ	1.00 UJ	1.10 U	1.00 U	0.510 J	3.00 U	50.0 U	23.0	1.40	22.0	1.90	14.0	0.810 U		6.08	4.28	201	0.645	1060	17.0
Area 5	G6M-97-05B	10/3/2011	5.7	0.58	0.5U	0.5U	0.5U	0.5U	-	-	-	5U	0.1U	25U	-	-	-	-	-	-	6.21	3.91	166.4	0.357	1.48	12.4
Area 5	G6M-97-05B	10/12/2012	13	0.73	0.5U	0.5U	0.5U	0.5U	-	-	-	5U	0.0194 J	25U	-	-	-	-	-	-	6.19	4.13	132	0.649	0.41	14.61
Area 5	G6M-97-05B	10/16/2013	26	0.70	0.63	0.5U	0.5U	0.5U	-	-	-	5U	0.1U	25U	-	-	-	-	-	-	6.15	3.88	123.8	0.513	3.86	13.76
Area 5	G6M-97-05B	10/28/2014	83	1.8	1.7	0.5U	0.5U	0.5U	-	-	-	2.5U	0.0293U	25UJ	-	-	-	-	-	-	6.21	3.38	112.1	0.499	2.78	11.07
Area 5	G6M-97-05B	6/19/2015	89	4.8	2.3	0.50 U	0.50 U	0.50 U	5.0 U	5.0 U	5.0 U	3.1 J	0.05 U	7.5 U	-	27.0	1.00	7.8 J	1.0 U	-	6.26	2.73	106.3	0.630	1.72	17.20
Area 5	G6M-97-05B	10/15/2015	117	6.90	3.40	1.0 U	1.0 U	1.0 U	-	-	-	4.0 U	0.0615 J	19	-	-	-	-	-		5.43	3.41	86.9	0.687	1.05	18.92
Area 5	G6M-97-05B	2/11/2016	97	11	3.8	1.0 U	1.0 U	1.0 U	10 U	10 U	10 U	4.0 U	0.10 U	15 U	1.0 U	29.3	1.0	7.8 J	2.0 U		6.33	4.72	131.7	0.430	16.7	7.32
Area 5	G6M-97-05B	6/15/2016	87	13	4.2	1.0 U	1.0 U	1.0 U	-	-	-	3.0 U	0.05 U	3.0 U	-	-	-	-	-		6.26	2.75	81.7	669.000	1.15	15.93
Area 5	G6M-97-05B	11/15/2016	140	13	4.2	1.0 U	1.0 U	1.0 U	-	-	-	3.0 U	0.021 J	2.4 J	-	-	-	-	-		6.39	3.37	129.4	0.469	0.87	11.73
Area 5	G6M-97-05B	5/17/2017	190	15	8.6	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	0.84	3.0 U	0.05 U	3.0 U	1.0 U	31	0.94	7.0	1.0 U		6.20	2.00	120.8	0.547	9.59	15.17
Area 5	G6M-97-05B	10/11/2017	140	16	4.4	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	0.58 U	3.0 U	0.10 U	3.3 J	1.0 U	32	0.89	7.4	1.0 U		6.20	1.65	100.1	0.710	5.27	13.95
Area 5	G6M-97-05B	4/3/2018	240	19	9.0	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	34	3.0 U	0.05 U	1.4 J	1.5	33	0.79	7.4	1.0 U		6.60	1.85	47.4	0.671	1.13	10.87
Area 5	G6M-97-05B	10/30/2018	190	16	9.6	2.0 U	2.0 U	2.0 U	1.1 U	1.0 U	530 J	3.0 U	0.05 U	1.5 J	0.5 U	35	0.59	8.6	1.0 U		5.74	1.29	105	0.758	9.85	9.05
Area 5	G6M-97-05B	4/3/2019	180	22	9.8	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	1100	3.0 U	50 U	4.3 J	0.50 U	-	0.58	7.6	1.0 U		6.20	1.5	45	0.760	0.69	13.00
Area 5	G6M-97-05B	10/21/2019	26	7.8	17	1.0 U	1.0 U	1.0 U	4.7	1.4	820	56	22,000	5,800	270	110	0.050 U	2.0	0.83 U		6.00	0.11	5.8	0.980	140	12.00
Area 5	G6M-97-05B	05/11/2020	6.40	0.970 J	77.0	1.00 U	1.00 U	0.560 J	6.50	1.60	13,000	220	100,000	16,000	260	250	0.100 U	0.480 J	0.810 U		5.86	1.04	-61.2	1230	23.1	13.4
Area 5	G6M-97-05B	10/13/2020	13.0	3.10	73.0	1.00 U	1.00 U	2.40	25.0	22.0	10,000	130	61,000	5,800	210	150	0.100 U	1.00 U	0.810 U		5.32	0.420	181	0.655	2600	11.8
Area 5	IW-39	1/30/2014	180	4.4	15	4U	4U	4U	-	-	-	-	-	-	-	-	-	-	-	-	6.56	0.91	44.9	0.780	3.68	12.31
Area 5	MW-3	10/17/2001	4,300	1,500	540	20U	10U	20U	-	-	-	-	-	-	-	-	-	-	-	-	5.70	0.9	-127	1.400	3.1	13.73
Area 5	MW-3	12/19/2001	26	4,000	2,200	20U	6.5J	20U	-	-	-	-	-	-	92	-	-	0.43J	-	-	6.28	0.43	-46	0.912	7.28	12.98
Area 5	MW-3	1/3/2002	-	-	-	-	-	-	0.063	0.21	18	180	30	-	44	-	-	-	-	-	4.77	1.33	-48	2.795	4.4	11.19
Area 5	MW-3	1/31/2002	-	-	-	-	-	-	-	-	-	-	-	-	38	-	-	-	-	-	6.64	0	-293	0.999	-	12.17
Area 5	MW-3	2/13/2002	4,400	1,700	1,600	1.6J	3.7	2U	0.079	0.29	53	190	20	8,300	15	-	0.10U	14	1.0J	-	6.65	0.75	-71	0.893	1.3	13.54
Area 5	MW-3	3/13/2002	5,200	640	1,400	1.4J	2.8	2U	0.093	0.37	66	180	16	8,400	7.3	-	0.10U	15	2.0U	-	6.72	0.25	-75	0.795	1.04	12.21
Area 5	MW-3	4/2/2002	3,100	1,000	1,700	2.2	4	2U	-	-	-	-	-	-	3.3J	-	-	-	-	-	6.74	4.28	-120	0.634	2.08	13.17
Area 5	MW-3	4/17/2002	1,200	1,300	1,600	1.2J	3.4	2U	0.025	0.087	54	240	37	17,000	6.1	-	3	7.9J	1.6J	-	6.60	4.39	-102	0.771	0.81	12.69
Area 5	MW-3	5/15/2002	31	23	2,600	3.5	6.7	2U	0.052	0.24	560	260	42	19,000	96	-	0.10U	3.9	1.6J	-	6.66	0.31	-124	1.460	1.68	14.23
Area 5	MW-3	6/27/2002	200U	200UJ	1,800	200UJ	100UJ	200UJ	0.021	0.082	3,900	490J	140	37,000J	270	-	14	4.4J	2.0U	-	6.70	1.64	-107	3.804	2.9	13.8
Area 5	MW-3	7/31/2002	-	-	-	-	-	-	-	-	-	-	-	-	31	-	-	-	-	-	6.76	0.15	-225	1.606	-	13.9
Area 5	MW-3	8/26/2002	990	640	580	2.1	4.4	2U	0.053	0.16	14,000	270	-	-	30	320	-	-	-	-	6.83	0.15	-138	1.285	6.5	18.8
Area 5	MW-3	10/28/2002	1,900	820	1,700	3.9	4.2	2U	0.3	0.23	6,300	330	39	9,700	6.3	190	0.10U	10	2.0U	-	6.70	0.4	-129	1.129	5.01	15.7
Area 5	MW-3	2/3/2003	3.0	2U	2,900	2U	7.1	2U	0.005U	0.26	28,000	330	120	-	180	580	-	1.0U	-	-	6.84	0.3	-159	1.322	6.7	18.2
Area 5	MW-3	7/16/2003	2.4	2U	2,700	2U	7.5	2.5	0.005U	0.1	23,000	520	170	-	17	450	-	4.0UB	2.0U	-	7.02	1.09	-138	1.464	39.2	16.1
Area 5	MW-3	9/24/2003	670	1,100	1,900	2.4	6.9	2U	0.005U	0.012	22,000	460	89	7,900	5.9	-	-	-	-	-	6.10	9.17	-138	1.222	18.9	15.3
Area 5	MW-3	1/9/2004	9.7	64	2,000	2U	5.6	2U	0.005U	0.005U	45,000	530	200J	15,000	130	500J	-	1.0U	2.0U	-	6.73	0.4	-195	1.347	14.6	-
Area 5	MW-3	3/11/2004	680	620	4,700	2U	7.6	2U	0.005U	0.005U	27,000	420	11	8,400	6.1	200	-	4.4	2U	-	6.58	0.62	-161	0.972	4.3	13.9
Area 5	MW-3	6/2/2004	2U	2U	1,800	2U	4.5	2U	0.005U	0.014	31,000	670MSA	150	23,000	290	810	-	0.98J	2U	-	6.95	0.1	-149	1.905	38.7	15.7
Area 5	MW-3	9/21/2004	210	250	1,900	2U	5.2	3.5	0.086	0.005U	28,000	660	200J	7,200	17	310	1J	4.3J	2U	-	6.66	0.95	-153.6	0.725	2.27	11.1
Area 5	MW-3	12/13/2004	2U	2U	750	2U	1U	610	0.092	3.5	17,000	510	160	5,400	8	210	1.1	1.4M	2U	-	6.62	1.6	-103.3	1.009	15.1	13.9
Area 5	MW-3	3/28/2005	23J	16J	1,000	50U	50U	280	0.005U	5.1	25,000	670	150	7,300	21	405	0.2U	1U	7.5J	-	6.49	0.34	-134.9	1.260	2.37	14.44
Area 5	MW-3	8/10/2005	440	80	120	2U	5.1	760	0.061J	13	22,000	680	180	4,400	43	338	0.05U	2U	8	-	11.13	0.71	-118.5	1.401	28.9	15.67
Area 5	MW-3	9/27/2005	1,100	240	180	1.8	9.1	360	0.020J	40	22,000	480	71J	2,500	5.6	96.8	0.05U	9.9J	3.4	-	6.36	0.21	-91.2	0.660	2.8	14.5
Area 5	MW-3	12/12/2005	37	67	52	20U	10U	480	0.055	100	26,000	566	100	-	18	180	0.083J	2U	5.6	-	6.66	0.11	-152.7	1.087	8	15.7
Area 5	MW-3	3/20/2006	620	350	120	3.1	3.9	220	0.025U	130	25,000	440	85	3,600	13	110	0.2U	6.31	1U	-	6.95	0.77	-106.2	0.871	3.71	14.88
Area 5	MW-3	6/22/2006	2U	2U	4	7.6	1U	6.1	0.023J	180	20,000	520	87	3,300	4J	98	0.2U	1U	1U	-	6.40	0.22	-127	1.012	4.18	12.97
Area 5	MW-3	9/20/2006	360	420	130	12	5.6	200	0.015J	95	17,000	580	70	3,300	9.6	70	0.2U	7.88	1.4	-	6.52	0.28	-108.5	0.729	3.56	13.28
Area 5	MW-3	12/12/2006	2U	3.1	3.1	16	1U	7.1	0.032	170	24,000	490	92	3,700	7.8	-	-	1U	1U	-	6.60	0.17	-116	0.990	4.36	12.34

Appendix D
Historical Groundwater Analytical Results
2020 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

			Laboratory Parameters																	Field Parameters					
			PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	VC	Ethane	Ethene	Methane	Dissolved Arsenic	Dissolved Iron	Dissolved Manganese	TOC	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	Phosphate	pH	DO	ORP	SpC	Turbidity	Temp
Area	Well ID	Date Sampled	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
Area 5	MW-3	3/27/2007	2U	31	19	12	1U	27	0.025U	130	18,000	560	110	3,300J	5.2	-	-	3.18	1U	-	6.28	0.19	21	0.944	2.64	13.6
Area 5	MW-3	6/11/2007	2U	5	5.4	15	1U	8	0.038	150	32,000	570	190	5,000	67	-	-	12.1	2.2	-	6.56	0.58	-124.7	1.405	17.3	12.26
Area 5	MW-3	9/11/2007	610	470	100	6.4	2.6	97	-	-	-	530	100	3,600	-	150	0.2U	400	1U	-	6.76	0.23	-130	1.016	6.8	13.48
Area 5	MW-3	10/12/2007	-	-	-	-	-	-	0.025U	120	34,000	-	-	-	3.8J	-	-	-	-	-	-	-	-	-	-	12.51
Area 5	MW-3	12/13/2007	250	180	59	8.8	2.4	78	0.016J	130	30,000	420	91	4,400	4.1J	-	-	10	1U	-	6.6	0.27	-159.8	1.040	15.7	19.2
Area 5	MW-3	3/10/2008	2U	2U	2U	8.3	1U	2U	18	35	29,000	530	140	3,300	16	-	-	5U	2.4	-	6.46	0.12	-113	1.402	5.5	14.26
Area 5	MW-3	10/6/2008	5U	5U	5U	11	5U	5U	1.3U	72	28,000	482	112	3,720	10U	210	0.13U	7.0U	0.03UJ	-	6.49	0.24	-158.6	1.070	9.3	21.5
Area 5	MW-3	1/21/2009	1.4U	2.3U	1.6J	9.2	1.2U	1.9	3.2	58	40,000	556	114J	3,350	10UJ	160	0.13U	7.0U	0.03U	0.15J	6.69	0.5	-79.9	1.044	4.01	15.5
Area 5	MW-3	5/7/2009	2.0U	59	48	17	2.0U	66	1.3	70	47,000	519	115	3,630	7.0J	360J	0.13U	22	0.03U	0.11J	6.26	1.03	-89.9	1.205	4.54	18.86
Area 5	MW-3	10/19/2009	2U	35	25	9.4	2U	40	1.2U	36	25,000	551	120	5,330	6.7J	490	0.13U	28	0.03UJ	0.36	6.24	0.6	-62.6	1.494	25.6	15.54
Area 5	MW-3	4/20/2010	0.5UJ	0.48J	0.47J	4.7J	0.5UJ	2.5J	10	19	47,000	526	136J	3,200	9.0J	440	0.13U	3.4J	0.03U	0.63	6.33	0.16	5.4	1.445	0.09	11.12
Area 5	MW-3	10/5/2010	0.5U	4.8	3.4	7.5	0.5U	20	1.2U	69	32,000	444	76	3,560	10U	750	0.13U	4.5J	0.03U	0.50J	6.20	0.20	-85.9	1.799	0.58	11.94
Area 5	MW-3	6/8/2011	0.5U	0.66	0.93	4.4	0.5U	17	4.5	18	100,000	374	53.6	2,570	12	690	0.13U	1.7J	0.03U	-	6.34	0.30	-91.1	1.232	3.56	11.96
Area 5	MW-3	10/3/2011	0.5U	0.5U	0.52	1.7	0.5U	1.0	1.2U	1.5U	40,000	385	45.8	2,760	10	730	0.13U	0.74J	0.03U	-	6.47	0.13	-88.1	1.544	0.9	12.14
Area 5	MW-3	5/8/2012	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	51	110	66,000	276	27	3,140	7.5J	600	0.13U	0.82J	0.03U	-	6.77	0.08	-107.2	1.856	4.6	12.24
Area 5	MW-3	10/10/2012	0.5U	0.5U	0.5U	0.54	0.5U	1.2	61	100	36,000	267	25.7	4,810	5.6J	520	0.13U	1.4J	0.03U	-	6.45	0.51	-87.6	1.738	0.92	12.1
Area 5	MW-3	5/21/2013	0.5U	0.5U	0.30J	0.39J	0.5U	0.75	1.2U	1.5U	10,000	281	24.7	6,460	4.3J	530J	0.13UJ	0.64J	0.03UJ	-	6.76	0.12	-105.2	1.277	2.75	11.48
Area 5	MW-3	10/16/2013	0.5U	0.21J	0.36J	0.32J	0.5U	0.94	12	11	38,000	298	26.6	7,970	5.2J	510	0.13U	1.9J	0.03U	-	6.75	0.40	-87.4	1.437	0	11.96
Area 5	MW-3	6/11/2014	0.5U	0.5U	0.5U	0.37J	0.5U	0.83	2.9J	1.6UJ	5,100J	354	34.3J	11,100	8.3J	330J	0.13U	1.2U	0.03U	-	6.70	0.51	-67.6	1.062	6.18	11.84
Area 5	MW-3	10/29/2014	0.5U	0.27J	0.68	0.38J	0.5U	0.53	3.8	1.5U	13,000	334	30.1J	10,500J	5.2J	370	0.13U	2.4J	0.03U	-	6.8	0.34	-110.1	0.756	3.79	11.95
Area 5	MW-3	6/23/2015	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	5.0 U	5.0 U	4,830	409	37.1	11,000	5.00	366	0.11 U	5.1 J	1.0 U	-	6.34	1.07	-89.4	1.262	5.85	14.23
Area 5	MW-3	10/15/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.54 J	10 U	10 U	4,570	420	41.9	12,600	4.9	349	0.071	10 U	2.0 U		6.97	0.48	-112.1	1.215	1.38	13.86
Area 5	MW-3	2/10/2016	1.0 U	1.0 U	1.0	1.0 U	1.0 U	0.88 J	10 U	10 U	7,260	423	49	12,000	5.4	341	0.094 J	10 U	2.0 U		6.72	1.12	-109.7	0.851	10.5	9.14
Area 5	MW-3	6/16/2016	1.0 U	1.0 U	1.5	1.0 U	1.0 U	0.89 J	3.0	1.0 U	20,000	410	45	9,800	6.1	350	0.05 UJ	1.3	1.0 U		6.81	0.66	-77.4	1.360	4.93	14.27
Area 5	MW-3	11/11/2016	1.0 U	0.96 J	1.7	1.0 U	1.0 U	1.6	2.9	1.0 U	7,000	410	47	9,500	6.4	370	0.05 U	1.4	1.0 U		7.22	0.83	-97.8	0.871	7.77	12.73
Area 5	MW-3	5/17/2017	1.0 U	1.0 U	0.75 J	1.0 U	1.0 U	1.0 U	1.8	1.0 U	10,000	500	56	9,400	5.2	310	0.073 J	2.2	1.0 U		6.78	0.63	-112.4	0.909	6.29	12.70
Area 5	MW-3	10/11/2017	1.0 U	1.0 U	1.0	1.0 U	1.0 U	0.60 J	1.9	1.0 U	5,500	440	56	9,200	5.0	280	0.06 J	0.62 J	1.0 U		6.60	0.69	-102.3	1.200	4.33	13.43
Area 5	MW-3	10/29/2018	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	470	51	8,300	--	--	--	--	--		6.80	1.05	-102	1.211	4.13	11.61
Area 5	MW-3	10/17/2019	1.0 U	1.0 U	0.71 J	1.0 U	1.0 U	1.0 U	-	-	-	510	42,000	7,000	-	-	-	-	-		6.70	1.1	-100	1.100	7.6	12.00
Area 5	MW-3	10/15/2020	1.00 U	1.00 U	0.490 J	1.00 U	1.00 U	1.00 U	-	-	-	610	43,000	7,300	-	-	-	-	-		6.91	0.230	-120	0.716	1.89	13.9
Area 5	MW-7	2/14/2002	5,900	4.5	2U	2U	1U	2U	0.12	0.08	8.4	5U	1U	170J	-	-	-	20	0.6J	-	6.12	1.58	104	0.787	90	18.84
Area 5	MW-7	3/14/2002	5,700	4.2	2U	2U	1U	2U	0.094	0.18	5.9J	5U	1U	1,000U	2.0J	-	4.1	22J	2.0U	-	6.12	2.29	203	0.808	8.85	12.76
Area 5	MW-7	4/17/2002	4,200	2.9	2U	2U	1U	2U	0.072	0.2	6	2.3J	1U	1,000U	5U	-	4.2	18J	1.6J	-	6.11	0.5	145	0.656	19.5	-
Area 5	MW-7	6/27/2002	5,300	3.8J	2UH	2UH	10H	2UH	-	-	-	5U	1U	170UJ	5U	-	4.2	19J	2.0U	-	6.13	0.73	163	1.198	100	11.12
Area 5	MW-7	8/27/2002	4,700	3.5	2U	2U	1U	2U	-	-	-	5U	-	-	5U	29	-	-	-	-	6.13	0.29	136	0.632	1.86	12.02
Area 5	MW-7	10/30/2002	5,400	2.7	2U	2U	1U	2U	0.047	0.18	20	5U	1U	200J	5U	23	4.9	16	2.0U	-	6.05	0.37	66	0.779	3.63	11.85
Area 5	MW-7	12/14/2002	-	-	-	-	-	-	-	-	-	-	-	-	5U	-	-	-	-	-	-	-	-	-	-	12.04
Area 5	MW-7	1/30/2003	4,700	3.1	2U	2U	1U	2U	0.044	0.075	23	5U	1U	-	5U	19	-	16	-	-	5.80	2.2	171	0.773	1.08	13.43
Area 5	MW-7	9/24/2003	4,200	3.3	2U	2U	1U	2U	0.015	0.027	58	5U	1U	140	5U	-	-	-	-	-	3.40	1.43	522	0.691	0.3	-
Area 5	MW-7	1/8/2004	4,300	2.8	2U	2U	1U	2U	0.011	0.026	25	5U	1U	130	5U	27	-	14J	2.0U	-	6.02	0	198	0.481	15	11.59
Area 5	MW-7	3/12/2004	3,100	2.7	2U	2U	1U	2U	0.02	0.28	6.3	5U	1U	120	1U	24	-	15M	2U	-	6.04	0.47	162	0.556	1.0	13.99
Area 5	MW-7	6/3/2004	2,900	2.6	2U	2U	1U	2U	0.012	0.034	34	5U	1U	110	1.5J	24	-	15M	2U	-	5.96	0.31	205.2	0.580	1.92	-
Area 5	MW-7	9/21/2004	2,900	3.4	3.1	2U	1U	2U	-	-	-	5U	1U	110	-	-	-	-	-	-	5.98	0.21	240.4	0.580	0	11.09
Area 5	MW-7	9/27/2005	1,600	3.7	5.8	2.5U	2.5U	2.5U	-	-	-	5U	0.2J	110	-	-	-	-	-	-	4.49	0.93	304.1	0.593	3.39	11.86
Area 5	MW-7	9/22/2006	4,400	9.8	7.7	2U	1U	2U	-	-	-	5U	0.10U	100	-	-	-	-	-	-	5.99	1.19	140.9	0.503	3.01	12.70
Area 5	MW-7	9/11/2007	1,200	11	22	2U	1U	2U	-	-	-	6U	0.1U	110	-	-	-	-	-	-	5.98	0.32	139.9	0.691	5.9	-
Area 5	MW-7	10/20/2008	600	40	150	20U	20U	20U	-	-	-	8U	0.2U	166	-	-	-	-	-	-	5.97	1.39	71.9	0.804	2.0	14.72
Area 5	MW-7	10/19/2009	97	33	270	10U	10U	10U	-	-	-	4.2J	1.7	2,170	-	-	-	-	-	-	6.03	0.47	76.7	1.686	1.91	14.58
Area 5	MW-7	10/6/2010	45	9.5	120	2.5U	2.5U	3.1	-	-	-	5.7	1.46	2,090	-	-	-	-	-	-	6.53	0.21	-21.6	2.072	4.81	11.46
Area 5	MW-7	10/6/2011	1.6	3.7	20	0.5U	0.5U	6.8	-	-	-	52.9	5.44	5,070	-	-	-	-	-	-	6.6	0.49	-48.8	1.717	3.0	-
Area 5	MW-7	10/12/2012	2.3	2.3	9.9	0.70	0.5U	11	-	-	-	140	20.5	9,900	-	-	-	-	-	-	6.38	0.65	-65	1.253	0	-
Area 5	MW-7	10/17/2013	1.5	6.9	13	0.24J	0.5U	2.2	-	-	-	156	20.9	9,360	-	-	-	-	-	-	6.72	0.58	-68.2	1.152	0	10.50
Area 5	MW-7	11/3/2014	1.7	8.4	13	0.27J	0.5U	1.5	-	-	-	205	29.9	15,300	-	-	-	-	-	-	6.62	0.41	-74.2	0.878	1.94	10.28
Area 5	MW-7	10/15/2015	1.0 U	1.70	12.4	1.0 U	1.0 U	1.10	-	-	-	198	30.2	15,100	-	-	-	-	-		6.83	0.84	-68.2	0.926	1.50	11.26
Area 5	MW-7	11/14/2016	1.0 U	1.4	22	1.0 U	1.0 U	37	-	-	-	110	19	13,000	-	-	-	-	-		6.01	1.24	-63.5	0.770	7.42	13.2
Area 5	MW-7	10/11/2017	1.0 U	0.53 J	1.4	1.0 U	1.0 U	15	--	--	--	160	20	19,000	--	--	--	--	--		6.37	0.67	-30.1	0.730	2.75	12.73
Area 5	MW-7	10/29/2018	1.0 U	1.0 U	0.95 J	1.0 U	1.0 U	1.0 U	--	--	--	250	20	14,000	--	--	--	--	--		6.17	0.46	-56.8	1.018	19.6	12.83
Area 5	MW-7	10/30/2019	-	-	-	-	-	-	-	-	-	400	23,000	12,000	-	-	-	-	-		6.40	0.41	-52	0.980	96	13.00
Area 5	MW-7	12/20/2019	1.0 U	0.79 J	1.3	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	-	-		6.79	2.43	-110.7	0.626	15.15	9.94
Area 5	MW-7	10/15/2020	1.00 UJ	1.00 UJ	2.20 J	1.00 UJ	1.00 UJ	2.00 J	-	-	-	470	22,000	10,000	-	-	-	-	-		6.80	0.270	-94.9	0.602	2.59	14.1
Area 5	XSA-12-95X	10/12/2012	290	36	66	5.0U	5.0U	10	-	-	-	4.6J	9.53	11,800	-	-	-	-	-	-	6.53	2.04	-63.9	1.247	45	12.77
Area 5	XSA-12-95X	10/15/2013	160	51	100	4.7J	5.0U	6.5	-	-	-	12.8	5.17	9,890	-	-	-	-	-	-	6.59	0.3	-254.4	1.411	24.4	13.11
Area 5	XSA-12-95X	10/28/2014	110	39	94	5.0	0.47J	9.0	-	-	-	8.3	4.47J	9,310J	-	-	-	-	-	-	6.9	0.18	-315.7	0.906	20.2	14.23
Area 5	XSA-12-95X	10/19/2015	27	20	1.0 U	1.0 U	6.70	7.20	-	-	-	4.0 U	4.77	10,600	-	-	-	-	-		7.97	1.77	-103.6	1.385	15.3	-
Area 5	XSA-12-95X	11/14/2016	23	9.8	78	4.3	1.0 U	7.4	-	-	-	3.0 U	1.9	8,400	-	-	-	-	-		6.58	1.21	-59.7	1.048	28.1	12.69
Area 5	XSA-12-95X	10/10/2017	36	11	26	3.1	1.0 U	5.6	--	--	--	3.2	7.8	9,700	--	--	--	--	--		6.65	0.35	-85.3	1.410	19.5	14.73
Area 5	XSA-12-95X	10/23/2018	13	5	11	2.2	1.0 U	1.9	--	--	--	3.2	3.3	11,000	--	--	--	--	--		6.58	0.21	-2.1	1.198	29.4	9.60
Area 5	XSA-12-95X	10/15/2020	6.90	3.90	6.10	2.20	1.00 U	1.00 U	-	-	-	3.00	1,900	11,000	-	-	-	-	-		6.79	0.610	-89.7	1.23	202	15.7
Area 5	XSA-12-96X	10/10/2012	120	4.4	14	2.0U	2.0U	2.0U	-	-	-	5U	3.13	96.8	-	-	-	-	-	-	6.52	0.72	-87.1	0.782	3.9	12.33
Area 5	XSA-12-96X	10/15/2013	100	11	17	2.5U	2.5U	3.7	-	-	-	3.7J	0.94	2,840	-	-	-	-	-	-	6.46	0.27	-271.6	0.824	0.90	15.90
Area 5	XSA-12-96X	10/28/2014	84	14	22	2.3	0.36J	6.0	-	-	-	3.2J	0.925J	5,720J	-	-	-	-	-	-	6.73	0.14	-300.6	0.625	4.83	12.11
Area 5	XSA-12-96X	10/26/2015	30	14	1.0 U	1.0 U	3.40	10.2	-	-	-	4.0 U	2.19	7,340	-	-	-	-	-		6.34	0.66	-77.9	0.787	9.41	12.98

Appendix D
Historical Groundwater Analytical Results
2020 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50, Former Fort Devens Army Installation
Devens, Massachusetts

			Laboratory Parameters																	Field Parameters					
			PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	VC	Ethane	Ethene	Methane	Dissolved Arsenic	Dissolved Iron	Dissolved Manganese	TOC	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	Phosphate	pH	DO	ORP	SpC	Turbidity	Temp
Area	Well ID	Date Sampled	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
Area 5	XSA-12-96X	11/14/2016	29	19	20	4.9	0.59 J	11	-	-	-	3.0 U	1.2	6,300	-	-	-	-	-		5.63	0.66	-25.5	0.733	9.26	11.67
Area 5	XSA-12-96X	10/10/2017	26	20	20	5.0	0.64 J	16	--	--	--	3.0 U	8.2	6,200	--	--	--	--	--		6.48	0.69	-38.6	1.120	9.27	14.23
Area 5	XSA-12-96X	4/3/2018	27	22	23	5.7	0.69 J	16	--	--	--	3.0 U	3.20	4,400	--	--	--	--	--		7.15	1.31	-187.3	0.988	14.2	9.07
Area 5	XSA-12-96X	10/31/2018	24	9.1	21	3.2	1.0 U	4.7	--	--	--	2.9 J	5.10	10,000	--	--	--	--	--		6.53	0.38	-54.7	1.221	20.8	10.50
Area 5	XSA-12-96X	4/19/2019	10	13	9.9	2.9	0.48 J	8	2.9	1.0 U	270	3.0 U	3,300	3,900	4.8	-	-	-	-		6.90	1.2	-100	1.000	10	17.00
Area 5	XSA-12-96X	11/6/2019	13 J	24	20	6.7	0.90 J	23	-	-	-	3.0 U	2,200	5,300	-	-	-	-	-		6.92	1.15	-100.9	1.032	10.1	17.09
Area 5	XSA-12-96X	05/12/2020	4.20	20.0 J	25.0	7.00	0.880 J	21.0	11.0	1.10	780	3.00 U	4,200	5,800	1.50	240	0.100 U	6.20	1.00 U		6.76	9.89	-64.3	1240	8.94	11.5
Area 5	XSA-12-96X	10/15/2020	7.40	16.0	12.0	5.40	1.00 U	15.0	18.0	1.30	1,800	3.00 U	3,200	5,900	1.50	220	0.0500 U	9.20	0.810 U		6.56	0.630	-75.8	1.08	24.8	15.3
Area 5	XSA-12-97X	10/9/2012	2.1	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	5U	1.430 J	44.4	-	-	-	-	-	-	6.66	1.3	-11.9	0.673	33.8	11.73
Area 5	XSA-12-97X	10/16/2013	2.9	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	5U	2.25	29.3	-	-	-	-	-	-	6.74	1.74	-21.9	0.721	19.6	12.06
Area 5	XSA-12-97X	10/30/2014	5.6	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	2.5U	0.435	9.1J	-	-	-	-	-	-	6.51	1.52	51.8	0.522	17.5	17.21
Area 5	XSA-12-97X	10/19/2015	7.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	4.0 U	0.771	15	-	-	-	-	-		6.62	1.39	31.9	0.614	13.9	10.02
Area 5	XSA-12-97X	11/14/2016	10	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	3.0 U	0.77	12	-	-	-	-	-		7.62	1.68	-57.9	0.526	18.4	11.61
Area 5	XSA-12-97X	10/10/2017	8.0	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	3.0 U	1.5	78	--	--	--	--	--		7.88	0.28	-130.3	0.813	9.83	16.81
Area 5	XSA-12-97X	10/29/2018	6.1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	3.0 U	2.3	49	--	--	--	--	--		9.82	0.34	-283	0.682	27.2	7.89
Area 5	XSA-12-97X	10/15/2019	9.2	0.98 J	2.9	1.0 U	1.0 U	1.0 U	-	-	-	2.2 J	2,400	200	-	-	-	-	-		6.90	0.72	-47	0.980	19	12.00
Area 5	XSA-12-97X	11/22/2020	2.00 U	1.00 U	6.20	1.00 U	1.00 U	1.00 U	-	-	-	51.0	2,700	2,700	-	-	-	-	-		7.13	0.690	-401	0.561	4.73	10.0
Area 5	XSA-12-98X	10/11/2012	10	0.59	0.50	0.5U	0.5U	0.5U	-	-	-	5U	1.420	18.4 J	-	-	-	-	-	-	7.75	0.76	-60.1	0.308	8.89	13.14
Area 5	XSA-12-98X	10/16/2013	5.2	0.34J	0.47J	0.5U	0.5U	0.5U	-	-	-	3.1J	0.1U	6.6J	-	-	-	-	-	-	7.89	0.51	-39.8	0.413	51	10.53
Area 5	XSA-12-98X	10/29/2014	5.5	0.37J	0.76	0.5U	0.5U	0.5U	-	-	-	2.5U	0.313	5.6J	-	-	-	-	-	-	8	0.46	-293.1	0.258	44.8	10.63
Area 5	XSA-12-98X	10/19/2015	6.3	0.66 J	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	4.0 U	0.174	15 U	-	-	-	-	-		8.04	0.42	-194.4	0.310	3.62	10.70
Area 5	XSA-12-98X	11/11/2016	5.6	0.69 J	0.81 J	1.0 U	1.0 U	1.0 U	-	-	-	3.0 U	0.095	3.1 J	-	-	-	-	-		7.98	0.52	-140.7	0.233	16.1	9.67
Area 5	XSA-12-98X	10/23/2017	5.0	0.60 J	0.70 J	1.0 U	1.0 U	1.0 U	--	--	--	3.0 U	0.088 J	2.8 J	--	--	--	--	--		7.35	0.26	-55.5	0.387	5.42	11.48
Area 5	XSA-12-98X	10/23/2018	2.8	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	3.0 U	0.05 U	3.0 U	--	--	--	--	--		7.71	0.25	-141.6	0.948	4.99	12.00
Area 5	XSA-12-98X	10/9/2019	5.5	0.52 J	0.47 J	1.0 U	1.0 U	1.0 U	-	-	-	3.0 U	88	1.7 J	-	-	-	-	-		7.70	0.62	-65	0.380	3.5	11.00
Area 5	XSA-12-98X	10/16/2020	4.10	1.00 U	0.610 J	1.00 U	1.00 U	1.00 U	-	-	-	3.00 U	150	4.90 J	-	-	-	-	-		7.72	0.860	-129	0.360	4.10	12.3
Area 5	XSA-19-95X	10/30/2019	-	-	-	-	-	-	-	-	-	5.5	3,500	9,900	-	-	-	-	-		6.70	0.43	-56	1.500	11	12.00
Area 5	XSA-19-95X	12/26/2019	11	4.9	11	2.7	1.0 U	1.8	-	-	-	-	-	-	-	-	-	-	-		6.61	0.86	-55.9	1.298	3.8	9.23
Nashua River	G6M-02-06X	10/16/2020	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	-	-	-	1.50 J	50.0 U	1.30 J	-	-	-	-	-		7.37	8.55	224	0.0950	3.93	11.8
Nashua River	G6M-04-08X	9/24/2004	4.2	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	7.29	0.81	-75.5	0.632	52.8	15.68
Nashua River	G6M-04-14X	11/16/2004	12	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14.3
Nashua River	G6M-04-14X	9/27/2005	6.9	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	7.88	1.6	333	0.263	18	13.22
Nashua River	G6M-04-14X	9/21/2006	9.4	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	7.98	3	26.1	0.211	15.7	11.11
Nashua River	G6M-04-14X	10/1/2007	7.1	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	7.69	2.56	80.4	0.363	13.9	10.71
Nashua River	G6M-04-14X	10/21/2008	7.1J	0.21J	0.5UJ	0.5UJ	0.5UJ	0.5UJ	-	-	-	-	-	-	-	-	-	-	-	-	7.78	2.51	138.8	0.237	45	12.98
Nashua River	G6M-04-14X	10/15/2009	4.5J	250	10U	10U	10U	10U	-	-	-	-	-	-	-	-	-	-	-	-	7.56	3.6	-69.7	0.250	4.58	11.54
Nashua River	G6M-04-14X	1/15/2010	4.5	0.22J	0.5U	0.75U	0.75U	1.0U	-	-	-	-	-	-	-	-	-	-	-	-	7.73	25.3	166.2	0.293	12.5	11.64
Nashua River	G6M-04-14X	10/8/2010	2.4	0.25J	0.5U	0.5U	0.5U	0.5U	-	-	-	-	-	-	-	-	-	-	-	-	7.55	1.92	72.7	0.307	100.4	12.54
Nashua River	G6M-04-14X	10/5/2011	2.2	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	6.8	0.1U	25U	-	-	-	-	-	-	7.68	2.62	99.9	0.172	20.4	11.07
Nashua River	G6M-04-14X	10/15/2012	3.3	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	9.6	0.194	7.7J	-	-	-	-	-	-	7.71	2.58	-10.9	0.297	21.7	16.33
Nashua River	G6M-04-14X	10/18/2013	1.7	0.34J	0.5U	0.5U	0.5U	0.5U	-	-	-	8.2	0.1U	7.5U	-	-	-	-	-	-	7.89	1.25	94	0.479	27.1	15.03
Nashua River	G6M-04-14X	10/31/2014	1.8	0.40J	0.5U	0.5U	0.5U	0.5U	-	-	-	2.5U	0.0507U	7.5U	-	-	-	-	-	-	7.93	0.4	54.4	0.423	8.26	15.56
Nashua River	G6M-04-14X	10/26/2015	1.7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	9.8	0.0731 J	15 U	-	-	-	-	-		7.89	1.44	79.2	0.482	18.9	13.11
Nashua River	G6M-04-14X	11/11/2016	2.5	1.4	1.2	1.0 U	1.0 U	1.0 U	-	-	-	8.3	0.05 U	2.1 J	-	-	-	-	-		7.48	0.84	-106.7	0.350	10.14	10.53
Nashua River	G6M-04-14X	10/6/2017	1.0	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	7.1	0.017 J	3.2 J	--	--	--	--	--		7.50	0.46	69.9	0.997	5.26	12.91
Nashua River	G6M-04-14X	10/25/2018	1.1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	8.1	0.05 U	1.7 J	--	--	--	--	--		7.65	0.36	102.7	0.767	1.56	12.68
Nashua River	G6M-04-14X	10/15/2019	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	8.4	21 J	7.1 J	-	-	-	-	-		7.70	0.74	-59	0.600	13	12.00
Nashua River	G6M-04-14X	10/19/2020	0.800 J	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	-	-	-	7.10	50.0 U	3.00 J	-	-	-	-	-		7.55	0.670	14.4	0.752	1.42	13.0
North Plume	G6M-96-22A	10/16/2001	2U	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	5.50	5.1	210	2.000	0	15.95
North Plume	G6M-96-22A	2/28/2002	2U	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	0.10U	-	-	-	5.70	8.37	183.5	1.780	0.5	12.41
North Plume	G6M-96-22A	9/21/2004	2U	2U	2U	2U	1U	2U	-	-	-	5U	1U	54	-	-	-	-	-	-	5.75	6.73	187.9	1.885	1.59	11.59
North Plume	G6M-96-22A	9/29/2005	2U	2U	2U	2U	1U	2U	-	-	-	5U	1U	52	-	-	-	-	-	-	5.95	4.9	223.1	3.180	0.38	10.75
North Plume	G6M-96-22A	9/20/2006	2U	2U	2U	2U	1U	2U	-	-	-	5U	0.10U	42	-	-	-	-	-	-	5.68	4.78	176.3	1.814	1.85	11.03
North Plume	G6M-96-22A	9/12/2007	2U	2U	2U	2U	1U	2U	-	-	-	6U	0.1U	78	-	-	-	-	-	-	5.50	6.95	-101.1	1.404	5.0	12.38
North Plume	G6M-96-22A	10/17/2008	0.55	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	8U	0.2U	2,240	-	-	-	-	-	-	5.57	1.41	123.8	1.378	1.8	10.07
North Plume	G6M-96-22A	10/16/2009	0.25J	29	0.27J	0.5U	0.5U	0.5U	-	-	-	8U	0.2U	7,120	-	-	-	-	-	-	5.91	0.25	228.5	2.288	0	11.31
North Plume	G6M-96-22A	10/7/2010	0.22J	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	5U	0.1U	7,670	-	-	-	-	-	-	5.72	0.21	141.2	3.623	0	9.31
North Plume	G6M-96-22A	10/7/2011	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	5U	0.1U	6,860	-	-	-	-	-	-	5.6	0.18	59.9	2.144	0	10.13
North Plume	G6M-96-22A	10/15/2012	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	5U	0.1U	12,400	-	-	-	-	-	-	5.82	0.36	110.5	2.915	0	14.55
North Plume	G6M-96-22A	10/18/2013	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	5U	0.1U	6,010	-	-	-	-	-	-	6.05	0.58	177.1	1.524	0	11.1
North Plume	G6M-96-22A	11/4/2014	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	2.5U	0.019U	3,160	-	-	-	-	-	-	6.12	3.75	203.7	0.774	0.86	-
North Plume	G6M-96-22A	10/14/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	4.0 U	0.10 U	3,810	-	-	-	-	-		6.11	2.77	122.9	1.333	0.21	-
North Plume	G6M-96-22A	11/8/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	3.0 U	0.05 U	2,300	-	-	-	-	-		4.64	3.73	129.4	0.983	0.75	11.89
North Plume	G6M-96-22B	10/19/2001	2U	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	6.76	6.95	176	2.090	0.6	13.13
North Plume	G6M-96-22B	2/28/2002	2U	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	0.10U	-	-	-	6.35	7.83	198.5	2.002	1.5	12.89
North Plume	G6M-96-22B	1/31/2003	2U	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.48
North Plume	G6M-96-22B	9/21/2004	2U	2U	2U	2U	1U	2U	-	-	-	5U	1U	44	-	-	-	-	-	-	5.83	6.15	193.9	1.941	2.76	13.86
North Plume	G6M-96-22B	9/29/2005	2U	2U	2U	2U	1U	2U	-	-	-	5U	1U	48	-	-	-	-	-	-	6.12	5.57	187.7	3.020	1.43	11.15
North Plume	G6M-96-22B	9/20/2006	2U	2U	2U	2U	1U	2U	-	-	-	5U	0.10U	44	-	-	-	-	-	-	5.53	6.51	179	2.183	0.67	10.19
North Plume	G6M-96-22B	9/12/2007	2U	2U	2U	2U	1U	2U	-	-	-	6U	0.1U	40	-	-	-	-	-	-	5.73	16.11	-112.1	2.618	13.9	11.86
North Plume	G6M-96-22B	10/17/2008	0.91	0.5U	0.24J	0.5U	0.5U	0.5U	-	-	-	8U	0.2U	67.3	-	-	-	-	-	-	5.40	1.77	121.3	1.020	0.85	11.56
North Plume	G6M-96-22B	10/16/2009	0.3J	23	0.32J	0.5U	0.5U	0.5U	-	-	-	8U	0.135U	25,500	-	-	-	-	-	-	6.08	0.31	209.1	1.683	0.04	11.52
North Plume	G6M-96-22B	10/7/2010	0.25J	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	3.3J	0.1U	14,600	-	-	-	-	-	-	6.00	0.48	115.1	2.295	0.49	12.85
North Plume	G6M-96-22B	10/7/2011	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	5U	0.1U	9,320	-	-	-	-	-	-	5.98	0.16	30.7	1.899	0	11.27

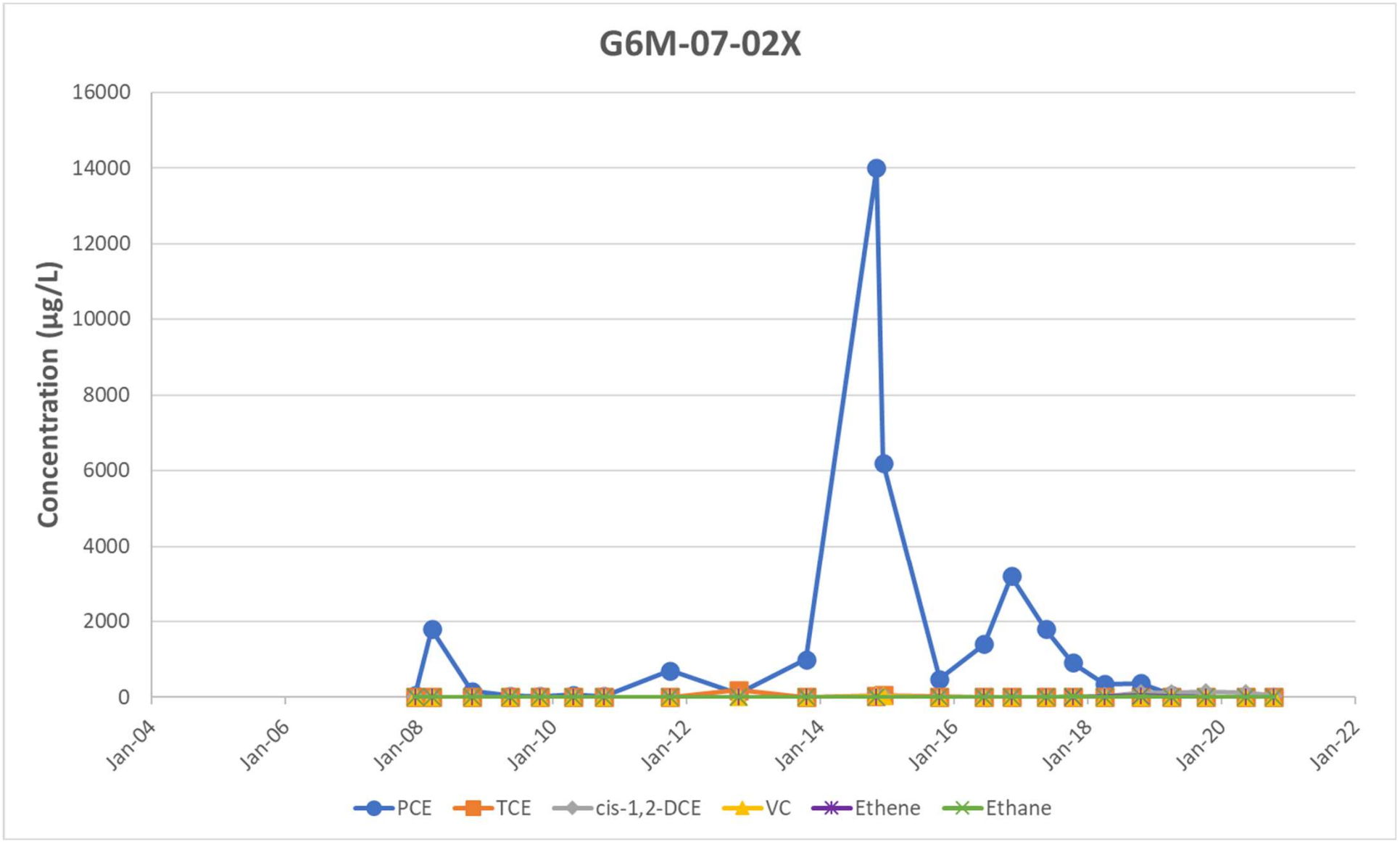
			Laboratory Parameters																	Field Parameters					
			PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	VC	Ethane	Ethene	Methane	Dissolved Arsenic	Dissolved Iron	Dissolved Manganese	TOC	Alkalinity	Nitrate/ Nitrite	Sulfate	Sulfide	Phosphate	pH	DO	ORP	SpC	Turbidity	Temp
Area	Well ID	Date Sampled	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
North Plume	G6M-96-22B	10/15/2012	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	5U	0.120U	9,980	-	-	-	-	-	-	6.14	0.25	16.4	2.358	1.17	12.41
North Plume	G6M-96-22B	10/18/2013	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	3.2J	0.1U	14,100	-	-	-	-	-	-	6.17	0.81	142	2.288	0.31	13.79
North Plume	G6M-96-22B	11/4/2014	0.21J	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	4.6J	0.017U	7,180	-	-	-	-	-	-	6.58	0.45	137.4	1.087	3.55	17.20
North Plume	G6M-96-22B	10/14/2015	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	4.0 U	0.10 U	5,610	-	-	-	-	-		6.53	1.34	93.5	1.457	2.18	15.00
North Plume	G6M-96-22B	11/8/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	3.0 U	0.05 U	6,500	-	-	-	-	-		5.96	2.66	174	1.362	2.49	11.2
North Plume	G6M-96-24B	10/16/2001	18	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	6.37	0	81	0.420	19	14.44
North Plume	G6M-96-24B	3/1/2002	11	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	6.35	-6.27	106.7	0.430	2.8	17.01
North Plume	G6M-96-24B	1/31/2003	7.5	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.61
North Plume	G6M-96-24B	1/12/2004	11	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14.41
North Plume	G6M-96-24B	9/24/2004	13	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	6.17	0.2	152.2	0.422	0.44	19.31
North Plume	G6M-96-24B	12/17/2004	8.1	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	6.05	0.46	259.6	0.384	2.43	15.12
North Plume	G6M-96-24B	4/13/2005	8.2	1U	2.8	1U	1U	1U	-	-	-	-	-	-	-	-	-	-	-	-	5.32	0.2	216.6	0.429	2.49	10.84
North Plume	G6M-96-24B	7/6/2005	7.6	2U	3.0	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	5.69	1.34	242.8	0.770	0.02	14.12
North Plume	G6M-96-24B	9/30/2005	7.2	2U	3.6	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	5.77	0.29	198.3	1.022	7.7	16.26
North Plume	G6M-96-24B	12/15/2005	7.4	2U	3.1	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	5.97	0.14	242.8	0.900	2.1	19.14
North Plume	G6M-96-24B	3/23/2006	4.2	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	5.99	0.23	404.5	0.458	1.31	12.78
North Plume	G6M-96-24B	6/23/2006	2U	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	4.62	0.85	526.9	0.443	0.88	15.18
North Plume	G6M-96-24B	9/22/2006	2U	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	5.93	0.3	141	0.407	4.23	16.89
North Plume	G6M-96-24B	12/14/2006	2U	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	5.54	0.17	74.8	0.560	0.2	16.2
North Plume	G6M-96-24B	3/30/2007	2U	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	5.90	0.5	-43.6	0.620	0.15	12.58
North Plume	G6M-96-24B	6/13/2007	2U	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	6.10	0.16	138.9	0.727	220.2	12.48
North Plume	G6M-96-24B	9/13/2007	2U	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	6.05	3.93	-95.7	0.689	9.9	11.3
North Plume	G6M-96-24B	12/12/2007	2U	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	-	6.33	0.3	106.2	0.802	0.8	14
North Plume	G6M-96-24B	10/7/2008	0.4J	0.5U	0.5U	0.5U	0.5U	0.5U	1.3U	1.6U	15	8.0U	0.352U	448	10U	46	0.13U	10	0.03UJ	-	6.04	0.54	92.4	0.510	30	14.4
North Plume	G6M-96-24B	1/22/2009	1.4U	2.3U	1.8U	1.3U	1.2U	1.3U	1.2U	1.5U	4.2	8.0U	226J	315	10UJ	32	0.13U	9.3	0.03U	0.24J	6.16	0.45	149.6	0.479	65	13.4
North Plume	G6M-96-24B	5/11/2009	0.29J	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	-	-	-	-	-	-	-	-	-	5.87	0.20	90.8	0.304	23.1	12

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
ID = identification
mg/L = milligram per liter
mS/cm = millisiemen per centimeter
ND (U) results are reported at the limit of detection (LOD)
NTU = nephelometric turbidity unit
ORP = oxidation-reduction potential
PCE = tetrachloroethene
SpC = specific conductivity
TCE = trichloroethene
TOC = total organic carbon
trans-1,2-DCE = trans-1,2-dichloroethene
VC = vinyl chloride

Data Qualifiers:
J = Estimated result.
U = Non-detect.
UJ = Estimated non-detect.

Appendix E

CVOC Trend Graphs



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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CVOC TREND GRAPH
G6M-07-02X (AREA 1)

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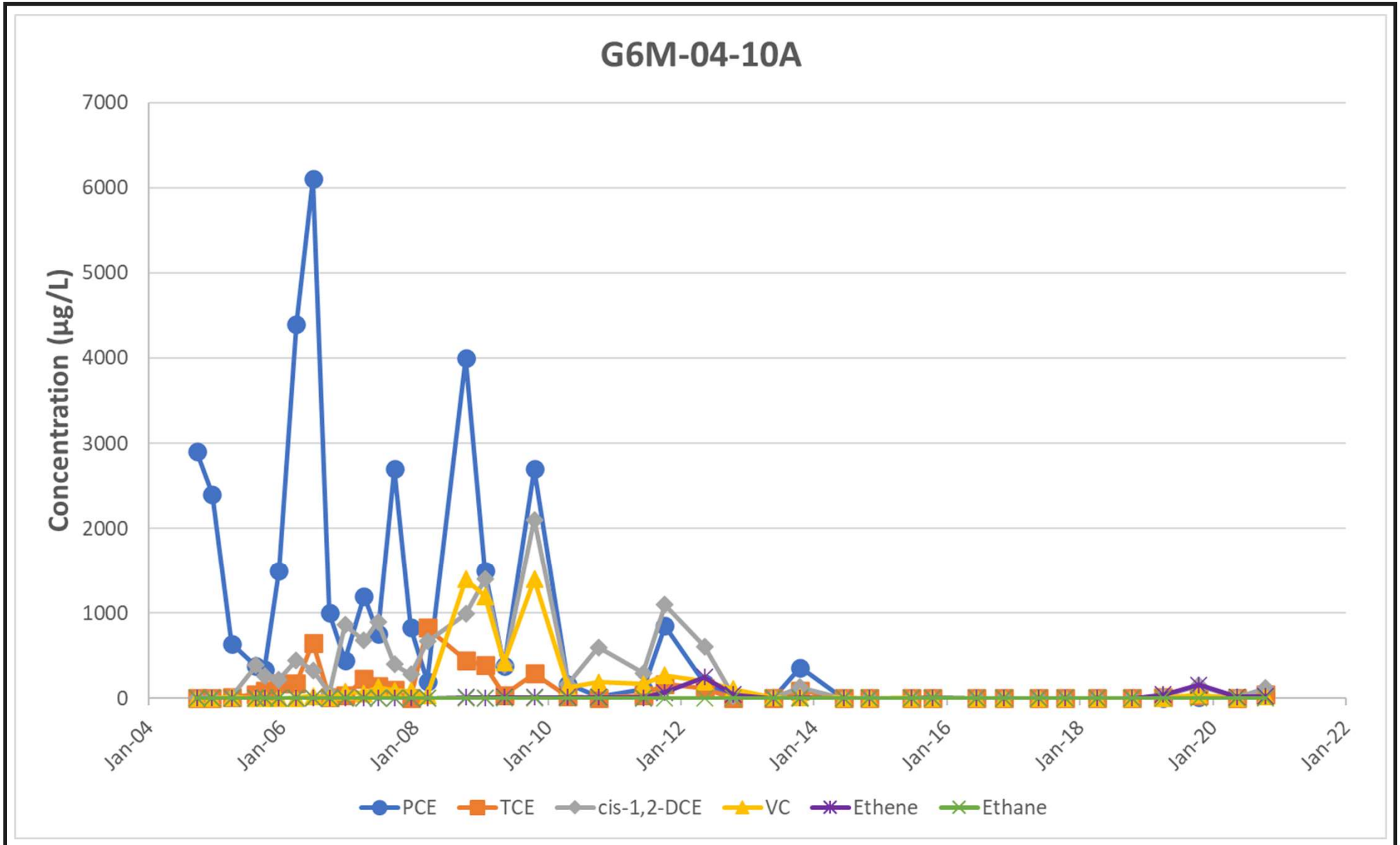
FIGURE
E-1

\ARCADIS\SERES-Arcadis JV - _NE Dist Devens Task Orders\TO 1 - Seed Task\AOC 50\Reports\2. Fall 2020 Memo\Attachments



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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CVOC TREND GRAPH
G6M-04-10A (AREA 1)

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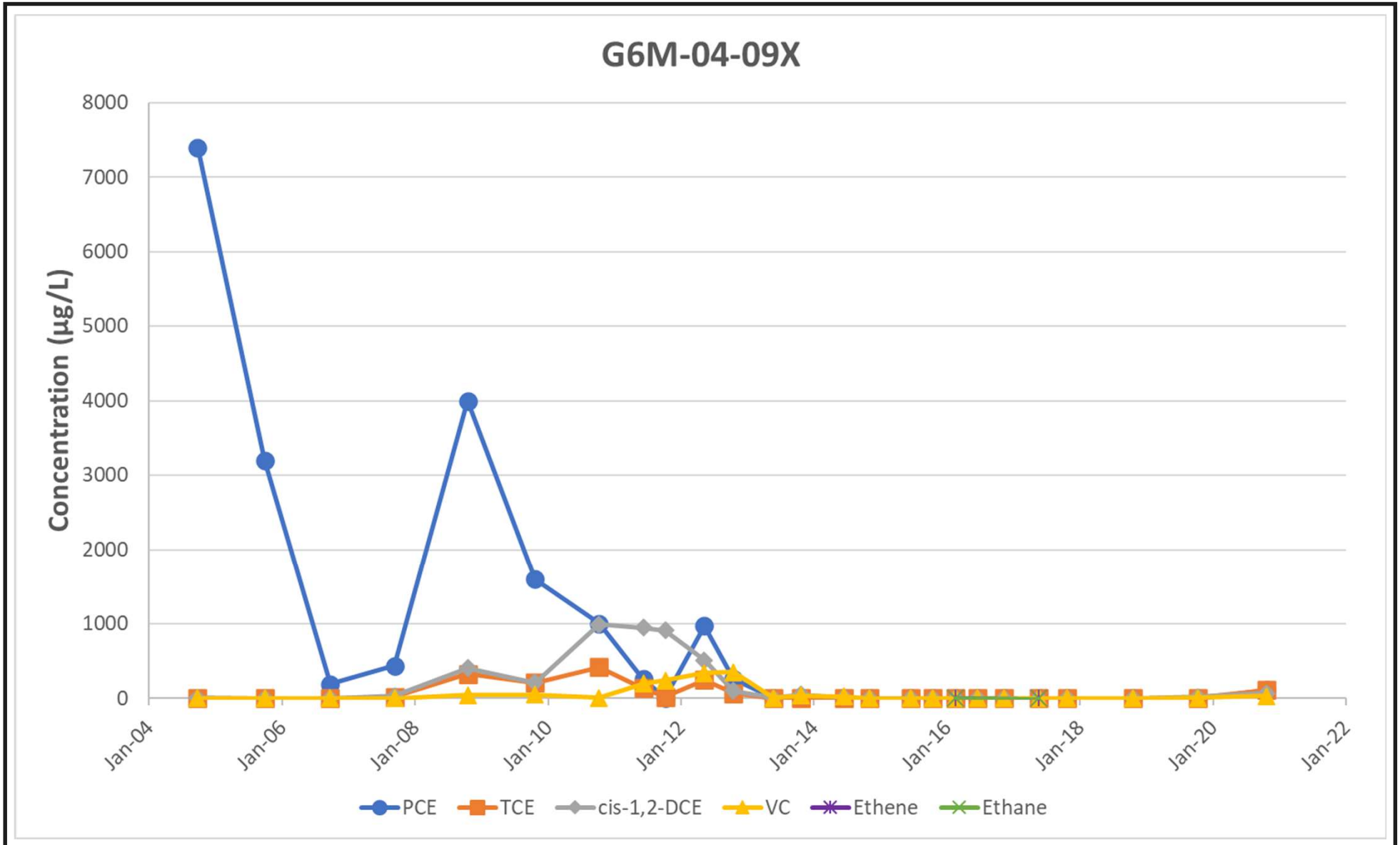
FIGURE
E-2

\ARCADIS\SERES-Arcadis JV - _NE Dist Devens Task Orders\TO 1 - Seed Task\AOC 50\Reports\2. Fall 2020 Memo\Attachments



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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CVOC TREND GRAPH
G6M-04-09X (AREA 1)

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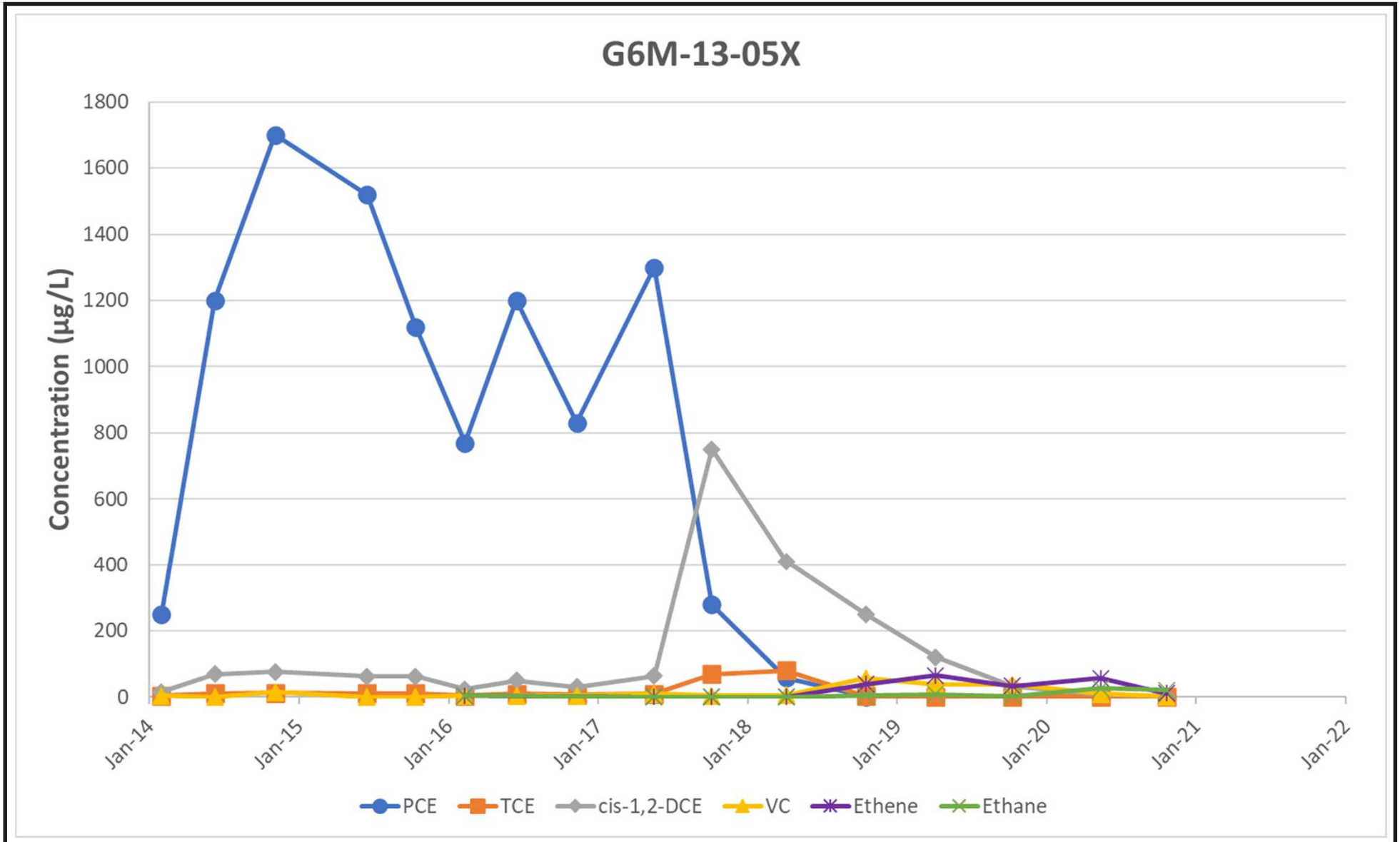
FIGURE
E-3

\ARCADIS\SERES-Arcadis JV - _NE Dist Devens Task Orders\TO 1 - Seed Task\AOC 50\Reports\2. Fall 2020 Memo\Attachments



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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CVOC TREND GRAPH
G6M-13-05X (AREA 1)

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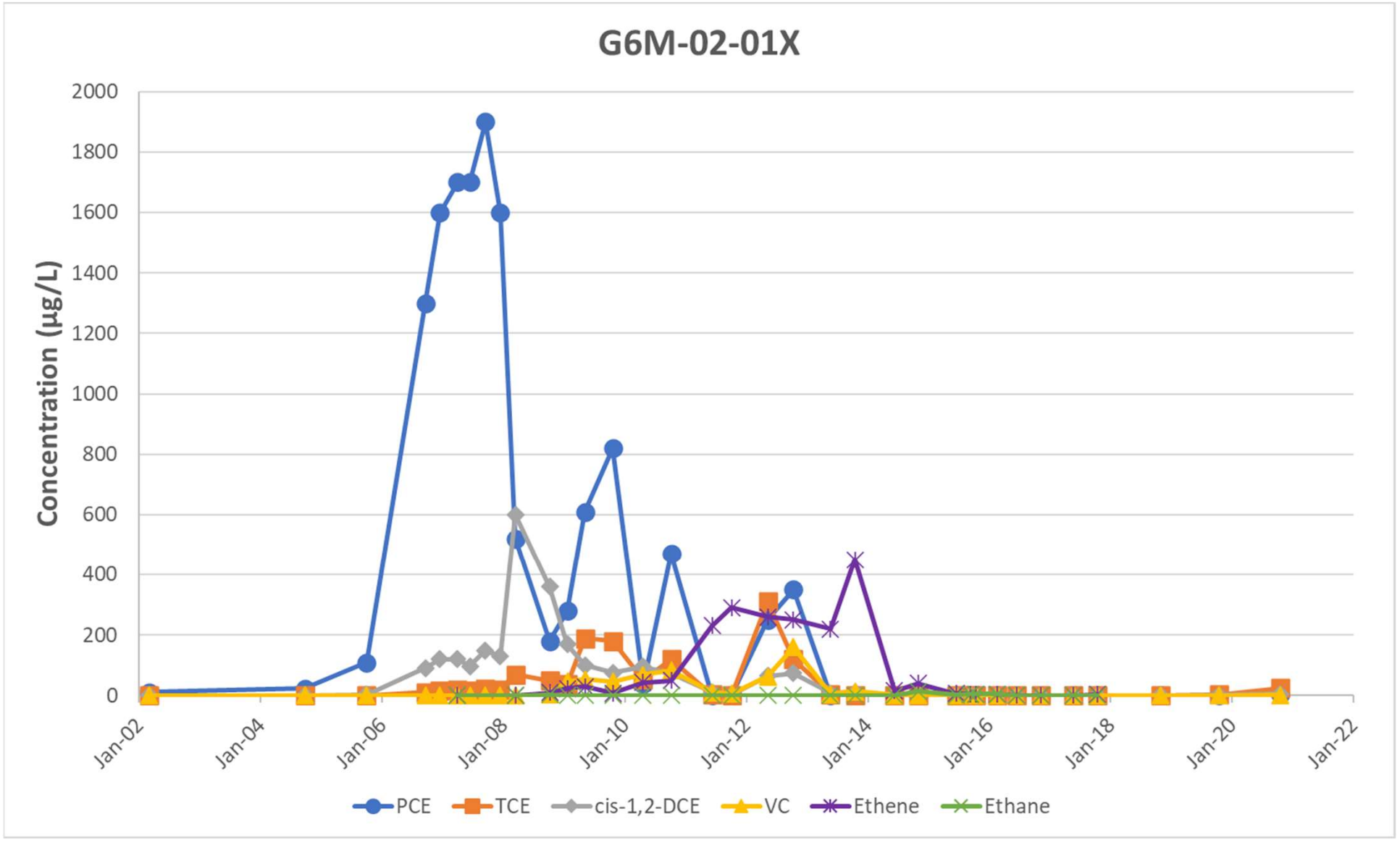
FIGURE
E-4

\ARCADIS\SERES-Arcadis JV - _NE Dist Devens Task Orders\TO 1 - Seed Task\AOC 50\Reports\2. Fall 2020 Memo\Attachments



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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CVOC TREND GRAPH
G6M-02-01X (AREA 2)

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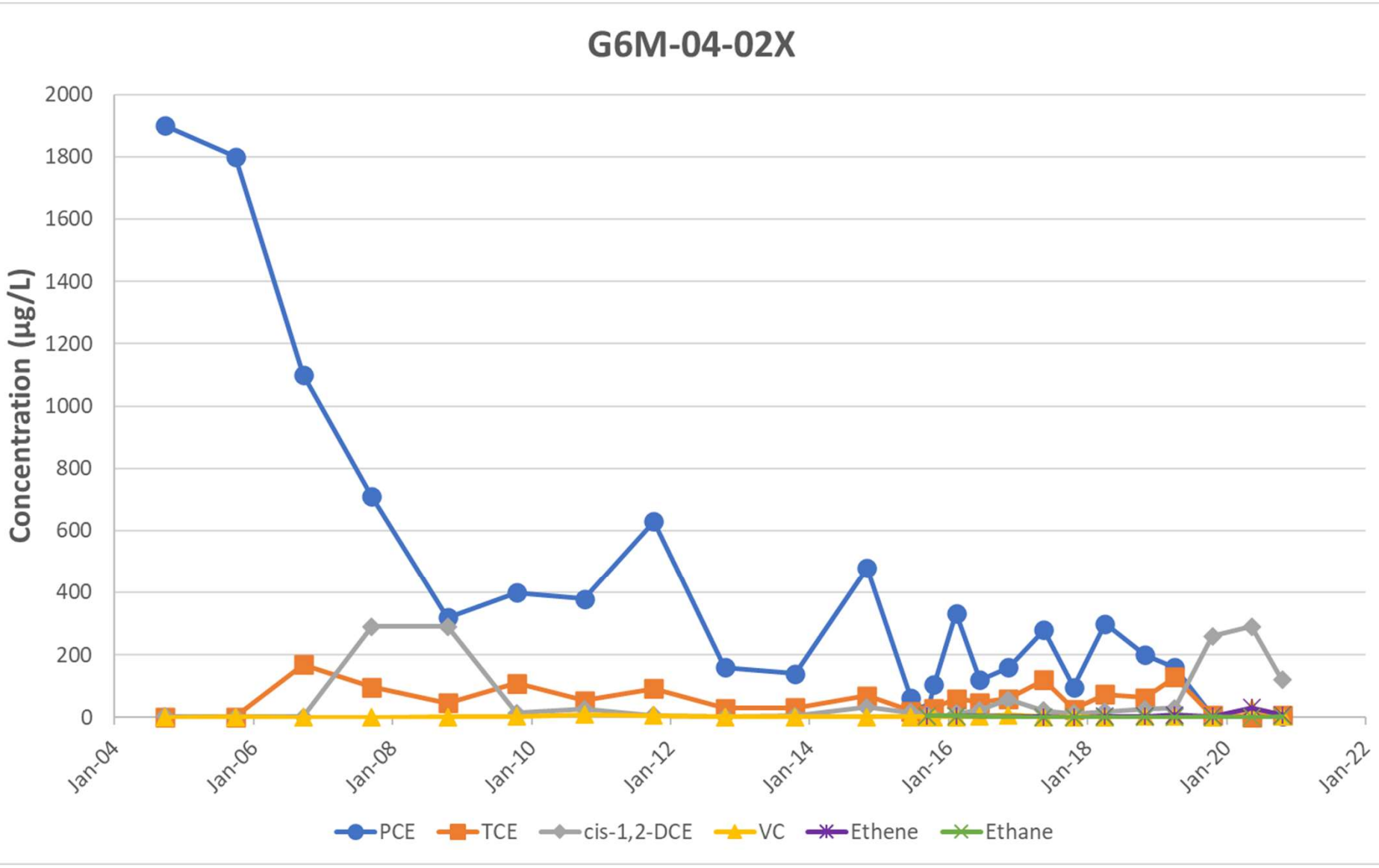
FIGURE
E-5

\ARCADIS\SERES-Arcadis JV - _NE Dist Devens Task Orders\TO 1 - Seed Task\AOC 50\Reports\2. Fall 2020 Memo\Attachments



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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CVOC TREND GRAPH
G6M-04-02X (AREA 3)

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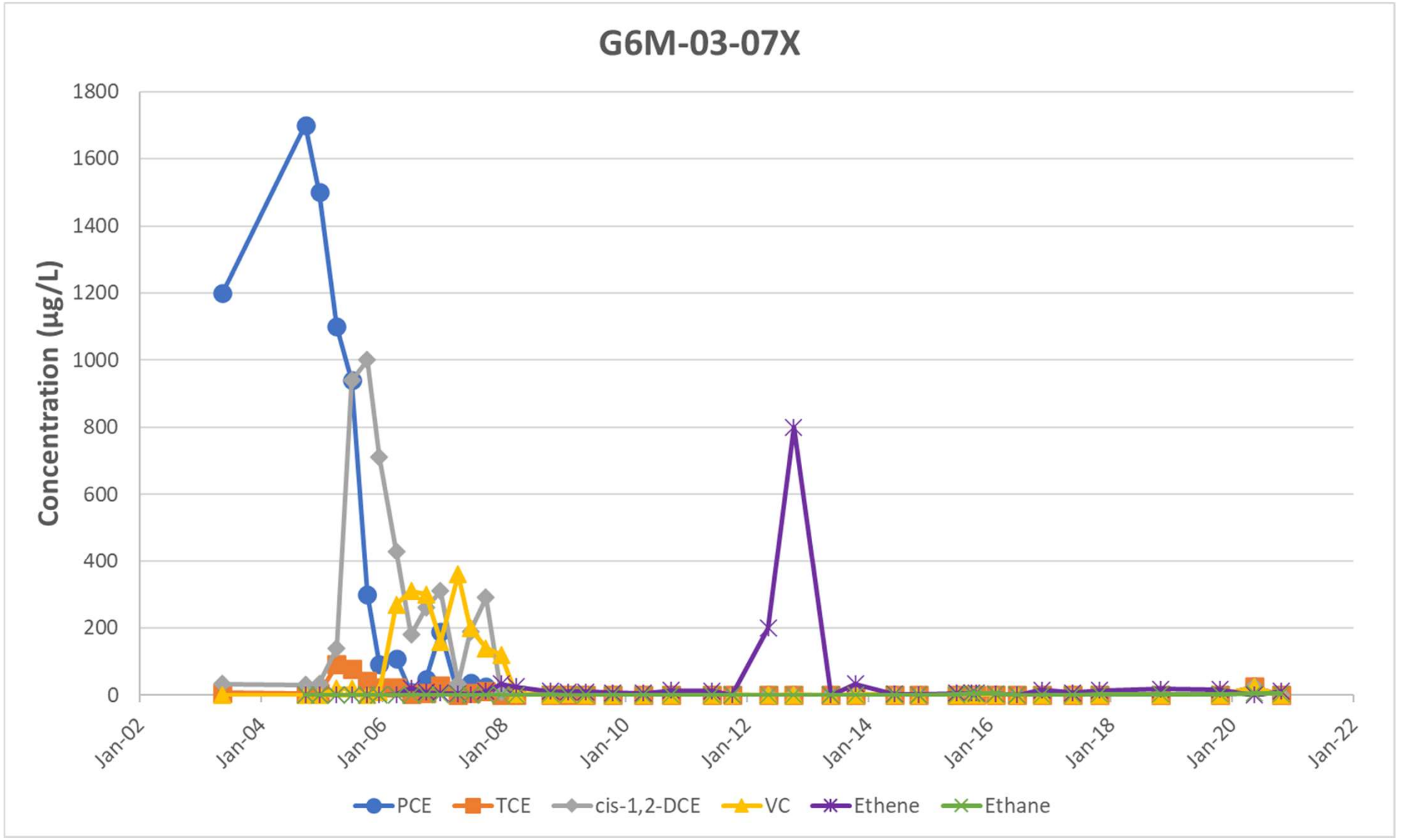
FIGURE
E-6

\ARCADIS\SERES-Arcadis JV - _NE Dist Devens Task Orders\TO 1 - Seed Task\AOC 50\Reports\2. Fall 2020 Memo\Attachments



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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CVOC TREND GRAPH
G6M-03-07X (AREA 3)

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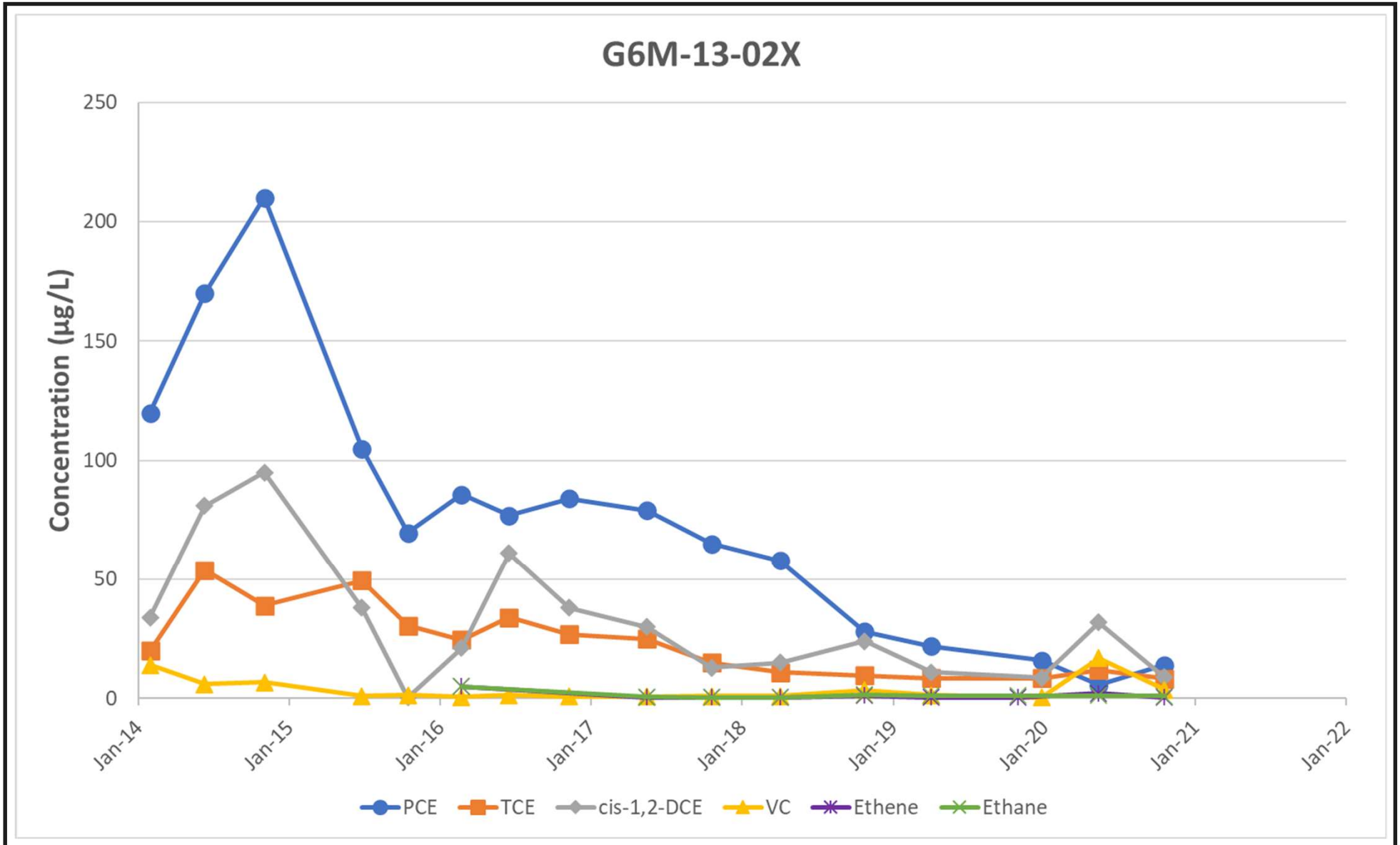
FIGURE
E-7

\ARCADIS\SERES-Arcadis JV - _NE Dist Devens Task Orders\TO 1 - Seed Task\AOC 50\Reports\2. Fall 2020 Memo\Attachments



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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CVOC TREND GRAPH
G6M-13-02X (AREA 4)

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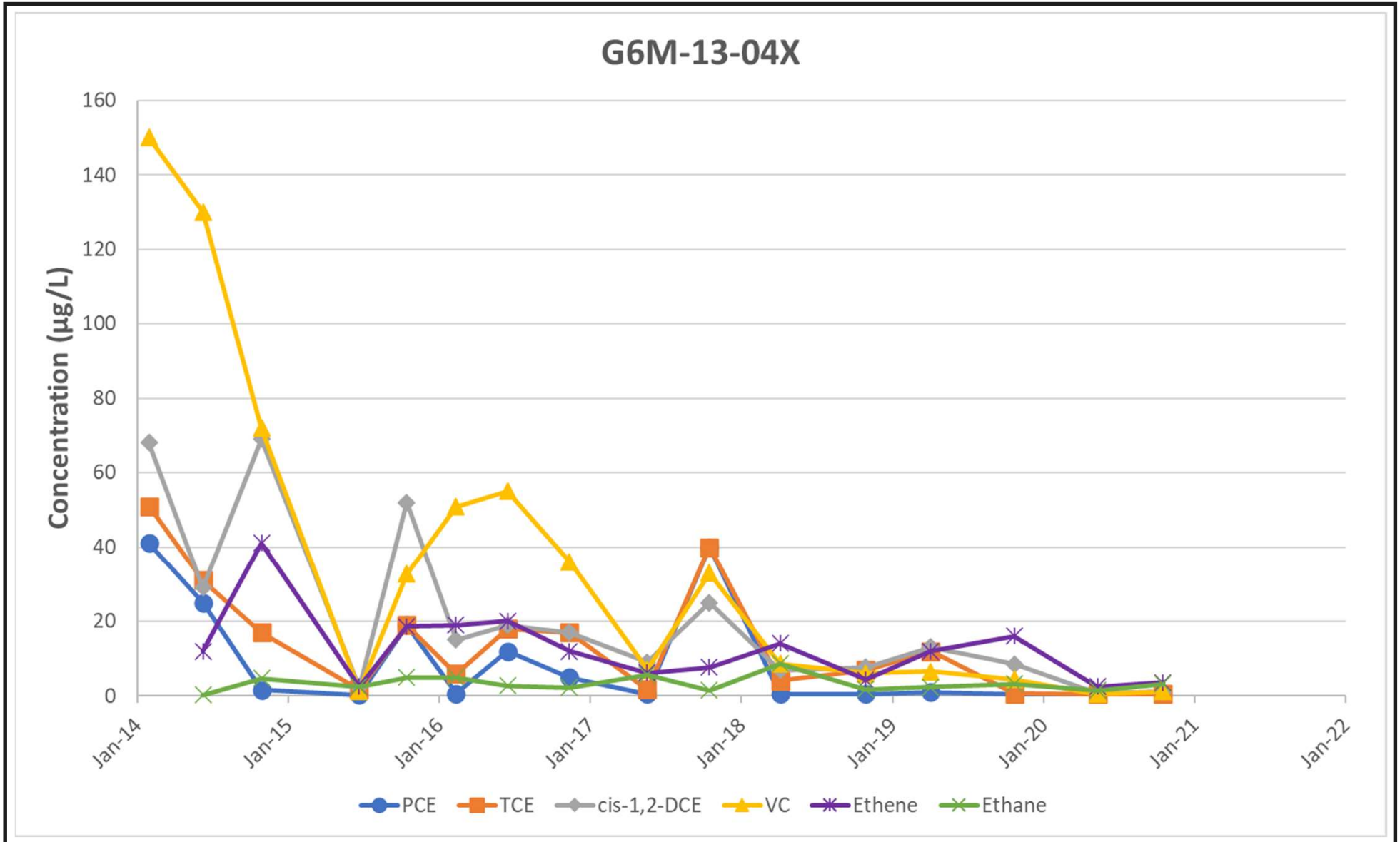
FIGURE
E-8

\ARCADIS\SERES-Arcadis JV - _NE Dist Devens Task Orders\TO 1 - Seed Task\AOC 50\Reports\2. Fall 2020 Memo\Attachments



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

2020 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
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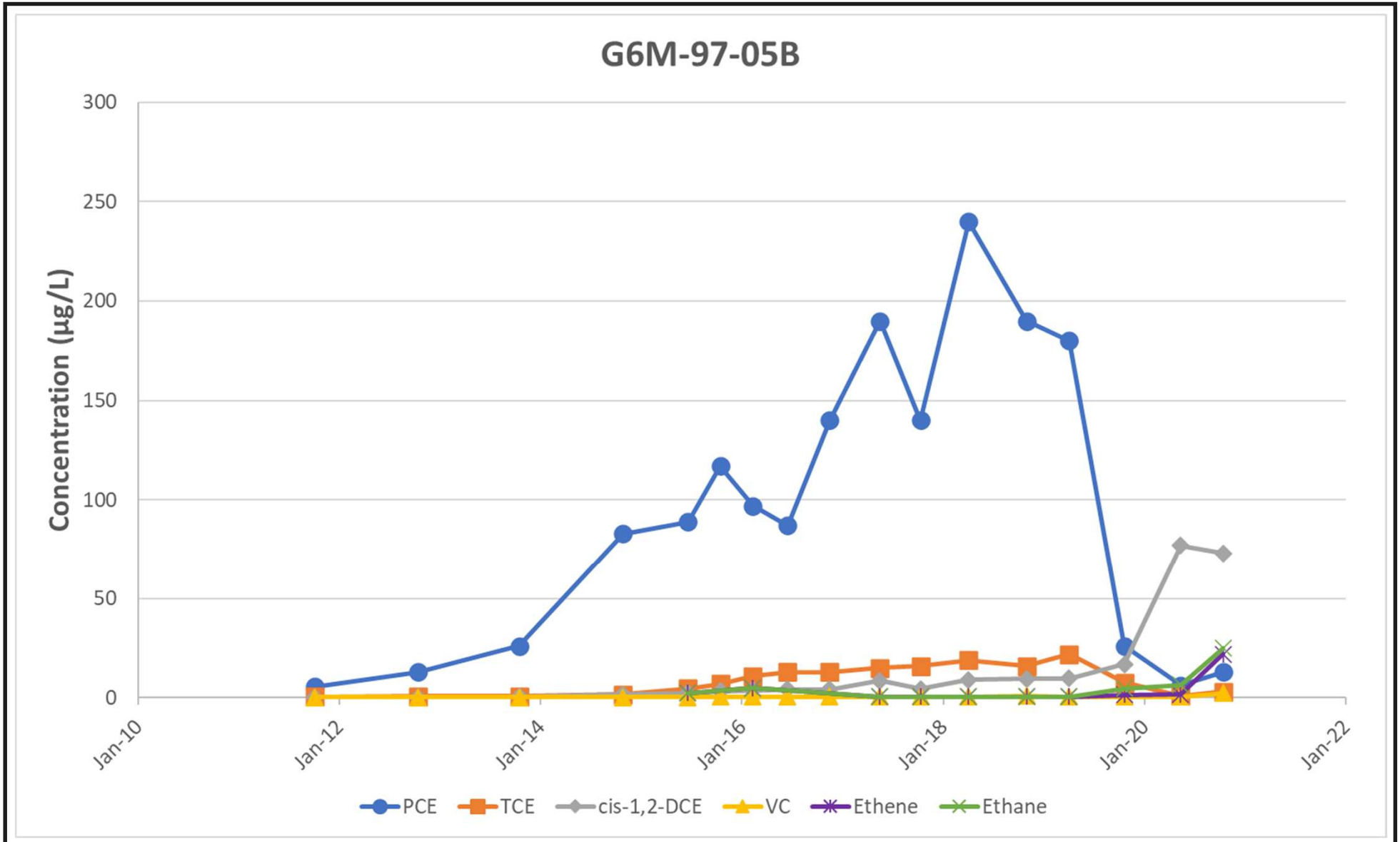
FIGURE
E-9

\ARCADIS\SERES-Arcadis JV - _NE Dist Devens Task Orders\TO 1 - Seed Task\AOC 50\Reports\2. Fall 2020 Memo\Attachments



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COC	AOC 50 Cleanup Level (µg/L)
PCE	5
TCE	5
cis-1-2-DCE	70
VC	2

2020 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
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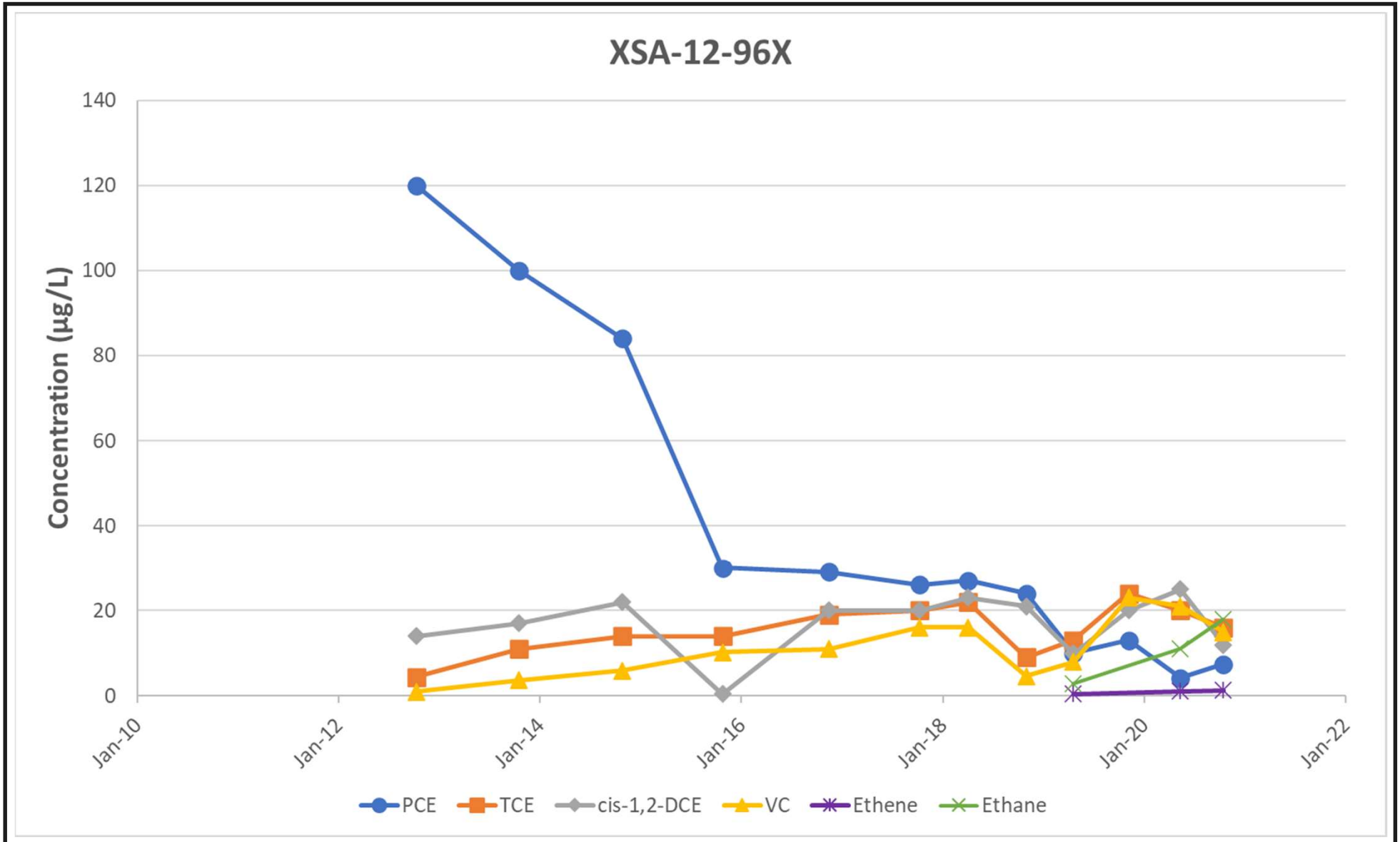
FIGURE
E-10

\ARCADIS\SERES-Arcadis JV - _NE Dist Devens Task Orders\TO 1 - Seed Task\AOC 50\Reports\2. Fall 2020 Memo\Attachments



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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

2020 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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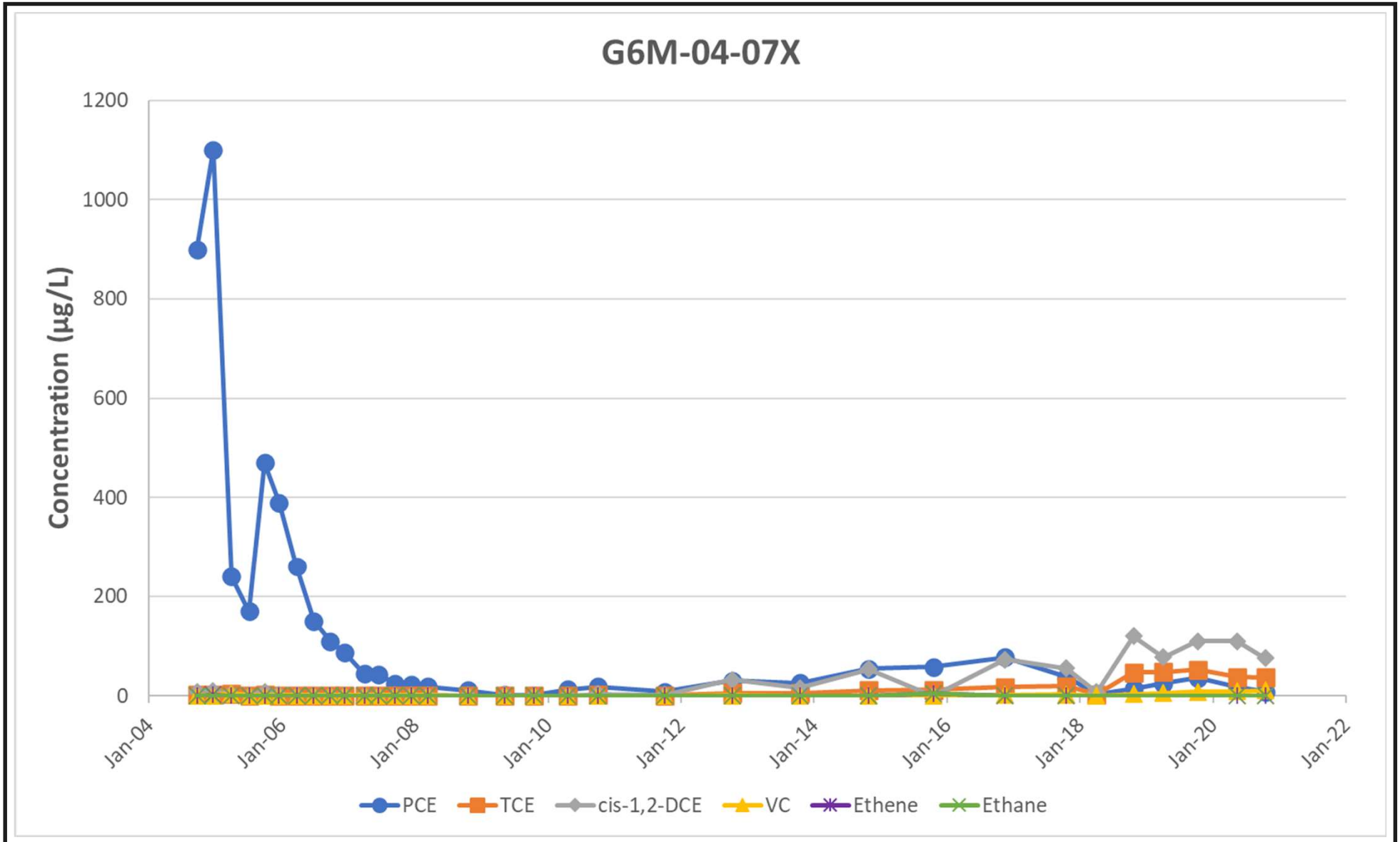
FIGURE
E-11

\ARCADIS\SERES-Arcadis JV - _NE Dist Devens Task Orders\TO 1 - Seed Task\AOC 50\Reports\2. Fall 2020 Memo\Attachments



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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

2020 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
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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

Appendix F

Annual Land-Use Control Plan Checklist, Reinforcement Letters, and Real Property Master Plan

Annual Land Use Control Plan Checklist for AOC 50

This checklist has been developed from the USEPA guidance document Comprehensive Five Year Review Guidance dated June 2001 (OSWER No. 9355.7-03B-P) and from Section 4.6 of the Remedial Action Work Plan, AOC 50, Devens, Massachusetts Site (Arcadis, 2005). The Checklist was modified to site-specific conditions as recommended by the guidance document. The checklist will be completed annually and submitted with the AOC 50 annual operations, maintenance and monitoring report. The checklist will also be used to assist in compiling information for the five-year review.

I. Site Information			
Site Name/Location: AOC 50		**Name/Affiliation:** Ian Martz - Arcadis	
Remedy Includes: Long Term Monitoring, Institutional Controls, ERD			
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			
Inspector: Desmond Bedard (Arcadis), Brent Smith (USACE)			
Item	**Yes**	**No**	**Comments**
Any construction activities or new buildings present in the area of the remedy?		X	Ongoing PFAS investigation - installation wells, borings, piezometers.
Is there evidence of damage to the remedy?		X	
Any groundwater supply wells present?		X	
Any construction detention ponds?		X	
Is there sufficient access to the site for monitoring?	X		
IV. Interview #1			
Name of Interviewer: Ian Martz (Arcadis)			
Name of Interviewee: Roy Herzig (MassDevelopment) and Neil Angus (Devens Enterprise Commission)			
Contact Information: rherzig@massdevelopment.com, 978-784-2917; neilangus@devensec.com, 978-772-8831 x3334			
Interview Notes: Emailed 2019 AR appendices to Roy Herzig, Jessica Strunkin and Neil Angus for review on 12/23/2020. Performed phone interview on 1/27/2021 with Roy Herzig and Neil Angus			
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 Mr. Eagle and Mr. Woodle on October 8, 2020. MassDev was cc'ed on 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	
Are there any issues with site access for monitoring and remediation?	X		Advance notice required due to police training activities, but has not significantly delayed any planned work.
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	
IV. Interview #2			
Name of Interviewer: Ian Martz (Arcadis)			
Name of Interviewee: Tom Eagle - Deputy Project Leader (USFWS)			
Contact Information: tom_eagle@fws.gov, 978-579-4027			
Interview Notes: Emailed interview checklist to Tom Eagle on 1/7/2021. Received responses on 1/21/2021, 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, 2020.
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	Army sampling wells (not pumping wells), probe points/piezometers
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	
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 1/7/2021. Contacted Mr. Woodle on 1/27/2021 via phone, his responses are summarized 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, 2020.
Is interviewee familiar with the land use controls imposed upon the property & documentation of these controls?	X		
Are there any pumping wells or other sources of water other than those supplied by the Town at the property?		X	
Are there any proposed plans for property sale, future development, construction or demolition activities at the property?		X	
Are there any issues with site access for monitoring and remediation?		X	
V. Response Actions			
Item	**Yes**	**No**	**Comments**
Were violations of the LUCs present ?		X	
Are there Response Actions necessary based on the violations?		X	
Are modifications/ terminations of LUC's necessary?		X	
Have Enforcement Actions been taken during this reporting period?		X	

Mr. Henry and Jeffrey Woodle
Merrimack Warehouse Realty Co., Inc.
PO Box 353
Ayer, MA 01432

Arcadis U.S., Inc.
One Executive Drive
Suite 303
Chelmsford, MA 01824
Tel 978 322 4526
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 8, 2020

Contact:
Ian Martz

Phone:
978.322.4526

Email:
ian.martz@arcadis.com

Our ref:
30048392

Dear Mr. Henry and Jeffrey Woodle,

On behalf of the United States Department of the Army (the Army) Seres-Arcadis 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. Robert Simeone at the address listed below.

Mr. Robert Simeone
U.S. Army Garrison Fort Devens
30 Quebec Street
Building 666, Room 132
Devens, MA 01434-4479
978-615-6090

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.

Sincerely,

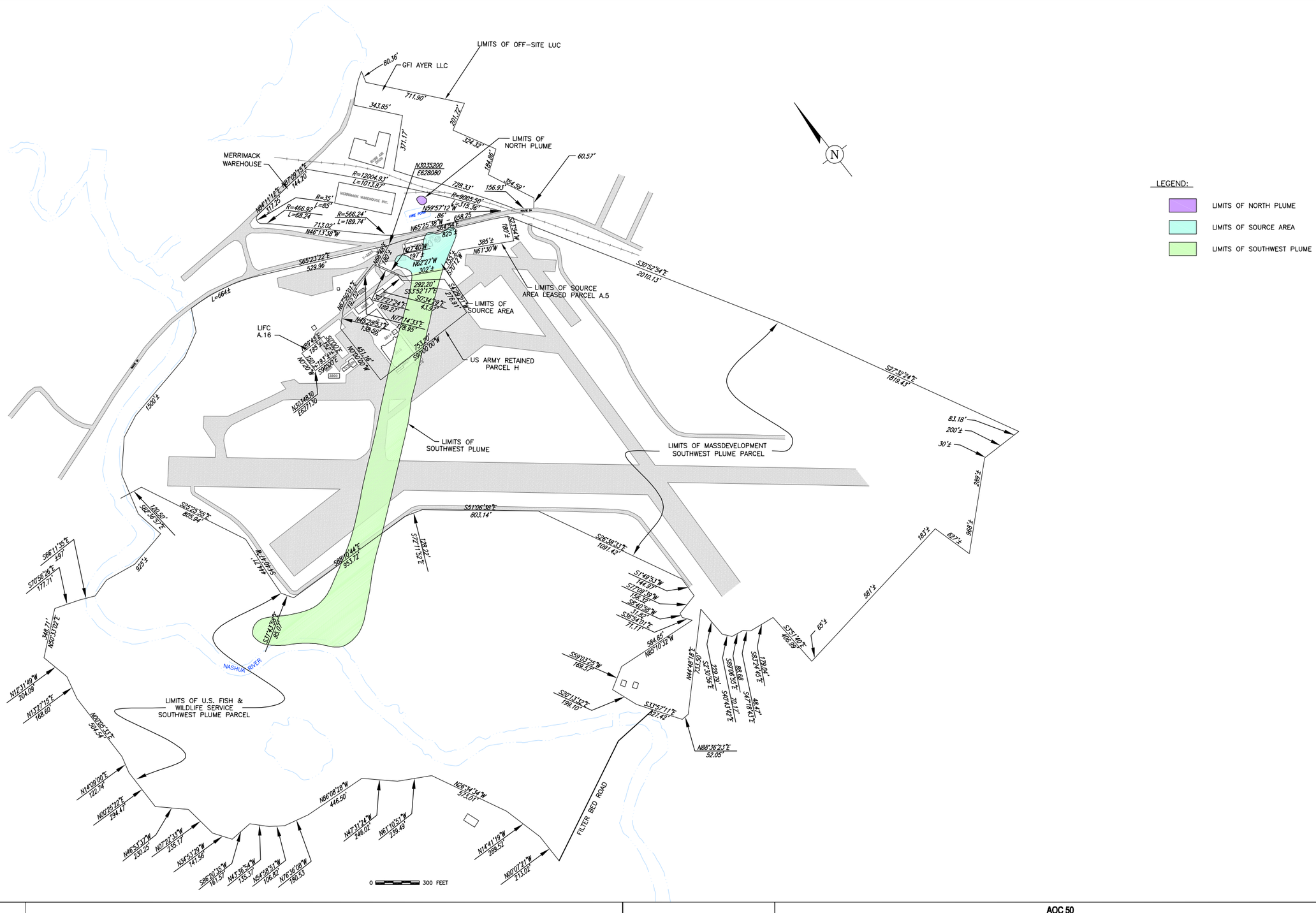
Seres-Arcadis



Ian A. Martz, P.G.
Senior Geologist

Attachments:
Limits of Land Use Controls Map

Copies:
Robert Simeone – BRAC Devens
Penelope Reddy – USACE
Carol Keating – USEPA
David Chaffin – MassDEP
Roy Herzig - MassDevelopment



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Current Plotstyle : ByColor
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

Arcadis U.S., Inc.
One Executive Drive
Suite 303
Chelmsford, MA 01824
Tel 978 322 4526
www.arcadis.com

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Land Use Control (LUC) Reinforcement Letter
CERCLA Remedy - Area of Contamination (AOC) 50
Former Fort Devens Army Installation – Devens, MA

ENVIRONMENT

Date:
October 8, 2020

Contact:
Ian Martz

Phone:
978.322.4526

Email:
ian.martz@arcadis.com

Our ref:
30048392

Dear Mr. Eagle,

On behalf of the United States Department of the Army (the Army) Seres-Arcadis 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. Robert Simeone at the address listed below.

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U.S. Army Garrison Fort Devens
30 Quebec Street
Building 666, Room 132
Devens, MA 01434-4479
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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.

Sincerely,

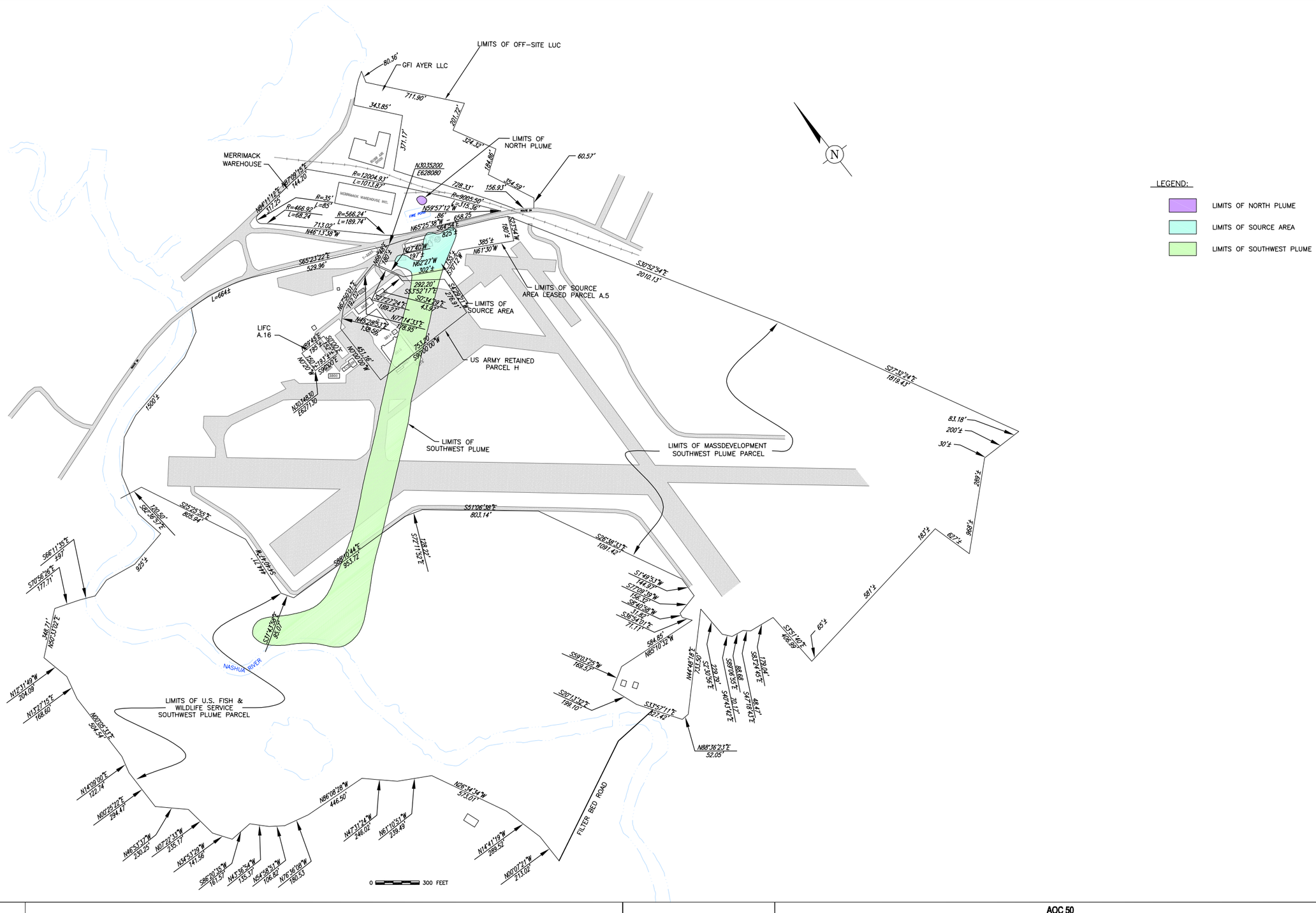
Seres-Arcadis



Ian A. Martz, P.G.
Senior Geologist

Attachments:
Limits of Land Use Controls Map

Copies:
Robert Simeone – BRAC Devens
Penelope Reddy – USACE
Carol Keating – USEPA
David Chaffin – MassDEP
Linh Phu – USFWS



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Area Manager	D. KNOX
Project Director	C. CASTELLUCCIO
Task Manager	C. CASTELLUCCIO
Technical Reviewer	

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LOWELL, MASSACHUSETTS 01854

AOC 50
FORT DEVENS, MASSACHUSETTS

LIMITS OF LAND-USE CONTROL

Project Number	MA000664.0007
Date	02/28/05
Figure	2

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 G

Response to Comments

Response to Comments
2020 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50
Fort Devens, MA
July 2021

Comment No.	Reviewer	Section & Page Number	Comment	Response
1	David Chaffin / MassDEP	Section 4.1.2.3, Area 5	PCE concentrations have declined substantially in samples collected from well G6M-97-05B since 2019; however, these reductions resulted from intense treatment within feet of the well location (five DPT points within 10 feet), rather than a successful westward extension of the Area 4 and/or Area 5 injection well transects. Essentially, well G6M-97-05B has become an injection well and the samples collected from well G6M-97-05B can no longer be used to monitor conditions downgradient of the Area 4 and 5 transects. More specifically, the 2020 sample results are insufficient to demonstrate that an untreated band of PCE does not extend between the west ends of the Areas 4 and 5 injection transects and wells G6M-18-01 and G6M-18-02, where PCE concentrations are below CLs. To address contamination west of the Area 4 and 5 transects, MassDEP recommends: (1) extending one of the Area 4 or Area 5 transects westward to close the gap between the transects and wells G6M-18-01 and G6M-18-02, and (2) installing and sampling an additional monitoring well upgradient of the 2019 injection points to replace well G6M-97-05B.	Monitoring contaminant trends at G6M-97-05B and downgradient XSA-12-96X provides sufficient data on treatment efficacy in this area. Both contaminant concentrations and geochemical conditions at western monitoring well G6M-18-02 do not indicate that VOC contamination extend west from G6M-97-05B. G6M-18-02 to the west and the monitoring wells southwest of G6M-97-05B will continue to be monitored and any changes that might indicate treatment in the upgradient area needs to be adjusted will be reported. Well GM-13-02X, located south and west of IW-36 of Transect 4, shows decline of PCE since 2014 and indicates that Transect 4 is acting to reduce the plume west of the runway.
2	David Chaffin / MassDEP	Section 6	MassDEP agrees with the recommendation to sample well G6M-04-09X for VOCs and ERD indicators during Spring 2021.	---
3	David Chaffin / MassDEP	Figure 5	Persistence of PCE at well G6M-07-01X (Appendix D) indicates that the Area 2 injection well transect may not extend far enough west to intercept the full extent of the PCE plume.	While PCE is present in G6M-07-01X, the concentrations in Spring and Fall 2020 (27 and 32 ug/L, respectively) are within the historical concentration range (11 to 50 ug/L). This location was sampled again in Spring 2021 and PCE was detected at Monitoring wells G6M-04-11X and G6M-96-25B have been below the CLs and bound the plume upgradient of G6M-07-01X, and as such contamination in this well likely does not extent to the west. Plume dynamics and groundwater flow direction are well documented. The Army will re-consider the need for additional wells as monitoring proceeds in the future. This area will continue to be monitored and targeted injection could be performed, if needed, using DPT injections in the future outside of any area where injection wells are not in place.
4	David Chaffin / MassDEP	Table 8	Table 8 should list the DTW value for well G6M-13-02X.	The table has been revised per the comment.
5	David Chaffin / MassDEP	Appendix A	Many of the Sampling Forms list Purge Volumes of 0 gallons; please correct or explain.	This was due to a software error with the electronic data application. The "0" values have been deleted, and the total volumes + gallons purged values have been added to the logs where missing.
6a	David Chaffin / MassDEP	Appendix D, page 11	The data from well G6M-18-01 are out of order and should be relocated to p. 16.	The table has been revised per the comment.
6b	David Chaffin / MassDEP	Appendix D, page 18	The data from well XSA-12-95X are out of order and should be relocated to p. 17.	The table has been revised per the comment.
	EPA GENERAL COMMENTS (GC)			
1	EPA	General	While the ERD remedy continues to show progress in many locations, it appears to be less successful in other areas of the plume. As noted in comments on the 2019 Annual Report (AR) and reiterated again in comments below, PCE concentrations declined following ERD injections in 2017, 2018, and 2019, but then rebounded at some locations by the next spring's sampling round. (See 2019 AR Figure 4-5 and Page-Specific Comment (PSC) 17.) EPA recommended that Army perform focused injections in these areas of the plume, where COC concentrations remain above ROD-specified cleanup goals. Unfortunately, Army opted to forego the recommended injections. Despite Army's vague commitment to resume injections at some point in the future, the remedy remains incomplete until a) the groundwater at the site (including the Source Area, the Southwest plume, and the North plume) no longer present an unacceptable risk to future workers or residents via potable water ingestion and inhalation; b) the site is suitable for unrestricted land use; and c) groundwater at the site is suitable for potable purposes (i.e. MCLs have been attained throughout the contaminated groundwater plume). EPA requests that focused ERD injections using a combination of existing injection wells and direct push geoprobe wells should be proposed and designed based on the 2020 and spring 2021 results to ensure continued progress towards the attainment of ROD-specified remedial action objectives and cleanup goals (i.e. remedy completion).	The Army is aware of, and is committed to, complying with the ROD-specified remedial action objectives and notes that ERD injections are just one element of a comprehensive ROD-specified remedial program that ensures protection of human health and the environment during the time required for groundwater remediation. The Army also notes that the presence of PFAS in groundwater at AOC 50 significantly alters the timeframe and feasibility of completion of a groundwater remedy that will meet the criteria described by the EPA in the comment. In accordance with 19 February 2021 *Area of Contamination 50, Fall 2020 Remedy Performance and Recommendations Memorandum* , the Army is currently evaluating the results of the Spring 2021 sampling to assess the need for/scope of additional injections at the site. The results of the evaluation will be presented to EPA/DEP in August 2021. These evaluations, including the temporary cessation of injection activities, are required to properly evaluate the performance of the remedy and allow for optimization where necessary. Periodic cessation of injections when data indicate that ERD is ongoing in the absence of additional carbon injection is a sound remedial practice. As described in the February 2021 Memo, additional injections were not suggested because ERD was still occurring. Injection of carbon when not needed can cause the aquifer pH to drop below levels conducive to treatment. The Army will submit a review of the injection program based on the Spring 2021 data in the upcoming memo to be submitted in mid-August. The memo will include trend analysis and a summary of aquifer TOC concentrations and geochemistry.

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<table>
<tr><th>Comment No.</th><th>Reviewer</th><th>Section & Page Number</th><th>Comment</th><th>Response</th></tr>
<tr><td>2</td><td>EPA</td><td>General</td><td>While EPA agreed (in comments on the 2019 AR) that the evaluation of potential future injection locations could be conducted in conjunction with future annual LTM submittals, it strongly recommended that a combination of direct push injections and injections into existing injection wells continue in 2020. (See General Comment (GC) 4 and PSC 15.) Unfortunately, Army did not conduct the recommended focused ERD injections in 2020 and did not include the agreed upon annual evaluation in the draft 2020 AR.</td><td>See response to EPA Comment 1 above. The annual evaluation was submitted in advance of the AR in the above-referenced 19 February 2021 memorandum.</td></tr>
<tr><td>3</td><td>EPA</td><td>General</td><td>In the 2016 AR, Army also predicted continued decreases in PCE and TCE concentrations, despite acknowledging that for five wells (G6M-07-02X, G6M-13-05X, G6M-04-02X, G6M-97-05B, and G6M-04-07X) these concentrations were not decreasing or stable. EPA recommended that these five wells be tracked and discussed in subsequent years' reports, because they appeared to represent exceptions to Army's general conclusion of decreasing concentrations. The 2017 and 2018 ARs documented that most of these same wells were still not exhibiting decreasing concentrations of PCE. Trends through 2019 were more encouraging for some of the wells, but G6M-97-05B showed an increasing trend (through the 2019 AR) despite injections in this area in both 2018 and 2019. Results in 2020 were more encouraging for G6M-97-05B but not for G6M-07-02X. Army should continue to provide a discussion of noteworthy PCE and TCE trends in these five wells in the next version of the 2020 AR and in future reports, as rebounds in PCE concentrations may continue to occur following injections, with the lag time uncertain.</td><td>Results for CVOCs at G6M-07-02X from 2017 through 2020 are shown below and the data are encouraging. PCE was 1,800 µg/L in 2017 and 1.1 [1.2] µg/L in fall 2020. This data is provided in Appendix D.
<table><tr><th></th><th></th><th>PCE</th><th>TCE</th><th>cis-1,2-DCE</th><th>trans-1,2-DCE</th><th>1,1-DCE</th><th>VC</th></tr><tr><th>Well ID</th><th>Date Samp</th><th>(µg/L)</th><th>(µg/L)</th><th>(µg/L)</th><th>(µg/L)</th><th>(µg/L)</th><th>(µg/L)</th></tr><tr><td>G6M-07-02X</td><td>5/16/2017</td><td>1,800</td><td>20 U</td><td>20 U</td><td>20 U</td><td>20 U</td><td>20 U</td></tr><tr><td>G6M-07-02X</td><td>10/10/2017</td><td>910 J</td><td>20 U</td><td>20 U</td><td>20 U</td><td>20 U</td><td>20 U</td></tr><tr><td>G6M-07-02X</td><td>4/4/2018</td><td>350</td><td>5.0 U</td><td>33</td><td>5.0 U</td><td>5.0 U</td><td>5.0 U</td></tr><tr><td>G6M-07-02X</td><td>10/17/2018</td><td>370</td><td>4.1 J</td><td>110</td><td>5.0 U</td><td>5.0 U</td><td>3.3 J</td></tr><tr><td>G6M-07-02X</td><td>4/5/2019</td><td>71 J</td><td>1.8</td><td>110</td><td>1.0 U</td><td>1.0 U</td><td>3.4</td></tr><tr><td>G6M-07-02X</td><td>10/9/2019</td><td>5.3</td><td>5.0 U</td><td>140</td><td>5.0 U</td><td>5.0 U</td><td>4.6 J</td></tr><tr><td>G6M-07-02X</td><td>05/12/2020</td><td>2.4</td><td>0.720 J</td><td>110</td><td>1.00 U</td><td>1.00 U</td><td>3.6</td></tr><tr><td>G6M-07-02X</td><td>10/14/2020</td><td>1.1</td><td>1.00 U</td><td>40</td><td>1.00 U</td><td>1.00 U</td><td>1.7</td></tr><tr><td>G6M-07-02X (FD)</td><td>05/12/2020</td><td>2.9</td><td>0.730 J</td><td>110</td><td>1.00 U</td><td>1.00 U</td><td>3.6</td></tr><tr><td>G6M-07-02X (FD)</td><td>10/14/2020</td><td>1.2</td><td>1.00 U</td><td>41</td><td>1.00 U</td><td>1.00 U</td><td>1.6</td></tr></table>
The Army will provide the discussion in future performance evaluations which will be submitted independent of the annual reports. Trends for these well are shown in Appendix E of the Annual Report.</td></tr>
<tr><td>4</td><td>EPA</td><td>General</td><td>In GC 7. on the 2016 AR, EPA referenced the 2014 MiHPT report (included as Appendix A of the 2014 AR), which stated the goal of investigating both the parachute shakeout tower area and the former drum storage area (FDSA) and noted that the FDSA had not yet been investigated with MiHPT. In response, Army stated that it was planning five DPT injections in this area, and "Based on subsequent monitoring results of the effectiveness of the DPT injections, the Army will assess the need and value of conducting additional investigations in the FDSA."

PCE concentrations in FDSA (part of Area 1) well G6M-07-02X rebounded from 482 µg/L in 2015 to 1,400 µg/L in June 2016 and 3,200 µg/L in November 2016, but then declined to 1,800 µg/L in May 2017 and to 910 µg/L µg/L in October 2017, after the July 2017 injections. Further declines in 2018 (350 µg/L in May 2018 and 370 µg/L in October 2018, after injections), in 2019 (71 µg/L in May 2019 and 5.3 µg/L in October 2019 after injections), and in 2020 (2.4 µg/L in spring 2020; 1.1 µg/L in fall 2020) show a continuation of these trends. EPA agrees that the declines are encouraging and that further MiHPT or other high-resolution investigations are not needed at present. However, G6M-07-02X has a previous history of fluctuating concentrations. Therefore, it is premature to conclude that future rebounds will not occur. Based on the recent success of using a combination of injections into existing wells and direct push injections, this combined approach should continue to be used in the future.</td><td>The Army agrees that the declines in concentrations in at the FDSA are encouraging and will continue to evaluate contaminant concentrations in the noted wells as part of future performance evaluations.</td></tr>
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5	EPA	General	Several years ago, EPA and Army agreed that the injection well network was missing the west edge of the plume, selected monitoring wells located west of the injection transects were converted to injection wells to address this issue. EPA concurred, but noted that the ability to monitor the effectiveness of the injections was diminished, unless new monitoring wells were installed west of the converted wells. EPA appreciates that Army sampled one such converted, former monitoring well (G6M-07-01X, at the west end of the Area 2 transect) in spring 2019. EPA recommended (in comments on the 2019 AR) sampling G6M-07-01X and the other western, converted wells in 2020. The 2020 results for G6M-07-01X (PCE 27 µg/L in spring 2020 and 32J µg/L in fall 2020) indicate the need to install a monitoring well or wells farther to the northwest to define the plume edge northwest of Area 2. (See PSC 9.)	Monitoring wells G6M-04-11X and G6M-96-25B have been below the CLs and bound the plume upgradient of G6M-07-01X, and as such contamination in this well likely does not extent to the west. Plume dynamics and groundwater flow direction are well documented. In Spring 2021, PCE was detected at 10 ug/L (results not yet validated) at G6M-07-01X. The Army will re-consider the need for additional wells as monitoring proceeds in the future.
6	EPA	General	According to the 2017 and 2018 ARs, Army reached an agreement with EPA that the IWS system will be repaired and maintained, if and/or when it is needed for resuming in-well stripping. Sampling in 2019 and 2020 revealed a surprisingly high arsenic concentration downgradient of the IWS area. If this occurs also in 2021, reactivation of the IWS may be necessary. (See PSC 12.)	As described in the 2017 Annual LTM Report dated December 2018 by KGS, at the BCT meeting on January 18, 2018, the Army and EPA agreed that the system could be repaired in the future if it was found to be needed again. At that time, visual inspection of the system indicated a number of components would need to be replaced. Concentrations of arsenic in wells located hydraulically downgradient of the IWS area (G6M-04-06X and G6M-04-07X) were below the CL of 10 ug/L in Fall 2020.
7	EPA	General	The distribution of arsenic concentrations in wells downgradient and side-gradient of Area 5 remains puzzling and possibly anomalous. Army has stated that elevated arsenic generally occurs in areas with reducing conditions, typically downgradient of injection sites; arsenic levels below 10 µg/L generally occur where there has been no injection or where enough time has passed following injection for oxidizing conditions to return. This pattern did not appear to hold true near Area 5 in 2018, where a group of wells located down-gradient of the former injection transect (G6M-02-11X, G6M-02-12X, G6M-03-10X) had elevated arsenic levels, even though there was no injection at all in 2016, and the 2017 and 2018 injections were done via direct push at locations northwest (side gradient) of the wells in question. These conditions may be explained by differing injection and monitoring well screen depths, as pointed out by Army in the 2018 AR. G6M-02-11X and G6M-03-10X showed elevated arsenic again in 2019 (G6M-02-12X was not sampled), although the injections were closer to this area in 2019. The highest arsenic concentration in 2019 was at G6M-04-06X, located downgradient from the IWS. Arsenic is also elevated at other locations along the eastern edge of the plume in Areas 4 and 5 and not necessarily near 2019 injections. EPA requested that Army continue to track these conditions (in Area 5 and elsewhere if noted) and comment on this matter in the 2020 AR, but the discussion (Section 4.1.4) is very general and makes no mention of the continuing high arsenic results along the southeastern edge of the monitoring network downgradient of the IWS; please discuss. (See GC 6 and PSC 12.)	The following text has been added to Section 4.1.4: Arsenic concentrations exceeding the CL had previously been detected near the southeastern edge of the plume downgradient of Area 5. In Fall 2020, wells located within 400 ft downgradient of Area 5 (i.e., G6M-02-11X, G6M 02-12X, G6M-03-08X, G6M-03-10X, G6M-13-04X, and MW-3) contained arsenic above the CL of 10 ug/L. At each of these wells, arsenic concentrations have been greater than the CL since at least 2014, presumably due to upgradient ERD injection activities in Area 5. The one exception is G6M-03-08X, which is located downgradient of G6M-02-12X, and first exceeded the arsenic CL in 2018. At locations farther downgradient of these wells (i.e., G6M-04-06X, G6M-04-07X, XSA-12-95X), arsenic concentrations have generally been below the CL historically, including in Fall 2020, indicating that arsenic is attenuating with greater distance from former injection areas and time since injections have been performed.
8	EPA	General	Unjustifiably broad conclusions regarding conditions “throughout the plume” should be omitted or sufficient data must be presented and discussed to support such claims (See PSC 5, 7, and 11.)	The requested revisions have been made throughout the document to change "throughout the plume" to "at many site wells" or an equivalent statement.

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	EPA PAGE-SPECIFIC COMMENTS (PSC)			
1	EPA	Page 3, § 1.4, 6th and 7th paragraphs	These paragraphs discuss the history of injections at the site and ROD-predicted time frames for cleanup. EPA agrees that ERD injections in 2017, 2018, and 2019 were generally successful; however, EPA sees the success as rationale for continuing the injections, and Army sees the success as rationale for suspending them. Noting that the last three injection rounds differed in detailed locations and strategies (existing injection wells vs direct push Geoprobe wells) based on previous results, a more thorough presentation and evaluation of key sample data would have revealed that additional injections in specific areas of the site are necessary. As noted in GC 2. above, despite EPA's request for a combination of direct push injections and injections into existing injection wells in 2020, Army opted to discontinue injections and evaluate potential future injections in subsequent ARs. Although the 2020 AR did not include the agreed upon evaluation, EPA strongly believes that additional injections in 2021 are critical to ensuring timely, complete remediation of the AOC 50 plume.	As noted in the response to Comment #1 above, the temporary suspension of injection activities to allow for the evaluation of contaminant concentration trends and aquifer conditions is a common and sound practice. As also noted above, the Army provided the detail and rationale for the current evaluation in the memorandum submitted on 19 February 2021, in accordance with the Army Response to EPA's General Comment #2 on the 2019 AR. An evaluation of Spring 2021 data and recommendations will be submitted mid-August.
2	EPA	Page 4, § 2	This section is too general; the statement that "complete dechlorination is occurring across the site" is over-simplified. It would be better to say something like "Evidence at many locations is consistent with dechlorination and will be discussed in more detail in Section _____." Additionally, the last sentence of the section is too vague; carefully planned and targeted injections in 2021 would be more likely to "achieve optimum remedial performance" than monitoring alone. (Please note: the previous three injection rounds were not identical; they were carefully designed and focused.)	The beginning of the first sentence of Section 2 has been changed to: "As described in greater detail in Section 4, CVOC and geochemical data collected in spring and fall 2020 indicate that complete dechlorination is occurring at many areas of the site…" The last sentence of Section 2 states that the remedial approach will continue to be adjusted over time to achieve optimum remedial performance. This includes carefully designed and focused injections when and where is necessary to continue to support reductive dechlorination where individual COC concentrations are approximately 100 µg/L or greater and where data indicated that dechlorination has stalled due to a lack of available electron donor.
3	EPA	Page 6, § 4.1.1, 1st bullet	One of the two wells outside the acceptable pH range for bioremediation (G6M-6-01X; pH = 4.16) had very high turbidity in fall 2020 as shown in Table 5. Could this have influenced the pH result of any of the CVOC or metals results?	This well is a former monitoring well that was utilized as an injection well in 2019. The elevated turbidity and dissolved iron and reduced pH are likely due to injection at this well. G6M-06-01X was sampled in 2020 at EPA's request. The Army does not plan to continue to sample this location at this time.
4	EPA	Page 6, § 4.1.1, 2nd bullet	The three sentences of the primary bullet make general claims about anoxic conditions and negative ORP being located "downgradient and within the in-situ reactive zones … because of ERD treatment." Although the sub-bullets provide Area-specific information on anoxic and ORP conditions, the reader has no way to evaluate the general claims made above – are the claims always true; often true, or true only in selected locations? No figure or table references are provided to support the claims made in the second bullet. EPA recommends that a new figure should be developed, showing a composite of all the ERD injection locations for 2017, 2018, and 2019 (perhaps with a different color or font for each year). DO and ORP results from 2020 could then be posted on the map to allow assessment of Army's claim and identify wells (if any) that represent exceptions.	A reference to Table 4, where DO and ORP data are listed, has been added to the introductory paragraph. DO and ORP data ranges are described in detail in bullet two of Section 4.1.1.
5	EPA	Page 7, § 4.1.2.1	The text states, "As shown in Table 4, spring 2020 CVOC results indicate that treatment continued to occur throughout the extent of the CVOC plume …." While Table 4 provides a snapshot of results from one monitoring round, it does not, alone, provide enough information to support this claim. At minimum, CVOC concentrations before the 2019 injections would need to be discussed and compared to the 2020 results to support such a conclusion. Even then, Army's conclusion would be justified only if there were no exceptions throughout the extent of the CVOC plume. More cautious and well-supported conclusions will do more to advance the discussion and may reach an earlier consensus that site cleanup has been achieved. A reference to trend plots in Appendix E would be helpful.	Reference at the beginning of the sentence has been changed to Appendix D. Section 4.1.2.1 was intended to include a brief summary of the Spring 2020 data and conclusions that were discussed more thoroughly in the AOC 50 Spring 2020 Performance Evaluation and Recommendations Memorandum, referenced at the end of the section and above in the response to Page Specific Comment #1.
6	EPA	Page 8, § 4.1.2.2, 1st bullet below embedded table	At G6M-04-09X, PCE concentrations increased from fall 2019 (2.8 µg/L) and non-detect in fall 2018 following injections upgradient in both years, to fall 2020 (110 µg/L). This well had the highest PCE concentration for the fall 2020 round (was not sampled in spring 2020), indicative of significant rebounding. These results are yet another example of why (and where) additional injections should be performed in 2021.	Monitoring well G6M-04-09X was sampled in Spring 2021 to confirm the Fall 2020 results and overall trend of COCs at that location. The PCE concentration at G6M-04-09X decreased, and in May 2021 was below the limit of detection of 2 µg/L. The Army is currently evaluating the results of the Spring 2021 sampling to assess the need for/scope of additional injections at the site. The results of the evaluation will be presented to EPA/DEP in August 2021.

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7	EPA	Page 9, § 4.1.2.2, last paragraph of section at top of page	When will the revised LTMMP be submitted to USEPA and MassDEP? For reasons previously discussed, a targeted round of ERD injections should be performed in summer 2021, prior to and separate from the LTMMP update (i.e. review and comment) process.	The draft LTMMP Update is currently scheduled to be provided in May 2022. However, the schedule also calls for an injection plan update to be submitted in August 2021.
8	EPA	Page 9, Section 4.1.2.3, 1st paragraph and Appendix E	Please add labels to each trend plot in Appendix E illustrating the Area in which each well is located. The conclusions in the 3rd and 4th sentences of the paragraph are true in many areas, but with a significant rebound in one Area 1 well (G6M-04-09X) and an undefined plume edge remaining at the west edge of Area 2. While the sentences are applicable to Area 3, questions remain for portions of Areas 4 and 5 (see additional comments below).	Appendix E has been updated to include which Area each well is located. While a PCE rebound was detected in G6M-04-09X compared to recent previous events, it is difficult to draw conclusions from one data point as to whether this was a temporary increase or indicative of a trend. For this reason, G6M-04-09X was sampled in Spring 2021. The PCE concentration at G6M-04-09X decreased and in May 2021 was below the limit of detection of 2 µg/L. Validated data will be submitted to the EPA on August 11, 2021.
9	EPA	Page 9, § 4.1.2.3, Area 2	Well G6M-07-01X, located at the west end of the Area 2 transect, was sampled in spring 2019 for the first time since 2013 (this well had been converted to an injection well). The result was 35J µg/L for PCE; the well was re-sampled in 2020, with results of 27 µg/L in the spring and 32J µg/L in the fall . Prior to this well's conversion from a monitoring well to an injection well, it was the western most monitoring well in this part of Area 2; no monitoring well was installed to replace this well, subsequent to its conversion. Because PCE detections above the limit are found again in 2020, EPA recommends installation of a new monitoring well farther northwest, to define the plume boundary. (See GC 4.)	Monitoring wells G6M-04-11X and G6M-96-25B have been below the CLs and bound the plume upgradient of G6M-07-01X, and as such contamination in this well likely does not extent to the west. Plume dynamics and groundwater flow direction are well documented. The Army will re-consider the need for additional wells as monitoring proceeds in the future. Injection well G6M-07-01X was sampled in 2020 at the EPA's request and, based on the Fall 2020 VOC concentrations detected at the location, was sampled again in Spring 2021. In Spring 2021, PCE was detected at 10 ug/L (results not yet validated) at G6M-07-01X. The Army is currently evaluating the results of the Spring 2021 sampling to assess the need for/scope of additional injections at the site and will review the need for a monitoring well further to the northwest. The results of the evaluation will be presented to EPA/DEP in August 2021.
10	EPA	Page 10, § 4.1.2.3, Area 4	G6M-13-02X is located obliquely down-gradient of the west end of the Area 4 injection wells. ERD injections were performed in these wells in 2018 and 2019. G6M-13-02X is not distant from the injection points, so it no longer seems reasonable to assume that more time is needed for the 2019 injections to produce a significant decline in PCE concentrations. Screen depth, intervening low-permeability deposits, or the wells not being located on the same groundwater flow lines are possible explanations for the lack of response. In comments on the July 2020 annual memo on injections, EPA recommended a new injection targeting this well, and Army (in its RTC) declined because of the relatively low level concentration (well below 100 µg/L for several years). To ensure timely, complete remediation of the AOC 50 plume, an injection event should be performed in a new well or in a Geoprobe direct push well located west of the current line of injection wells and immediately upgradient of G6M-13-02X.	The PCE concentration at G6M-13-02X was only 17 µg/L in Fall 2020, the second lowest detected concentration of PCE at the well over the 16 most recent monitoring events depicted on Figure E-8 in Appendix E. The overall PCE trend at the well is declining. This well was sampled again in Spring 2021, and the PCE concentration was 3.3 µg/L. G6M-18-01 bounds the plume to the west. The Army is currently evaluating the results to assess the need for/scope of additional injections at the site. The results of the evaluation will be presented to EPA/DEP in August 2021.
11	EPA	Page 11, § 4.1.3.1	The first sentence seems to make an unjustifiably broad conclusion regarding conditions "throughout the plume". Sampled locations are probably too sparse to conclude this, especially since a few locations with unexplained CVOC concentrations are still present. Similarly, the last sentence makes a general conclusion that is not fully justified; EPA urges more cautious conclusions that can be supported by results. Please also revisit the methane, TOC, and general favorability for biodegradation in a more detailed manner that takes variations within the site and plume into account in the 2021 report. (See GC 8.)	Additional details will be added to the Geochemical Analyte sections beginning with the 2021 annual report. The first sentence has been edited to change "throughout the CVOC plume" to "at many locations within the CVOC plume". Similarly, the last paragraph has been edited to read: "Ethene and/or ethane are present in most monitoring wells sampled, particularly within and immediately downgradient of injection areas. The presence of ethene and ethane indicate the microbes required for complete reductive dechlorination are active and present within site groundwater and indicate that PCE is being completely degraded."

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12	EPA	Page 12, § 4.1.4, 3rd paragraph of Section and Figure 10	This discussion of arsenic glosses over some high and unexplained arsenic levels along the former southeastern edge of the plume, downgradient of the Area 5 injection well array. More discussion of the arsenic levels is warranted in the 2020 Annual Report. Specifically, Army had predicted, in Section 4.1.3 of the 2018 AR, that arsenic concentrations would decrease in these areas; please discuss wells for which this prediction has and has not been borne out. (See GC 6.)	Arsenic concentrations in groundwater are anticipated to decrease when groundwater returns to pre-injection aerobic/oxidizing conditions following suspension of injection activities. This transition is anticipated to take several years. Per the Final Principles and Practices of Enhanced Anaerobic Bioremediation of Chlorinated Solvents by Leeson, Andrea & Becvar, Erica & Henry, Bruce & Fortenberry, Josh & Coyle, Chuck (2004): "In general, the reduced groundwater environment induced by substrate addition may increase the mobility of some naturally occurring (but regulated) metals in the reactive zone (e.g., iron, manganese, and arsenic). This is not always problematic: in some cases migration of metals such as arsenic may be retarded by adsorption to the aquifer matrix. Additionally, the mobilized inorganics may be precipitated/immobilized downgradient of the reactive zone when the conditions return to a more oxidizing state." and "Many of these changes are not easily reversed, and in the case of a slow-release carbon source it may take many years for the effects of the substrate addition to diminish." Currently, groundwater at many site wells is anoxic and reducing, which is favorable for reductive dechlorination of CVOCs. Arsenic and relevant field parameters will continue to be monitored and results evaluated in ARs.
13	EPA	Figure 12	The 202-foot contour label is mis-placed. Please correct and include revised figure in draft final AR.	The figure has been corrected.
14	EPA	Page 18, § 6.0, 5th bullet	The text is vague and should be strengthened. Based on the success of the dual approach of using existing injection wells and direct push injections and based on concentration rebounds and a few continued hot spots, the same dual approach should have been used in 2020 and should be used in 2021. The benefits have been demonstrated, and a limited, carefully designed ERD injection program can be planned now, based on existing data, and not wait for the development of the next LTMMP.	As described in the report, only one well had a detection in 2020 above the historical action limit for ERD injections (100 ug/L). Concentrations at this well have not been above 5 ug/L since 2013, so additional monitoring is warranted to determine whether this increase was a temporary blip or representative of a long-term trend. Therefore, based on existing data, no additional injections are recommended until this well can be resampled in Spring 2021 to determine if additional injections are warranted.
15	EPA	Page 18, § 6.0	EPA recommends adding a 6th bullet, be added acknowledging the need to install a new well(s) to define the western edge of the plume in Area 2. Please submit a plan and schedule for the proposed well location and installation, respectively.	Please see above response to EPA General Comment #5.
16	EPA	Figure 5	The outer edge of the tan PCE plume areas shown on the figure is essentially the 5 µg/L PCE contour; this is important, as it is generally viewed as the plume edge. There are fewer areas of uncertainty for this contour line than in the past. For example, new wells G6M-18-01 and G6M-18-02 now justify a solid contour along the western edge of the plume near Areas 4 and 5. However, there are locations where a solid contour is not justified by data presented. Where there is no data point with a concentration below 5 µg/L outside the line, the contour should be dashed. For example, the result of 35J µg/L for G6M-07-01X in spring 2019, and similar results in 2020, indicate that the plume edge is uncertain in this area and the edge of the tan plume area on the figure should be dashed or have question marks. An additional monitoring well(s) showing sub-5 PCE levels is needed in this area to assure that the plume boundary is adequately constrained. Also, in the Area 1 inset, the southwestern portion of the 5 µg/L contour should probably be dashed or have question marks for much of the two small areas shown, as the boundary locations are speculative in some directions.	The Area 1 and 2 plumes in Figure 5 have been amended to include dashed lines where appropriate. Monitoring wells G6M-04-11X and G6M-96-25B have been below the CLs and bound the plume upgradient of G6M-07-01X, and as such contamination in this well likely does not extent to the west. Plume dynamics and groundwater flow direction are well documented.
17	EPA	Figure 6	EPA appreciates the addition of labels for “Area 1”, “Area 2”, etc. over the appropriate parts of the cross section A-A’. EPA regrets the reduction from three cross sections to one cross section. Remaining and shifting PCE concentrations, in response to injections and other factors, indicates that careful decisions and actions still need to be made to optimize remedy success. The cross sections provide a three-dimensional view allowing injection design (screen depth, presence of low-permeability units, etc.) and the ability to track results in three dimensions. For example, the B-B’ cross section in the 2019 AR indicates that the injection depths for GP-107, 108, and 109 were located in a silty sand, considerably deeper than the screened interval for G6M-97-05B. This might explain results and help plan future injections.	Additional cross sections will be used to depict information in performance evaluations and for injection planning as needed. The cross section referenced in the 2019 AR (B-B', Figure 4-9) was corrected in the Final 2019 AR to show that the injections were performed in fine sand and spanned the screened interval for G6M-97-05B.